EFB ELEKTRONIK

PRODUCT CATALOGUE 2020|21

NETWORK TECHNOLOGY

FIBER OPTIC

COPPER CABLING

CABINET SYSTEMS

MULTIMEDIA

ACTIVE COMPONENTS

www.efb-elektronik.de/en

WIR SORGEN FÜR VERBINDUNG
WE CARE FOR CONNECTION

EFB-ELEKTRONIK

PROFILE

EFB-Elektronik GmbH is a leading manufacturer and system provider of networking technology and industrial system solutions. Our expertise ranges from structured cabling using certified high-end products for data centres to custom developments for industrial clients.

Our team services customers worldwide from our headquarters in Bielefeld, Germany. Our customer base includes renowned household names from the IT industry, as well as medium sized companies and large corporations.

Our membership in the international TKH Group based in the Netherlands, with more than 6,500 employees and production facilities around the globe, gives us additional leverage for the benefit of our customers. The EFB group of companies has 240 employees across eight locations in Europe, five of them in Germany and three subsidiary companies located in Istanbul, Copenhagen and Vienna.

The current turnover of the **TKH Group** amounts to 1.5 billion Euros (2018). With a sales volume of 65.4 million Euros (2019), the EFB-Elektronik GmbH ranks among the leading companies of the group.

FIND OUT MORE ABOUT US:
www.efb-elektronik.de/en/aboutus

EXPLORE OUR
PRODUCT PORTFOLIO

JOIN THE EFB COMMUNITY: BLOG

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OUR SERVICE OFFER

EFB PRODUCTS
WIDE RANGE AVAILABLE ONLINE

Visit our EFB-Elektronik online shop and have a look at our wide product range. A versatile selection awaits you – from fiber optic or copper cabling, cabinet systems and multimedia all the way to active components – everything from a single source.

EFB NEWSLETTER
ALWAYS STAY WELL INFORMED

Take a minute and sign up to receive our free newsletter containing innovations and interesting facts relating to our product highlights, as well as special events, product launches, exclusive offers and free admission tickets to events.

WIDE RANGE OF PRINTED MATERIALS

Explore our wide range of printed materials: Catalogues, brochures, informational materials, certificates and operating manuals. These are easy and convenient to download. Alternatively, you can also have them sent to you as print version. This service is free of charge.

OUR WEBSITE
TAILORED TO MEET YOUR REQUIREMENTS

Check out our website to find out everything about EFB-Elektronik, our products and services.

CONSEQUENTLY, WE ARE THE IDEAL PARTNER FOR YOU

STRONG ARGUMENTS IN FAVOUR OF A COLLABORATION WITH US

1

Leading supplier in the networking technology sector

Structured cabling for buildings is our passion. Only available from us: a broad and in-depth product portfolio with over 10,000 products in the categories of fiber optic and copper cabling, cabinet systems, multimedia and active components. As a result, we can offer 100% custom-fit selections for different applications, for your home, for an office or even for a computer centre.

2

Strong partner for custom-made products

In addition to our standard assortment, we are always open to take on individual custom-made products to be made at our manufacturing sites for fiber optic and copper cabling in Germany. We can therefore swiftly implement small-scale and large-scale productions alike at a high quality level. A balanced combination of state-of-the-art technology and precision craftsmanship allows us to develop optimal processes.

3

Verified quality: Customer safety and satisfaction

This makes EFB-Elektronik unique: Our two-stage quality control for imported goods. After a prequalification on site at the supplier's premises, the products will be inspected once more by our internal quality assurance teams (inspection planning, inspection implementation and IT-supported inspection data processing (CAQ)).
Furthermore, we as the manufacturer guarantee top product quality. Upon the request of the customer, we will prepare inspection reports and carry out 100%-inspections of cable assemblies and PLCs for the production of fully automatic machines.

4

Our INFRALAN® premium brand – cabling system

Reliability of your high-performance system provided now and in future. Our INFRALAN® brand stands for high-performance system solutions all around structured cabling of buildings. Discover selected high-performance components for structured fiber optic and copper cabling as well as cabinet systems – all under one roof.

5

Reliability & timely delivery

On-schedule delivery is a vital part of successful collaboration. Our logistical delivery processes are constantly reviewed and optimized. Delivery times will always be met as stipulated with our high stock availability and the many years of cooperation with our logistics partners.

6

Expert service beyond standard

Through personal contact to our customers, partners and suppliers, we achieve maximum customer orientation. As a result, our customers benefit from professional consultation with contact partners appointed to accompany them along the entire progress of their projects.
Moreover, we bundle individual service packages filled with comprehensive offers designed to help the customer to save time and expenses. These include individual configurations, equipment or product refinement.

Broad product knowledge and expertise

Make sure to secure a space in one of our fiber optic workshops to gain special know-how. In addition, we will regularly issue new articles, news items and information of interest through the various communication channels such as our newsletters, blogs and on social media.

Get your desired product with just a few clicks: In the EFB online shop

Find out about availabilities, packaging units and delivery times in real time. Via integrated EDI/OCI interfaces, simply add products to your shopping cart in the EFB online shop. The EFB online shop can be used by several employees at the same time via the integrated multi-user management.

EFB configurators: Your requirements. Your product.

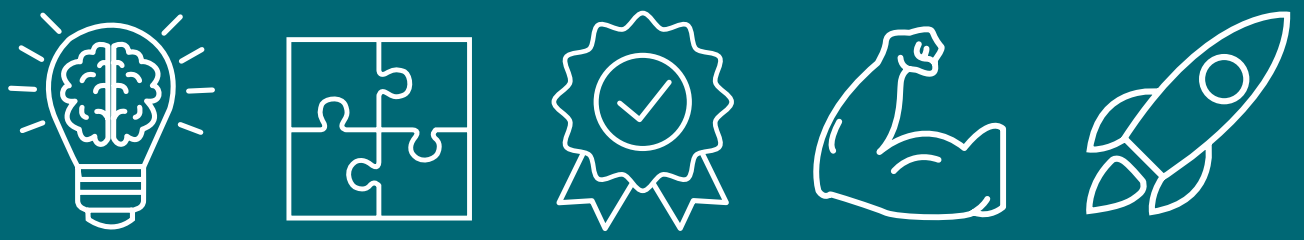
Furthermore, our configurators allow you to develop individual network and server cabinets or design connector-cable assemblies for breakout and loose tube cables especially tailored to your applications.

ARE YOU INTRIGUED? MORE DETAILS:
www.efb-elektronik.de/en/services

INFRALAN® Cabling System

INFRALAN® stands for high-performance system solutions wherever structured cabling of buildings is concerned. This premium brand combines high quality standards, future reliability and outstanding market expertise in one product portfolio with selected high performance components for structured fiber optic and copper cabling as well as cabinet systems under one roof.

WHY IS *INFRALAN®* IN?



COMPETENCE | PERFECT SYNERGY | RELIABILITY | HIGH PERFORMANCE | FUTURE-PROOF SOLUTIONS

OUR MANUFACTURING PLANTS

YOUR GUARANTEE: PROMPTNESS AND FLEXIBILITY

EFB-Elektronik is represented in Germany with its two manufacturing plants in Bielefeld and Sonneberg. The balanced combination of state-of-the-art technology and precision craftsmanship ensure that the products meet the high-quality standards of the customers.

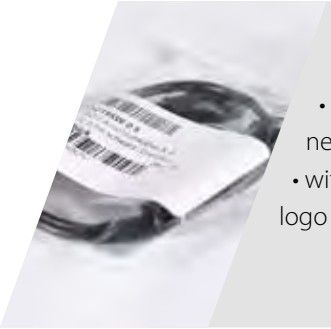
COPPER CABLE PRODUCTION IN BIELEFELD
FIBER OPTIC CABLE PRODUCTION IN SONNEBERG

- Individual custom-made products available
- High quality processing by specialised personnel
- Optimal quality control
- Quick response times and short delivery routes
- Quickest possible implementation of individual requirements

PRODUCT REFINEMENT

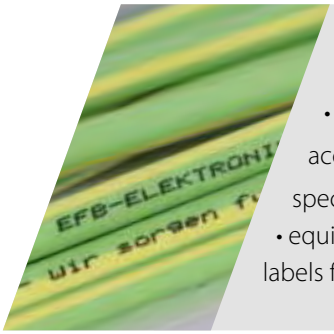
EXPLORE YOUR OPTIONS

Take advantage of our service options to give your products the finishing touch. We bundle individual service packages perfectly tailored to your needs. From our comprehensive offers, simply select the services you need, or have your contact partner advise you accordingly.



Packaging & labels for your products:

- individually packed into neutral polybags or
- with a label featuring your logo



Cable cutting & cable printing

- cables cut to the lengths according to your individual specifications
- equipped with individual printed labels for the cables

Fiber optic duplex clips

Preliminary work takes time! We can take care of it for you by plugging in

- clips 1:1 or
- cross over

Measurements including wrap-around cable labels with serial numbers

- among others, for trunk, patch and fiber optic cables
- including inspection report and wrap-around cable label with serial number for each cable

Cabinet retrofit & installation

Do you need a network cabinet customised according to your requirements? We can take care of the following for you:

- Installation of 19"-components, doors and side panels

Other individual solutions

Have your contact partner advise you, or explore these and other services we can take care of for you!

FIND MORE INFORMATION:
www.efb-elektronik.de/en/productrefinement

HIGHEST STANDARDS
MET FOR EACH PRODUCT

Easy to operate, strong in application and of great benefit to users. Quality is one of the outstanding performance features of our products. Quality at the highest level is ensured through compliance with all standards and with qualified production processes.

MANAGEMENT SYSTEM

DIN ISO 9001

PRODUCT CERTIFICATIONS

ETL-ZERTIFIZIERUNG

GHMT

DELTA

LICENSES

UL-ZERTIFIZIERUNG

PEFC Certified

This product is from sustainably managed forests and controlled sources

PEFC/04-31-0934

www.pefc.org

Even with regard to the printing process, we devote our attention to the environment and sustainability.

- The printing shop uses energy coming 100% from hydro power and
- also uses organic inks or mineral-oil free printing inks without harmful additives containing alcohol

YOUR DIGITAL SALES CONSULTANT

With just a few clicks, you can design your individual product and directly request a binding quotation by using our configurator. The user-friendly interface intuitively guides you through the process – clever tools are provided to assist you, even if a selection is impossible.

SAVES TIME FOR FOLLOW-UP ORDERS

YOUR CONFIGURATION, YOUR PRICES

SENSIBLE SOLUTIONS

AVAILABLE TWENTY-FOUR SEVEN

THE NEW CONFIGURATOR FOR NETWORK AND SERVER CABINETS

A configurator with many options
No matter whether it is used as a floor distributor or in a computer centre. A free-standing or wall-mounted cabinet.

Your cabinet, your parameters
From height units (HU), width / depth, door models and colours. While selecting your parameters, your individually designed cabinet is always visualised.

Matching accessories options
Solutions exactly matching the properties of your selected configuration.

Accessories as needed – also for modifications
The accessory be adjusted automatically to the newly selected parameters.

By the way: It fits in every trouser pocket
Due to the responsive design, it can also be used on mobile end devices.

https://configurator.efb-elektronik.de/cabinet

BREAK-OUT AND LOOSE TUBE CABLES CLEVERLY CONFIGURED

Better informed
Each individual product required for your personal configuration will be visualised clearly laid out and in detail.

Nothing is impossible!
If specific cable/ connector combinations are not yet available, they will be managed as "custom-made assemblies". With just one click, a binding quotation can be requested in the fiber optic configurator.

https://configurator.efb-elektronik.de/fiber_optic

FIBER OPTIC

FOR VARIOUS APPLICATIONS

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FIBER PIGTAILS & JUMPER

In addition to the wide range of fiber optic pigtails, jumper cables and all common fiber optic connector types from stock, EFB-Elektronik can also quickly and specifically implement special solutions - your own fiber optic assembly in Germany makes it possible. In addition, E2000® patch cables are assembled in-house.

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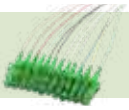
Simplex Jumper		P. 21
Service / Measurements		P. 22
Fiber Pigtails		P. 24

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Cleaning Tools	P. 64
Cable Management	P. 228
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- **Discover our wide range of fiber optic jumpers: from standard jumpers to custom-made products**
- **Standard jumpers in various connector versions (e.g. LC-LC, SC-SC, LC-SC, E2000®) and in various cable versions**
- **Your advantage: short delivery times for standard variants**

Block Diagram Standard Duplex Jumper

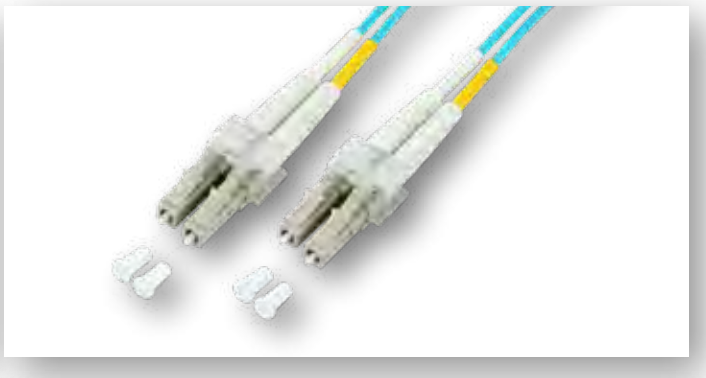
Duplex Jumper Matrix

	OS2	OM5	OM4	OM3	OM2	OM1
LC, LC	00350.x	00319.x0M5	00319.x	00312.x	00310.x	00330.x
LC, SC	00360.x	00323.x0M5	00323.x	00314.x	00320.x	03061.x
LC, ST	00361.x		00326.x	00313.x	00321.x	00371.x
SC, SC	02513.x	00318.x0M5	00318.x	07413.x	06413.x	06423.x
SC, ST	02073.x		00347.x	07353.x	06353.x	06363.x
ST, ST	02003.x		00348.x	07013.x	06013.x	06023.x
LC, E2000®	00364.x		00341.x	00315.x		
E2000®, SC	00940.x					
E2000®, ST	00909.x					

Block Diagram Standard Duplex Jumper

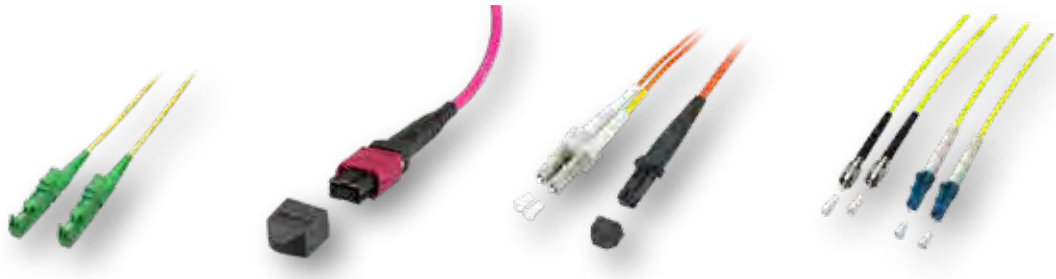
Duplex Jumper Matrix APC

	OS2
LC/APC, LC/APC	00381.x
LC/APC, SC/APC	00387.x
SC/APC, SC/APC	02561.x
SC/APC, LC	00362.x
E2000®/APC, E2000®/APC	00933.x
E2000®/APC, LC	00937.x
LC/APC, E2000®/APC	00389.x
E2000®/APC, SC	00939.x
E2000®/APC, ST	00920.x



Fiber Connectors and its features

	SC-Connector Subscriber Connector	LC-Connector Lucent Connector	ST-Connector Straight Tip	DIN (LSA)-Connector Solder-, screw- and stripping-free
Relevant Producer	div.	div.	div.	div.
pro	low IL, sturdy Connector	low RL,small dimension, due to this high packing density	save lock due to bayonet locking	save lock due to screwing lock
con	no high packing density possible in comparance		high IL, measurement variation on mechanical forces	no high packing density possible in comparance
Connector cleaning/ Effect	Poor connector cleaning affects the RL and IL. This can also damage the geometry of the connector section.	Poor connector cleaning affects the RL and IL. This can also damage the geometry of the connector section.	Poor connector cleaning affects the RL and IL. This can also damage the geometry of the connector section.	Poor connector cleaning affects the RL and IL. This can also damage the geometry of the connector section.
Application	FO link/Switch Systems, Optical MDF (Multi Distribution Frames), LAN, CATV, SONET/ SDH, ATM, WDM Communication Systems, measurement- and test devices			
Ferrule diameter	2,5mm	1,25mm	2,5mm	2,5mm
APC version possible(angled polish)	yes	yes	yes	yes
Typical IL	0,2 - 0,3dB	0,2dB	0,2 - 0,4dB	0,2dB
Suitable fiber	1	1	1	1
Standard	IEC 61754-4	IEC 61754-20	IEC 61754-2	IEC 874-6
Locking mechanism	Push Pull principle	clamping bracket lock	Bayonet lock	screwing lock



	E2000®-Connector	MPO/MTP®-Connector Multipath Push-On/ MTP®=Brand name	MTRJ-Connector Mechanical Transfer Registered Jack	FC-Connector Fiber Connector
Relevant Producer	Reichle & de Massari, Huber & Suhner, Diamond	US Conec	div.	div.
pro	patent registered Connector for WAN, required for WAN, integrated dust- and laser protection	small Connector with high ammount of connection possible, high packing density	Duplex housing	save lock due to screwing lock
con	high price, assembling can only be done by certified productions	complex assembling, high IL	high IL, low RL	no high packing density possible in comparance
Connector cleaning/ Effect	Poor connector cleaning affects the RL and IL. This can also damage the geometry of the connector section.			
Application	FO link/Switch Systems, Optical MDF (Multi Distribution Frames), LAN, CATV, SONET/ SDH, ATM, WDM Communication Systems, measurement- and test devices			FO link/Switch Systems, Optical MDF (Multi Distribution Frames), LAN, CATV, SONET/ SDH, ATM, WDM Communication Systems, measurement- and test devices
Ferrule diameter	2,5mm	MT- Ferrule	MT- Ferrule	2,5mm
APC version possible(angled polish)	yes	yes	yes	yes
Typical IL	0,2dB	0,3 - 0,5dB	0,3 - 0,5dB	0,2dB
Suitable fiber	1	4-96	2	1
Standard	IEC 61754-15	IEC 61754-5	IEC 61754-18	IEC 61754-13
Locking mechanism	Push Pull principle	Push Pull principle	clamping bracket lock	screwing lock

MTRJ-, FC-, DIN-Assemblies on request available

Optical Classes

Singlemode	Multimode
OS2 9/125µ G657 (A1, A2, B1, B2) 9/125µ G652D 9/125µ	OM5 50/125µ OM4 50/125µ OM3 50/125µ OM2 50/125µ OM1 62,5/125µ

Duplex Jumper 1.2mm

Duplex Jumper with 1.2 mm outer jacket
Space-saving installation due to the small outer diameter
Halogen free according to IEC-60754-2
Flame retardant according to IEC-60332-1
Low smoke according to IEC-61034
Connector in colour of category (aqua, erica-violet or blue)
LC connector in Compact design
EFB fiber connectors meet the quality classes
Grade B/2 according to IEC-61753-1 for Singlemode
Grade A/1 according to IEC-61753-122-2 (Draft) for Multimode pre-coded
100% tested and with individuell measuring protocol

Up to 60% space saving during installation

2mm Cable

1,2mm Cable

Art.-No.	Category	Colour outer sheath	Connector
00350.xx-1.2	OS2	yellow	LC-Duplex blue, LC-Duplex blue
00360.xx-1.2	OS2	yellow	LC-Duplex blue, SC-Duplex blue
02513.xx-1.2	OS2	yellow	SC-Duplex blue, SC-Duplex blue
00319.xx-1.2	OM4	erica-violet	LC-Duplex erica-violet, LC-Duplex erica-violet
00323.xx-1.2	OM4	erica-violet	LC-Duplex erica-violet, SC-Duplex erica-violet
00318.xx-1.2	OM4	erica-violet	SC-Duplex erica-violet, SC-Duplex erica-violet
00312.xx-1.2	OM3	aqua	LC-Duplex aqua, LC-Duplex aqua
00314.xx-1.2	OM3	aqua	LC-Duplex aqua, SC-Duplex aqua
07413.xx-1.2	OM3	aqua	SC-Duplex aqua, SC-Duplex aqua

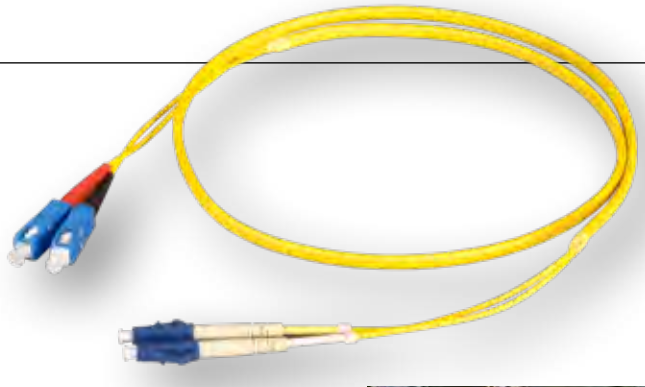
Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 10 m

Cable type: ..... I-V(ZN) H
Cable Construction: ..... Duplex
Jacket Material: ..... LSZH
Cable Ø: ..... 1.2 mm
Operating Temperature: ..... -20 – 75 °C
Storage Temperature: ..... -20 – 85 °C

Duplex Jumper Flat Twin

The Flat Twin Duplex Jumper have a higher stability due to the additional added outer jacket and can be installed much easier than standard jumper. Also the jacket material is made of LSZH.

Characteristics
Additional outer jacket for higher stability and easier installation
Cable sheath consists of flame retardant LSZH material
Cable whip length of 150 mm inclusive connector
Same colour of Cable whip and jacket material
Compact cable diameter of 3x5 mm
Simple allocation of the fibers with boots in different colours or A/B markers
Possibility of coding with clips enclosed to the delivery



For direct installation

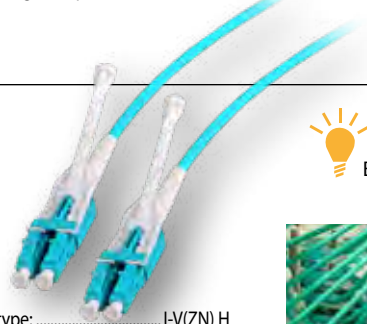
Art.-No.	Category	Colour outer sheath	Connector
00350FT.x	OS2	yellow	LC-Duplex blue, LC-Duplex blue
00360FT.x	OS2	yellow	LC-Duplex blue, SC-Duplex blue
02513FT.x	OS2	yellow	SC-Duplex blue, SC-Duplex blue
00319FT.x	OM4	erica-violet	LC-Duplex beige, LC-Duplex beige
00323FT.x	OM4	erica-violet	LC-Duplex beige, SC-Duplex beige
00318FT.x	OM4	erica-violet	SC-Duplex beige, SC-Duplex beige
00312FT.x	OM3	aqua	LC-Duplex beige, LC-Duplex beige
00314FT.x	OM3	aqua	LC-Duplex beige, SC-Duplex beige
07413FT.x	OM3	aqua	SC-Duplex beige, SC-Duplex beige

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 - 25 - 30 - 35 - 40 - 45 - 50 m

Cable type: ..... I-V(ZN) HH
Cable Construction: ..... Duplex
Jacket Material: ..... LSZH
Cable Ø: ..... 3x5 mm
Operating Temperature: ..... -40 – 70 °C
Storage Temperature: ..... -40 – 85 °C

Duplex Jumper HD Uniboot LC - LC

The LC HD Uniboot Jumper has a long unlock latch, due to unlock in the easiest way in HD patchpanel. The Polarity or Coding of the Duplex connector can be changed in the easiest way that it can reach the requirements of the application. The Jumper is available in the categories OM3, OM4 and G657A1.



Easy unlocking

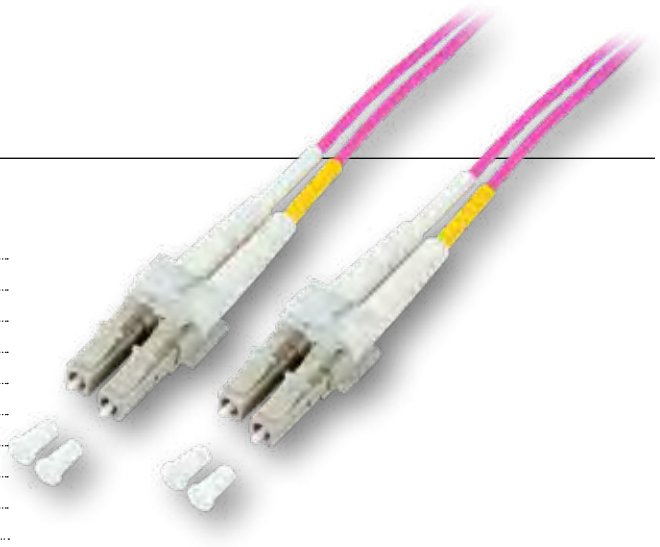
Art.-No.	Category	Colour outer sheath	Connector
DJP-LCLCOS2-UNI-xx	G657A1	yellow	LC blue, LC blue
DJP-LCLCOM4-UNI-xx	OM4	erica-violet	LC erica-violet, LC erica-violet
DJP-LCLCOM3-UNI-xx	OM3	aqua	LC aqua, LC aqua

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 m

Cable type: ..... I-V(ZN) H
Cable Construction: ..... Duplex
Jacket Material: ..... LSZH
Cable Ø: ..... 3.0 mm
Operating Temperature: ..... -20 – 70 °C
Storage Temperature: ..... -20 – 70 °C

Jumper-Characteristics:

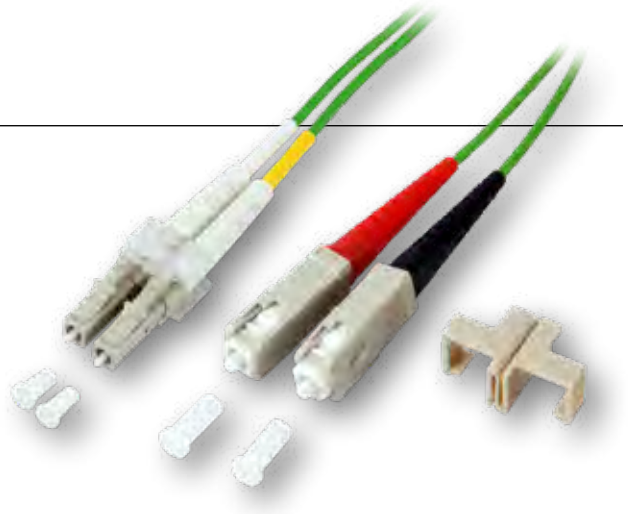
Cable type: ..... I-V(ZN) H
Cable Construction: ..... Duplex
Jacket Material: ..... LSZH
Cable Ø: ..... 2.0 mm
Operating Temperature: ..... -20 – 70 °C
Storage Temperature: ..... -20 – 85 °C



Duplex Jumper LC-LC

Art.-No.	Category	Colour outer sheath	Connector
00350Bl.x	G657A2	yellow	LC-Duplex blue, LC-Duplex blue
00381.x	OS2	yellow	LC-Duplex 8° green, LC-Duplex 8° green
00384.x	OS2	yellow	LC-Duplex 8° green, LC-Duplex blue
00350.x	OS2	yellow	LC-Duplex blue, LC-Duplex blue
00319.xOM5	OM5	lime green	LC-Duplex beige, LC-Duplex beige
00319.x TOP SELLER	OM4	erica-violet	LC-Duplex beige, LC-Duplex beige
00312.x	OM3	aqua	LC-Duplex beige, LC-Duplex beige
00310.x	OM2	orange	LC-Duplex beige, LC-Duplex beige
00330.x	OM1	orange	LC-Duplex beige, LC-Duplex beige

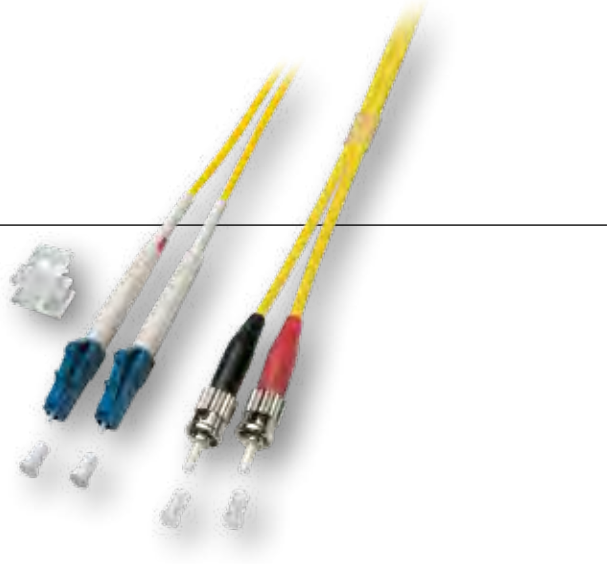
Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 - 25 - 30 - 35 - 40 - 45 - 50 m



Duplex Jumper LC-SC

Art.-No.	Category	Colour outer sheath	Connector
00360Bl.x	G657A2	yellow	LC-Duplex blue, SC-Duplex blue
00387.x	OS2	yellow	LC-Duplex 8° green, SC-Duplex 8° green
00383.x	OS2	yellow	LC-Duplex 8° green, SC-Duplex blue
00362.x	OS2	yellow	LC-Duplex blue, SC-Duplex 8° green
00360.x	OS2	yellow	LC-Duplex blue, SC-Duplex blue
00323.xOM5	OM5	lime green	LC-Duplex beige, SC-Duplex beige
00323.x	OM4	erica-violet	LC-Duplex beige, SC-Duplex beige
00314.x	OM3	aqua	LC-Duplex beige, SC-Duplex beige
00320.x	OM2	orange	LC-Duplex beige, SC-Duplex beige
03061.x	OM1	orange	LC-Duplex beige, SC-Duplex beige

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 - 25 - 30 - 35 - 40 - 45 - 50 m



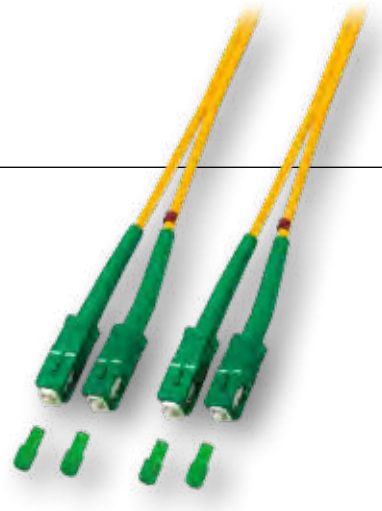
Duplex Jumper LC-ST

Art.-No.	Category	Colour outer sheath	Connector
00361.x	OS2	yellow	LC-Duplex blue, ST
00326.x	OM4	erica-violet	LC-Duplex beige, ST
00313.x	OM3	aqua	LC-Duplex beige, ST
00321.x	OM2	orange	LC-Duplex beige, ST
00371.x	OM1	orange	LC-Duplex beige, ST

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 - 25 - 30 - 35 - 40 - 45 - 50 m

Jumper-Characteristics:

Cable type: ..... I-V(ZN) H
Cable Construction: ..... Duplex
Jacket Material: ..... LSZH
Cable Ø: ..... 3.0 mm
Operating Temperature: ..... -20 – 70 °C
Storage Temperature: ..... -20 – 85 °C



Duplex Jumper SC-SC

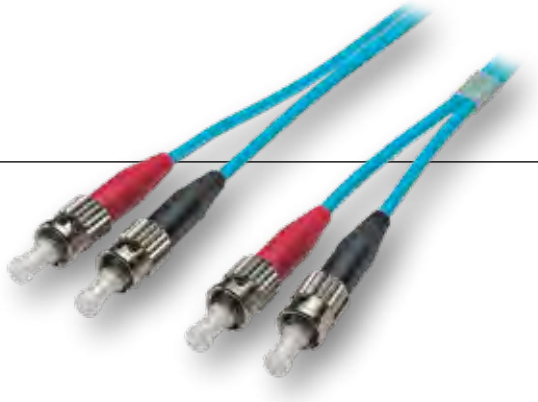
Art.-No.	Category	Colour outer sheath	Connector
02561.x	OS2	yellow	SC-Duplex 8° green, SC-Duplex 8° green
02513.x	OS2	yellow	SC-Duplex blue, SC-Duplex blue
00318.x0M5	OM5	lime green	SC-Duplex beige, SC-Duplex beige
00318.x	OM4	erica-violet	SC-Duplex beige, SC-Duplex beige
07413.x	OM3	aqua	SC-Duplex beige, SC-Duplex beige
06413.x	OM2	orange	SC-Duplex beige, SC-Duplex beige
06423.x	OM1	orange	SC-Duplex beige, SC-Duplex beige

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 - 25 - 30 - 35 - 40 - 45 - 50 m

Duplex Jumper SC-ST

Art.-No.	Category	Colour outer sheath	Connector
02073.x	OS2	yellow	SC-Duplex blue, ST
00347.x	OM4	erica-violet	SC-Duplex beige, ST
07353.x	OM3	aqua	SC-Duplex beige, ST
06353.x	OM2	orange	SC-Duplex beige, ST
06363.x	OM1	orange	SC-Duplex beige, ST

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 - 25 - 30 - 35 - 40 - 45 - 50 m



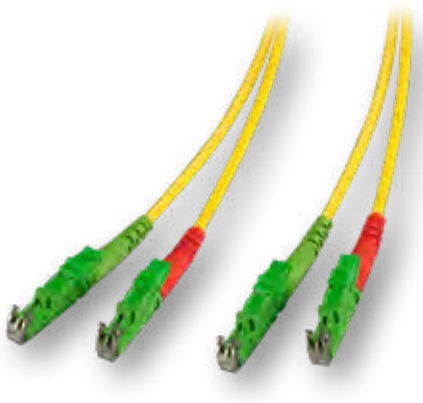
Duplex Jumper ST-ST

Art.-No.	Category	Colour outer sheath	Connector
02003.x	OS2	yellow	ST , ST
00348.x	OM4	erica-violet	ST , ST
07013.x	OM3	aqua	ST , ST
06013.x	OM2	orange	ST , ST
06023.x	OM1	orange	ST , ST

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 m

Jumper-Characteristics:

Cable type: ..... I-V(ZN) H
Cable Construction: .....Duplex
Jacket Material: ..... LSZH
Operating Temperature: .....-20 – 70 °C
Storage Temperature: .....-20 – 85 °C



Duplex Jumper E2000®-E2000®

Cable Ø: 3.0 mm

Art.-No.	Category	Colour outer sheath	Connector
00933.x	OS2	yellow	E2000® 8° green, E2000® 8° green

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 m

Duplex Jumper E2000®-LC

Cable Ø: 2.0 mm

Art.-No.	Categroy	Colour outer sheath	Connector
00937.x	OS2	yellow	LC-Duplex blue, E2000® 8° green
00389.x	OS2	yellow	LC-Duplex 8° green, E2000® 8° green
00364.x	OS2	yellow	LC-Duplex blue, E2000® blue
00341.x	OM4	erica-violet	LC-Duplex beige, E2000® black
00315.x	OM3	aqua	LC-Duplex beige, E2000® black

Stock Lengths O0937.x: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 m
Stock Lengths: on request

Duplex Jumper E2000®-SC

Cable Ø: 3.0 mm

Art.-No.	Category	Colour outer sheath	Connector
00939.x	OS2	yellow	E2000® 8° green, SC-Duplex blue
00940.x	OS2	yellow	E2000® blue, SC-Duplex blue

Stock Lengths O0939.x: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 - 20 m
Stock Lengths O0940.x: on request

Duplex Jumper E2000®-ST

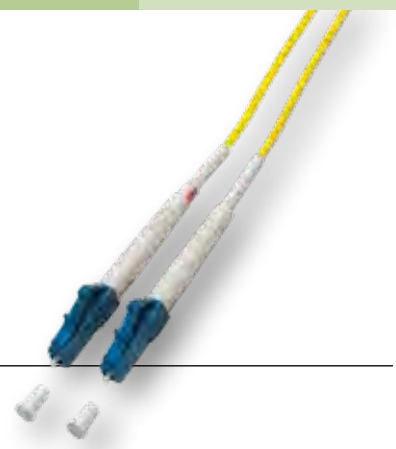
Cable Ø: 3.0 mm

Art.-No.	Category	Colour outer sheath	Connector
00920.x	OS2	yellow	E2000® 8° green, ST
00909.x	OS2	yellow	E2000® blue, ST

Stock Lengths: on request

Jumper-Characteristics:

Cable type: ..... I-V(ZN) H
Cable Construction: ..... Simplex
Jacket Material: ..... LSZH
Operating Temperature: ..... -20 – 70 °C
Storage Temperature: ..... -20 – 85 °C

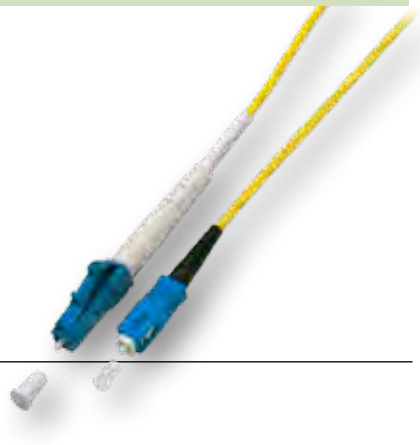


Simplex Jumper LC-LC

Cable Ø: 2.0 mm

Art.-No.	Category	Colour outer sheath	Connector
02519.x	OS2	yellow	LC 8° green, LC 8° green
01403.x	OS2	yellow	LC 8° green, LC blue
00948.x	OS2	yellow	LC blue, LC blue

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 -10 - 15 - 20 m

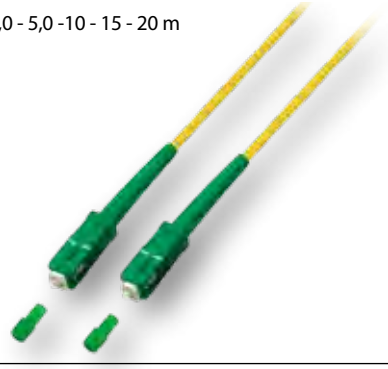


Simplex Jumper LC-SC

Cable Ø: 2.0 mm

Art.-No.	Category	Colour outer sheath	Connector
02531.x	OS2	yellow	SC 8° green, LC 8° green
00946.x	OS2	yellow	SC 8° green, LC blue
00947.x	OS2	yellow	LC blue, SC blue

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 -10 - 15 - 20 m

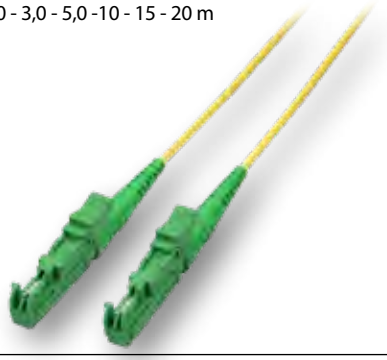


Simplex Jumper SC-SC

Cable Ø: 3.0 mm

Art.-No.	Category	Colour outer sheath	Connector
00944.x	OS2	yellow	SC 8° green, SC 8° green
00928.x	OS2	yellow	SC 8° green, SC blue
01323.x	OS2	yellow	SC blue, SC blue

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 -10 - 15 - 20 m

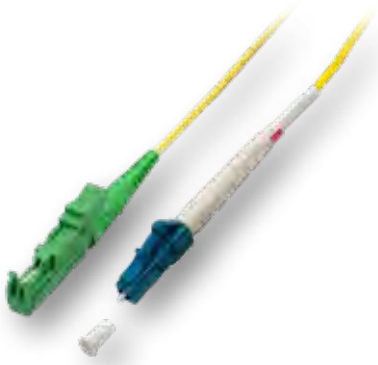


Simplex Jumper E2000®-E2000®

Cable Ø: 3.0 mm

Art.-No.	Category	Colour outer sheath	Connector
00833.x	OS2	yellow	E2000® 8° green, E2000® 8° green

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 -10 - 15 - 20 m

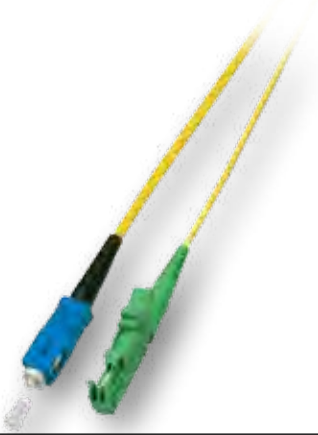


Simplex Jumper E2000®-LC

Cable Ø: 3.0 mm

Art.-No.	Category	Colour outer sheath	Connector
01420.x	OS2	yellow	E2000® 8° green, LC blue
00863.x	OS2	yellow	E2000® blue, LC blue

Stock Lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 -10 - 15 - 20 m



Simplex Jumper E2000®-SC

Cable Ø: 3.0 mm

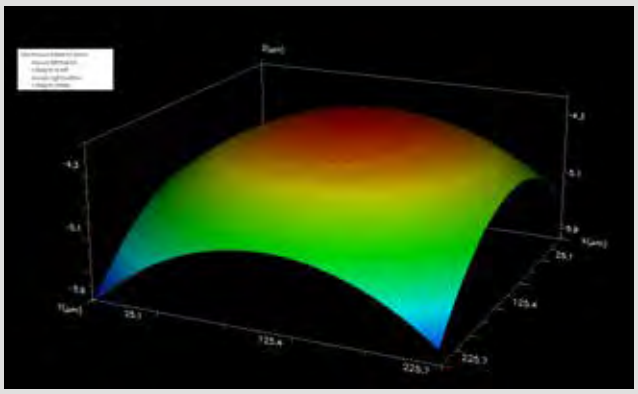
Art.-No.	Category	Colour outer sheath	Connector
00923.x	OS2	yellow	E2000® 8° green, SC blue
00839.x	OS2	yellow	E2000® blue, LC blue

Stock Lengths: on request

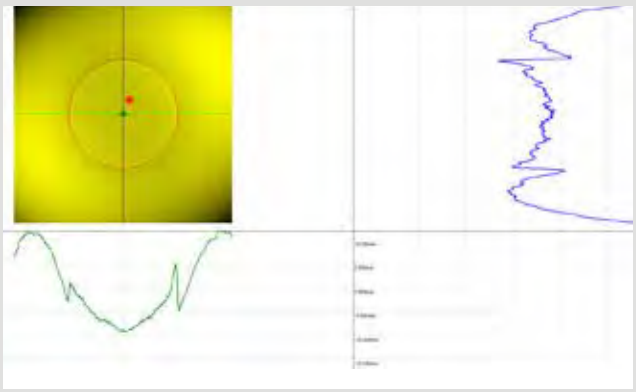
OUR SERVICE IN THE FIELD OF FIBER OPTIC CABLING

EFB-Elektronik offers various measurements for any kind of cablings of the portfolio. At the Headquarter in Bielefeld, interferometer measurements, OTDR measurements, Insertion Loss measurements or additional assessments of the connector end faces are carried out. The measured cables can be assigned via a serial number attached to the cable.

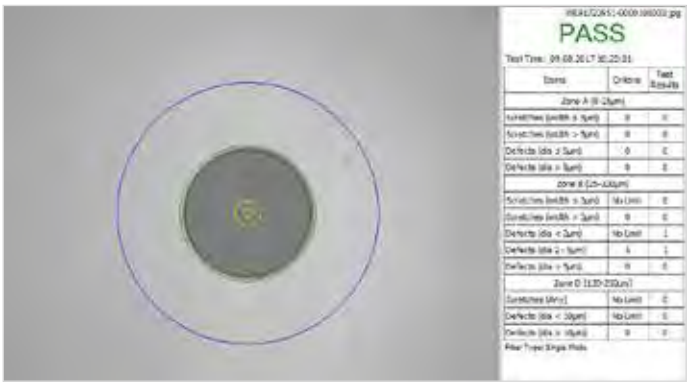
3D SURFACE:



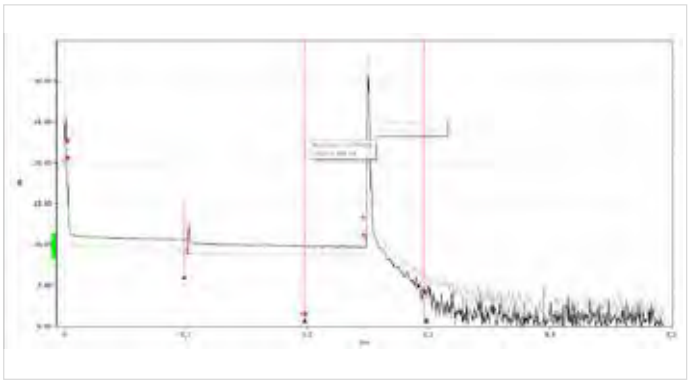
2D SUBTRACETED SURFACE:



Interferometer Measurement



Connector endface inspection



OTDR-Measurement

Insertion Loss Measurement

1. DLOLWL-Dämpfung	IL measurement for FO Jumper inclusive, label with serial number, lead time for 200pcs. approx. 5 working days plus regular picking time
2. DLOLWL-OTDR	OTDR-measurement of FO Links inclusive label with serial number, lead time for 200pcs. approx. 3 working days plus regular picking time
3. DLOLWL-Interfero	Interferometer measurement for Connectors inclusive label with serial number, lead time for 200pcs. approx. 3 working days plus regular picking time
4. DLOWICKEL2	Assembling of label on both sides of cable, lead time for 200pcs. approx. 3 working days plus regular picking time

* lead time for other quantities on request

1.

2.

3.

Prepared ready to splice

Easy Splice Pigtailset

The pigtailset is ready for splice and direct use. The 12 fiber pigtails are coloured according to DIN VDE 0888 and bundled with shrink tube grommet around the fibers. The cable drillers in the set are bound for a decent laying and fiber guidance. The use of the special manufactured packaging warrants a safe transportation.

Scope of delivery
12x pigtails
1x splice cassette
1x cover
1x splice holder
12x splice protection
6x cable driller for fiber guidance

Matching this:
Splicing-/Measurement equipment and tools page 72

Easy Splice Pigtailset, LC

Art.-No.	Category	Colour	Connector type
00482SET	OS2	12 Colours	LC/APC green
00481SET	OS2		LC blue
034830M5SET	OM5		LC beige
03483SET	OM4		LC beige
03482SET	OM3		LC beige
03484SET	OM2		LC beige

Easy Splice Pigtailset, SC

Art.-No.	Category	Colour	Connector type
01015SET	OS2	12 Colours	SC/APC green
01022SET	OS2		SC blue
033260M5SET	OM5		SC beige
03326SET	OM4		SC beige
03325SET	OM3		SC beige
03324SET	OM2		SC beige

Explanation for Connector and Pigtails:	
Connector APC	green
Connector Multimode	beige
Connector Singlemode	blue
G657A	bending-optimized Singlemode Fiber
OS2	Standard Singlemode Fiber

Requiered Accessories	
Splicing	**Measuring**
Crimp Protection	OTDR Measurement Device
Shrink Protection	Attenuation Measurement Device
Splcie-cassettes	Cleaning Material
Spliceholder	Fiber Checker
Fiber Toolings	Fiber Microskope
Splice Device	Pre-Launch Fiber for OTDR
Crimpingtool	Reference-Cable for Attenuation Measurement
Heating oven	
Cleaning Material	

Fiberpigtails

EFB-Elektronik offers a wide portfolio of fiber optic pigtails in the categories Multimode (OM1, OM2, OM3, OM4, OM5) and Singlemode (OS2). These are available in single colour and 12-coloured version as well as with different connectors such as SC, LC, E2000® etc. The colour-code for the 12-coloured fiber pigtails is according to DIN VDE 0888 and the fiber is dyed accordingly except for the 250µ fiber. The fiber pigtails of the EFB-Elektronik have a semi tight buffer as standard and are therefore very easy to use.

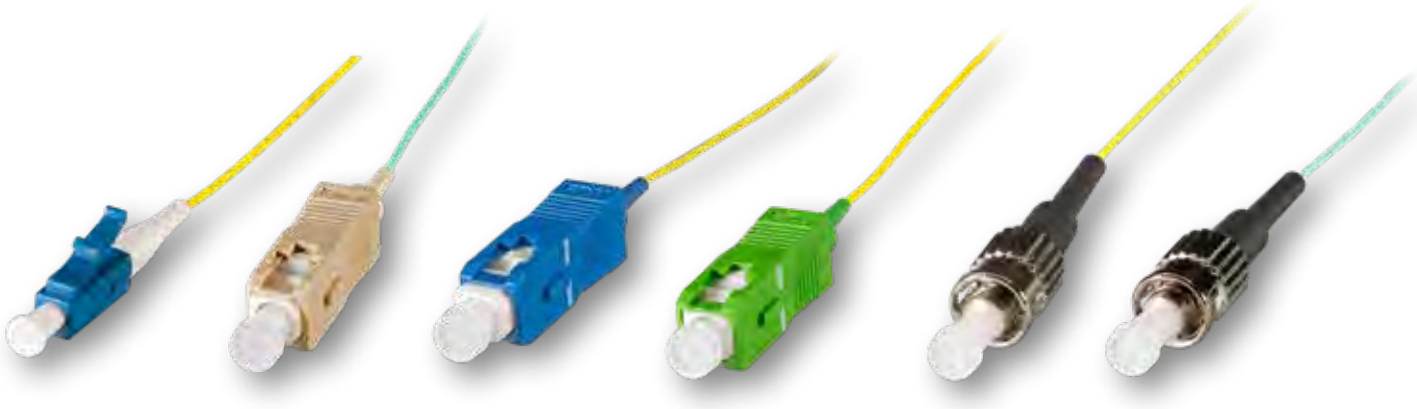
General Characteristics of Fiberpigtails:

Max. Tension	3 N
Min. Bending Readius Static	9 mm
Min. Bending Readius Dynamic	18 mm
Outer Diameter	0.9 mm
Jacket Material	LSZH
Length	2,0 m
Operating Temperature	-20 – 70 °C
Cable Conform to Standard	IEC60793-2

Fiberpigtail 12-colours

	LC	SC	ST	LC/APC	SC/APC	E2000®/APC
OS2	00481.2	01022.2	01004.2	00482.2	01015.2	00769.2
OM5	03483.20M5	03326.20M5		APC polish is not used in Multimode Catergory		
OM4	03483.2	03326.2	03307.2			
OM3	03482.2	03325.2	03305.2			
OM2	03484.2	03324.2	03304.2			

PU 12, Price/PU



Fiberpigtail Single Coloured

	LC	SC	ST	E2000®	LC/APC	SC/APC	E2000®/APC
OS2	00480.2	01023.2	01003.2	00779.2	00485.2	01019.2	00770.2
OM5	03686.20M5	03685.20M5		APC polish is not used in Multimode Catergory			
OM4	03686.2	03685.2	03687.2				
OM3	03681.2	03623.2	03603.2				
OM2	03481.2	03323.2	03303.2				
OM1	03491.2	03333.2	03313.2				

PU 12, Price/piece

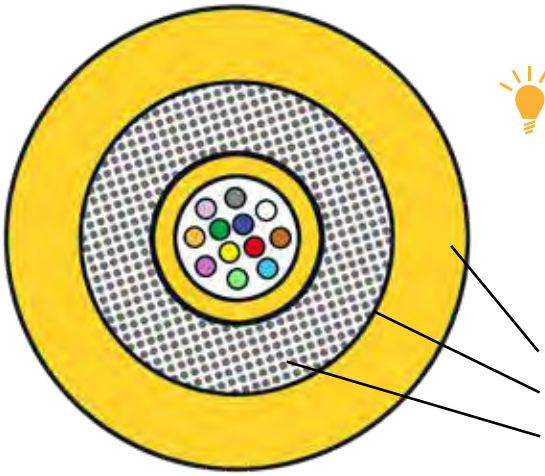
PRE-ASSEMBLED BREAKOUT- & LOOSE TUBE FIBER CABLE

EFB-Elektronik guarantees a fast delivery of pre-assembled breakout and loose tube cables of all common fiber optic connectors thanks to an extensive stock range. Individual customer orders are assembled in our own production and also delivered on time. Marking by means of letters or numbers ensures that individual cables are clearly labeled.

Installation Cable	P. 27
Pre-assembled Cable	P. 31
Trunk Cable stocked	P. 33

YOU MAY ALSO BE INTERESTED IN:

Splice Boxes	P. 42
Splicing- & Measurement Equipment	P. 72
Closures	P. 92
Accessory (Splice Cassette, Splice Protection)	P. 57
Adapters	P. 36
Cleaning Tools	P. 64



Fields of application:
For indoor use
For use in plastic pipe systems
For installation in cable ducts an on flatbeds

Characteristics:
Easy to use construction
Gel-free cable construction for clean and fast assembly
Small dimensions
High laying stability
Fire behavior tested and certified according to Construction Products Regulation (see Euro fire class)

Cable diameter can vary

Temperature Range (Operation):	see table
Temperature Range (Storage):	-25 – 70 °C
Temperature Range (Installation):	-5 – 50 °C

INFRALAN® I-B(ZN)BH 9/125µ, OS2

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)	Euro Class
56312.10S2-CPR	12E (1 x 12) Singlemode G.657.A1	6.5 mm	130 mm	yellow	1500 N	-25 – 60 °C	B2ca
56324.20S2-CPR	24E (2 x 12) Singlemode G.657.A1	8.3 mm	166 mm		3000 N	-10 – 70 °C	
56348.20S2-CPR	48E (4 x 12) Singlemode G.657.A1	8.3 mm	166 mm		3000 N	-10 – 70 °C	

INFRALAN® I-B(ZN)BH 50/125µ, OM4

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)	Euro Class
56312.10M4-CPR	12G (1 x 12) Multimode OM4	6.5 mm	130 mm	erica-violet	1500 N	-25 – 60 °C	B2ca
56324.20M4-CPR	24G (2 x 12) Multimode OM4	8.3 mm	166 mm		3000 N	-10 – 70 °C	
56348.20M4-CPR	48G (4 x 12) Multimode OM4	8.3 mm	166 mm		3000 N	-10 – 70 °C	

INFRALAN® I-B(ZN)BH 50/125µ, OM3

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)	Euro Class
56312.10M3-CPR	12G (1 x 12) Multimode OM3	6.5 mm	130 mm	aqua	1500 N	-25 – 60 °C	B2ca
56324.20M3-CPR	24G (2 x 12) Multimode OM3	8.3 mm	166 mm		3000 N	-10 – 70 °C	
56348.20M3-CPR	48G (4 x 12) Multimode OM3	8.3 mm	166 mm		3000 N	-10 – 70 °C	

Building classes according to the MBO			Fire classes	
Class	Description		Minimum requirement	
			Building (except escpae route)	Escape Routes
S1	high-rise buildings	exceeding 22 m	C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S2	construction works	exceeding 30 m	C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S3	buildings	with the largest floorspace of 1600 m², except for residential buildings and garages	C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S4	sales outlets	exceeding 800 m²	C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S5	office/ administration	rooms exceeding 400 m²	C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S6	buildings with single rooms	single rooms can be used with more than 100 persons	C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S7	places of assembly	more than 200 persons	C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S8	restaurants/ hotels	for more than 40 guests in buildings, more than 12 beds, casinos more than 150 m²	C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S9	buildings with functional units provided for care or assistance dependent people	more than 6 persons, need for intensive care	$B2_{ca}$ s1 d1 a1	$B2_{ca}$ s1 d1 a1
S10	hospitals		$B2_{ca}$ s1 d1 a1	$B2_{ca}$ s1 d1 a1
S11	other facilities for accommodating people like residences		C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S12	day-care facilities for children, disabled people and elderly		$B2_{ca}$ s1 d1 a1	$B2_{ca}$ s1 d1 a1
S13	schools, universities or similar facilities		C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S14	penal institution and contruction works for psychiatric hospital treatments		C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S16	leisure/ amusement parks		C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
S18	warehouse shelves with top of the load higher exceeding 7.5 m		E_{ca}	$B2_{ca}$ s1 d1 a1
S19	construction works for storafe of substances witht increased fire hazard		$B2_{ca}$ s1 d1 a1	$B2_{ca}$ s1 d1 a1
	Instustry		C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1
	server rooms		$B2_{ca}$ s1 d1 a1	$B2_{ca}$ s1 d1 a1
	road tunnels		$B2_{ca}$ s1 d1 a1	$B2_{ca}$ s1 d1 a1
	rail tunnels		$B2_{ca}$ s1 d1 a1	$B2_{ca}$ s1 d1 a1
	underground parking		C_{ca} s1 d2 a1	$B2_{ca}$ s1 d1 a1

Source: ZVEI: Die Elektroindustrie – Brandschutzkabel erhöhen die Sicherheit vom 12.10.2016

Applications:
For fixed installation indoor and outdoor
In cable ducts, tubes and interconnections
Mechanical installation by winch is permitted only when using force meters with recording function
Not suitable for underground laying (direct buried)

Characteristics:
Universal cable
Longitudinally waterproof
Non-metallic, halogen-free, rodent protection
suitable for connector assembly

Outer Jacket:
Euro Flame resistance class: see table
Halogen-free and flame-retardant material (FRNC)

Standards:
Harmonised Standard: EN 50575
Flame retardant: IEC 60332-3-24 and IEC 60332-1-2
Halogen-free: IEC 60754-1
Acidity of the combustion gases: IEC 60754-2
Low smoke: IEC 61034
No resistance to oil, petrol, acid and leach

The cable diameter can vary

Temperature Range (Operation):	see table
Temperature Range (Storage):	-40 – 80 °C
Temperature Range (Installation):	-20 – 60 °C

INFRALAN® Universal Cable U-DQ (ZN)BH G657.A1

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)	Euro Class
54404.1L-CPR	04E (1 x 4) Singlemode G.657.A1	7.0 mm	140 mm	black	1750 N	-20 – 60 °C	Dca
54408.1L-CPR	08E (1 x 8) Singlemode G.657.A1	7.0 mm	140 mm		1750 N	-20 – 60 °C	Dca
54412.1L-CPR	12E (1 x 12) Singlemode G.657.A1	7.0 mm	140 mm		1750 N	-20 – 60 °C	Dca
54424.1L-CPR	24E (1 x 24) Singlemode G.657.A1	7.5 mm	150 mm		1750 N	-20 – 60 °C	Dca
54448.1L-CPR	48E (4 x 12) Singlemode G.657.A1	11.2 mm	170 mm		4000 N	-40 – 80 °C	Eca
54496.1L-CPR	96E (8 x 12) Singlemode G.657.A1	13.1 mm	200 mm		4000 N	-40 – 80 °C	Eca

INFRALAN® Universal Cable U-DQ (ZN)BH OM5

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)	Euro Class
54504.10M5-CPR	04G (1 x 4) Multimode OM5	7.0 mm	140 mm	black	1750 N	-20 – 60 °C	Dca
54512.10M5-CPR	12G (1 x12) Multimode OM5	7.0 mm	140 mm				
54524.10M5-CPR	24G (1 x 24) Multimode OM5	7.5 mm	150 mm				

INFRALAN® Universal Cable U-DQ (ZN)BH OM4

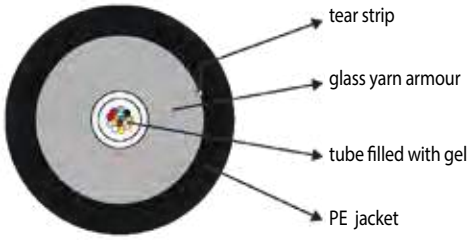
Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)	Euro Class
54504.2L-CPR	04G (1 x 4) Multimode OM4	7.0 mm	140 mm	black	1750 N	-20 – 60 °C	Dca
54508.2L-CPR	08G (1 x 8) Multimode OM4	7.0 mm	140 mm		1750 N	-20 – 60 °C	Dca
54512.2L-CPR	12G (1 x 12) Multimode OM4	7.0 mm	140 mm		1750 N	-20 – 60 °C	Dca
54524.2L-CPR TOPSELLER	24G (1 x 24) Multimode OM4	7.5 mm	150 mm		1750 N	-20 – 60 °C	Dca
54548.2L-CPR	48G (4 x 12) Multimode OM4	11.2 mm	170 mm		4000 N	-40 – 80 °C	Eca

INFRALAN® Universal Cable U-DQ (ZN)BH OM3

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)	Euro Class
54504.1L-CPR	04G (1 x 4) Multimode OM3	7.0 mm	140 mm	black	1750 N	-20 – 60 °C	Dca
54508.1L-CPR	08G (1 x 8) Multimode OM3	7.0 mm	140 mm		1750 N	-20 – 60 °C	Dca
54512.1L-CPR	12G (1 x 12) Multimode OM3	7.0 mm	140 mm		1750 N	-20 – 60 °C	Dca
54524.1L-CPR	24G (1 x 24) Multimode OM3	7.5 mm	150 mm		1750 N	-20 – 60 °C	Dca
54548.1L-CPR	48G (4 x 12) Multimode OM3	11.2 mm	170 mm		4000 N	-40 – 80 °C	Eca

INFRALAN® Universal Cable U-DQ (ZN)BH OM2

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)	Euro Class
54204.1L-CPR	04G (1 x 4) Multimode OM2	7.0 mm	140 mm	black	1750 N	-20 – 60 °C	Dca
54208.1L-CPR	08G (1 x 8) Multimode OM2	7.0 mm	140 mm		1750 N	-20 – 60 °C	Dca
54212.1L-CPR	12G (1 x 12) Multimode OM2	7.0 mm	140 mm		1750 N	-20 – 60 °C	Dca
54224.1L-CPR	24G (1 x 24) Multimode OM2	7.5 mm	150 mm		1750 N	-20 – 60 °C	Dca
54248.1L-CPR	48G (4 x 12) Multimode OM2	11.2 mm	170 mm		4000 N	-40 – 80 °C	Eca



Application:
For fixed installation outdoor
In cable ducts, tubes and interconnections
Primary cabling (Campus), Backbone

Characteristics:
PE-Jacket black, metall-free, longitudinal waterproof, halogen-free
UV-restistant, rodent restistant
Restistant to oil, petrol, acid and leach
Central/Loose tubes, 250µm-coating

Standards:
Longitudinal waterproof: IEC 60794-1-2
Transmission specifications: IEC 60793
Cabling: ISO/IEC 11801, EN 50173

The cable diameter can vary

Temperature Range (Operation): see table
Temperature Range (Storage): -40 – 70 °C
Temperature Range (Installation): -15 – 50 °C

Outdoor Cable A-DQ (ZN)B2Y SM G657.A1

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)
55404.1	04E (1 x 4) Singlemode G.657.A1	7.1 mm	140 mm	black	1750 N	-25 – 60 °C
55408.1	08E (1 x 8) Singlemode G.657.A1	7.1 mm	140 mm		1750 N	-25 – 60 °C
55412.1	12E (1 x 12) Singlemode G.657.A1	7.1 mm	140 mm		1750 N	-25 – 60 °C
55424.1	24E (1 x 24) Singlemode G.657.A1	7.3 mm	150 mm		1750 N	-25 – 60 °C
55448.1	48E (4 x 12) Singlemode G.657.A1	11.2 mm	170 mm		4000 N	-40 – 60 °C
55472.1	72E (6 x 12) Singlemode G.657.A1	11.6 mm	175 mm		4000 N	-40 – 60 °C
55496.1	96E (8 x 12) Singlemode G.657.A1	13.1 mm	200 mm		4000 N	-40 – 60 °C
554144.1	144E (12 x 12) Singlemode G.657.A1	16.0 mm	320 mm		4000 N	-40 – 60 °C

Outdoor Cable A-DQ (ZN)B2Y MM OM4

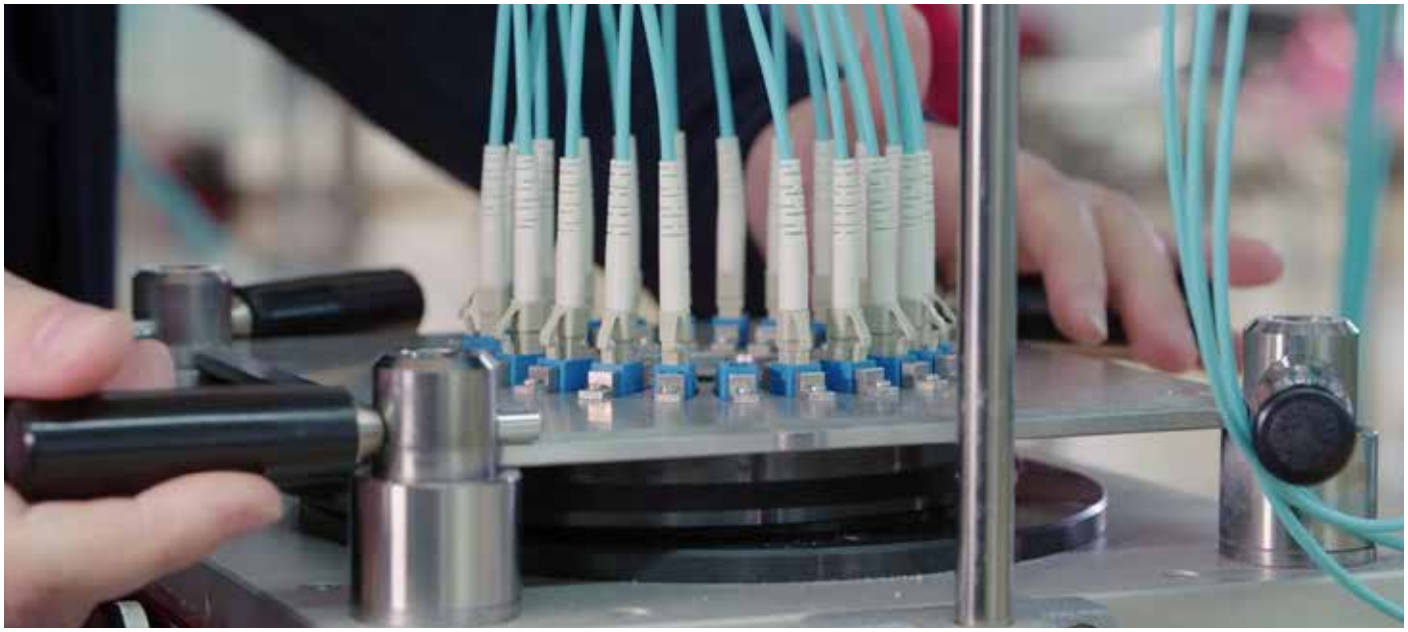
Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)
55204.10M4A	04G (1 x 4) Multimode OM4	6.0 mm	60 mm	black	1500 N	-25 – 60 °C
55208.10M4A	08G (1 x 8) Multimode OM4	6.0 mm	60 mm			
55212.10M4A	12G (1 x 12) Multimode OM4	6.0 mm	60 mm			
55224.10M4A	24G (2 x 12) Multimode OM4	7.2 mm	72 mm			

Outdoor Cable A-DQ (ZN)B2Y MM OM3

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)
55204.10M3A	04G (1 x 4) Multimode OM3	6.0 mm	60 mm	black	1500 N	-25 – 60 °C
55208.10M3A	08G (1 x 8) Multimode OM3	6.0 mm	60 mm			
55212.10M3A	12G (1 x 12) Multimode OM3	6.0 mm	60 mm			
55224.10M3A	24G (2 x 12) Multimode OM3	7.2 mm	72 mm			

Outdoor Cable A-DQ (ZN)B2Y MM OM2

Art.-No.	Construct	Cable Ø	Bending radius	Colour outer sheath	Tensile Force	Temperature Range (Operation)
55204.1A	04G (1 x 4) Multimode OM4	6,0 mm	60 mm	black	1500 N	-25 – 60 °C
55208.1A	08G (1 x 8) Multimode OM2	6,0 mm	60 mm			
55212.1A	12G (1 x 12) Multimode OM2	6,0 mm	60 mm			
55224.1A	24G (2 x 12) Multimode OM2	7,2 mm	72 mm			



Our fiber optic production

One of our own manufacturing plants in Germany is located in Sonneberg. This location is specialised in the assembly of fiber optic cables, subracks, FTTX components and special fixtures, as well as in fitting of splice boxes. We ensure the highest quality level due to :

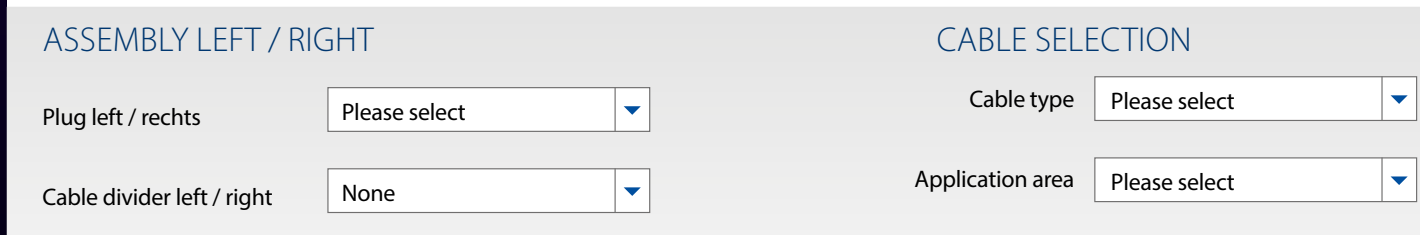
- many years of experience and employees with a high level of expertise
- the use of state-of-the-art test/inspection technology, a production sequence process and the implementation of regular quality controls during serial production
- high stock availability of individual components and short production times
- R&M certified production processes for the serial production of E-2000 connectors to achieve the highest level of quality

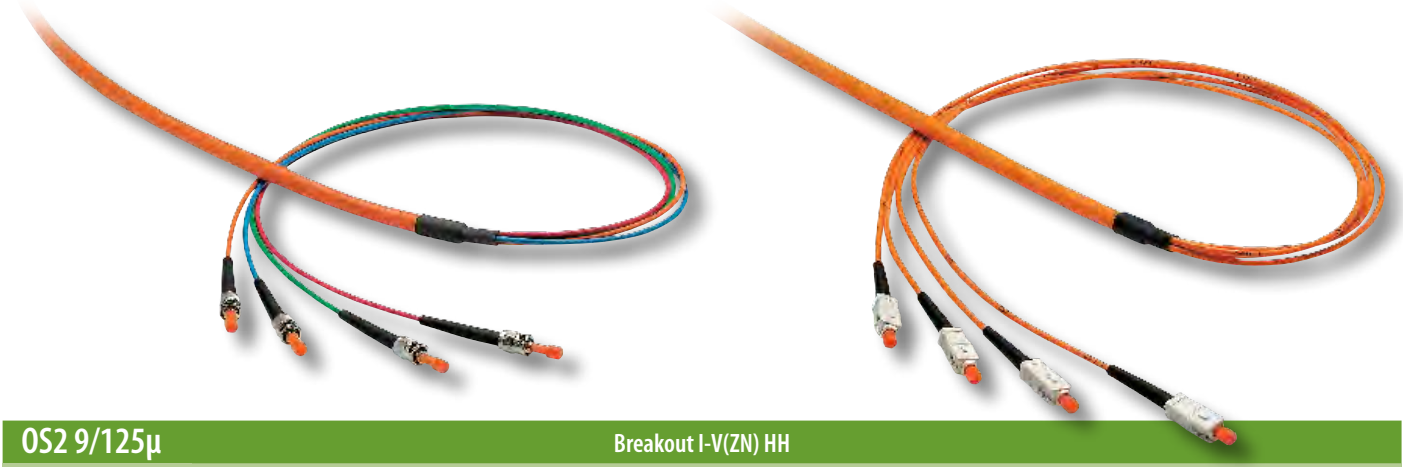
To find out more details about our manufacturing plants in Germany, visit our website:
https://www.efb-elektronik.de/en/production

Configurator for break-out and loose tube cables

- Easy and quick access to individual products
- Sensible alternative solutions in case of conflicts
- Configurations are saved automatically: Call up, edit and order again
- Individually customised live price calculation
- Requesting quotations online directly with the configurator
- Detailed product specifications
- On call twenty-four seven

Direct access to the configurator https://konfigurator.efb-elektronik.de/





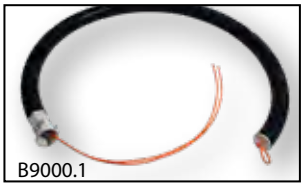
OS2 9/125µ	Breakout I-V(ZN) HH			
	2	4	8	12
LC - SC	01790.x	01820.x	01832.x	01873.x
ST - LC	01792.x	01712.x	01732.x	01752.x
ST - ST	01800.x	01711.x	01731.x	01751.x
ST - SC	01801.x	01723.x	01740.x	01951.x
SC - SC	01802.x	01811.x	01831.x	01851.x
LC - LC	01803.x	01812.x	01840.x	01754.x
SC - SC-APC	01805.x	01815.x	01730.x	01879.x
SC-APC - SC-APC	01806.x	01818.x	01734.x	01885.x
LC - SC-APC	01780.x	01713.x	01846.x	01881.x
LC - E2000®	01794.x	01719.x	01835.x	01755.x
ST - E2000®	01807.x	01714.x	01736.x	01825.x
SC - E2000®	01808.x	01718.x	01834.x	01865.x
E2000® - E2000®	01809.x	01716.x	01839.x	01824.x
ST - SC-APC	01783.x	01715.x	01733.x	01878.x

OM4 50/125µ	Breakout I-V(ZN) HH			
	2	4	8	12
ST - LC	06122.x0M4	06512.x0M4	06532.x0M4	09872.x0M4
ST - ST	06131.x0M4	06511.x0M4	06531.x0M4	06551.x0M4
SC - SC	06771.x0M4	06711.x0M4	06671.x0M4	06751.x0M4
LC - SC	06772.x0M4	06712.x0M4	06674.x0M4	06752.x0M4
LC - LC	06773.x0M4	06720.x0M4	06672.x0M4	09873.x0M4
ST - SC	09811.x0M4	09831.x0M4	09851.x0M4	09871.x0M4

OM3 50/125µ	Breakout I-V(ZN) HH			
	2	4	8	12
ST - LC	06122.x0M3	06512.x0M3	06532.x0M3	09872.x0M3
ST - ST	06131.x0M3	06511.x0M3	06531.x0M3	06551.x0M3
SC - SC	06771.x0M3	06711.x0M3	06671.x0M3	06751.x0M3
LC - SC	06772.x0M3	06712.x0M3	06674.x0M3	06752.x0M3
LC - LC	06773.x0M3	06720.x0M3	06672.x0M3	09873.x0M3
ST - SC	09811.x0M3	09831.x0M3	09851.x0M3	09871.x0M3
LC - E2000®	06123.x0M3	06713.x0M3		
E2000® - E2000®	06774.x0M3	06514.x0M3	06534.x0M3	06754.x0M3
SC - E2000®	06775.x0M3	06714.x0M3		

OM2 50/125µ	Breakout I-V(ZN) HH			
	2	4	8	12
ST - LC	06122.x	06512.x	06532.x	09872.x
ST - ST	06131.x	06511.x	06531.x	06551.x
SC - SC	06771.x	06711.x	06671.x	06751.x
LC - SC	06772.x	06712.x	06674.x	06752.x
LC - LC	06773.x	06720.x	06672.x	09873.x
ST - SC	09811.x	09831.x	09851.x	09871.x
E2000® - E2000®	06774.x	06514.x	06534.x	06754.x
SC - E2000®	06775.x	06714.x	06535.x	06753.x
ST - E2000®	06779.x	06715.x		
LC - E2000®	06123.x	06713.x		06755.x

OM1 62,5/125µ	Breakout I-V(ZN) HH			
	2	4	8	12
LC - ST	06892.x	06523.x	06545.x	
ST - ST	06141.x	06521.x	06541.x	06561.x
SC - SC	06781.x	06721.x	06681.x	06761.x
LC - SC	06890.x	06722.x	06682.x	06562.x
LC - LC	06891.x	06522.x	06542.x	06570.x
ST - SC	09821.x	09841.x	09861.x	09881.x


B9000.1

B9000.2/B9000.2-24

Drawing in Tubes

Art.-No.	Description	Number of connectors	Ø in mm
B9000.1	Drawing in Tube	up to 24	33.5
B9000.2	Premium „1" Drawing in tube, 1 m	up to 12	33.5
B9000.2-24	Premium „2" Drawing in tube, 1 m	up to 24	41.0

OS2 9/125µ — Universal Cable U-DQ(ZN) BH

	4	8	12	24
ST - ST	08121.x	08131.x	08141.x	08821.x
LC - LC	08122.x	08132.x	08814.x	08832.x
ST - LC	08123.x	08133.x	08143.x	08828.x
SC - SC	08421.x	08431.x	08441.x	08831.x
LC - SC	08430.x	08432.x	08442.x	08829.x
ST - SC	08801.x	08451.x	08811.x	08161.x
LC - E2000®	08417.x	08455.x	08148.x	08830.x
LC - SC-APC	08418.x	08438.x	08446.x	08827.x
E2000® - E2000®	08125.x	08461.x	08146.x	08834.x
SC - E2000®	08126.x	08460.x	08147.x	08826.x
SC - SC-APC	08422.x	08435.x	08443.x	08162.x
SC-APC - SC-APC	08428.x	08439.x	08445.x	08835.x
E2000®-APC - SC-APC	08804.x		08810.x	
ST - E2000®	08124.x	08454.x	08144.x	08833.x

OM5 50/125µ — Universal Cable U-DQ(ZN) BH

	4	12	24
LC - LC	08303.x0M5	08342.x0M5	08392.x0M5
SC - SC	08301.x0M5	08341.x0M5	08382.x0M5

OM4 50/125µ — Universal Cable U-DQ(ZN) BH

	4	8	12	24
ST - ST	08201.x0M4	08221.x0M4	08241.x0M4	08381.x0M4
LC - SC	08302.x0M4	08325.x0M4	08344.x0M4	08393.x0M4
LC - LC	08303.x0M4	08322.x0M4	08342.x0M4	08392.x0M4
ST - SC	09711.x0M4	09731.x0M4	09751.x0M4	08390.x0M4
ST - LC	08307.x0M4	08223.x0M4	08242.x0M4	08391.x0M4
SC - SC	08301.x0M4	08321.x0M4	08341.x0M4	08382.x0M4

OM3 50/125µ — Universal Cable U-DQ(ZN) BH

	4	8	12	24
SC - SC	08301.x0M3	08321.x0M3	08341.x0M3	08382.x0M3
LC - SC	08302.x0M3	08325.x0M3	08344.x0M3	08393.x0M3
LC - LC	08303.x0M3	08322.x0M3	08342.x0M3	08392.x0M3
ST - ST	08201.x0M3	08221.x0M3	08241.x0M3	08381.x0M3
ST - SC	09711.x0M3	09731.x0M3	09751.x0M3	08390.x0M3
ST - LC	08307.x0M3	08223.x0M3	08242.x0M3	08391.x0M3

OM2 50/125µ — Universal Cable U-DQ(ZN) BH

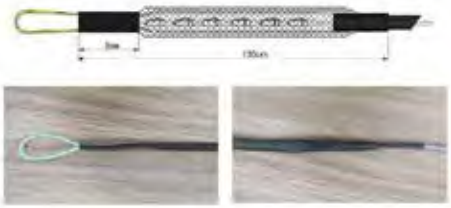
	4	8	12	24
ST - ST	08201.x	08221.x	08241.x	08381.x
SC - SC	08301.x	08321.x	08341.x	08382.x
LC - SC	08302.x	08325.x	08344.x	08393.x
LC - LC	08303.x	08322.x	08342.x	08392.x
LC - ST	08307.x	08223.x	08242.x	08391.x
ST - SC	09711.x	09731.x	09751.x	08390.x

OM1 62,5/125µ — Universal Cable U-DQ(ZN) BH

	4	8	12	24
SC - SC	08311.x	08331.x	08351.x	08181.x
LC - LC	08214.x	08332.x	08360.x	08182.x
LC - SC	08312.x	08333.x	08352.x	08183.x
ST - ST	08211.x	08231.x	08251.x	08281.x
ST - LC	08212.x	08334.x	08252.x	08283.x
ST - SC	09721.x	09741.x	09761.x	08291.x

NEW

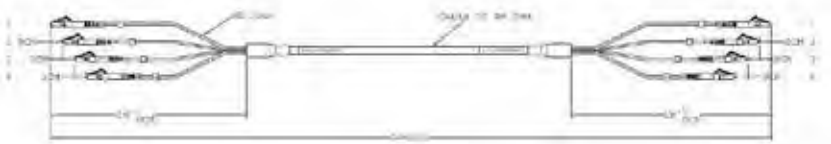
Fast delivery: standard lengths up to 200 m in commercial quantities available from stock
Reduction of installation costs: no expensive splicing and assembly equipment required
Reduction of installation time: fiber ready for direct installation
Traceable quality: fiber with serial number and measurement protocol



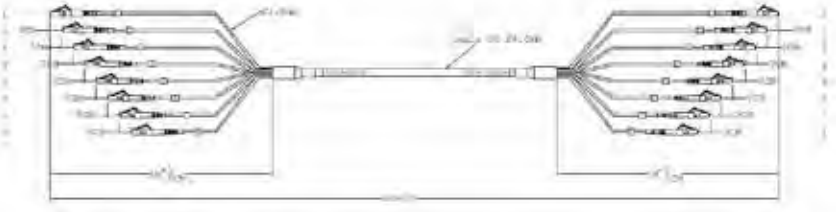
EFB-Elektronik sets standards in high quality

For many years, EFB-Elektronik has been offering individual fiber optic assemblies from its own production for insertion into cable ducts and shafts. Now there is also a standard line, which is kept in stock. These are pre-assembled trunk cables with LC connectors in the OM3 and OM4 categories. The stocked lengths can be found in the overview below.

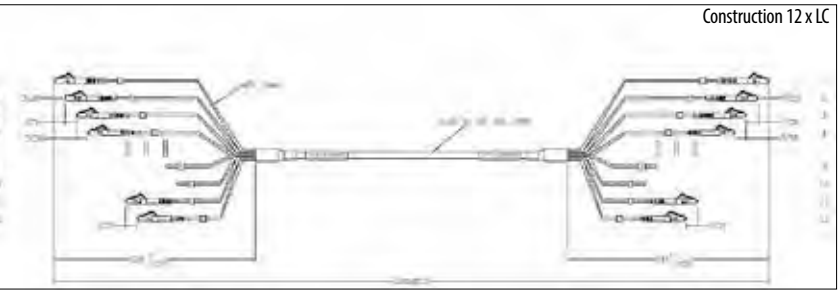
Construction 4 x LC



Construction 8 x LC



Construction 12 x LC



Performance features:
4, 8 or 12 Fiber per cable
Fiber class OM3 or OM4
Factory production, polishing and function test
Double-sided assembled stepped cable whips (longest length 1 m)
Identification of the remote individual cables with cable markers (numbers)
Serial number on the cable
Attenuation protocol for each individual fiber is provided
Delivery on both sides with fabric hose as drawing in tube
Delivery up to 40 m in polybag, from 50 m on disposable drum

Fiber type:..... Multimode 50/125
Category:..... OM3
Cable type: ..... U-DQ (ZN) H
Cable Ø: ..... 6.0 mm
Colour outer sheath:..... black
Max. Tension:..... 200 N
Min. Bending radius (Static):..... 90 mm
Min. Bending radius (Dynamic):..... 180 mm
Operating Temperature:..... 0 – 50 °C
Storage Temperature:..... -20 – 70 °C

Trunk Cable U-DQ(ZN)BH 50/125 LC/LC OM3

Art.-No.	Type of connector connection 1	Type of connector connection 2	Number of fibers
08303LxxOM3	4 x LC, beige	4 x LC, beige	4
08322LxxOM3	8 x LC, beige	8 x LC, beige	8
08342LxxOM3	12 x LC, beige	12 x LC, beige	12

Trunk Cable U-DQ(ZN)BH 50/125 LC/LC OM4

Art.-No.	Type of connector connection 1	Type of connector connection 2	Number of fibers
08303LxxOM4	4 x LC, beige	4 x LC, beige	4
08322LxxOM4	8 x LC, beige	8 x LC, beige	8
08342LxxOM4	12 x LC, beige	12 x LC, beige	12

Stock Lengths: 10 - 20 - 30 - 40 - 50 - 60 - 70 - 80 - 90 - 100 - 120 - 140 - 160 - 180 - 200 m

Outdoor Cable A-DQ(ZN) B2Y					
OS2 9/125µ		4	8	12	24
	SC - SC	08421.xADQ		08441.xADQ	08831.xADQ
	ST - ST	08121.xADQ	08131.xADQ	08141.xADQ	08821.xADQ
	LC - LC	08122.xADQ	08132.xADQ	08814.xADQ	08832.xADQ
	LC - ST	08123.xADQ	08133.xADQ	08143.xADQ	08828.xADQ
	LC - SC	08430.xADQ	08432.xADQ	08442.xADQ	08829.xADQ
	ST - SC	08801.xADQ	08451.xADQ	08811.xADQ	08161.xADQ

Outdoor Cable A-DQ(ZN) B2Y					
OM4 50/125µ		4	8	12	24
	LC - SC	08302.xADQOM4	08325.xADQOM4		
	ST - ST	08201.xADQOM4	08221.xADQOM4	08241.xADQOM4	08381.xADQOM4
	SC - SC	08301.xADQOM4	08321.xADQOM4	08341.xADQOM4	08382.xADQOM4
	LC - LC	08303.xADQOM4	08322.xADQOM4	08342.xADQOM4	08392.xADQOM4

Outdoor Cable A-DQ(ZN) B2Y					
OM3 50/125µ		4	8	12	24
	SC - SC		08321.xADQOM3	08341.xADQOM3	08382.xADQOM3
	ST - ST		08221.xADQOM3	08241.xADQOM3	08381.xADQOM3
	ST - SC	09711.xADQOM3	09731.xADQOM3	09751.xADQOM3	08390.xADQOM3
	ST - LC	08307.xADQOM3	08223.xADQOM3	08242.xADQOM3	08391.xADQOM3
	LC - LC	08303.xADQOM3	08322.xADQOM3	08342.xADQOM3	08392.xADQOM3
	SC - LC	08302.xADQOM3	08325.xADQOM3	08344.xADQOM3	08393.xADQOM3

Outdoor Cable A-DQ(ZN) B2Y					
OM2 50/125µ		4	8	12	24
	ST - LC	08307.xADQ	08223.xADQ	08242.xADQ	08391.xADQ
	LC - LC	08303.xADQ	08322.xADQ	08342.xADQ	08392.xADQ
	ST - SC	09711.xADQ	09731.xADQ	09751.xADQ	08390.xADQ
	SC - LC	08302.xADQ	08325.xADQ	08344.xADQ	08393.xADQ
	SC - SC				08382.xADQ

OM-Classification ISO/IEC 11801		OM1	OM2	OM3	OM4	OM5
Min. modal bandwidth with overfilled launch [MHz*km]	850 nm	200	500	1500	3500	4700
	1300 nm	500	500	500	500	2470
Min. modal bandwidth EMB (effective laser bandwidth) [MHz*km]	850 nm	n/s	n/s	2000	4700	n/s
Attenuation[dB/km]	1300 nm	1.5	1.5	1.5	1.5	1,5
	850 nm	3.5	3.5	3.5	3.5	3,5

Fiber Grade	Core/Cladding	Attenuation[dB/km] 1300nm	850nm	Gigabit 1000BaseSX	Gigabit 1000BaseLX	10Gigabit 10GBaseSR	25 Gigabit 25GBaseSR	40 Gigabit 40GBaseSR4	100 Gigabit 100GBaseSR4
OM1	62.5/125µ	1.5	3.5	275 m	550 m	ca. 30 m	-	-	-
OM2	50/125µ	1.5	3.5	550 m	550 m	ca. 80 m	-	-	-
OM3	50/125µ	1.5	3.5	1000 m	550 m	300 m	70 m	100 m	70 m
OM4	50/125µ	1.5	3.5	>1000 m	550 m	550 m	100 m	150 m	100 m
OM5	50/125µ	1,5	3,5	>1000 m	550 m	550 m	440 m	150 m	150 m

BLP = Modal Bandwidth

Number	Parameters	Abbreviation	Property
1	**Cable type**	I	Indoor cable
		A	Outdoor cable
		AT	Breakout cable
2	**Fiber protection**	F	Fiber with 250 µm buffer
		V	Full core, i.e. F with 900 µm buffer
		H	Hollow core, one fiber dry
		W	Hollow core filled with GEL
		B	Bundled core, many fibers dry
		D	Bundled core filled with GEL
3	**Central element**	S	Metal strand as cable core
4	**Cable filling**	F	Hollow core filled with GEL
5	**Outer jacket**	H	Halogen-free material
		Y	PVC (polyvinyl chloride)
		2Y	PE (poly ethylene)
		(L)2Y	Sheath with PE
		(D)2Y	PE with plastic barrier layer
		(ZN)2Y	PE with non-metallic strain relief
		(BN)2Y	PE with non-metallic glas-fiber yarn armouring
		4Y	PA (rodent-proof polyamide)
		11Y	PUR (polyurethane, elastic, chemically resistant)
6	**Armouring**	B	Armouring, general
		BY	Armouring plus PVC protective sheath
		B2Y	Armouring plus PE protective sheath
		Q	Swelling fleece wrap
7	**Number of fibers**	e.g.: 6	6 full cores or cable
		4 x 6	4 bundle cores, each with 6 fibers
8	**Fiber Type**	E	Single-mode fiber (Single-mode)
		G	Gradient index fiber (Multi-mode)
		S	Step index fiber, glass/glass
		K	Step index fiber, glass/plastic
		P	Plastic fiber
9	**Fiber core**	µm	e.g.: 9, 50 or 62.5
10	**Fiber jacket**	µm	e.g.: 125
11	**Attenuation**	dB/km	at the wavelength of No. 12
12	**Wavelength**	B	850 nm
		F	1300 nm (MM) and 1310 nm (SM)
		H	1550 nm
13	**Dispersion**	MHz x km	Bandwidth on multimode fibers
		ns/km	with single-mode also ps/nm/km
14	**Special types**	LG	Layer stranding of the cable
		SZ	SZ stranding of the cable

CONNECTORS- & ADAPTERS

Connectors and couplings influence the quality of the fiber optic connection - they are an essential part of every fiber optic transmission link. In line with the respective application, EFB-Elektronik offers an extensive selection of connectors or couplings (PC / APC) with ceramic sleeves.

Connectors & Boots		**P. 37**
Adapters		**P. 38**
Attenuators		**P. 41**

YOU MAY ALSO BE INTERESTED IN:

Fiber Pigtails	P. 24
Jumper	P. 15
Splice Boxes	P. 42
FTTH Boxes	P. 80
Fiber Optic Cable Pre-Assembled	P. 32
Cleaning Tools	P. 64

only at 2mm version delivery
with shrink tube

grommet: white
PU: 100, Price/piece

PU: 100, Price/piece

LC Connectors

Art.-No.	Suitable for fiber	APC-version	Colour	Cable Ø
53232.7	Singlemode	yes	green	2.0 mm
53232.6	Singlemode	no	blue	2.0 mm
53233.8	Multimode	no	beige	2.0 mm
53233.9	Multimode	no	beige	3.0 mm

Accessory

Art.-No.	Description
53234.6	Universal Clip for LC Duplex transparent

SC Connectors

Art.-No.	Suitable for fiber	APC-version	Grommet	Colour	Cable Ø
53214.1	Singlemode	yes	green	green	2.0 mm
53214.2	Singlemode	yes	green	green	3.0 mm
53206.12	Multimode	no	red	beige	3.0 mm
53206.11	Multimode	no	black	beige	3.0 mm

Accessory

Art.-No.	Description
53205.31	Universal Clip blue for SC-Duplex
53205.30	Universal Clip beige for SC-Duplex

PU: 100, Price/piece

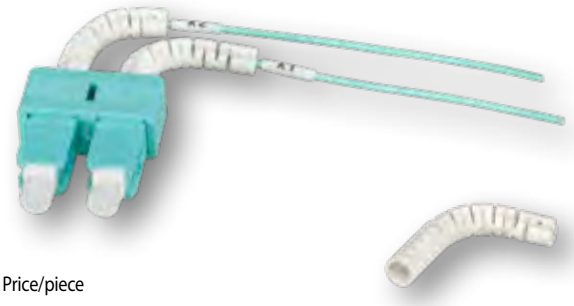
Delivery without boot
PU: 100, Price/piece

FC Connector Set with plug, ferrule and boot

Art.-No.	Suitable for fiber	APC-version	Grommet	Cable Ø
53227.5	Singlemode	yes	green	3.0 mm
53227.3	Singlemode	no	black	3.0 mm
53227.4	Singlemode	no	red	3.0 mm
53216.3	Multimode	no	black	3.0 mm

ST Connectors

Art.-No.	Suitable for fiber	APC-version	Colour	Cable Ø
53210.3	Singlemode	no	metal	3.0 mm
53202.3	Multimode	no	metal	3.0 mm



PU: 100, Price/piece

Boot, flexible, white

flexible boot
Bending 90° to the left and 90° to the right side possible
Holds the position

Art.-No.	Colour	Connector	Cable Ø
53210.1	white	LC	2.0 mm
53210.2	white	SC	2.0 mm

Boots for ST and SC Connectors

Art.-No.	Colour	Connector	Cable Ø
53202.31	black	ST/SC	0.9 mm
53202.32	black	ST	3.0 mm
53202.33	red	ST	3.0 mm

LC Duplex Adapter one-piece with plastic housing

Type of connector connection 1:..... LC-Duplex
Type of connector connection 2:..... LC-Duplex
Type of fastening:..... Screw/lock
Design:..... SC-Simplex
Accessory:..... Self-Tapping Screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

higher stability through one-piece housing

Art.-No.	Suitable for fiber	Colour	Version
53343.31	Singlemode	green	LC/APC
53350.31	Singlemode	blue	LC/PC
53334.10M5	Multimode	lime green	LC/PC
53334.1	Multimode	erica-violet	LC/PC
53357.31	Multimode	aqua	LC/PC
53348.32	Multimode	beige	LC/PC

LC Quad Adapter one-piece with Platic housing

Type of connector connection 1:..... LC-Quad
Type of connector connection 2:..... LC-Quad
Type of fastening:..... Screw/lock
Desgin:..... SC-Duplex
Accessory:..... Self-Tapping Screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

higher stability through one-piece housing

Art.-No.	Suitable for fiber	Colour	Version
53353.31	Singlemode	green	LC/APC
53353.3	Singlemode	blue	LC/PC
53335.1	Multimode	erica-violet	LC/PC
53355.32	Multimode	aqua	LC/PC
53352.3V1	Multimode	beige	LC/PC

LC Duplex Adapter with metal housing

Type of connector connection 1:..... LC-Duplex
Type of connector connection 2:..... LC-Duplex
Type of fastening:..... Screw/lock
Design:..... SC-Simplex
Accessory:..... Metric screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53343.1	Singlemode	metal	LC/PC

LC Quad Adapter with metal housing

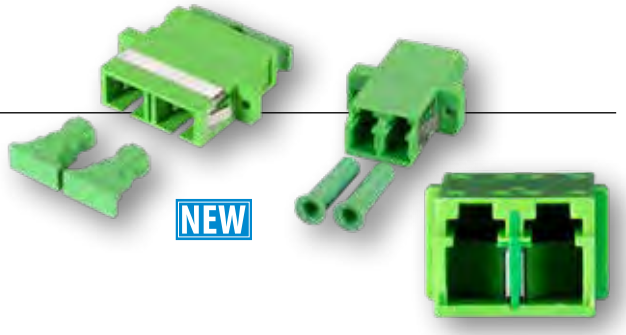
Type of connector connection 1:..... LC-Quad
Type of connector connection 2:..... LC-Quad
Type of fastening:..... Screw/lock
Design:..... SC-Duplex
Accessory:..... Metric screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53353.1	Singlemode	metal	LC/PC

Adapter Singlemode one-piece, with internal shutter

Suitable for fiber:..... Singlemode
Sleeve material:..... Ceramic
Colour:..... green
Version:..... APC
PU:..... 12, Price/piece

Laserprotection by internal shutter



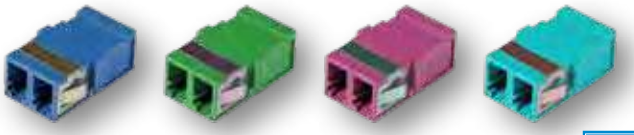
Art.-No.	Type of connector connection 1	Type of connector connection 2	Type of fastening	Design	Accessory	Version of housing
53343.32	LC-Duplex	LC-Duplex	Screw/lock	SC-Simplex	Self-Tapping screw	with flange
53519.2	LC-Duplex	LC-Duplex	lock	SC-Simplex	-	flangeless
53353.32	LC-Quad	LC-Quad	Screw/lock	SC-Duplex	Self-Tapping screw	with flange
53316.36	SC-Duplex	SC-Duplex	Screw/lock	SC-Duplex	Self-Tapping screw	with flange

Accessories for all items on this double-side

Art.-No.	Description
80550.1-50	Self-tapping screw ST2,5 50 pcs., DIN7971, for plastic adapters
80715.1-200	screw, zinc plated with nut M2x8, PU 200, for metal adapters
53215.1	Laser protection cover SC-Duplex
53217.1	Laser protection cover LC-Duplex
37501WS.1	Keystone adapter frame, white, for flangeless adapters
37501SW.1	Keystone adapter frame, black, for flangeless adapters

Adapter colours and its classes

Singlemode	Multimode
blue = Singlemode PC green= Singelmode APC	OM5= lime green OM4= erica-violet OM3= aqua OM2= beige OM1= beige



NEW

LC Duplex Adapter flangeless one-piece with plastic housing

Type of connector connection 1:..... LC-Duplex
Type of connector connection 2:..... LC-Duplex
Type of fastening:..... Lock
Design:..... SC-Simplex
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

higher stability through one-piece housing

Art.-No.	Suitable for fiber	Colour	Version
53519.1	Singlemode	green	LC/APC
53515.1	Singlemode	blue	LC/PC
53517.1	Multimode	erica-violet	LC/PC
53516.1	Multimode	aqua	LC/PC

NEW

SC Simplex Adapter flangeless one-piece with plastic housing

Type of connector connection 1:..... SC-Simplex
Type of connector connection 2:..... SC-Simplex
Type of fastening:..... Lock
Design:..... SC-Simplex
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

higher stability through one-piece housing

Art.-No.	Suitable for fiber	Colour	Version
53518.1	Singlemode	green	SC/APC
53511.1	Singlemode	blue	SC/PC
53513.1	Multimode	erica-violet	SC/PC
53512.1	Multimode	aqua	SC/PC
53510.1	Multimode	beige	SC/PC

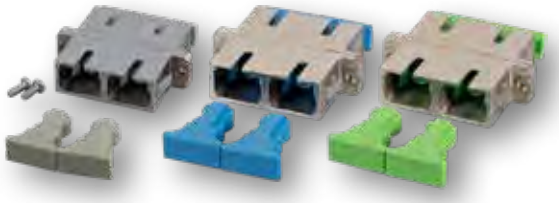
NEW

SC Duplex Adapter one-piece with plastic housing

Type of connector connection 1:..... SC-Duplex
Type of connector connection 2:..... SC-Duplex
Type of fastening:..... Screw/lock
Design:..... SC-Duplex
Accessory:..... Self-Tapping Screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

higher stability through one-piece housing

Art.-No.	Suitable for fiber	Colour	Version
53316.35	Singlemode	green	SC/APC
53316.3	Singlemode	blue	SC/PC
53333.10M5	Multimode	lime green	SC/PC
53333.1	Multimode	erica-violet	SC/PC
53356.1	Multimode	aqua	SC/PC
53303.32	Multimode	beige	SC/PC



SC Duplex Adapter with metal housing

Type of connector connection 1:..... SC-Duplex
Type of connector connection 2:..... SC-Duplex
Type of fastening:..... Screw
Design:..... SC-Duplex
Accessory:..... Metrtic screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53319.3	Singlemode	metal	SC/APC
53316.34	Singlemode	metal	SC/PC
53312.34	Multimode	metal	SC/PC

NEW

higher stability through one-piece housing

SC Simplex Adapter one-piece with plastic housing

Type of connector connection 1:..... SC-Simplex
Type of connector connection 2:..... SC-Simplex
Type of fastening:..... Screw/lock
Design:..... SC-Simplex
Accessory:..... Self-Tapping screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53302.32	Singlemode	green	SC/APC
53302.31	Singlemode	blue	SC/PC
53302.33	Multimode	beige	SC/PC

Fiber optic hybridadapter plug/jack

Hybridadapter plug/jack in different versions for adapting by changes of the connectors

PU: 1, Price/piece

Art.-No.	Suitable for fiber	Connector
53432.1	Multimode	SC-male, LC-female, OM3
53422.1	Multimode	SC-male, LC-female, OM2
53426.1	Multimode	LC-male, SC-female, OM2
53420.1V1	Multimode	SC-male, ST-female, OM2

ST/SC Duplex Hybridadapter with plastic housing

Type of connector connection 1:..... ST-Duplex
Type of connector connection 2:..... SC-Duplex
Type of fastening:..... Screw/lock
Design:..... SC-Duplex
Accessory:..... Self-Tapping screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53320.3	Singlemode	blue	PC
53305.31	Multimode	beige	PC

ST/SC Duplex Hybridadapter with metal housing

Type of connector connection 1:..... ST-Duplex
Type of connector connection 2:..... SC-Duplex
Type of fastening:..... Screw/lock
Design:..... SC-Duplex
Accessory:..... Metric screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53320.34	Singlemode	metal	PC
53307.34	Multimode	metal	PC

ST Simplex Adapter with metal housing

Type of connector connection 1:..... ST-Simplex
Type of connector connection 2:..... ST-Simplex
Type of fastening:..... Screw
Design:..... ST-Simplex
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53103.3	Singlemode	metal	ST/PC
53102.32	Multimode	metal	ST/PC

ST Duplex Adapter with metal housing

Type of connector connection 1:..... ST-Duplex
Type of connector connection 2:..... ST-Duplex
Type of fastening:..... Screw
Design:..... SC-Duplex
Accessory:..... Metric screw
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53313.34	Singlemode	metal	ST/PC

E2000® Simplex adapter flangeless

Type of connector connection 1:..... E2000®-Simplex
Type of connector connection 2:..... E2000®-Simplex
Type of fastening:..... lock
Design:..... SC-Simplex
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53526.1	Singlemode	green	E2000®/APC

E2000® Simplex Adapter

Type of connector connection 1:..... E2000®-Simplex
Type of connector connection 2:..... E2000®-Simplex
Type of fastening:..... Screw
Design:..... SC-Simplex
Sleeve material:..... Ceramic
PU:..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53532.1V2	Singlemode TOPSELLER	green	E2000®/APC
53531.1	Singlemode	blue	E2000®/PC
53529.1V2	Multimode	beige	E2000®/PC

Accessories for all items on this double-side

Art.-No.	Description
80550.1-50	Self-tapping screw ST2,5 50 pcs., DIN7971, for plastic adapters
80715.1-200	screw, zinc plated with nut M2x8, PU 200, for metal adapters
37501WS.1	Keystone adapter frame, white, for flangeless adapters
37501SW.1	Keystone adapter frame, black, for flangeless adapters

E2000® Duplex Compact Adapter

Type of connector connection 1: ..... E2000® compact
Type of connector connection 2: ..... E2000® compact
Type of fastening: ..... Screw
Sleeve material: ..... Ceramic
PU: ..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53523.1	Singlemode	green	E2000®/APC
53525.1	Multimode	aqua	E2000®/PC

MTP®/MPO Adapter

Type of connector connection 1: ..... MTP®/MPO
Type of connector connection 2: ..... MTP®/MPO
Type of fastening: ..... Screw/lock
Sleeve material: ..... Plastic
PU: ..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53458.1V2	Singlemode/ Multimode	black	MTP®/MPO PC MTP®/MPO APC

FC Adapter with metal housing

Type of connector connection 1: ..... FC
Type of connector connection 2: ..... FC
Type of fastening: ..... Screw
Design: ..... FC
Sleeve material: ..... Ceramic
PU: ..... 12, Price/piece

Art.-No.	Suitable for fiber	Colour	Version
53344.3	Singlemode	metal	FC/PC

Attenuators

For increasing the attenuation of fiber optic lines
To prevent overmodulation at short distances
SPC = RL max. 45 dB.
APC = RL max. 60 dB
Suitable for CWDM
IL values in dB: 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 10 - 15 - 20

PU: 1, Price/piece

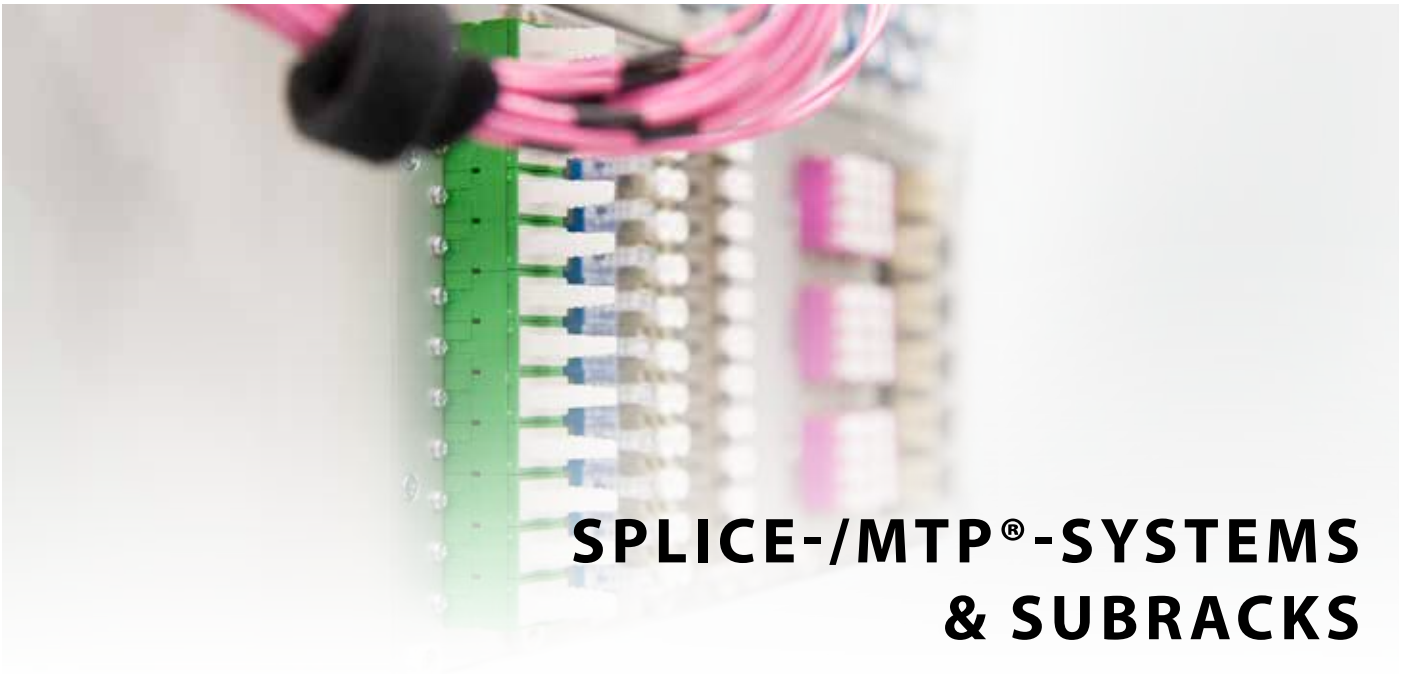
Singlemode

Art.-No.	Suitable for fiber	Housing material	Version
53360.x	Singlemode	metal	SC/PC
53364.x	Singlemode	metal	ST/PC
533680.x	Singlemode	plastic	LC/PC
53361.x	Singlemode	metal	SC/APC

Multimode

Art.-No.	Suitable for fiber	Housing material	Version
53365.x	Multimode	metal	SC/PC
53370.x	Multimode	plastic	LC/PC

Note: x = IL values in dB



SPLICE-/MTP®-SYSTEMS & SUBRACKS

Fitted and unfilled splice boxes are always kept in stock by EFB-Elektronik. The stocking of all components also enables a quick, targeted implementation of individual customer inquiries in our own glass fiber assembly: Each order is manufactured and delivered on time as part of the flexible processes. EFB Elektronik also offers an extensive range of MTP® / MPO components as well as subracks and their module racks.

Assembled Splice Boxes		P. 43
Partially Assembled Splice Boxes		P. 46
Unassembled Splice Boxes		P. 47
Front Panels		P. 47
Wall Distributor		P. 50
Splice Distributor		P. 53
Accessory		P. 57
Subracks		P. 60
MTP®		P. 61

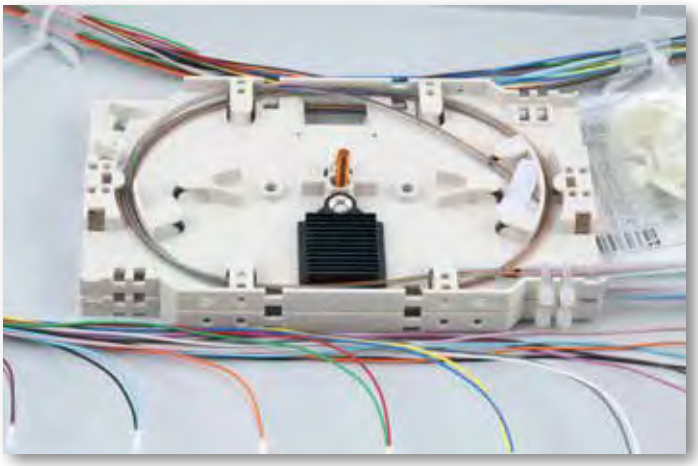
YOU MAY ALSO BE INTERESTED IN:

19“ Network Cabinets	P. 172
Adapters	P. 36
Transceiver	P. 327

Splice Boxes 19“/1U completely equipped and ready to splice

Order code for the splice box prepared ready for splicing:
Each completely equipped splice box can also be ordered ready for splicing.

By adding an A to the partnumber you can order a box with stripped pigtails. The number behind the dot shows the number of assembled pigtails.

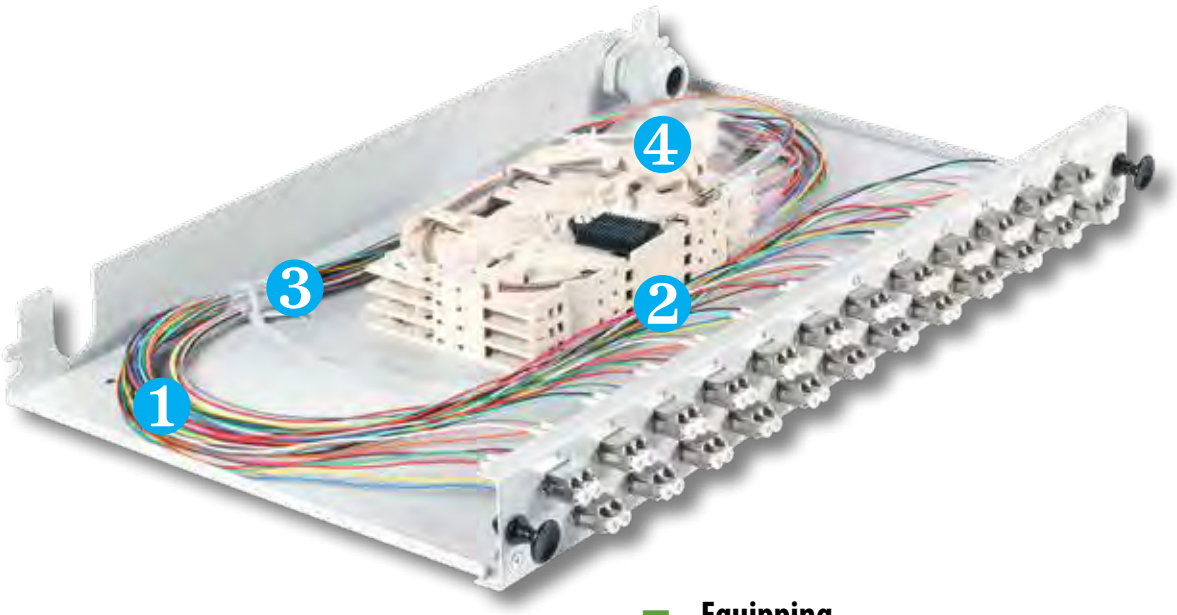


LC Pigtails to LC Adapters completely equipped, slide-out splice box 19” 1U, RAL7035, splice-ready prepared

Art.-No.	Description
BA71902.xx0M4	Splice Box LC-Duplex completely equipped, sliding version, ready to splice

Colourcode DIN VDE0888

Prepared ready to splice:
The colour coded pigtails are according to colour code DIN VDE0888 into the feedthrough adapters. The 900µ fibers are properly laid through the fiber guides in the splice box and inserted into the splice cassette.
In the splice cassette the secondary coating (900µ) of the fibers is deposited in a length-adjusted manner. The 250µ fibers are guided in the splice cassette and shortened to the same length.
The coloured primary coating (250µ) makes colour allocation easy.

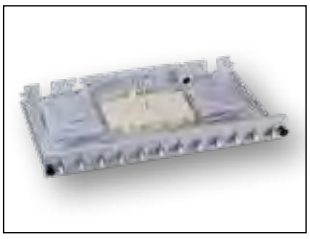


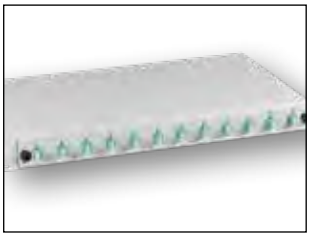
1. Fiber pigtails with through-dyed, color-coded primary and secondary coating.
2. Plugged into the feedthrough adapters according to colour code DIN VDE0888.
3. Proper fiber guidance in the splice box.
4. Fibers inserted into the splice cassette, set down and shortened.

Equipping
In the shortest possible time, individual customer orders are prepared „just-in-time“ in the company‘s own production facilities ready for splicing and delivered on schedule. In order to keep the delivery time as short as possible, we have an extensive range of products in stock for you.

Wide range of products
The high availability of our stock of semi-finished products enables us to offer a wide range of products. This provides the right product for every application with spliced or pre-assembled variants.

Special variants
Ask for special variants, e.g. OM4 and OS2 mixed, our production department will find the right solution for you.





also available as black Splice Box

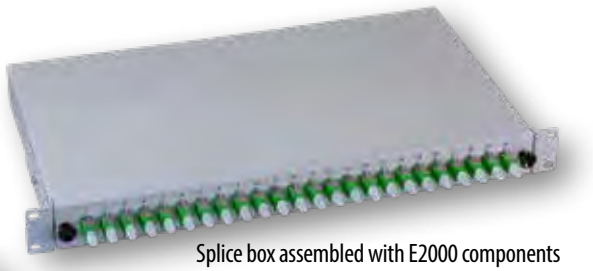
Completely assembled splice box with adapters and coloured pitails
Metal housing depth adjustable
Cable entries at the rear side, incl. 1 x PG16/M20
6 x self adhesive fiber tray
Special assembly possible at short notice!

Completely assembled splice box LC, standard

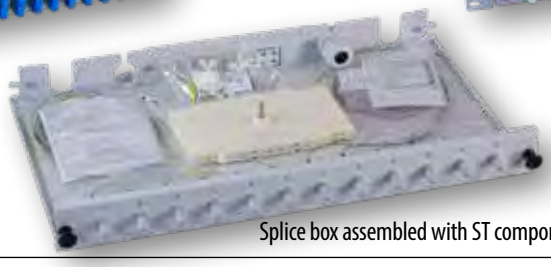
Art.-No.	Fiber Class	Fiber type	Adapter Colour	Pigtail	Suitable for number of adapters	Colour
BA71920.xx	OS2	Singlemode 9/125	green	12 - 24 - 48 x LC/APC, stripped	6 - 12 - 24	grey
BA71924.xx	OS2	Singlemode 9/125	metal			grey
BA71922.xx	OS2	Singlemode 9/125	metal	12 - 24 - 48 x LC, stripped		grey
BA71922.xx	OS2	Singlemode 9/125	metal			grey
BA71921TS.xx	OS2	Singlemode 9/125	blue			black
BA71921.xx	OS2	Singlemode 9/125	blue			grey
BA71901.xx0M5	OM5	Multimode 50/125	lime green			grey
BA71901.xx0M4	OM4	Multimode 50/125	erica-violet			grey
BA71902.xx0M4	OM4	Multimode 50/125	metal			grey
BA71902TS.xx0M4	OM4	Multimode 50/125	metal			black
BA71901.xx0M3	OM3	Multimode 50/125	aqua			grey
BA71902.xx0M3	OM3	Multimode 50/125	metal			grey
BA71902TS.xx0M3	OM3	Multimode 50/125	metal			black
BA71901.xx	OM2	Multimode 50/125	beige			grey
B71920.xx	OS2	Singlemode 9/125	green	12 - 24 - 48 x LC/APC, not stripped		grey
B71924.xx	OS2	Singlemode 9/125	metal			grey
B71921.xx	OS2	Singlemode 9/125	blue	12 - 24 - 48 x LC, not stripped		grey
B71922.xx	OS2	Singlemode 9/125	metal			grey
B71921TS.xx	OS2	Singlemode 9/125	blue			black
B71901.xx0M5	OM5	Multimode 50/125	lime green			grey
B71901.xx0M4	OM4	Multimode 50/125	erica-violet			grey
B71902TS.xx0M4	OM4	Multimode 50/125	metal			black
B71902.xx0M4	OM4	Multimode 50/125	metal			grey
B71901TS.xx0M4	OM4	Multimode 50/125	erica-violet			black
B71902TS.xx0M4	OM4	Multimode 50/125	metal			black
B71901.xx0M3	OM3	Multimode 50/125	aqua			grey
B71902.xx0M3	OM3	Multimode 50/125	metal			grey
B71901TS.xx0M3	OM3	Multimode 50/125	aqua			black
B71902TS.xx0M3	OM3	Multimode 50/125	metal			black
B71901.xx	OM2	Multimode 50/125	beige			grey

Note: xx set number of Pigtails. Preferred storage types see table.

Splice box assembled with SC components



Splice box assembled with E2000 components



Splice box assembled with ST components

Completely assembled Splice Box SC, Standard

Art.-No.	Fiber Class	Fiber type	Adapter Colour	Pigtail	Suitable for number of adapters	Colour
BA71228.xx	OS2	Singlemode 9/125	green	12 - 24 - 48 x SC/APC, stripped	6 - 12 - 24	grey
BA71223.xx	OS2	Singlemode 9/125	blue	12 - 24 - 48 x SC, stripped		grey
BA71203.xx0M5	OM5	Multimode 50/125	lime green			grey
BA71203.xx0M4	OM4	Multimode 50/125	erica-violet			grey
BA71203TS.xx0M4	OM4	Multimode 50/125	erica-violet			black
BA71203.xx0M3	OM3	Multimode 50/125	aqua			grey
BA71203TS.xx0M3	OM3	Multimode 50/125	aqua			black
BA71203.xx	OM2	Multimode 50/125	beige			grey
B71228.xx	OS2	Singlemode 9/125	green	12 - 24 - 48 x SC/APC, not stripped		grey
B71223.xx	OS2	Singlemode 9/125	blue	12 - 24 - 48 x SC, not stripped		grey
B71203.120M5	OM5	Multimode 50/125	lime green			grey
B71203.xx0M4	OM4	Multimode 50/125	erica-violet			grey
B71203TS.xx0M4	OM4	Multimode 50/125	erica-violet			black
B71203.xx0M3	OM3	Multimode 50/125	aqua			grey
B71203TS.xx0M3	OM3	Multimode 50/125	aqua			black
B71203.xx	OM2	Multimode 50/125	beige			grey

Completely assembled Splice Box E2000®, Standard

Art.-No.	Fiber Class	Fiber type	Adapter Colour	Pigtail	Suitable for number of adapter	Colour
BA71533.xx	OS2	Singlemode 9/125	green	12 - 24 - 48 x E2000®/APC, stripped	6 - 12 - 24	grey
BA71533TS.xx	OS2	Singlemode 9/125	green			black
BA71523.xx	OS2	Singlemode 9/125	blue	12 - 24 - 48 x E2000®, stripped		grey
BA71503.xx0M4	OM4	Multimode 50/125	beige			grey
BA71503.xx0M3	OM3	Multimode 50/125	beige			grey
BA71503.xx	OM2	Multimode 50/125	beige			grey
B71533.xx	OS2	Singlemode 9/125	green	12 - 24 - 48 x E2000®/APC, not stripped		grey
B71533TS.xx	OS2	Singlemode 9/125	green			black
B71503.xx0M4	OM4	Multimode 50/125	beige	12 - 24 - 48 x E2000®, not stripped		grey
B71503.xx0M3	OM3	Multimode 50/125	beige			grey
B71503.xx	OM2	Multimode 50/125	beige			grey
BA71533SA.xx①	OS2	Singlemode 9/125	green	12 x E2000®/APC, stripped	12	grey

① Angled outlet

Completely assembled Splice Box ST, Standard

Art.-No.	Fiber Class	Fiber type	Adapter Colour	Pigtail	Suitable for number of adapter	Colour
BA71023.xx	OS2	Singlemode 9/125	metal	12 - 24 - 48 x ST, stripped	6 - 12 - 24	grey
BA71006.xx0M4	OM4	Multimode 50/125	metal			grey
BA71006.xx0M3	OM3	Multimode 50/125	metal			grey
BA71006.xx	OM2	Multimode 50/125	metal			grey
B71023.xx	OS2	Singlemode 9/125	metal	12 - 24 - 48 x ST, not stripped		grey
B71006.xx0M4	OM4	Multimode 50/125	metal			grey
B71006.xx0M3	OM3	Multimode 50/125	metal			grey
B71006TS.xx0M3	OM3	Multimode 50/125	metal			black
B71006.xx	OM2	Multimode 50/125	metal			grey

Note: xx set number of Pigtails. Preferred storage types see table.

also available as black Splice Box

Partially assembled splice box

Partially assembled splice box with adapters
Per 12 adapters 1 splice cassette with 1 splice holder
Suitable up to 4 splice cassettes
Metal housing depth adjustable
Front panel screwed
Cable entries at the rear side
Special assembly possible at short notice!

Partially assembled splice box LC, non sliding unit

Art.-No.	Fiber Class	Fiber type	Adapter colour	Suitable for number of adapter	Colour
B61901.xx0M4	0M4	Multimode 50/125	erica-violet	6 - 12 - 24	grey

Partially assembled splice box LC, sliding unit

Art.-No.	Fiber Class	Fiber type	Adapter Colour	Suitable for number of adapter	Colour
B61922.xx	OS2	Singlemode 9/125	metal		grey
B61921.xx	OS2	Singlemode 9/125	blue		grey
B61921TS.xx	OS2	Singlemode 9/125	blue		black
B61902.xx	-	Multimode 50/125	metal	6 - 12 - 24	grey
B61901.xx0M3	0M3	Multimode 50/125	aqua		grey
B61901TS.xx0M3	0M3	Multimode 50/125	aqua		black
B61901.xx	0M2	Multimode 50/125	beige		grey

Partially assembled splice box SC, sliding unit

Art.-No.	Fiber Class	Fiber type	Adapter Colour	Suitable for number of adapter	Colour
B61223.xx	OS2	Singlemode 9/125	blue		grey
B61223TS.xx	OS2	Singlemode 9/125	blue		black
B61203.xx0M4	0M4	Multimode 50/125	erica-violet	6 - 12 - 24	grey
B61203.xx0M3	0M3	Multimode 50/125	aqua		grey
B61203.xx	0M2	Multimode 50/125	beige		grey

Partially assembled splice box E2000®, sliding unit

Art.-No.	Fiber Class	Fiber type	Adapter Colour	Suitable for number of adapter	Colour
B61533.x	OS2	Singlemode 9/125	green	6 - 12 - 24	grey

Partially assembled splice box ST, non sliding unit

Art.-No.	Fiber Class	Fiber type	Adapter Colour	Suitable for number of adapter	Colour
B61003.xx	-	Multimode 50/125	metal	6 - 12 - 24	grey

Note: xx set number of Adapters. Preferred storage types see table.

also available as black Splice Box

Inseration for microcable

Splice box equipped with keystones

Easy entry for pre-assembled cable

Angle bracket

Rear side cable entry for 24 Copper Cable

Equipable with 4 splice cassettes with sleeve nut 80555.1

Equipable with micro and installation cable

1U splice box, without frontpanel, sliding unit

Steel sheath 1.5 mm
With sleeve nut (Art.-No. 80555.1) max. 4 splice cassettes installable
Cable entry at the rear, prepared for PG16/ M20
Changeable cable entry for straight and angled
Cable entry in the middle for thinner cable

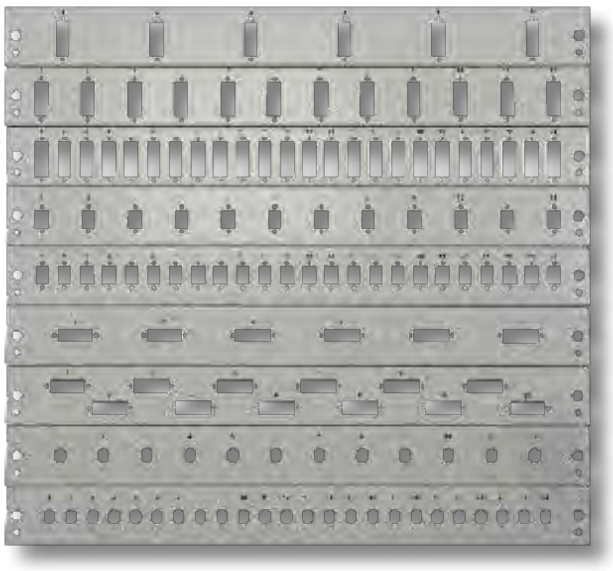
Art.-No.	Description	Colour
VSB-A-GR	Splice box sliding version 1U without front panel, unequipped, grey	grey
VSB-A-SW	Splice box sliding version 1U without front panel, unequipped, black	black

Accessory

Art.-No.	Description
VSB-A-GR-WINKEL	Angled cable entry (45°) for VSB-A-GR, grey
VSB-A-SW-WINKEL	Angled cable entry (45°) for VSB-A-GR, black

also available as black front panel

VSB-FP-6SC-D-V
VSB-FP-12SC-D-V
VSB-FP-24SC-D-V
VSB-FP-12SC-S
VSB-FP-24SC-S
VSB-FP-6SC-D-H
VSB-FP-12SC-D-H
VSB-FP-12ST-S
VSB-FP-24ST-S



RAL7035 (grey)	RAL9005 (black)	Version of front panel
VSB-FP-6SC-D-H	VSB-FP-SW-6SC-D-H	6 x SC Duplex horizontal, shifted
VSB-FP-12SC-D-H	VSB-FP-SW-12SC-D-H	12 x SC Duplex horizontal, shifted
VSB-FP-6SC-D-V	VSB-FP-SW-6SC-D-V	6 x SC Duplex vertikal
VSB-FP-12SC-D-V	VSB-FP-SW-12SC-D-V	12 x SC Duplex vertikal
VSB-FP-24SC-D-V	VSB-FP-SW-24SC-D-V	24 x SC Duplex vertikal
VSB-FP-12SC-S	VSB-FP-SW-12SC-S	12 x SC Simplex/E2000® Simplex/MTRJ/LC Duplex
VSB-FP-24SC-S	VSB-FP-SW-24SC-S	24 x SC Simplex/E2000® Simplex/MTRJ/LC Duplex
VSB-FP-12ST-S	VSB-FP-SW-12ST-S	12 x ST / FC (D-hole)
VSB-FP-24ST	VSB-FP-SW-24ST	24 x ST / FC (D-hole)
53018.1		6 x SC Simplex/E2000® Simplex/MTRJ/LC Duplex vertikal
53034.1V2		12 x E2000®Duplex Compact (RDM) new version
53036.1		12 x Keystone + 12 x SC Simplex
53036.2		12 x Keystone + 12 x SC Duplex
53036.3		24 x Slimline Keystone E-20095
53042.1		24 x MPO/MTP

1U splice box, unequipped, sliding unit, RAL7035

Unequipped, depth adjustable
Steel sheath 1.5 mm
6 x self adhesive fiber tray
Frontpanel screwed
With sleeve nut (item 80555.1) max. 4 splice cassettes installable
cable entry at the rear, prepared for cable gland PG16/M20
Also equipped available

Art.-No.	Suitable for adapter	suitable for number of adapters
53600.0	Without front panel	
53600.1	ST	24
53600.2	ST	12
53600.3	SC duplex/ LC quad	24
53600.4	SC duplex/ LC quad	12
53600.6	SC duplex/ LC quad	6
53600.7	SC duplex/ LC quad	6
53600.8	SC duplex/ LC quad	12
53600.9	SC simplex/ E2000 simplex/ LC duplex	12
53600.10	SC simplex/ E2000 simplex/ LC duplex	24

1U splice box, unequipped, sliding unit, RAL9005

Unequipped, depth adjustable
Steel sheath 1.5 mm
6 x self adhesive fiber tray
Frontpanel screwed
With sleeve nut (item 80555.1) max. 4 splice cassettes installable
cable entry at the rear, prepared for cable gland PG16/M20
Also equipped available

Art.-No.	Suitable for adapter	suitable for number of adapters
53600TS.1	ST	24
53600TS.2	ST	12
53600TS.3	SC duplex/ LC quad	24
53600TS.4	SC duplex/ LC quad	12
53600TS.8	SC duplex/ LC quad	12
53600TS.9	SC simplex/ E2000 simplex/ LC duplex	12
53600TS.10	SC simplex/ E2000 simplex/ LC duplex	24

1U splice box, slideless unit, RAL7035

Unequipped, depth adjustable
Steel sheath 1.5 mm
6 x self adhesive fiber tray
Frontpanel screwed
With sleeve nut (item 80555.1) max. 4 splice cassettes installable
cable entry at the rear, prepared for cable gland PG16/M20
Also equipped available

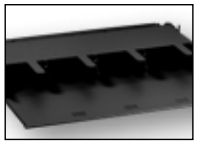
Art.-No.	Suitable for adapter	suitable for number of adapters
53601.0	Without front panel	
53601.1	ST	24
53601.2	ST	12
53601.3	SC duplex/ LC quad	24
53601.4	SC duplex/ LC quad	12
53601.6	SC duplex/ LC quad	6
53601.7	SC duplex/ LC quad	6
53601.8	SC duplex/ LC quad	12
53601.9	SC simplex/ E2000 simplex/ LC duplex	12
53601.10	SC simplex/ E2000 simplex/ LC duplex	24

1U splice box, slideless unit, RAL9005

Unequipped, depth adjustable
Steel sheath 1.5 mm
6 x self adhesive fiber tray
Frontpanel screwed
With sleeve nut (item 80555.1) max. 4 splice cassettes installable
cable entry at the rear, prepared for cable gland PG16/M20
Also equipped available

Art.-No.	Suitable for adapter	suitable for number of adapters
53601TS.0	Without front panel	
53601TS.1	ST	24
53601TS.4	SC duplex/ LC quad	12
53601TS.9	SC simplex/ E2000 simplex/ LC duplex	12

high packing density



HD splice box, modular equipable

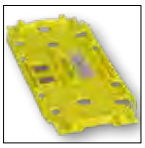
The HD splice box is designed for a high amount of ports on 1U
Modular equipable due to insertion cassettes
Up to 144 ports on 1U
Front-side cable management
Note for cabinet installation: Construction height to te front is 120 mm
Cover locks magnetically
Magnetic cable guides included in delivery
Delivery unequipped
Insterion cassettes for example in the variants feedthrough, splicable, MTP®/MPO

Art.-No.	Description	Colour
SB-HD-SW	HD Splice Box, modular equipable up to 144 port on 1U	black

Accessory

Art.-No.	Description
SB-HD-ME-3SCD	Insertion slot for SB-HD-SW, 3x LC Quad / 1 x MTP®/MPO
SB-HD-ME-4MTP	Insertion slot for SB-HD-SW, 4x MTP®/MPO, feedthrough
SB-HD-ME-SVB	Insertion slot for SB-HD-SW, for 24x thermo splices
SB-HD-ME-3SCD-SVB	Insertion slot for SB-HD-SW, 3x LC Quad, splice modul

SB-HD-ME-SVB



SB-HD-ME-3SCD

SB-HD-ME-3SCD-SVB

SB-HD-ME-4MTP

1U splice box with telescopic-pull out and quick-lock, RAL9005

sliding unit with telescopic pull-out, depth adjustable up to 60 mm
Unequipped
Steel sheath 1.5 mm
6 x self adhesive fiber tray
cable entry at the rear, prepared for cable gland PG16/M20
also equipped available

Art.-No.	Suitable for adapter	suitable for number of adapters
53640TS.3	SC duplex/ LC quad	24
53640TS.4	SC duplex/ LC quad	12
53640TS.9	SC simplex/ E2000 simplex/ LC duplex	12
53640TS.10	SC simplex/ E2000 simplex/ LC duplex	24

1U breakout box, not extendible, RAL7035

Unequipped
Steel sheath 1.5 mm
6 x self adhesive fiber tray
cable entry at the rear, prepared for cable gland PG16/M20
also equipped available

Art.-No.	Suitable for adapter	suitable for number of adapters
53608.0	Without front panel	
53608.4	SC duplex/ LC quad	12
53608.9	SC simplex/ E2000 simplex/ LC duplex	12

Wall distributor splice housing, pre-assembled

Completely assembled wall distributor with adapters and coloured pigtails
1 x or 2 x Splice cassette incl. cover
1 x or 2 x Splice holder for each 12 splices
Housing with two swivel doors, lockable
2 different locks each with 2 keys
On top and bottom each 2 cable entries for PG16 plus
2 cable entries with sealing strip
Dimensions: 445 x 445 x 95 mm

Wall distributor splice housing, pre-assembled E2000®, plastic adapters

Art.-No.	Fiber Class	Fiber type	Adapter colour	Suitable for number of adapter	Pigtail	Colour
B79533.xx	OS2	Singlemode 9/125	green	12 - 24 - 48	12 - 24 - 48 x E2000®/APC	grey
B79523.xx	OS2	Singlemode 9/125	blue		12 - 24 - 48 x E2000®	grey

Wall distributor splice housing, pre-assembled LC, plastic adapters

Art.-No.	Fiber Class	Fiber type	Adapter colour	Suitable for number of adapter	Pigtail	Colour
B79920.xx	OS2	Singlemode 9/125	green	12 - 24 - 48	24 - 48 - 96 x LC/APC	grey
B79921.xx	OS2	Singlemode 9/125	blue			grey
B79901.xx0M4	OM4	Multimode 50/125	erica-violet		24 - 48 - 96 x LC	grey
B79901.xx0M3	OM3	Multimode 50/125	aqua			grey

Wall distributor splice housing, pre-assembled LC, metal adapters

Art.-No.	Fiber Class	Fiber type	Adapter colour	Suitable for number of adapter	Pigtail	Colour
B79922.xx	OS2	Singlemode 9/125	metal	12 - 24 - 48	24 - 48 - 96 x LC	grey
B79902.xx0M4	OM4	Multimode 50/125	metal			grey
B79902.xx0M3	OM3	Multimode 50/125	metal			grey

Wall distributor splice housing, pre-assembled ST, metal adapters

Art.-No.	Fiber Class	Fiber type	Adapter colour	Suitable for number of adapter	Pigtails	Colour
B79023.xx	OS2	Singlemode 9/125	metal	12 - 24 - 48	12 - 24 - 48 x ST	grey
B79006.xx0M4	OM4	Multimode 50/125	metal			grey
B79006.xx0M3	OM3	Multimode 50/125	metal			grey

Wall distributor splice housing, pre-assembled SC, plastic adapters

Art.-No.	Fiber Class	Fiber type	Adapter colour	Suitable for number of adapter	Pigtail	Colour
B79228.xx	OS2	Singlemode 9/125	green	12 - 24 - 48	24 - 48 - 96 x SC/APC	grey
B79203.xx0M4	OM4	Multimode 50/125	erica-violet		24 - 48 - 96 x SC	grey
B79203.xx0M3	OM3	Multimode 50/125	aqua			grey

Note: xx set number of Pigtails. Preferred storage types see table.

Mini wall distributor, pre-assembled

Completely assembled wall distributor with adapters and coloured pigtails
1 or 2 x Splice cassette inclusive cover
1 or 2 x Spliceholder for 12 splices
Housing with cover, lockable, 2 keys
4 entries with sealing strip for incoming and outgoing cable

Dimensions: 280 x 320 x 54 mm

Note: xx set number of Pigtails. Preferred storage types see table.

Mini wall distributor, pre-assembled LC, metal adapters

Art.-No.	Fiber Class	Fiber type	Adapter colour	Suitable for number of adapter	Pigtail	Colour
B78902.xx0M4	OM4	Multimode 50/125	metal	6 - 12 - 24	12 - 24 - 48	grey
B78902.xx0M3	OM3	Multimode 50/125	metal			grey

Mini wall distributor, pre-assembled SC, plastic adapters

Art.-No.	Fiber Class	Fiber type	Adapter colour	Suitable for number of adapter	Pigtail	Colour
B78203.xx0M4	OM4	Multimode 50/125	erica-violet	6 - 12 - 24	12 - 24 - 48	grey
B78203.xx0M3	OM3	Multimode 50/125	aqua			grey

Wall Distributor and Mini Wall Distributor completely assembled

Colour code DIN VDE0888

Prepared assembly:
The wall distributors are fully equipped with feed-through couplings. The colour-coded pigtails are inserted into the feed-through adapters according to colour code DIN VDE0888 and the pigtails are neatly placed in the wall distribution box including the packaging with measured values.

The colour assignment of the pigtails during the splicing process is made easy by the solid-coloured primary coating (250µ).

Wall distributor Splice Housing RAL7035

Housing with two swivel doors, lockable
2 different locks each with 2 keys
with each 2 cable entries on top and bottom for PG16
2 further cable entries with sealing strip
Additional strain relief clamps and guiding clips for pigtails or cables for fixing with cable ties
Max. 5 splice cassettes and one mountable distribution plate
Fixing of distribution plate with two M3-screws and two quick locks
Steel sheet 1.5 mm
Weight 5.2 kg
Dimensions: 445 x 445 x 95 mm

Art.-No.	Colour
53604.1V1	grey

Accessory

Art.-No.	Description
53031.2	Distribution Plate, RAL 7035 48 SC
53604.4	Distribution Plate, RAL7035 24 SC
53604.3	Distribution Plate 48 SC-Simplex
53604.2	Distribution Plate, RAL7035 48 ST
53604.3V	Distribution Plate 48 SC-Simplex Vertical
53031.2TS	Distribution Plate, RAL 9005 48 SC
53604.3V0B	Distribution Plate 48 SC-Simplex

Compact Splice distributor Set

Housing with swivel lid lockable, 2 keys
2 openings with dust-tight strips for incoming and outgoing cable for fixing with cable ties
For max. 4 splice cassettes or 1 splice cassette plus one distribution plate
Steel sheet 1.5 mm

Scope of delivery:
Housing with 2 keys
1 x distribution plate for 12 x ST
1 x distribution plate for 6 x SC-Duplex

Dimensions: 265 x 150 x 55 mm

Art.-No.	Colour
53603.1	grey
53603.1WS	white

Accessory

Art.-No.	Description
53603.S	Spare lock for 53603.1, with 2 keys
53603.2	Distribution plate, RAL7035 12 ST or FC (D-hole) Adapters
53603.3	Distribution plate, RAL7035 6 SC dpx or 6 LC quad Adapters
53603.4	Distribution plate, RAL7035 6 SC spx or 6 LC quad Adapters

Mini wall distributor

Housing with cover, lockable, 2 keys
4 openings with sealing strips for incoming and outgoing cable
Strain relief via cable ties possible
Mountable are max. 8 splice cassettes or 4 splice cassettes and one distribution plate
Steel sheet 1.5 mm
Weight: 2 kg
Delivery unassembled

Scope of delivery:
Housing with 2 keys
2 plastic rivets

Dimensions: 280 x 320 x 54 mm

Art.-No.	Colour
53605.1	grey

Accessory

Art.-No.	Description
53605.2	Distribution Plate, RAL7035 24 ST/ST
53605.3	Distribution Plate, RAL7035 24 SC/SC
53605.4	Distribution Plate, RAL7035 12 SC/SC
53605.5	Distribution Plate, RAL7035 12 ST/ST

Industrial Splice distributor with Metal Housing, unassembled

Fully assembled metal housing
For DIN Rail mounting
Cable entries top/bottom, prepared for M20
Delivery incl. screws for front panel

Scope of delivery:
1 x splice distributor housing
1x splice cassette
1 x splice holder for 12 crimp splices (Attach of an optional additional splice holder only with double-sided adhesive tape)
1 x cable gland M20
1 x Alu DIN Rail clip
Delivery unassembled and without front panel
Dimensions: 61 x 115 x 113 mm

Art.-No.	Description	Colour
53705.1V3	Industrial Splice housing for DIN Rail without front panel RAL7035	grey

Accessory

Art.-No.	Description
53705.2V2B	Front plate for 6 x SC-D, LC-Quad with 2.8mm screw holes
53705.4V2B	Front plate for 12 x SC-S, LC-D, E2000® with 2.8mm screw holes
53705.3V2B	Front plate for 6 x SC-S, LC-D, E2000® with 2.8mm screw holes
53705.2V2B2	Front plate for 6 x SC-D, LC-Quad with Ø1,7mm screw hole
53705.3V2B2	Front plate for 6 x SC-S, LC-D, E2000® with Ø1,7mm screw holes
53705.5V2B	Front plate for 12 x ST-Simplex with Ø2,8mm screw holes
53705.4V2B2	Front plate for12 x SC-S, LC-D, E2000® with Ø1,7mm screw holes

Micro Splice distributor with Telecom - Splice Cassette

For spliced connection of fiber optic cables
Suitable for wall mounting
Duct installation or installation on DIN Rail possible with cable duct fixing set (53702.1)
Cable entries on top/bottom or at the rear
Delivery unassembled

Scope of delivery:
1 x splice cassette
1 x splice holder crimp for 12 splices
2 x grommets
2 x cable ties
Dimensions: 160 x 110 x 30 mm

Art.-No.	Description	Colour
53700.1V2	Micro Splicebox with telecom splice cassette for 12 spl.	grey

Accessory

Art.-No.	Description
53702.1	Cable duct fixing set C-rail or DIN Rail mountable

Micro Splice distributor for 4 Adapter with SC simplex design

Plastic splice box including accessories:
1 x adapter plate for 4 x SC simplex adapters
1 x splice holder for 5 splices, 2 x cable clips
4 x cable grommets, 4 x cable ties
Wall- mounting or cable duct installation possible
2 cable entries (top/bottom) or 1 x through rear wall possible
For connection of optical fibre cable via splice or for max. 4 fibers via connector
Dimensions: 160 x 110 x 30 mm

Art.-No.	Description	Colour
53701.1V2	Micro Splicebox for 4 adapters with SC simplex hole	grey

Accessory

Art.-No.	Description
53702.1	Cable duct fixing set C-rail or DIN Rail mountable
53703.1	Splice holder for 5 splices for Micro-splice box

FO Mini Splice distributor

With splice holder for12 x crimp splice protections. wall-, duct- or DIN Rail-installation (clip + screw, please order separately). Housing and cover made of plastic. 2 openings for incoming and outgoing cable. Strain relief via 4 included cable ties possible. weight ca. 30 g. delivery unassembled

Dimensions: 145 x 68 x 23 mm

Art.-No.	Description
53704.1	FO mini splice distributor plastic

Accessory

Art.-No.	Description
83030.2	DIN Rail holder,blank steel FM 4/TS35
81834.2	Screw M4 x 8mm for 83030.2 4.8 tinned DIN 7985

Micro Splice distributor Housing, unassembled

Wall-, cable duct- or DIN Rail mounting possible (clip + screw please order separately)
Plastic housing with holder for adapters:
2 x SC-Simplex, 2 x LC-Duplex, 2 x E2000®, 2 x FC, 2 x ST, 1 x SC-Duplex or 1 x LC-Quad
1 x cable entry with 5 holes 5 mm
1 x cable entry with 5 holes 3 mm
Holder for 4 x shrink splice protection
Pre-stamped outlines for fiber depot

Scope of delivery: 5 x holders for several adapters, 2 x cable entries, 2 x S6 dowel and screws, 6 x cable ties
Dimensions: 110 x 140 x 20 mm

Art.-No.	Description
53712.1	Small Splice distributor housing, IP20, RAL7035

FTTX Compact-Junction Box

FTTX compact junction box with dimensions 100x80x23mm
An adjustable fiber overlength cassette is mounted in the box for an easier work on cable inlets or connecting a adapter. The splice protection holder is also in the fiber overlength cassette. There are breakouts for 2 cable inlets in the box and also 2 breakouts for flangeless SC-Simplex or LC-Duplex adapters.

Technical Specification:
Adjustable fiber overlength cassette
In/Outputs: 2

Art.-No.	Description
53700.2	FTTx compact junction box, connection: 2x SC-Simplex/LC-Duplex

Splice distributor Housing Set IP66

IP66 Plastic housing RAL7035
Suitable for wall mounting

Included:
Distributor board for fixing of 3 splice cassettes or
2 splice cassettes (53100.200) and one mounting bracket
1 mounting bracket for 6 x SC duplex / LC quad adapters
1 mounting bracket for 12 x ST simplex / FC simplex adapters (D-hole)
Prepared cable entries for 2 x M16/M25 and 4 x M20/M32
Delivery unassembled
Dimensions: 255 x 180 x 100 mm

Art.-No.	Description
53710.1	Splice box housing IP66, grey

Micro Splice distributor I Housing IP54

IP54 Plastic housing RAL7035
For 6 shrink splices
Lockable cover

Included:
Metal installation board
Holder for 6 shrink splices
Chart label
1 x key
1 x PG13.5 gland
1 x PG9 gland
2 x dowel M8
2 x screws 2.9 x 9.5 mm

Dimensions: 103 x 185 x 100 mm

Art.-No.	Description
53713.1	Micro Splice distributor I, RAL7035, IP54, lockable

Micro Splice distributor II Housing IP54

IP54 Plastic housing RAL7035
For 4 x SC simplex / LC duplex adapters
Lockable cover

Included:
Metal bracket for adapters
Splice cassette
Chart label
Holder for 6 shrink splices
1 x key
2 x PG16 gland
1 x PG9 gland
2 x dowel M8
2 x screws 2.9 x 9.5 mm
Delivery unassembled

Dimensions: 103 x 185 x 93 mm

Art.-No.	Description
53714.1	Micro Splice distributor II IP54, RAL7035

Splice distributor Housing IP54

IP54 Plastic housing RAL7035
Suitable for wall mounting
Lockable cover (screw) with 3,5mm hole for sealing

Included:
Basic module plate for fixing one splice cassette (53100.200) and one mounting bracket
Splice cassette with cover
Mounting bracket with 24 LC duplex (**only plastic adapter**) / SC simplex / E2000® simplex mounting holes
Mounting bracket with 6 x SC duplex / LC quad mounting holes
Mounting bracket for 12 x ST simplex / FC simplex holes
3 x PG cable glands (2 x PG11, 1 x PG16)
4 x fixing screws for wall-mounting
Delivery unassembled

Dimensions: 190 x 375 x 115 mm

Art.-No.	Description
53720.1	IP54 Splice housing set with wide range of accessories

Splice Cassette

For 2 x 12 splice holders (max. 24 arc splices)
Stackable
Dimensions (W) x (H) x (D) 155 x 8 x 92 mm

Art.-No.	Description
53100.200	Splice cassette w/o Logo white
53100.201	Splice cassette cover, white

Stran relief for FO single fiber

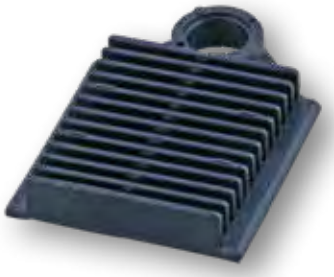
Strain-relief (for mounting on splice cassette 53100.200)

Art.-No.	Description
53100.6	Strain relief (fitted in the splice cassette 53100.200)

Splice Holder for Thermo Splice Protection

Splice Holder for 6 x Arc Splices with Shrink Tube

Art.-No.	Description
53100.8	Splice holder for 6 x arc splices with shrink tube,black



Splice Holder for Crimp Arc Splices

Splice Holder for 12 x Arc Splices Crimp

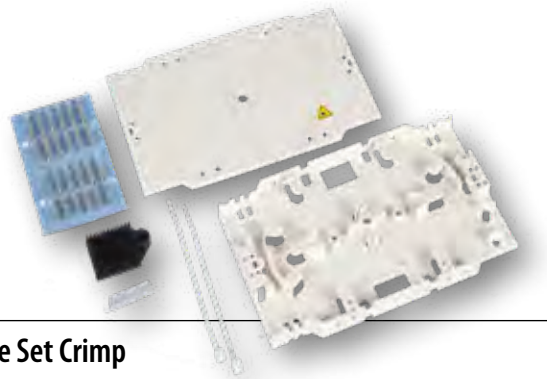
Art.-No.	Description
53100.21	Spliceholder for 12 arc splices

Splice Set Heat Shrink

Complete Set for assembling splice boxes, distributor or wall cabinets

The Set contains:
1x splice cassette for 2 splice holder
1x cover with Symbol „attention laser"
1x splice holder
6x splice protection (heat shrink tube)
2x cable tie
1x spiral coiled tube

Art.-No.	Description
53100.203	Splice Set Heat shrink



Splice Set Crimp

Complete Set for assembling splice boxes, distributor or wall cabinets

The Set contains:
1x splice cassette for 2 splice holder
1x cover with Symbol „attention laser"
1x splice holder
12x splice protection (crimp splice protection)
2x cable tie
1x spiral coiled tube

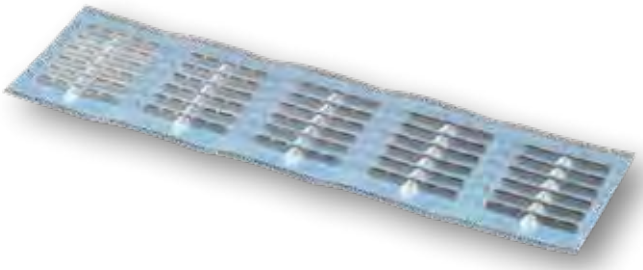
Art.-No.	Description
53100.202	Splice Set Crimp

Splice Cassette PRO

Plastic housing RAL9017, black
For holding 24 crimp splices
2 crimp splice holders each for 12 splices included in delivery
Stack- and **foldable**
Delivery without cover

Dimensions: 165x135x5mm

Art.-No.	Description
53100.10	Splice cassette Pro incl. holders for 2x12 splices
53100.110	Cover for splice cassette 53100.10

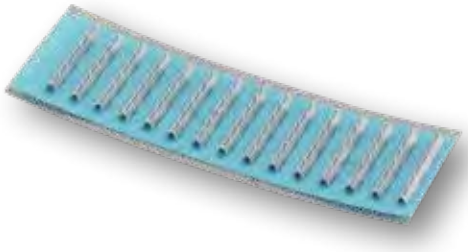


Splice protection with Telekom Approval TS0338/96

Crimp splice protector for arc splices
Telekom approved

Ordering info
53100.32: Price per splice protector - smallest order unit: 30
53100.32-150: Price per 150 x splice protectors - smallest order unit 1

Art.-No.	Description
53100.32	Crimp arc splice protection, Telekom approved, (min. PPU 30/ package 150pcs)
53100.32-150	Crimp arc splice protection, Telekom approved, 1 carton = 150 peaces (PPU)

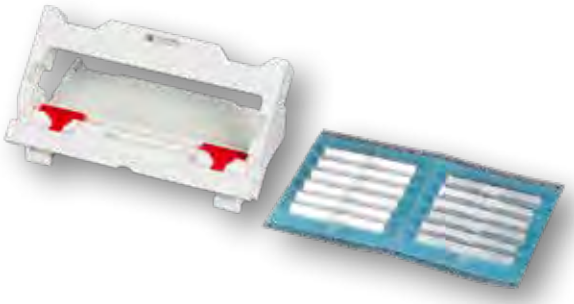


Crimp Splice protection(ANT)

Crimp splice protector for arc splices

Ordering info
53100.3: Price per splice protector - smallest order unit: 15

Art.-No.	Description
53100.3	Crimp splice protector for arc splices, (min. PPU 15/ package 150pcs) TOPSELLER



Crimptool for crimp splice protection inc. 12 pcs. of crimp splice protection

Plastic Crimptool for multiple use
12 pieces of crimp splice protection in the set

Art.-No.	Description
53100.5	crimptool for crimp splice protection inc. 12 pcs. of crimp splice protection

Thermo-Splice-Protection for Arc splices

Shrink splice protection to protect the splice from damage and environmental influences
Storage in lockable box
Metall bolt for bend protection integrated
Min. shrink temperature : 120 °C
PPU: 100

Art.-No.	Description
53100.9-100	Splice Heat Shrink, transparent, length: 60mm, PU 100
53100.91-100	Splice Heat Shrink, transparent, length: 45mm, PU 100

Cable Glands

Cable gland inclusive nut

Art.-No.	Description
53010.5	PG16 Cable Glands conical grey, RAL7035
53012.1	M20 Cable Glands grey, RAL7035

Dust Covers for Front- and Distribution-plates

Dust cover for unused ports

Art.-No.	Description
53025.1-100	Dust cover for ST or FC (D-hole),PU 100
53026.1-100	Dust cover for E2000®simplex, SCsimplex, LC-Duplex, PU 100
53028.1-100	Dust cover LC Duplex square cut, PU 100

Self-tapping screw

Self-tapping screw ST2,5

Art.-No.	Description
80550.1-50	Tapping screw ST2,5 50pieces DIN7971
80550.1-100	Tapping screw ST2,5 100pieces DIN7971

Pan head sleeve nut

Pan head sleeve nut , M4x7
For using 4 splice cassettes in one 1U Splice Box

Art.-No.	Description
80555.1	Pan head sleeve nut, M4x7, (splicebox)

Expanding rivet nylon white

For Mounting in distribution panel 53605.x with
mini wall distributor 53605.1.

Art.-No.	Description
53697.1	Expanding Rivets nylon white

LOOK UP STANDARD TERMS IN THE GLOSSARY.

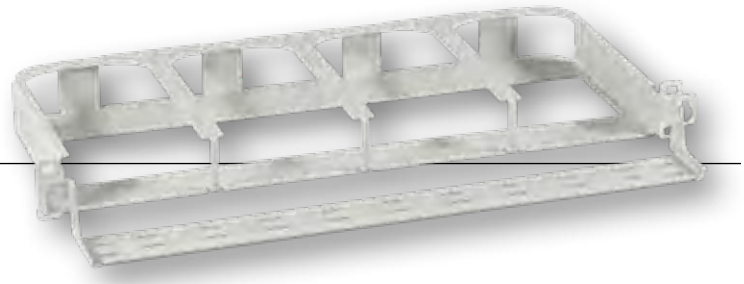
Brief and straightforward explanations can be found starting on page 328.

FTTH 19“ 3U Subrack for 17x Module FTTH-MODUL-X incl. cable management

19“ subrack for FTTH-MODUL-XX (delivery without modules)
Up to 204 LC ports to 3 units
with front-sided cable tray
delivery without modules

Art.-No.	Description	Max. Module	Max. Ports	Colour
FTTH-BGT-3HE	FTTH 19“ 3U Subrack for 17x Moduk FTTH-MODUL-X incl. cable management	17	204 LC / 102 SC	grey

NEW



FTTH 19“ 1U Subrack for 8x Module FTTH-MODUL-X incl. cable management

19“ subrack for FTTH-MODUL-XX (delivery without modules)
Up to 96 LC ports to 1 unit
with front-sided cable tray
delivery without modules

Art.-No.	Description	Max. Module	Max. Ports	Colour
FTTH-BGT-1HE	FTTH 19“ 1U Subrack for 8x Module FTTH-MODUL-X incl. cable management	8	96 LC / 48 SC	grey

Suitable for 1HE and 3HE subrack FTTH-BGT-xHE
Pre-equipped with 6 SC-Simplex adapter in single mode, multimode OM4 or multimode OM3 with ceramic ferrule
Inclined outlet left/right for the 1HE version, top/bottom outlet for the 3HE version
Cable entry via MTP®/MPO coupling
Splice cassette (Shrink -and Crimpprotection) holder included in cassette for MTP®/ MPO free installation

FTTH Module LC for FTTH-BGT

Art.-No.	Description	Number of adapter	Adapter	APC
FTTH-MODUL-LCAPC	FTTH Module for FTTH-BGT, 12 Port LC/APC with OS2 ceramic adapter	6	LC duplex	yes
FTTH-MODUL-LCOS2	FTTH Module for FTTH-BGT, 12 Port LC with OS2 ceramic adapter	6	LC duplex	no
FTTH-MODUL-LCOM4	FTTH Module for FTTH-BGT, 12 Port LC with OM4 ceramic adapter	6	LC duplex	no
FTTH-MODUL-LCOM3	FTTH Module for FTTH-BGT, 12 Port LC with OM3 ceramic adapter	6	LC duplex	no

FTTH Module SC for FTTH-BGT

Art.-No.	Description	Number of adapter	Adapter	APC
FTTH-MODUL-SCOS2	FTTH Module for FTTH-BGT, 6 Port SC with OS2 ceramic adapter	6	SC	no
FTTH-MODUL-SCOM4	FTTH Module for FTTH-BGT, 6 Port SC with OM4 ceramic adapter	6	SC	no
FTTH-MODUL-SCOM3	FTTH Module for FTTH-BGT, 6 Port SC with OM3 ceramic adapter	6	SC	no

Application: Suitable for transmission links up to 100 Gigabit
Construction: 1 multi-connector MTP® on one side,
4 LC-Duplex connector on the other side
LowLoss version: attenuation per Fanout max. 0,35 dB
Matrix: 8 or 12 fibers
Furcation length: 50 cm
Cable diameter multi-connector: 3 mm
Cable diameter single-connector: 2 mm
Colour: OM4 and OS2 acc. to colour code DIN VDE 0888

MTP®-F/LC 8-Fiber matrix Harness Cable

Art.-No.	Description	Connectors	Fiber type	Coding
MTPF08LCOS2-xx	MTP®-F/LC 8-fiber patch cable OS2, LSZH yellow	1 x MTP®-F/8 x LC	G657A1 9/125	1:1
MTPF08LCOM4-xx	MTP®-F/LC 8-fiber patch cable OM4, LSZH erica-violet	1 x MTP®-F/8 x LC	OM4 50/125	1:1

MTP®-F/LC 12-Fiber matrix Harness Cable

Art.-No.	Description	Connectors	Fiber type	Coding
MTPF12LCOS2-xx	MTP®-F/LC 12-fiber patch cable OS2, LSZH yellow	1 x MTP®-F/12 x LC	G657A1 9/125	1:1
MTPF12LCOM4-xx	MTP®-F/LC 12-fiber patch cable OS2 OM4, LSZH erica-violet	1 x MTP®-F/12 x LC	OM4 50/125	1:1

Stock Lengths: 1,0 - 2,0 - 3,0 - 5,0 -10 m

Application: Server to Server- / Switch to Switch connection,
Suitable for transmission links up to 100 Gigabit
Connector manufacturer: US Conec
Matrix: 12 Fibers
Singlemode variant always as APC version
Colour: OM4 erica-violet and OS2 yellow
Available lengths: 1 m up to 100 m
Note: In each MTP® transmission link, a type B (crossed) patch cable is required

MTP®-F/MTP®-F 12-Fiber matrix Patch cable

Stock Lengths: 1,0 - 2,0 - 3,0 - 5,0 - 7,5 -10 - 15 m

Art.-No.	Description	Connectors	Fiber type	Coding
MTPF12MTPFOS2-xx	MTP®-F/MTP®-F 12-fiber matrix patch cable OS2, LSZH yellow, Code B	1 x MTP®-F/1 x MTP®-F	G657A1 9/125	Typ B crossed
MTPF12MTPFOS2-xx-A	MTP®-F/MTP®-F 12-fiber matrix patch cable OS2, LSZH yellow, Code A	1 x MTP®-F/1 x MTP®-F	G657A1 9/125	Typ A 1:1
MTPF12MTPFOM4-xx	MTP®-F/MTP®-F 12-fiber matrix patch cable OM4, LSZH erica-violet, Code B	1 x MTP®-F/1 x MTP®-F	OM4 50/125	Typ B crossed
MTPF12MTPFOM4-xx-A	MTP®-F/MTP®-F 12-fiber matrix patch cable OM4, LSZH erica-violet, Code A	1 x MTP®-F/1 x MTP®-F	OM4 50/125	Typ A 1:1

MTP®-F/MTP®-F 24-Fiber matrix Patch cable, Code A

Stock Lengths: 5,0 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Description	Connectors	Fiber type	Coding
MTPF24MTPFOS2-xx-A	MTP®-F/MTP®-F 24-fiber matrix patch cable OS2, LSZH yellow, Code A	2 x MTP®-F/2 x MTP®-F	G657A1 9/125	Typ A 1:1
MTPF24MTPFOM4-xx-A	MTP®-F/MTP®-F 24-fiber matrix patch cable OM4, LSZH erica-violet, Code A	2 x MTP®-F/2 x MTP®-F	OM4 50/125	Typ A 1:1

MTP®-F/MTP®-F 36-Fiber matrix Patch cable, Code A

Stock Lengths: 5,0 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Description	Connectors	Fiber type	Coding
MTPF36MTPFOS2-xx-A	MTP®-F/MTP®-F 36-fiber matrix patch cable OS2, LSZH yellow, Code A	3 x MTP®-F/3 x MTP®-F	G657A1 9/125	Typ A 1:1
MTPF36MTPFOM4-xx-A	MTP®-F/MTP®-F 36-fiber matrix patch cable OM4, LSZH erica-violet, Code A	3 x MTP®-F/3 x MTP®-F	OM4 50/125	Typ A 1:1

MTP®-F/MTP®-F 48-Fiber matrix Patch cable, Code A

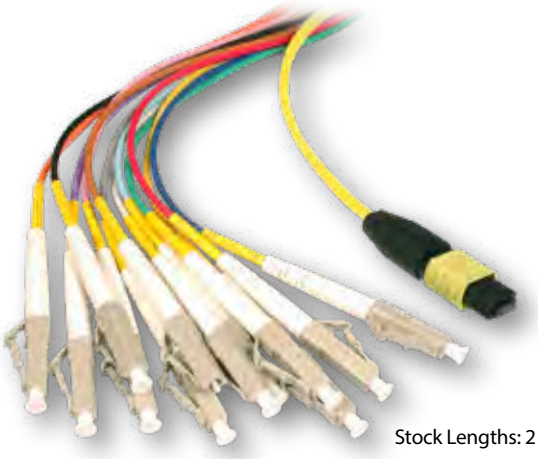
Stock Lengths: 5,0 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Description	Connectors	Fiber type	Coding
MTPF48MTPFOS2-xx-A	MTP®-F/MTP®-F 48-fiber matrix patch cable OS2, LSZH yellow, Code A	4 x MTP®-F/4 x MTP®-F	G657A1 9/125	Typ A 1:1
MTPF48MTPFOM4-xx-A	MTP®-F/MTP®-F 48-fiber matrix patch cable OM4, LSZH erica-violet, Code A	4 x MTP®-F/4 x MTP®-F	OM4 50/125	Typ A 1:1

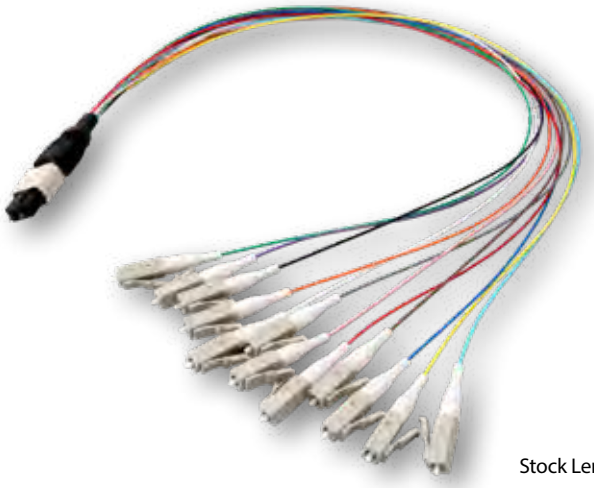
MTP®-F/MTP®-F 72-Fiber matrix Patch cable, Code A

Stock Lengths: 5,0 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Description	Connectors	Fiber type	Coding
MTPF72MTPFOM4-xx-A	MTP®-F/MTP®-F 72-fiber matrix patch cable OM4, LSZH erica-violet, Code A	6 x MTP®-F/6 x MTP®-F	OM4 50/125	Typ A 1:1



Stock Lengths: 2 - 5 m



Stock Lengths: 0,4m

MTP®/MPO-Female Fanout Cable, LowLoss

Application: Suitable for transmission links up to **100 Gigabit**
Construction: 1 multi-connector MTP® on one side,
12 Single connector on the other side (e.g. LC)
LowLoss version: attenuation per Fanout max. 0,35 dB
Matrix: 12 fibers
Furcation length: 50 cm
Cable diameter multi-connector: 3 mm
Cable diameter single-connector: 2 mm
Colour: OM4, OM3 and OS2 acc. to colour code DIN VDE 0888

MTP®/MPO-Female Fanout Cable, LowLoss, OM4

Art.-No.	Number of fibers	Connectors
004000.2LL	12	1 x MTP® female/12 x SC
004000.5LL	12	1 x MTP® female/12 x SC
004001.2LL	12	1 x MTP® female/12 x LC
004001.5LL	12	1 x MTP® female/12 x LC

MTP®/MPO-Female Fanout Cable, LowLoss, OM3

Art.-No.	Number of fibers	Connectors
004101.2LL	12	1 x MTP® female/12 x SC
004101.5LL	12	1 x MTP® female/12 x SC
004009.2LL	12	1 x MTP® female/12 x LC
004009.5LL	12	1 x MTP® female/12 x LC
004009.18LL	12	1 x MTP® female/12 x LC

MTP®/MPO-Female Fanout Kabel, LowLoss, OS2

Art.-No.	Number of fibers	Connectors
004103.2LL	12	1 x MTP® female/12 x SC
004103.5LL	12	1 x MTP® female/12 x SC
004007.2LL	12	1 x MTP® female/12 x LC
004007.5LL	12	1 x MTP® female/12 x LC

MTP®/MPO-Male Fanout Cable, Low Loss

Application: Suitable for transmission links up to **100 Gigabit**
Construction: 1 multi-connector MTP® on one side,
12 Single connector on the other side (e.g. LC)
LowLoss version: attenuation per Fanout max. 0,35 dB
Matrix: 12 fibers
Cable diameter single-connector: 900 µm
Colour: OM4, OM3 and OS2 acc. to colour code DIN VDE 0888

MTP®/MPO-Male Fanout Kabel, Low Loss, OS2

Art.-No.	Number of fibers	Connectors
004310.0,4LL	12	1 x MTP® male/12 x LC/APC
004311.0,4LL	12	1 x MTP® male/12 x SC/APC
004210.0,4LL	12	1 x MTP® male/12 x LC
004211.0,4LL	12	1 x MTP® male/12 x SC

MTP®/MPO-Male Fanout Kabel, Low Loss, OM4

Art.-No.	Number of fibers	Connectors
004010.0,4LL	12	1 x MTP® male/12 x LC
004011.0,4LL	12	1 x MTP® male/12 x SC

MTP®/MPO-Male Fanout Kabel, Low Loss, OM3

Art.-No.	Number of fibers	Connectors
004110.0,4LL	12	1 x MTP® male/12 x LC
004111.0,4LL	12	1 x MTP® male/12 x SC

19“ Subrack

19“/3U subrack with 84DU
Additional integrated 1U cable overlength box
Total hight: 4U
4U aluminium side walls for installation in 19“ rack
84DU depth adjustable subrack with 1DU splitting (1DU=5,08mm)
Cable overlength box to the back/front sliding unit
Front mounted cable routing panel with 5 cable brackets
Delivery unequipped
Scope of delivery: 1 x subrack mounted
1 x PG16 cable gland incl. locknut
5 x cable brackets

Dimensions: 483 x 178 x 295 mm

Art.-No.	Description	Max. Module	Colour
53711.1	Subrack 4U 84TE/3U Incl. 1U Cable Overlength Box	12	alu/metal

Accessory

Art.-No.	Description
53711.10	Blind plate 3HE/7TE Alu elox. with screwing set
53711.30	Labeling bar Alu, self-adhesive L=100mm
53711.31	Paper strips for Labeling bar Alu, L=100mm
53711.32	Film strips for Labeling bar Alu, L=100mm
53711.21	Blind plate 3HE/14TE Alu elox. with screwing set

Fully equipped plug-in module with adapters and pigtails
For installation in 19„subracks 53711.1 and 53733.1
3U/7DU
1x splice cassette including cover
12 pigtails with 1x splice holder (12 x crimp)
24 pigtails with 2x splice holder (12 x crimp)
Overlength cassette
Labelling strip

Plug in module for 19“ Subrack 3HE/7TE, LC-Duplex Adapters

Art.-No.	Connectors	Number of adapter	Adapter	APC	Fiber
B88924.12	12 x LC /APC green	6	LC Duplex	yes	OS2
B88921.12	12 x LC blue	6	LC Duplex	no	OS2
B88922.12	12 x LC metal	6	LC Duplex	no	OS2
B88901.120M4	12 x LC erica-violet	6	LC Duplex	no	OM4
B88901.120M3	12 x LC aqua	6	LC Duplex	no	OM3
B88902.120M3	12 x LC metal	6	LC Duplex	no	OM3

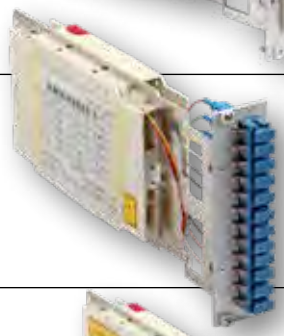
Plug in module for 19“ Subrack 3HE/7TE, LC-Quad Adapters

Art.-No.	Connectors	Number of adapter	Adapter	APC	Fiber
B88206.24	24 x LC/APC green	6	LC Quad	yes	OS2
B88925.12	12 x LC blue	3	LC Quad	no	OS2
B88925.24	24 x LC blue	6	LC Quad	no	OS2
B88905.120M3	12 x LC aqua	3	LC Quad	no	OM3
B88905.240M3	24 x LC aqua	6	LC Quad	no	OM3

Plug in module for 19“ Subrack 3HE/7TE, SC-Duplex Adapters

Art.-No.	Connectors	Number of adapter	Adapter	APC	Fiber
B88226.12	12 x SC/APC Simplex metal	6	SC Duplex	yes	OS2
B88228.12	12 x SC/APC Simplex green	6	SC Duplex	yes	OS2
B88223.12	12 x SC Simplex blue	6	SC Duplex	no	OS2
B88203.120M4	12 x SC Simplex erica-violet	6	SC Duplex	no	OM4
B88203.120M3	12 x SC Simplex aqua	6	SC Duplex	no	OM3

Plug in module for 19“ Subrack 3HE/7TE, SC-Simplex Adapters



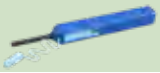
Art.-No.	Connectors	Number of adapter	Adapter	APC	Fiber
B88224.12	12 x SC Simplex blue	12	SC Simplex	no	OS2
B88403.120M4	12 x SC Simplex beige	12	SC Simplex	no	OM4
B88403.120M3	12 x SC Simplex beige	12	SC Simplex	no	OM3

Plug in module for 19“ Subrack 3HE/7TE, E2000® Adapters

Art.-No.	Connectors	Number of adapter	Adapter	APC	Fiber
B88533.12	12 x E2000®/APC green	12	E2000®	yes	OS2
B88523.12	12 x E2000® blue	12	E2000®	no	OS2

FIBER TOOLS & INSTALLATION MATERIAL

EFB-Elektronik provides a wide range of cleaning materials and tools for the cleaning and inspection of transmission lines (requirement of IEC 14763-3): These have been specially designed for use in the „glass fiber" area and have the corresponding fine tolerances and materials.

Tools & Cleaning Sets		P. 65
Cleaner		P. 66
Fiber Checker		P. 68
Tools		P. 69
Accessory		P. 71

YOU MAY ALSO BE INTERESTED IN:

Measurement Equipment	P. 75
Jumper	P. 15
Transceiver	P. 327
FTTH	P. 78

Optimized tool selection

NEW

Professional Fiber Optic Tool Case

This solid tool case made of aluminium contains all what is neccessary for the daily work with optical fibers. Equal if cleaning, stripping or testing - a suitable tool is provided in professional quality.

Scope of delivery:

1 x Aluminium case for fiber optical tools, bare aluminium (Art.-No: 39840.1), dimensions (W x H x D) ca. 345 x 100 x 260 mm
1 x Fiber Checker Single- und Multimode for 1.25mm and 2.5 mm Ferrulen (Art.-No. 399900.2)
1 x QUICKLOADER Mini 6 in 1 Multi-Bit Screwdriver (Art.-No. 39935.4)
1 x Chorme-plated side cutter Knipex 7005 180 (Art.-No. 39982.2)
1 x Pliers Knipex 3815 200 (Art.-No. 39984.1)
1 x Stripping tool Miller® RCS-114 für round cable 4.5 - 29 mm longitudinal-cross-spiral cut(Art.-No. 39900.1)
1 x Kevlar®-Cutter KS-1 140 mm (Art.-No. 39903.1)
1 x Loose tube tool blue 3.2 - 6.3 mm (Art.-No. 39958.1)
1 x Stripping tool 180 µm - 300 µm, for stripping the primary coating (Art.-No. 39923.1)
1 x Miller® Fiber Stripper FO 103-T-250-J „Tri-Hole“ (Art.-No. 39901.1)
1 x Alcohol dispenser - container PE with swab humidifier, without content (Art.-No. 39920.2)
1 x Cleaner „FCT-C410“ for fiber optic connector (Art.-No. 39961.1)
1 x Ferrule-Cleaner for ST, SC and FC for PC&APC 2.5 mm ferrules (Art.-No. 39988.2)
1 x Ferrule-Cleaner for LC and MU for PC&APC 1.25 mm ferrules (Art.-No. 39989.2)
10 x Stick Cleaner for 2.50 mm sleeves (Art.-No. 39976.1)
10 x Stick Cleaner für 1.25 mm sleeves (Art.-No. 39975.1)
25 x Miller® Fiber cleaning tapes, alcohol-soaked (Art.-No. 39926.1)

Art.-No.	Description
39843.2	Professional Fiber Optic Tool Case

Accessory

Art.-No.	Description
39988.2	Ferrule Cleaner for SC,FC and ST-adapters for 2.5mm ferrule
39989.2	Ferrule Cleaner for LC, MU for PC&APC 1.25mm ferrule

Fiber Optic Basic Cleaning & Inspection Kit

Basic Cleaning Kit consists of:
1x Bulb Blower (OD:42mm)
1x 2,5mm Fiber Optic Ferrule Cleaner
1x 1,25mm Fiber Optic Ferrule Cleaner
1x Fiber Optic Cleaning Cassette
1x Package of Lint free wiper
1x Fiber Optic Microscope for PC and APC 2.5mm connector
Magnification microscope: 200 times

Art.-No.	Description
39842.1	Fiber Optic Basic Cleaning & Inspection Kit

Accessory

Art.-No.	Description
39988.2	Ferrule Cleaner for SC,FC and ST-adapters for 2.5mm ferrule
39989.2	Ferrule Cleaner for LC, MU for PC&APC 1.25mm ferrule

Reel Cleaner

Minimizes static attraction
Ultra clean micro–fiber cloth captures debris and other contamination
The cloth is robust, it does not fray or leave any fibrous materials behind
More than 400 cleanings per unit
Dry cleaning
Suitable connector includes FC, SC simplex, ST, LC, MU simplex, D4, DIN

Art.-No.	Description
39962.2	Reel Cleaner
39962.2A	Reel Cleaner Exchange roll, 6-Pack

Easy replacement of the cleaning roller
Environmentally friendly and efficient - double-sided use of cleaning area

Cleaner „FCT-C410“ for fiber optic Connectors

Uses both sides of the cloth
Minimizes static attraction
Ultra clean micro–fiber cloth captures debris and other contamination
The cloth is robust, it does not fray or leave any fibrous materials behind
Easy to remove the cleaning reel without cause any contamination
More than 450 cleanings per unit
Dry cleaning
Suitable connector includes FC, SC simplex, ST, LC, MU simplex, D4, DIN

Art.-No.	Description
39961.1	Cleaner „FCT-C410“ for fiber optic Connector
39961.1A	Exchange roll for FCT-C410, single part

Ferrule Cleaner for Simplex Connectors

IBC dry cloth cleaning tools specially designed to clean single fiber connectors Residing in an adapters, faceplate or bulkhead
Dust cap of the cleaning tool acts as an adapters for cleaning unmated connectors
39989.2: Cleaning tool for 1.25mm ferrules LC and MU with PC and APC polishes
39988.2: Cleaning tool for 2.5mm ferrules E2000®, SC, FC and ST with PC and APC polishes
Disposable with 525+ cleanings per unit
Made from antistatic resins
Cleaning micro fibers are densely stranded and debris free
Cleaning system rotates about 180° for a full sweep

Art.-No.		Description
39989.2	TOPSELLER	Ferrule Cleaner for LC, MU for PC&APC 1.25mm ferrule
39988.2		Ferrule Cleaner for SC,FC and ST-adapters for 2.5mm ferrule

Ferrule Cleaner for MPO-Connectors

Dry cloth cleaning tools specially designed to clean single fiber connectors
Residing in an adapters, faceplate or bulkhead
Dust cap of the cleaning tool acts as an adapters for cleaning unmated connectors
Cleaning tool for MPO Adapter/ Connector
Disposable with 525+ cleanings per unit
Made from antistatic resins
Cleaning micro fibers are densely stranded and debris free
Cleaning system rotates about 180° for a full sweep

Art.-No.	Description
39989.4	Ferrule-Cleaner MPO II, push-pull-technology

Ferrulen Cleaner for E2000®, SC, FC, ST

Dry cloth cleaning tools specially designed to clean single fiber connectors
Residing in an adapters, faceplate or bulkhead
Dust cap of the cleaning tool acts as an adapters for cleaning unmated connectors
Cleaning tool for 2.5mm ferrules E2000®, SC, FC and ST with PC and APC polishes
Disposable with 525+ cleanings per unit
Made from antistatic resins
Cleaning micro fibers are densely stranded and debris free
Cleaning system rotates about 180° for a full sweep

Art.-No.	Description
39989.5	Ferrule cleaner for E2000®, SC, FC, ST with 2.5 mm ferrule

399900.1

39990.1

Fiber Checker für Single- und Multimode 2.5 mm Ferrulen

Compact design
Suitable to check single-/multimode optical fibers
Recognise faulty fiber optic components
Identify and patching of fibers
Due to 635 nm wavelength (visible red light) easier fault location
Suitable 2.5 mm ferrule: DIN, E2000®, FC, SC, ST
Temperature: -10°C ~ 45°C (operation), -40°C ~ 70°C (storage)
Weight: 60 g (incl. batteries)
Dimension: 167 mm x 12 mm

Scope of delivery:
Fiber checker with dust cap, battery set (2 x AAA), plastic etui and instruction manual

Art.-No.	Description	Range
39990.1	Fiber Checker 3000 for SM and MM 2.5mm Ferrules	3 km
399900.1	Adapter for Fiber Checker 5000 2.5mm to 1.5mm and 2.2mm	5 km

Accessory

Art.-No.	Description
39990.2	Adapter for Fiber Checker 3000 adapted from 2,5mm to 1,25mm
399910.2	Adapter for Fiber Checker 5000 2.5mm to 1.5mm and 2.2mm

Wide range of accessories

Fiber Checker for SM and MM, for 1.25 mm and 2.5 mm ferrules

The compact visual fault locator is an excellent tool for daily use of field, industrial and laboratory fiber optic applications.
Suitable for testing single / multimode fiber optic cables, faulty fiber optic components, and identifying and patching fibers
The 630 nm - 670 nm wavelength (visible red light) makes it easier to locate faults
Range: measured up to 6 km
Matching 2.5 mm ferrules: DIN, E2000®, FC, SC, ST
Matching 1,25 mm ferrules: LC
Delivery incl. Dust cover, adapter for LC. SC and FC
Delivery without batteries

Art.-No.	Description
399900.2	Fiber Checker for SM and MM, for 1.25 mm and 2.5 mm ferrules

Cable Stripping Tool

Precision tool for stripping of the outer jacket of round cables
Knife is adjustable for longitudinal cut, circumferential and spiral slitting
„Tri-Action-Strip“
Adjustable cutting depth
For cable 4.5 - 29 mm
Length: 138mm
Weight: 100g

Art.-No.	Description
39900.1	Cable Stripping Tool Miller® RCS-114
39900.2	Exchange blade for Miller® RCS-114 (39900.1)

Loose tube tool blue

Loose tube tool for stripping the loose tube in fiber horizontal cables
Minimises risk to damage the fibers during stripping off the tube

Art.-No.	Description
39958.1	Loose tube tool blue, 3,2-6,3mm

Kevlar® Cutting Tool KS-1

Hardened blades made of carbon-molybdenum-vanadium steel
Universal tool for cutting of Kevlar® or aramid yarn
High-quality nylon case
Length: 140 mm
Weight: 79 g

Art.-No.	Description
39903.1	Kevlar®-Cutting tool KS-1, 140mm

Miller® Kevlar® Cutting Tool FOKC

Faster, more powerful cut with hardened blades and opening spring
Serrated blades for clean, smooth cut
Lightweight and compact, in a tried and tested quality
Ergonomically shaped handles with non-slip plastic covering
Length: 146 mm
Weight: 72 g

Art.-No.	Description
39902.1	Miller® Kevlar Cutter FOKC 0

INFRALAN® Cleaver

Precision cleaver for optical fiber for a exact broken fiber endface
32.000 fiber cleaves possible with one blade (16 positions)
Dimensions: 60 mm x 53 mm x 52 mm

Art.-No.	Description
HS18-CLEAVER	INFRALAN® Cleaver

Accessory

Art.-No.	Description
HS15-FRB	Fiber garbage can for INFRALAN® Cleaver
HS18-CLEAVER-KLINGE	Blade for INFRALAN® Cleaver

Crimptool for crimp splice protection

Crimping tool for all common crimp splice protection types
(e.g. EFB item 53100.3, 53100.31)
Special feature:
Internal development with a design protection and protection of utility models
Compact and light design
Robust tool
Material: black anodized steel
Skid proof through rubberised pedastal
Defined insertion of fibers through large lateral support surfaces possible
Dimensions: 100 x 40 x 45 mm
Weight: 200 g

Art.-No.	Description
HS15-CRIMPTOOL	Crimptool for crimp splice protection

Miller® Fiber Stripper FO-103-S „One-Hole“

Miller® Fiber Stripper for stripping the primary coating 250µm to 125µm
Precision-made 127µm v-notch, no adjustment required
Length: 137mm
Weight: 71g

Art.-No.	Description
39956.1	Miller®Stripping-tool for stripping 250µ coating

Miller® Fiber Stripper CFS-2 „Dual-Hole“

Miller® Fiber Stripper with 140µm hole for
stripping the primary coating 250µm to 125µm
Second hole for stripping the 2-3 mm outer jacket
Ergonomic handles
Lock to hold tool closed when it is not in use
Length: 165 mm
Weight: 119 g

Art.-No.	Description
39922.1	Miller CFS-2 stripping tool Dual-Hole,140µm

Miller® Fiber Stripper FO 103-T-250-J „Tri-Hole“

Miller® Fiber Stripper for stripping
Primary coating 250µm to 125µm
Secondary coating 900µm to 250µm
2-3 mm outer jacket
Length: 137mm
Weight: 71g

Art.-No.	Description
39901.1	Miller® Fiber Stripper „Tri-Hole“ FO 103-T-250

Miller® Stripping Tool WS 5

Miller® Fiber Stripper for stripping the coating
For diameter 0,6 - 0,8 - 1,0 - 1,3 - 1,6 - 2,0 - 2,6 mm
Lock to hold tool closed when it is not in use
Automatic return spring for ease of use and speed
With cutting device
Length: 159mm
Weight: 108g

Art.-No.	Description
39915.1	Miller stripping tool WS 5 for stripping from 0.8-2.6mm

INFRALAN® Stripper

Fiber stripper for stripping the main jacket and primary coating 250µm to 125µm
Precision-made 127µm v-notch, no adjustment required

Art.-No.	Description
HS15-ABSETZZANGE	INFRALAN® Stripper

Stripping Tool

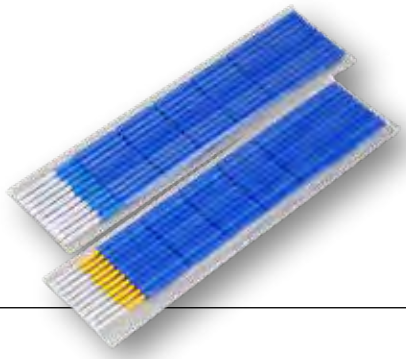
Stripping tool for stripping secondary coatings (39923.2) or primaty coatings (39923.1)

Art.-No.	Description
39923.1	Stripping tool, 180µm - 300µm primary coating 250µ to 125µ
39923.2	Stripping tool, 600µm - 1100µm stripping the sec. coating

Alcohol dispenser without contents

Suitable for cleaning liquid
Pumping mechanism economical dose
Seal of stainless steel
Without content

Art.-No.	Description
39920.2	Alcohol dispenser without contents



Cleaning Sticks

For cleaning optical fiber connectors at difficult to reach places in the adapter
The special fabric absorbs and retains dirt
Cleaning without alcohol
PU 10 pieces

Art.-No.	Description
39975.1	Stick Cleaner 1.25mm packing unit 10 pcs.
39976.1	Stick Cleaner 2.50mm packing unit 10 pcs.

Miller® Fiber Cleaning Tapes

25 non-linting cleaning cloths
Alcohol-impregnated, 91% isopropyl and 9% deionized water
For fiber cleaning after stripping or for cleaning ferrules

Art.-No.	Description
39926.1	Miller® Fiber Cleaning Tapes

Epoxy Resin, light 353

2-component adhesive for connector assembly
double pack with separation guarantees correct mixing proportion
Colour change to red after fully hardening
For about 100 connectors
Process time: max. 4 hours
Hardening time at 80°C: 15 min
Viscosity: 2000cps (typ)
PU: 10 pieces each 4g

Art.-No.	Description
53930.1	Epoxy Resin, light 353 4g, 2-component adhesiv

FO Marking Strips „Vorsicht Glasfaserkabel“

Warning for labeling fiber optic components
19 x 150 mm
Self-adhesive
PPU: 50

Art.-No.	Description
80361.1-50	FO marking strips „ Vorsicht Glasfaserkabel“, PU 50

FO Marking Strips „Warnung vor Laserstrahlung“

Warning: Laser radiation
12.5 mm
Self adhesive
PU: 10 labeling stripes each with 10 labels

Art.-No.	Description
80362.2-10	FO marking strips „ Warnung vor Laserstrahlung“, PU 10

SPLICING- & MEASUREMENT EQUIPMENT

Whether three-axis devices or single-axis devices: EFB-Elektronik offers splicers in various designs for the thermal connection of fiber optic transmission links. Appropriate measuring devices are also available for checking - for example for standard-compliant OTDR or damping measurements.

Splice devices **P. 73**

Measurement devices & accessories **P. 75**

YOU MAY ALSO BE INTERESTED IN:

Fiber Pigtails P. 25

Fiber Optic Installation Cable P. 27

Cleaning Tools P. 64

Service / Measurement P. 23

Fiber Optic Cable Pre-Assembled P. 32

FTTH P. 78

HS18C HS18O

The world's first splicer with built-in crimp tool

Extremely handy

Easy operation
2.8" colour TFT display
Camera with 140x magnification

Ultra fast splice time with only 7 seconds!

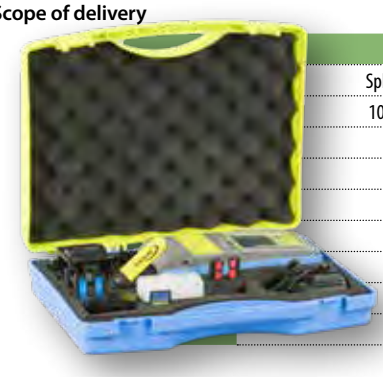
Arrange your personal demonstration appointment

INFRALAN® Splicer HS 18

The innovative INFRALAN ® Splicer has been specifically developed for FTTX and conventional splice applications.
The slim design offers the user excellent manoeuvrability and reliability.
The robust splicer guarantees ultra-fast and effortless splicing. Each splicing process is made possible with the fiber holders 250µ in black, 900µ in blue and 900µ in red for loose tube cables.
User-friendly and intuitive menu navigation via 2.8" colour TFT display and camera with 140x magnification.

Suitable for flat cable:	no
Extra Monitor connection:	no
Weight:	0,8 KG
Compatible Fiber/Cable:	0,25 - 3,0;Indoor Cable
Fiber Count:	Single
Fiber Holder:	Replaceable
Splice Mode:	3
Typical Splice Loss:	SM:0,03;MM: 0,01 dB
Splicing Time:	7 Seconds
Result Storage:	SD Card
Tension Test:	1,96 - 2,25 N
Operating Condition:	Temperature: 0 - 45°C;Humidity: 0 - 95%
Storage Condition:	Temperature: -20 - 60°C;Humidity: 0 - 98%
Dimension (BxHxT):	230mm x 98mm x 53mm

Scope of delivery



HS18O	HS18C
Splice device with shrink oven	Splice device with Crimp tool
100x Shrink splice-protectors	150x Crimp-protectors
Power supply	
Stripping tool	
Fiberholder, 250µ, 1 Pair (Black)	
Fiberholder, 900µ, 1 Pair (Blue)	
Fiberholder, 900µ, 1 Pair (Red),for Loose Tube Fiber	
Cleaver	
SD card	

Art.-No.	Number of Splice/ Heat cycles per battery	Equipment	Heating time oven
HS18C TOPSELLER	80x	Crimp tool	-
HS18O	40x Splice + Heat	Heat oven	25 - 80 seconds

Accessory

Art.-No.	Description
HS18-FH-SET900LT	Fiberholder, 900µ, 1 Pair (Red),for Loose Tube Fiber
HS18-FH-SET900	Fiberholder, 900µ, 1 Pair (Blue)
HS18-FH-SET250	Fiberholder, 250µ, 1 Pair (Black)
HS18-ELEKTRODE	1 pair exchange electrodes
HS15-WARTUNG-S	Maintenance Standard
HS15-WARTUNG-P	Maintenance Premium
HS15-WARTUNG3JS	Maintenance Contract Standard 3 years
HS15-WARTUNG3JP	Maintenance Contract Premium 3 years

Quick result check using Wi-Fi App
Automatic arc compensation

The highest magnification and resolution
520x magnification
3 bright LEDs and illuminated keypads for dark enviroment

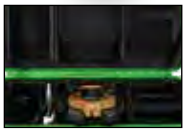
NEW

Suitable for this:
Crimping tool on page 69

View 8+

This Splicer is qualified for „ZTV-TK Netze 48“

View 7



3-Axis Fusionsplicer Inno

Characteristics View 8+ and View 7

- Core Alignment Splicing Method with DACAS (Digital Analysis Core Alignment System)
- The world's highest magnification and resolution
- 5“ Color LCD Touch Screen
- User-friendly smart GUI
- Explanation Videos retrievable on device
- Double Tap to Zoom in & out
- Fast Heating Time
- Ultra-high Capacity Battery
- Detachable SOC Holder and Heating Oven
- Ceramic Clamp for Improved Durability
- Protective Cover
- Suitable for harsh weather conditions
- 3-Year Extended Warranty

Scope of delivery View 8+ and View 7:
Fusion Splcier 1
Battery Pack 1
High Precision Cleaver 1
Power Cable 1
Fiber Holder 1
AC Aadapter 1
SOC Heater Cover 1
Manual CD 1
Cooling Tray 1
USB Cable 1
Electrode 2
Cigarette Lighter Cable 1
Electrode Grinder 1
Carrying Case 1

Equipment ..... Shrink oven
Suitable for flat cable: ..... no
Extra monitorconnection: ..... no
Weight: ..... 2,78 kg
Compatible Fiber/Cable: ..... 0,25 - 3,0;Indoor cable
Fiber count: ..... Single
Fiber Holder: ..... Replaceable
Splice Mode: 128
Typical Splice Loss: SM:0,02;MM: 0,01;DS: 0,04;NZDS: 0,04;G.657: 0,02
Typical Return Loss: ..... >60 dB
Number of Splice/Heating with Battery: ..... 355 splicing + heating
Attenuation Splicing: ..... 0,1 - 20 dB
Tension Test: ..... 1,96 - 2,25 N
Operating Conditions: ..... Altitude: 0-5000m;Humidity: 0 - 95%; Temperature: -10 - 50°C;Max. Wind: 15m/s

Art.-No.	Splicing time	Heating time oven	Results Storage
VIEW8+	6 seconds	9 seconds	10.000
VIEW7	8 seconds	13 seconds	2.000

Art.-No.	Description
VIEW-ACCU	Accupack Inno View 7, View 8+
VIEW-ELECTRODE	Set of Electrodes Inno View 7, View 8+
VIEW-CLEAVER	Cleaver for Inno View 7, View 8+
VIEW-PSUPPLY	Power Supply Inno View 7, View 8+

Fiber Optic Power Meter 850/1300/1310/1550nm

Fiber Optic Power Meter for measurement of the Insertion Loss of Fiber-Communication links. The unit is used with the Light Sources HS15-LS1 (850 nm/1300 nm) and/or HS15-LS2 (1310 nm/1550 nm).Robust and compact case
Internal storage for 39 measurements
Data transfer through with PC is possible
Communication Connector: USB
Visiual Fault Locator included in the unit
Detector Type: InGaAs
Visiual Fault Locator: 1 mW
Optical Connector: SC/ PC
Measurement Range: +8 dBm ~ -70 dBm
Measurement Wavelength: 850 nm, 1300 nm, 1310 nm, 1550 nm
Resolution: 0,01 dB
Accuracy: +/- 0,2 dB
Modulation Detection: 270 Hz, 1 kHz, 2 kHz
Low Battery Warning
Display Backlight
Operation Temperature -10 °C ~ +60 °C
Opteration Humidity < 90 % RH
Storage Temperature -20 °C ~ +70 °C
Storage Humidity < 90 % RH
Power Source: 2 x AA/LR6 1,5 V (not included)
Dimensions: 170 x 97 x 38 mm
Weight: 330 g

Adapter for LC connection available on request

Art.-No.	Description	Measured value memory	Suitable for	Type of indication	With PC/ printer interface	Suitable for network protocol measurement
HS15-MESS	F0 Power Meter 850/1300/1310/1550nm	yes	Fiber Optic	LCD/Monitor	yes	no

Fiber Optic Light Source for HS15-MESS

HS15-LS1: Light Source 1310 nm and 1550 nm
HS15-LS2: Light Source 850 nm and 1300 nm
To use with item HS15-MESS
Power Stability: +/-0,05 db for 1 hour, +/- 0,1 dB for 8 hours
Optic Connector: SC/PC
Signal Modulation: 270 Hz, 1 kHz, 2 kHz
Low Battery warning
Storage Temperature: -20 °C ~ +70 °C
Storage Humidity: < 90 %RH
Operating Temperature: -10 °C ~ +60 °C
Operating Humidity: < 90 %RH
Power Source: 2 x 1,5 V AA batteries (not included)
Dimension: 165 x 80 x 35 mm
Weight: 280 g

Art.-No.	Description
HS15-LS1	Fiber Optic Light Source 1310/1550nm, for HS15-MESS
HS15-LS2	Fiber Optic Light Source 850/1300nm, for HS15-MESS

Fiber Optic Inspection Microscope for 2.5mm and 1.25mm ferrules

Fiber Optic Microscope for inspection of connector endfaces
E.g. SC, LC, ST, E2000®,FC, DIN or FSMA connector
Adapter for 2,5 mm ferrules and 1,25 mm ferrules included
Eye-Safe video viewing, Ergonomic design
Fast and easy focus due to one hand operation
Large 3,5" display
Operation by rechargeable battery pack
Inspection of different kind of cable with mounted connectors possible
Change inspection tips in seconds

Specifications Camera:
Field of view: ~ 0,425 mm x 0,320 mm
Optical Resolution: 0,5 µm
Optical Magnification: 400 times
Focus: Manual adjustment
Light Source: Blue LED
Dimensions: 35 x 175 mm (without cap)
Weight 200 g

Specifications Display:
Display: 3,5" LCD-TFT, 960 x 240 pixel
Adjustable brigthness and contrast
Dimensions: 105 x 90 x 45 mm (folded)
Weight: 255 g (without battery)
Power Supply: 9,6 V battery pack or AC power supply
Battery Life: 4 hours

Scope of delivery:
Handheld (camera)
LCD display
Adapter for FC connector
Adapter for SC connector
Adapter for LC connector
Accupack (incl. with display)
Power supply/charger
Carrying case

Art.-No.	Description	Zoom factor
CI-1100	Fiber Optic Inspection Microscope for 2,5mm and 1,25mm ferrules	400

FiberXpert OTDR 5000 Quad

OTDR for 850/1300 nm multimode and 1310/1550 nm singlemode
Standards compliant Tier 2 measurement of fiber optic cabling
Automatic Pass/Fail analysis of the test results according to the limits specified by TIA/IEC
Display of the OTDR trace in a graphical format for a length-dependent analysis of all events for reflection and attenuation
All fiber link events and analysis listed in a table of results
Automatic macro-bend detection
Built-in optical loss test set
Optional fiber inspection probe
5 inch colour LCD touch screen
Hand-free operation due to a special carrying case
Generation of professional reports with the central eXport evaluation software
Laser safety class: M1
Interchangeable optical connectors: FC, SC, DIN, and ST
Calibrated wavelengths MM: 850 and 1300 nm
Calibrated wavelengths SM: 1310, 1490, 1550, 1625 and 1650 nm
Measurement accuracy MM: ±1 dB (At -15 dBm)
Measurement accuracy SM: ±0.5 dB (At -30 dBm)
Event dead zone MM: 0.8 m
Event dead zone MM: 0.9 m

Scope of delivery:
Main measurement unit, SC compatible Multimode/ Singlemode module
Li-Po batteries, power supplies, soft case with shoulder strap,
hard carry case, calibration certificate

Weight: 0.4 kg
Dimensions: 128 x 134 x 40 mm

Built-in attenuation measuring device

Art.-No.	Description	Measured value memory	Suitable for	Type of indication	With PC/ printer interface
FX5000-QU	FiberXpert OTDR 5000 Quad, Multimode/Singlemode	yes	Fiber Optic	LCD/Monitor	yes

Copper- and Fiber Optic-Cable Certifier up to 2500MHz

For standard conformance measurement of structured cabling in buildings
Certification up to 2500 MHz
Support new TIA CAT 8 und ISO Class I and II draft standard
Operating concept Dual Control System (DCS"TM") with two identical hand tools
Autotest in less than 9 Seconds
Professional documentation generator
Impact-resistant housing, impact and shock-proof design, long battery life
Complete glass fiber certification for MM and SM with optional fiber optic measuring adapters
Supports two-wavelength end-to-end measurements for MM and SM glass fibers

General Specifications
Interfaces: Probe Interface, RJ-45 Ethernet, USB host and device, talkset, power jack
Display: 6" industrial LCD, touch sensitive area on both units
Enclosure: Ruggedized plastic with rubber over-mold, withstands 1.5 m drop test on hard surface
Remote unit abilities: View test results, save tests, start autotest
Power supply: AC 100-240 V to 12 V, 3 A power adapter
Input over-voltage protection: Protected against Telco voltages
Battery: Removable and rechargeable Li-Ion
Battery Capacity: >8 hours continuous operation
Internal Storage Capacity: 2000 copper test results with full plot information
External Storage: USB Flash Drive 1 GB in delivery (21 GB max.)
Supported Languages: Chinese, Czech, English, Finnish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish, Swedish, Turkish
Calibration period: 1 year
Dimensions: 232 x 126 x 87 mm (9.1 X 5.0 X 3.4 inch3) /unit
Weight: Approx. 1.4 kg (3.0 lb) / unit

Environmental
Operating Temparature: 0 to 40 °C
Storage Temperature: -20 to 60 °C
Relative humidity: 10 % to 80 %

Scope of delivery:
WireXpert Handheld units: 2
Li-Ion Batteries: 2
Stylus with Cords: 2
Display Protection Covers: 2
CAT 6A Permanent Link Interface Adapters: 2
CAT 6A Permanent Link Test Cords: 2
CAT 6A Channel Adapters: 2
USB Thumb Drive incl. Manual and Software: 1
Talk Head Sets: 2
AC Power Adapters: 2
Country Specific Power Cord: 2
Calibration Certificate: 1
Carrying Case: 1
Quick Reference Guide: 1

Copper testing
Certification Testing: TIA 568-C.2 CAT 5e, 6, 6A, draft CAT 8
ISO/IEC 11801, EN 50173 Class D,E,EA,F,FA
draft Class I and Class II Permanent link and channel
CAT 5e, 6, 6A, 7, 7A and patch-cord
Autotest time - CAT6A: 9 sec
Autotest time - Class FA: 15 sec
Max cable length for dual ended Autotest: 500 m
Insertion Cycles: Channel: 10000 typical
Permanent link: 5000 typical

Advanced Diagnostics: Time-domain fault Locator for RL and NEXT
Measurement Accuracy: Exceeds TIA 1152 Level IIIe, IEC 61935 level IV
Measurement Frequency Range: 1- 2500 MHz

Fiber Testing - SM
Wavelengths 1310 nm, 1550 nm
Autotest Time: 6 seconds for dual ended test
Connector Type: SC, LC (optional adapter needed)

Fiber Testing - MM
Wavelengths: 850 nm, 1300 nm
Autotest Time: 6 seconds for dual ended test
Connector Type: SC

Art.-No.	Description
WX4500-FA-V2	Copper- and FO-Cable Certifier up to 2500MHz

Fiber Optic Module for WX4500

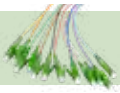
Art.-No.	Description
WX_AD_MM2	WX4500 Multimode-FO-measurement module (850nm and 1300nm)
WX_AD_SM2	WX4500 Singlemode-FO- measurement module (1310nm and 1550nm)

MPO Multimode Test Kit

Art.-No.	Description
WX_AD_MM_MPO_KIT	MPO Multimode Test Kit for, WireXpert 4500

FTTH

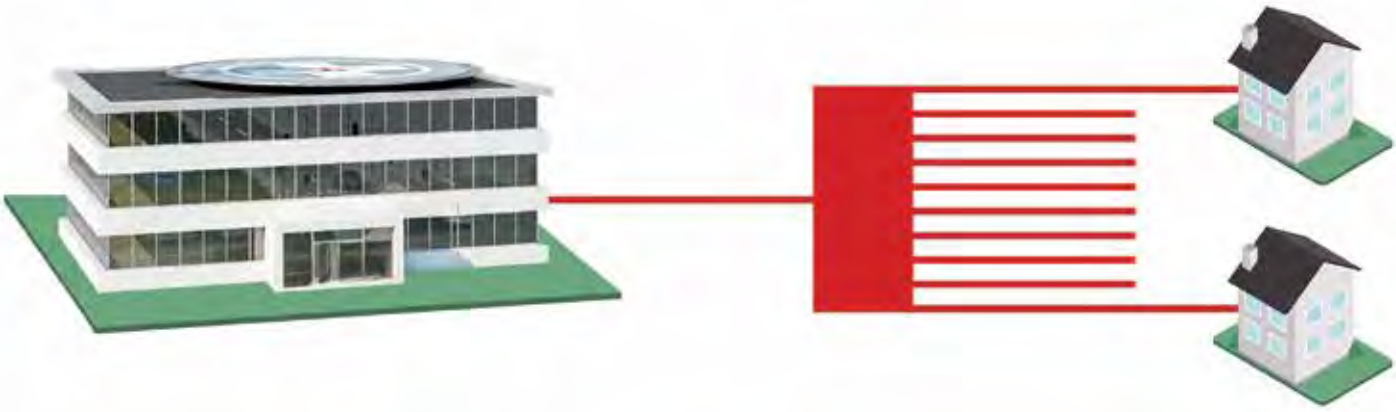
In the FTTH program from EFB-Elektronik, carriers and municipal telecommunications providers will find a perfectly coordinated selection: The portfolio ranges from installation cables and pre-assembled components to small distributors and subscriber equipment for the successful implementation of local fiber-to-the-home projects.

Outdoor Boxes		P. 80
Indoor Boxes		P. 81
In Wall distributor		P. 83
FTTH Subrack		P. 85
CPE		P. 86
Pre-assembled Connection Boxes		P. 87
Fiber Pigtails		P. 89
PLC Splitter		P. 89
Drop Cable		P. 90
Connectors field installable		P. 91
Connection boxes		P. 91

YOU MAY ALSO BE INTERESTED IN:

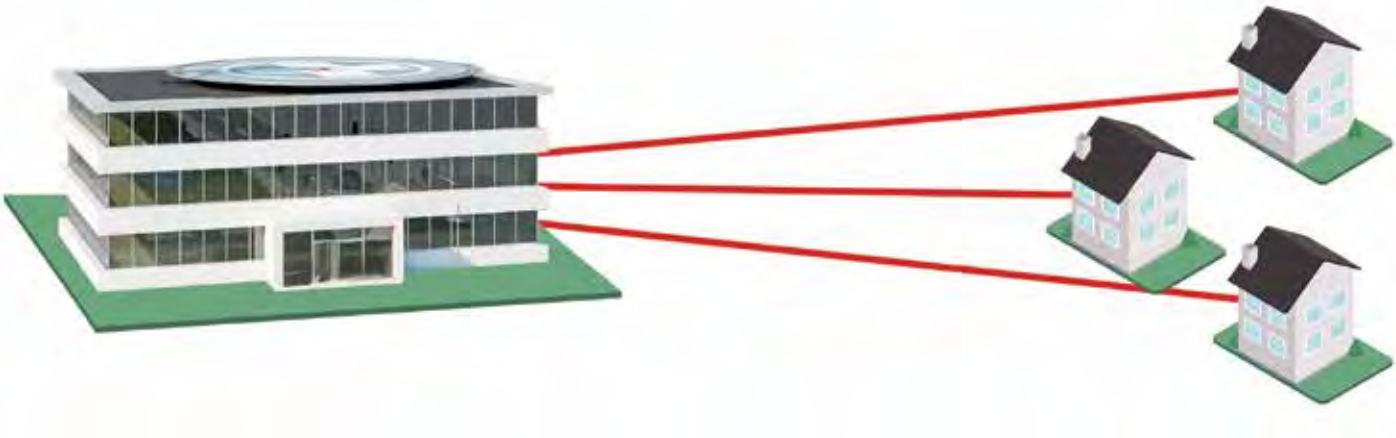
Simplex Jumper Singlemode	P. 21
IP55 Network Cabinets	P. 197

THE FTTH BUILDING TOPOLOGY



Point to Multipoint

At present, the connection type used is either point to multipoint or point to point. Point to multipoint technology is a connection from one point to several end points. This is also known as a multipoint connection, which is a passive optical network (PON). This is used to transfer information for several participants from the exchange to the distribution point in the residential area. The transmission method used is either time division multiplexing (TDM-PON) or wavelength division multiplexing (WDM-PON). Many passive optical splitters distribute the information to multiple optical fibers and transport it to end user. Multiple use of optical fibers makes it possible to connect many new participants to an existing optical fibre network.



Point to Point

With a point to point connection, information is transported from the exchange without an intermediate station, using a direct connection to the end user. This is also known as point to point technology. The information is transported using a direct Ethernet connection via separate fibers. This connection type offers better conditions for a future increase in bandwidth and flexible upgrades.

ALL BENEFITS AT A GLANCE

- Optimal use for outdoor applications due to protection class IP65
- Different size versions (16, 8, 4, 2 ports) for various applications
- Access protection with key or special screw
- Sealing possible
- Integrated swiveling splice cassette with fiber overlength holder for more
- 16 Port and 8 Port Boxes offer a receptacle for splitters

FTTH-BOX-OUT-1 closed

FTTH-BOX-OUT-2 closed

Crimp and shrink splice holder including

FTTH-BOX-OUT-3 closed

FTTH-BOX-OUT-4 closed

FTTH IP65 Connection Boxes

Foreign body and contact protection:.....Protection against ingrees of dust
Water protection:.....Protection against jet water
Type of splice protection:.....Shrink/ Crimp
Suitable for adapter:.....SC Simplex/LC Duplex/E2000®
Scope of application: .....Outdoor
Mounting:.....Wall mounting
Possibility of mast mounting: .....no
Material:.....Plastic
Colour:.....White
Temperature Range:.....-25 - 70°C

Application:
Optical Networks
LAN
CATV Networks
FTTH Networks
PON, G-PON

FTTH-BOX-OUT-1 open

FTTH-BOX-OUT-2 open

FTTH-BOX-OUT-3 open

FTTH-BOX-OUT-4 open

Art.-No.	Cable entry without cable gland	Cable entry with cable gland	Number of fiber	Max. Assembly (Adapter)	Dimension	Access control
FTTH-BOX-OUT-1	16x 3-5mm	2x PG13.5	16	16	295x220x85 mm	Lock
FTTH-BOX-OUT-2	8x max. 3mm / 1x max. 9mm	2x PG13.5	8	8	213x163x47 mm	Special screw/plomb
FTTH-BOX-OUT-3	1x max. 10mm / 4x max. 4mm	-	4	4	172x136x40 mm	Special screw/plomb
FTTH-BOX-OUT-4	1x max. 10mm / 2x max. 4mm	-	2	2	165x100x30 mm	Special screw/plomb

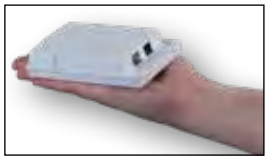
FTTH-BOX-IN-1 closed

FTTH-BOX-IN-2 closed

FTTH-BOX-IN-3 closed

FTTH-BOX-IN-4 closed

Matching this:
Adapters from page 38



FTTH Indoor Connection Boxes

Foreign body and contact protection: .....Protection against medium-sized foreign bodies
Water protection:.....Without protection
Type of splice protection:.....Shrink
Suitable for adapter:.....SC Simplex/LC Duplex/E2000®
Scope of application: .....Inside
Mounting:.....Wall mounting
Possibility of mast mounting: .....no
Material:.....Plastic
Colour:.....White
Temperature Range:.....0 - 50°C

Application:
Optical Networks
LAN
CATV Networks
FTTH Nertworks
PON, G-PON

FTTH-BOX-IN-1 open

FTTH-BOX-IN-2 open

FTTH-BOX-IN-3 open

FTTH-BOX-IN-4 open

Art.-No.	Number of fiber	Max. assembly (Adapter)	Dimension	Access control
FTTH-BOX-IN-1	4	4	150x110x34mm	without
FTTH-BOX-IN-2	2	2	84x130x24 mm	
FTTH-BOX-IN-3	2	1	115x86x23 mm	
FTTH-BOX-IN-4	2	1	148x90x16 mm	

FTTH Indoor DIN RAIL Box

Foreign body and contact protection: .....Protection against medium-sized foreign bodies
Water protection:.....Without protection
Type of splice protection: .....Shrink
Suitable for adapter:.....SC Simplex/LC Duplex/E2000®
Scope of application: .....Inside
Mounting:.....Wall mounting;DIN Rail
Possibility of mast mounting: .....no
Material: .....Plastic
Colour: .....White
Temperature Range:.....0 - 50°C

Art.-No.	Number of fiber	Max. assembly (Adapter)	Dimension	Access control
FTTH-BOX-IN-5	4	4	101x81x29 mm	without

DIN RAIL adapter assembeled

Fiber optic connection unit equipped with LC duplex or SC simplex for mounting on DIN rail TS35
Compact design
Closed on one side
Strain relief with cable ties

Delivery without end plate left (ET-25185.1)
An end plate left is always necessary. DIN RAIL adapter requires an end plate left, several connected also require only one end plate left.

Type of fastening:..... DIN-Rail 35 mm
Type of DIN-Rail adapter:..... Slanted
Material:..... Plastic
Colour:..... light grey
RAL colour:..... RAL7035
Dimension (BxHxT):..... 22x61x54 mm

Art.-No.	Number of ports	Assembly	Colour of adapter
FTTH-DINRAIL-LC	2	1x LC-Duplex	blue
FTTH-DINRAIL-LCA	2	1x LC-Duplex APC	green
FTTH-DINRAIL-SC	1	1x SC-Simplex	blue
FTTH-DINRAIL-SCA	1	1x SC-Simplex APC	green

FTTx Compact-Connection box

Foreign body and contact protection: .....Protection against medium-sized foreign bodies
Water protection:.....Without protection
Type of splice protection:.....Shrink
Suitable for adapter:.....SC Simplex/LC Duplex/E2000®
Scope of application: .....Inisde
Mounting:.....Wall mounting
Possibility of mast mounting: .....no
Material:.....Plastic
Colour:.....White
Temperature Range:.....-20 - 60°C

FTTX compact junction box with dimensions 100x80x23mm
An adjustable fiber overlength cassette is mounted in the box for an easier work on cable inlets or connecting a adapter. The splice protection holder is also in the fiber overlength cassette. There are breakouts for 2 cable inlets in the box and also 2 breakouts for flangeless SC-Simplex or LC-Duplex adapters.

Art.-No.	Number of fiber	Max. assembly (Adapter)	Dimension	Access control
53700.2	4	2	100x80x22 mm	without

FTTH In Wall Distributor

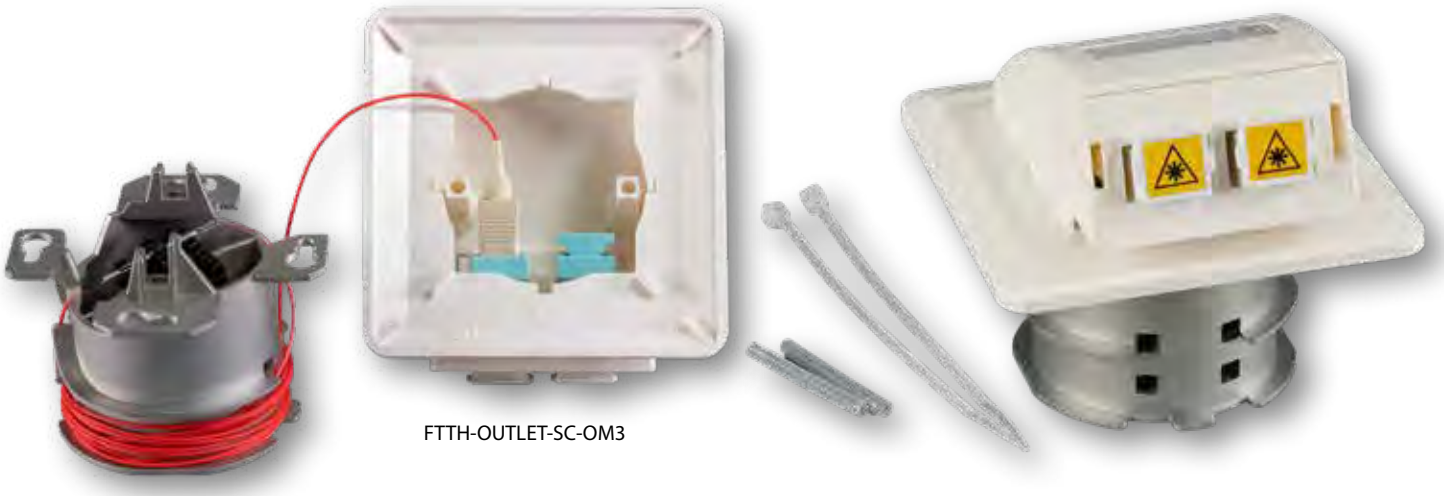
FTTH In Wall Distributor with base plate and hood with cam lock
For splice cassette and adapter
Pre-assembled with one splice cassette (without adapters and pigtails)

Delivery:
Holder for adapters (6x SC Duplex or LC Quad; 24x LC Duplex (**only plastic adapters**), E2000® or SC Simplex; 12x ST or FC)
4x Cable management
1x edge protector
Delivery without splice holder

Optional accessories:
53100.21 Splice holder for 12 crimp splices
53100.8 Splice holder for 6 shrink splices
FTTH-BOX-IN-UP-W Set distributor plates for adapters

Foreign body and contact protection:.....Protection against medium-sized foreign bodies
Water protection:.....without protection
Type of splice protection:.....crimp/thermo
Suitable for adapter:.....SC Simplex/LC Duplex/E2000®
Scope of application: .....Inside
Mounting:.....In Wall
Possibility of mast mounting: .....no
Material:.....Metal
Colour:.....Grey
Temperature Range:.....0 - 50°C

Art.-No.	Cable entry without cable gland	Number of Fiber	Max. Assembly (Adapter)	Dimension	Access control
FTTH-BOX-IN-UP	4x variable size	24	24	380x380x83 mm	without



FTTH-OUTLET-SC-OM3

NEW

Integrated fiber overlength holder
Holder for splice protection

FTTH flush mount outlet

Fiber Optical flush-mounted data outlet to accommodate 2 SC-Simplex adapter or 2 LC-Duplex adapter. The data outlet is equipped with couplings in the classes OM3, OM4 or OS2 including shutter.

Depending on the application, the holder can also be dismantled so that it does not get in the way when pre-assembled cables are installed.

Performance features:
Horizontal and vertical installation in the cable duct or flush mounting
Recording of fiber overlengths
Integrated splice protection for 4 splices
Cover 80mm x 80mm
Data outlet depth of 40mm for installation in flush-mounted boxes or cavity wall boxes

Outlet direction:..... down
Dust protection cap:..... Shutter
Material bearing ring: ..... Zinc alloy
Material central plate: ..... ABS Plastic
Material adapter plate: ..... ABS Plastic
Max. assembly (Adapter): 2
With Jack/Adapter:..... yes
Surface mounted:..... no
Flush mounted (plaster):..... yes
Duct installation:..... yes

Art.-No.	Colour	Category	Suitable for adapter	Central plate according to	Dimension
FTTH-OUTLET-LC-SMAPC	white	Singlemode	2x LC Duplex APC green	DIN 49075	80 x 80 x 40 mm
FTTH-OUTLET-SC-SMAPC		Singlemode	2x SC Simplex APC green		
FTTH-OUTLET-LC-OS2		Singlemode	2x LC Duplex blue		
FTTH-OUTLET-SC-OS2		Singlemode	2x SC Simplex blue		
FTTH-OUTLET-LC-OM4		Multimode	2x LC Duplex erica violet		
FTTH-OUTLET-SC-OM4		Multimode	2x SC Simplex erica violet		
FTTH-OUTLET-LC-OM3		Multimode	2x LC Duplex aqua		
FTTH-OUTLET-SC-OM3		Multimode	2x SC Simplex aqua		

Cable management included

FTTH subrack for system cassettes

19“ subrack for FTTH-MODUL-XX
Up to 204 LC ports to 3 units
With front-sided cable tray
Delivery without modules

Material: ..... Steel
Type of surface: ..... With powder coating
Type of enclosure: ..... open
With ventilation slots: ..... yes
Degree of protection (IP): IP20

Art.-No.	Max. Modules	Max. Ports	Colour	Dimension
FTTH-BGT-1HE	8	96 LC / 48 SC	grey	483 x 44.5 x 190 mm
FTTH-BGT-3HE	17	204 LC / 102 SC	grey	483 x 135 x 190 mm

FTTH system modules

Suitable for 1U and 3U subrack FTTH-BGT-xHE
Pre-equipped with 6 SC-Simplex adapter in single mode, multimode OM4 or multimode OM3 with ceramic ferrule
Inclined outlet left/right for the 1U version, top/bottom outlet for the 3U version
Cable entry via MTP®/MPO adapter
Splice cassette (Shrink -and Crimpprotection) holder included in cassette for MTP®/ MPO free installation

Number of height units (U): 0,5
With Pigtail: ..... no

Crimp & Shrink

Art.-No.	Modules	Number of adapter	Adapter	APC	Colour adapter
FTTH-MODUL-LCAPC	Singlemode APC	6	LC duplex	yes	green
FTTH-MODUL-LCOS2	Singlemode		LC duplex	no	blue
FTTH-MODUL-SCOS2	Singlemode		SC simplex	no	blue
FTTH-MODUL-LCOM4	Multimode OM4		LC duplex	no	erica-violet
FTTH-MODUL-SCOM4	Multimode OM4		SC simplex	no	erica-violet
FTTH-MODUL-LCOM3	Multimode OM3		LC duplex	no	aqua
FTTH-MODUL-SCOM3	Multimode OM3		SC simplex	no	aqua

Wall mounting for XON1300 & APL

Modularity Saves Investment and Service Costs

No matter if it concerns the housing industry, a city carrier or a utility company, easy planning and scaling of the FTTH network is a key point in the deployment process. Terminating the network with the XON1300 provides the ideal solution.

Versatile for greater success

Flexibility:
The XON30.W wallmount unit acts as a passive network termination and can be installed independently from the active XON1300 unit.
Reduction of Operational Costs:
Simple insertion of the XON1300 into the wallmount unit and placing into operation is carried out by the end user. Modification in services requires only an exchange of the active equipment.
Durable & Robust Technology:
Excellent quality and robustness guarantee a long life time and a high reliability of the device preparing the network for future bandwidth requirements.
Designed for the Living Room:
A timeless housing design in the smallest form factor suitable for the living area. Winner of the RedDot Award 2014 for the effective housing concept.

Thanks to its modularity, the XON1300 can be used in various point-to-point FTTH applications. The module is available in different versions for 1- and 2-fiber

Topologies:
XON1300.S Gigabit Ethernet Switch
XON1300.P / IP passive module for maintaining router freedom

Type of Splice protection:.....crimp/thermo
Scope of application: .....Inside
Mounting:.....Wall mounting
Possibility of mast mounting: .....no
Material: .....Plastic
Colour: .....White

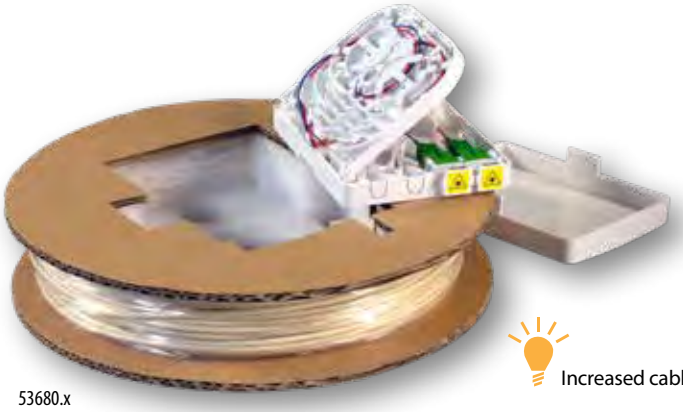
Art.-No.	Cable entry without cable gland	Number of Fibers	Dimension	Access control
XON30	4	2	48x150x150 mm	without

Passive Network termination,
optical CATV, without XON30 housing

Art.-No.	Mounting
XON1300.P	empty housing

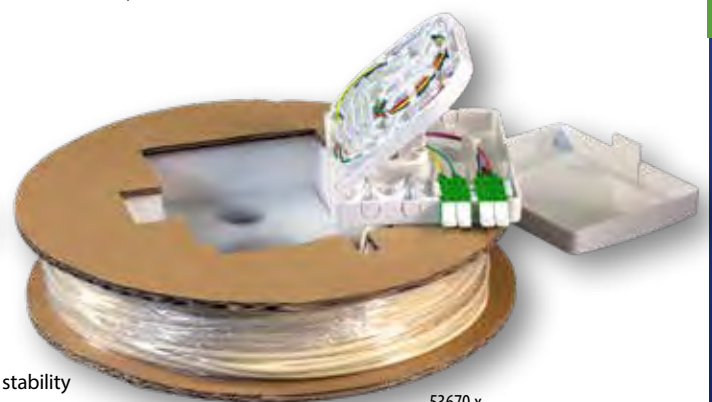
Gigabit Ethernet Switch
4xLAN, without XON30 housing

Art.-No.	Number of ports 10/100/1000 Mbps RJ45	Mounting
XON1300.S	4	empty housing



53680.x

Increased cable stability



53670.x

FTTX Compact Box pre assembled, G.657.A2

Scope of application: ..... Inside
Mounting:..... Wall mounting
Material:..... Plastic halogen free
Colour:..... White
Number of adapter:..... 2
IP Protection:..... IP20
Dimension:..... 100 x 80 x 22 mm

Stock Lengths: 10m - 20m - 30m - 40m - 50m - 60m - 70m - 80m

Art.-No.	Fiber type	Fiber category	Cable diameter	Material outer sheath	Colour outer sheath	Adapter
53670.x	Singlemode	G657.A2	2.2 mm	LSZH	White	LC Duplex
53680.x						SC Simplex

FTTH DIN RAIL Adapter, Laserprotection integrated

Scope of application: .....Inside
Mounting:.....DIN Rail
Material:.....Plastic halogen free
Colour:.....White
RAL colour:.....RAL9010
IP Protection:.....IP30

Stock Lengths: 15m - 30m - 50m - 100m

Art.-No.	Fiber type	Fiber category	Cable diameter	Material outer sheath	Colour outer sheath	Adapter	Dimension
53681.x	Singlemode	G657.A2	4.1 mm	LSZH	Ivorytower	1x SC Simplex	89.5x17.5x51.5 mm
53682.x						2x SC Simplex	
53683.x						4x SC Simplex	89.5x35x51.5 mm

Customised solutions in our own manufacturing facility

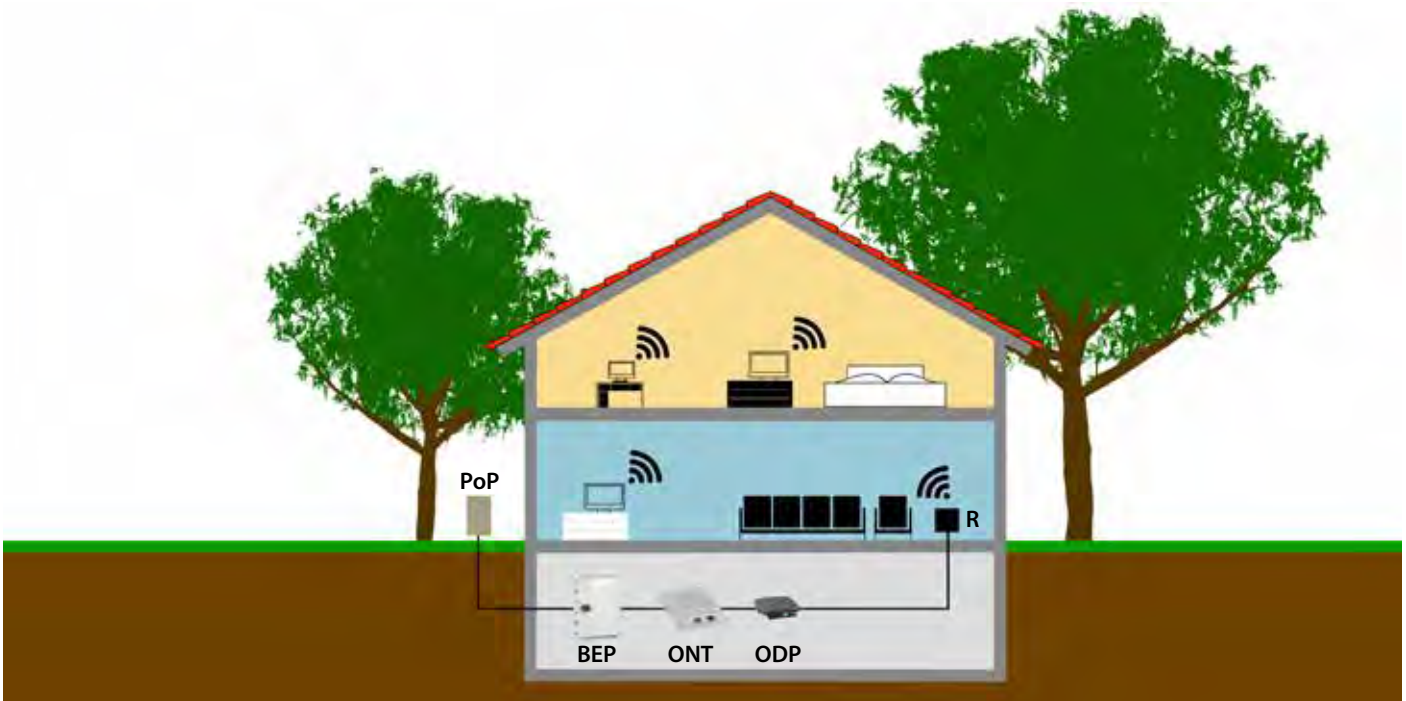
In our own manufacturing facilities in Germany, we offer the option to create customised cable assemblies for you: From jumpers to pigtails to breakout and loose tube fibre cables and E-2000 connectors.

To ensure top quality, we rely on the many years of experience and high level of knowledge of our employees. In addition, we use state-of-the-art testing techniques, a manufacturing process system and carry out regular quality checks. We can also guarantee high stock availability of individual components and short manufacturing times.

In the manufacture of E-2000 connectors, we use R&M certified production processes to achieve the best possible quality of the cable assemblies.

DOMESTIC CONNECTION WITH OPTICAL FIBRE CABLING

Certain basic conditions have to be created for the successful installation of an FTTH network. The building should have an accessible installation location for a building interconnection point. This location should not be more than 1.5 m from the building infeed. The building connection requires an area of approx. 0.8 m x 0.8 m. The building should already be cabled with optical fibre from the building interconnection point to the interior area. The optical fibre box can be placed in any location. The ONT is installed beside it. Two Schuko sockets are required for the ONT and a router. The distance between the socket and the ONT may not be more than 1 m.



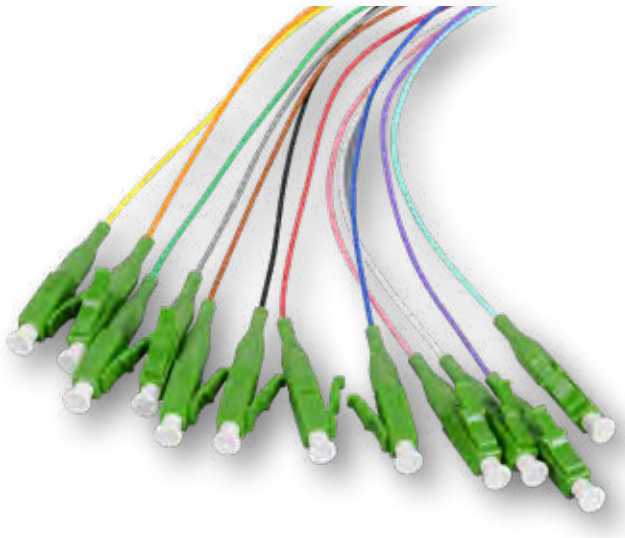
PoP
Point of Presence
This refers to the main distribution frames. From here, the optical cables are run to junction boxes on the street

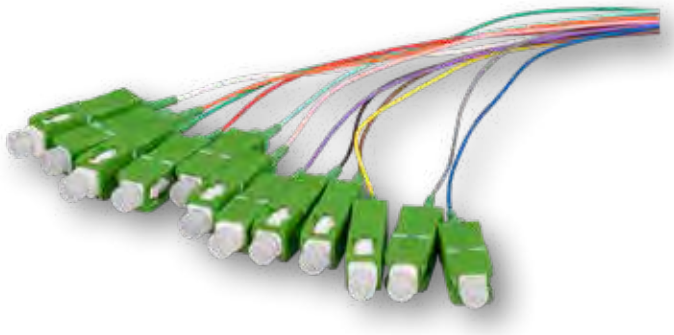
BEP
Building Entry Point
The building entry point is where the optical cable enters the building. The BEP is placed about 1.5 m from the house lead-in and is installed in the basement or the building terminal compartment.

ONT
Optical Network Termination
The ONT is the consumer-end termination box. This is where the optical signal from the optical cable is converted into an electronic signal. The ONT also serves as the termination point of the FTTH network.

ODP
Optical Distribution Point
Handover and termination of the optical fibre up to the interior using an optical splitter or a fibre optic port.

R
Router
Handover point for Internet and telephone.





FTTH Fiber pigtail LC

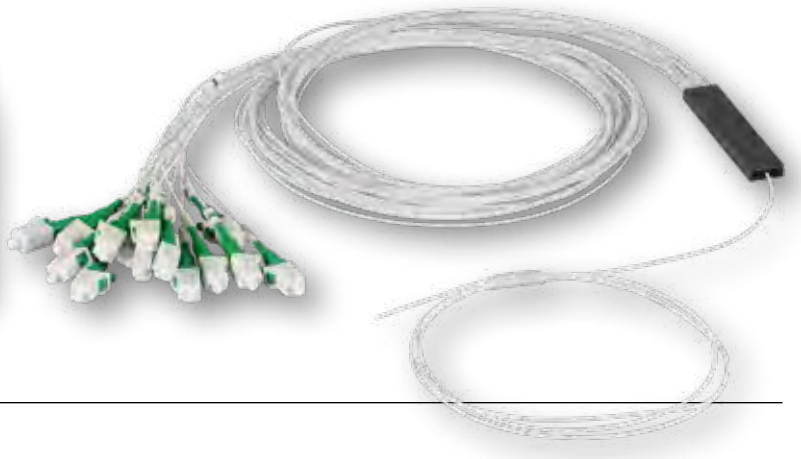
Insertion loss 1310nm: ..... < 0,3 dB
Max. Tension: ..... 3 N
Min. Bending Radius Static: ..... 9 mm
Min. Bending Radius Dynamic: ..... 18 mm
Outer Diameter: ..... 0,9 mm
Jacket Material: ..... LSZH
Length: ..... 2,0 m
Operating Temperature: ..... -20 – 70 °C
Connector Conform to Standard: IEC61754-20
Cable Conform to Standard: IEC60793-2

Art.-No.	Category	Colour	APC-Version	Connector Colour
FTTH-PIGTAIL-LCA1	G657A2	yellow	yes	green
FTTH-PIGTAIL-LC1		yellow	no	blue
FTTH-PIGTAIL-LCA12		12 colours	yes	green
FTTH-PIGTAIL-LC12		12 colours	no	blue

FTTH Fiber pigtail SC

Insertion loss 1310nm: ..... < 0,3 dB
Max. Tension: ..... 3 N
Min. Bending Radius Static: ..... 9 mm
Min. Bending Radius Dynamic: ..... 18 mm
Outer Diameter: ..... 0,9 mm
Jacket Material: ..... LSZH
Length: ..... 2,0 m
Operating Temperature: ..... -20 – 70 °C
Connector Conform to Standard: IEC61754-4
Cable Conform to Standard: IEC60793-2

Art.-No.	Category	Colour	APC-Version	Connector Colour
FTTH-PIGTAIL-SCA1	G657A2	yellow	yes	green
FTTH-PIGTAIL-SC1		yellow	no	blue
FTTH-PIGTAIL-SCA12		12 colours	yes	green
FTTH-PIGTAIL-SC12		12 colours	no	blue



PLC Splitter

Type of accessory: ..... PLC Splitter
Number of connector front side: 1
Colour: ..... Aluminium
Application: ..... CATV

Art.-No.	Connection type front side	Connection type backside	Split	Length	Width	Heights	Insertion loss (incl. connector)
FTTH-PLC4-SCA	open	SC/APC	1 on 4	55 mm	7 mm	4 mm	<7,4 dB
FTTH-PLC8-SCA		SC/APC	1 on 8	55 mm	7 mm	4 mm	<10,5 dB
FTTH-PLC16-SCA		SC/APC	1 on 16	60 mm	12 mm	4 mm	<13,8 dB
FTTH-PLC32-SCA NEW		SC/APC	1 on 32	80 mm	20 mm	6 mm	<17 dB
FTTH-PLC64-SCA		SC/APC	1 on 64	100 mm	40 mm	6 mm	<20,6 dB
FTTH-PLC4-LCA		LC/APC	1 on 4	55 mm	7 mm	4 mm	<7,4 dB
FTTH-PLC8-LCA		LC/APC	1 on 8	55 mm	7 mm	4 mm	<10,5 dB
FTTH-PLC16-LCA		LC/APC	1 on 16	60 mm	12 mm	4 mm	<13,8 dB
FTTH-PLC32-LCA NEW		LC/APC	1 on 32	80 mm	20 mm	6 mm	<17 dB
FTTH-PLC64-LCA		LC/APC	1 on 64	100 mm	40 mm	6 mm	<20,6 dB

NEW

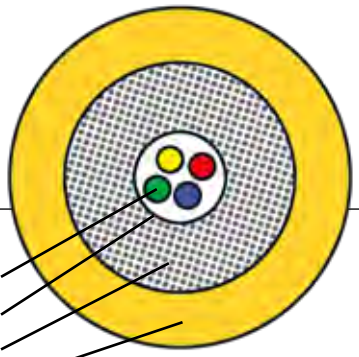
Stock Lengths: 750 m in Box

Broadband Outdoor Cable MDIC - Micro Drop Installations Cable

Material outer sheath:..... LZSH
Colour outer sheath:..... white
Temperature Range (Operation):..... -30 – 70 °C
Temperature Range (Storage):..... -30 – 70 °C
Temperature Range (Installation):..... -10 – 50 °C
IL max. (dB/km) 1310nm:..... 0,35
IL max. (dB/km) 1550nm:..... 0,22
Cabling standards: ..... EN 50173-1;ISO/IEC 11801

Art.-No.	Construct	Cable Ø	Weight	Bending radius	Tensile Force
56204.3	2 x Singlemode G.657.A1	2.0 x 3.1 mm	10 kg/km	30 mm	150 N
56204.4	4 x Singlemode G.657.A1	3.7 mm	16 kg/km	37 mm	150 N

NEW



FTTH Indoor Drop Cable LSOH

Material outer sheath:..... LSZH
Euro Class: ..... Dca
Colour outer sheath:..... Ivory
Temperature Range (Operation):..... -5 – 60 °C
Temperature Range (Storage):..... -40 – 70 °C
Temperature Range (Installation):..... -5 – 50 °C
Rayleigh Backscatter Coefficient 1310nm:..... 1,467
Rayleigh Backscatter Coefficient 1550nm:..... 1,468
Rayleigh Backscatter Coefficient 1625nm:..... 1,468
IL max. (dB/km) 1310nm:..... 0,36

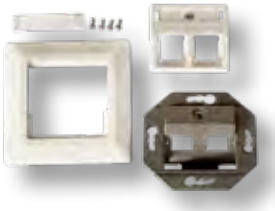
Art.-No.	Construct	Cable Ø	Weight	Bending radius	Tensile Force
FTTH-DROP-2	2 x Singlemode G.657.A2	3.0 mm	11 kg/km	20 mm	15da N
FTTH-DROP-4	4 x Singlemode G.657.A2	2.65 mm	6,5 kg/km	15 mm	15da N

Fiber Optic Frame Set for E2000®, SC simplex or LC duplex

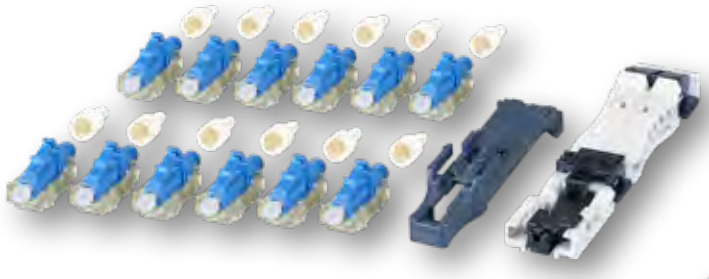
Outer ring 80 x 80 mm and Central plate 50 x 50 mm
Compatible to common switch programs with adapter plate
Integrated label behind transparent cover
Delivery unassembled

Scope of delivery:
1 x Metal frame
1 x Bearing ring
1 x Central plate
4 x M2-Screw

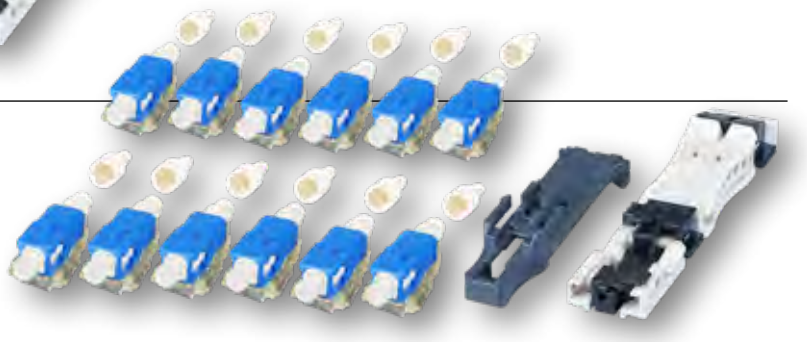
Outlet direction:..... angled
Dust protection cap:..... without
Material bearing ring: ..... Zinc alloy
Material central plate:..... ABS plastic
Max. Assembly (Adapter):..... 2
With jack/coupling:..... no
Surface mounted:..... yes
Flush mounted (plaster):..... yes
Duct installation:..... yes



Art.-No.	Colour	Suitable for adapter	Central plate according to	Dimension
ET-25085FO	white	SC Simplex/LC Duplex/E2000®	DIN 49075	80x80 mm



Easy assembly in less than 2 minutes
No adhesive necessary
No electrical power required



Connector Field Installable with fiberholder

One Set Field Installable connector includes:
12 x Connector with wedge
12 x Boots
12x Protection tube for 250µ Fiber
1 x Assembling jig
1 x Fiber holder

Recommended Tools (not included in delviery):
HS18-CLEAVER - Cleaver
39901.1 - Miller® Fiber Stripper „Tri-Hole“

NEW

Material sleeve:.....Ceramic
Connection type:.....clamp
Cable Ø:.....0,9 mm

Art.-No.	Suitable Fiber type	Connector	Colour	Insertion Loss	Return Loss
53196.1	Singlemode	LC	blue	0.5 dB	>55 dB
53197.1	Multimode	LC	aqua	0.3 dB	>35 dB
53198.1	Multimode	LC	black	0.3 dB	>35 dB
53199.1	Singlemode	SC	blue	0.5 dB	>55 dB
53200.1	Multimode	SC	aqua	0.3 dB	>35 dB
53201.1	Multimode	SC	black	0.3 dB	>35 dB

FO Outlet Multi System

Clip and screw lock for the adapter plates
Die-cast housing, duct/in wall mount
Faceplate ABS 50x50mm
With laser symbol and text field
Delivery incl. 9 unassembled adapter plates for SC-simplex, SC-duplex, E2000®-simplex, MTRJ, AMP/MTRJ, ST, FC, DIN, LC-duplex and a blanking plate

Art.-No.	Description	Colour
ET-25170	FO Outlet Multi System RAL 9010	white

Accessory

Art.-No.	Description
ET-25084V3	Surface frame RAL9010
ET-25074V2	Surface mount frame, RAL 1013

CLOSURES

A selection of different types of sleeves are available for the cable connection / distribution. These can optionally have one or two oval entries for uncut pipe loops as well as six or eight outputs for stub lines (inputs / outputs) and access cables. Depending on the type of cable and type of installation, suitable gasket sets are also available.

Pipe Closures		**P. 93**
Junction Closures		**P. 96**

YOU MAY ALSO BE INTERESTED IN:

Fiber Optic Installation Cable	P. 28
Accessory (Splice Cassette, Splice Protection)	P. 57
Tools	P. 65
Splicing- & Measurement Equipment	P. 72

83189.3

48 splicing options in a minimum of space

83189.1

83187.1

Outdoor Pipe Closures

Material:..... Plastic
Colour:..... Green
Temperature Range:..... -30 – 65 °C
Splice Cassette:..... integrated
Degree of Protection (IP):..... IP68
Direct Burial: ..... yes

83187.S

Art.-No.	Max. Fiber	In-/Output	Cable Diameter	Length	Diameter	Splice Holder	Version of Closure
83187.1 TOPSELLER	24	2	3.5 – 10.7 mm	307 mm	69 mm	Crimp	Connection Clousre
83189.1	24	3	3.5 – 10.7 mm	307 mm	69 mm	Shrink	Junction
83189.3 NEW	48	3	7 – 17 mm	360 mm	101 mm	Crimp	Junction

Accessory

Art.-No.	Description
83187.S	Key-Set for FDM-1 (2 pieces), for 83187.1 & 83189.1
83189.3S	Key for FDM-2 (1 piece), for 83189.3

Assemble dome closures according to your requirements

Step 1: selection of housing type

Dome closure FOC, round Ø 285 mm, protection degree IP68	Dome closure CFOC, flach 290 x 150 mm, protection degree IP68
Two oval ports for uncut tubes or loop-cable	One oval port for uncut tubes or loop-cable
Eight round ports with each 32mm diameter	Six round ports with each 32mm diameter
Cable entries with mechanical seal at customers choice, see accessories	Cable entries with mechanical seal at customers choice, see accessories
Splice trays with crimp- or heat splice holder, see accessories	Splice trays with crimp- or thermo splice holder, see accessories

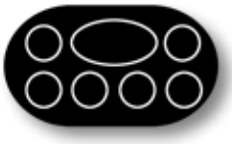
Design: round
Height: 525 mm

Design: round
Height: 770 mm

2 x oval entry
8 x round entry

Design: flat
Height: 380 mm

Design: flat
Height: 450 mm



1 x oval entry
6 x round entry

Standards	Temperature Range
Direct burial (underground) or for areal-applications (overground)	Operation: -40°C .. +70°C
Protection degree: IP68, Material: plastic, Colour: black	Transport /Storage: -10°C .. +40°C

capacity: Tray count / Fiber count

Art.-No.	STHD-6A (ANT)	STHD-6H (Heat)	STHD-4A (ANT)	STHD-4H (Heat)
FOC-CB-525	60 / 720	60 / 480	40 / 480	40 / 480
FOC-CC-770	132 / 1584	132 / 1056	88 / 1056	88 / 1056

capacity: Tray count / Fiber count

Art.-No.	STHD-6A (ANT)	STHD-6H (Heat)	STHD-4A (ANT)	STHD-4H (Heat)
CFOC-AA-380	12 / 144	12 / 96	8 / 96	8 / 96
CFOC-AB-450	24 / 288	24 / 192	16 / 192	16 / 192

Step 2: selection of tray type

Shelf tray set height 4 mm / 6 mm - both variants suitable for both housing types (round/flat)

- Shelf tray set with 4 mm height
- For high density

Art.-No.	Tray set count	Splices	Splice protection	Height
STHD-6A	6 cassettes	72 (6 x 12)	Crimp (ANT)	4 mm
STHD-6H	6 cassettes	48 (6 x 8)	Thermo (Heat)	4 mm
STHD-COVER	cover for STHD-6A, STHD-6H, STHD-4A and STHD-4H			

or

- Shelf tray set with 6 mm height
- For optimised fiber management

Art.-No.	Tray set count	Splices	Splice protection	Height
STHD-4A	4 cassettes	48 (4 x 12)	Crimp (ANT)	6 mm
STHD-4H	4 cassettes	48 (4 x 12)	Thermo (Heat)	6 mm
STHD COVER	cover for STHD-6A, STHD-6H, STHD-4A and STHD-4H			

Step 3: selection of cable entries

FOC-MRS-16X3

FOC-MRS-6X8

FOC-MOS-2X20

FOC-MRS-1X20

FOC-MRS-2X12

FOC-MOS-4X10

Cable entries with mechanical sealing
Multiple cable entries for small diameter

Art.-No.	Entries/Outlets	Suitable for cable	Design
FOC-MRS-6X8	6 x 8 mm	max. 6 x 4 .. 8 mm	round
FOC-MRS-16X3	16 x 3 mm	max. 16 x 0 .. 3 mm	round
FOC-MRS-1X20	1 x 20 mm	max. 1 x 10 .. 20 mm	round
FOC-MRS-2X12	2 x 12 mm	max. 2 x 8 .. 12 mm	round
FOC-MOS-2X20	2 x 20 mm	max. 2 x 10 .. 20 mm	oval
FOC-MOS-4X10	4 x 10 mm	max. 4 x 5 .. 10 mm	oval

Step 4: selection of accessories

Mounting bracket for FOC (round)

Mounting bracket for CFOC (flat)

Cable fixing braket for FOC + CFOC
(round + flat)

Pole mounting bracket for FOC + CFOC
(round + flat)

Art.-No.	Description	Closure type
FOC-MB	Mounting bracket for Dome closure rand	FOC round
CFOC-MB	Mounting bracket for Dome closure oval	CFOC flat
FOC-CFB	Cable fixing bracket for round or flat	FOC + CFOC
FOC-PMB	Pole mounting bracket for round or flat	FOC + CFOC

Further closures or special types on request !

FO Coupling Splice Closure Outdoor II

Suitable for number of fiber: 24
In-/Output: 4
Cable Diameter: 8 – 23 mm
Dimension (LxBxH): 470 x 223 x 104 mm
Material: Plastic
Temperature Range: -40 – 70 °C
Splice Cassette: integrated
Splice Holder: Crimp
Degree of Protection (IP): IP68
Direct Burial: yes

Art.-No.	Version of Closure
83184.1	Junction

Matching this:
FO outdoor and universal cable on page 28

FO Splice Closure Outdoor 3M

Suitable for number of fiber: 48
In-/Output: 4
Cable Diameter: 10 – 25 mm
Dimension (LxBxH): 399 x 175 x 107 mm
Material: Plastic
Temperature Range: -40 – 60 °C
Splice Cassette: without
Splice Holder: without
Degree of Protection (IP): IP68
Direct Burial: yes

Art.-No.	Version of Closure
83200.1	Junction

Accessory for 83184.1 and 83200.1

Art.-No.	Description
53100.200	Splice cassette w/o Logo white
53100.201	Splice cassette cover, white
53100.21	Spliceholder for 12 arc splices
53100.3	Crimp splice protector for arc splices, (min. PPU 15/ package 150pcs)
53100.91-100	Splice Heat Shrink, transparent, length: 45mm, PU 100
53100.8	Splice holder for 6 x arc splices with shrink tube, black

FO Splice Closure Outdoor RAYCHEM II

Suitable for number of fiber: 24
In-/Output: 4
Cable Diameter: 5 – 15 mm
Dimension (LxBxH): 422 x 125 x 65 mm
Material: Plastic
Temperature Range: -30 – 60 °C
Splice Cassette: integrated
Splice Holder: Shrink
Degree of Protection (IP): IP68
Direct Burial: yes

Art.-No.	Version of Closure
83127.1	Junction

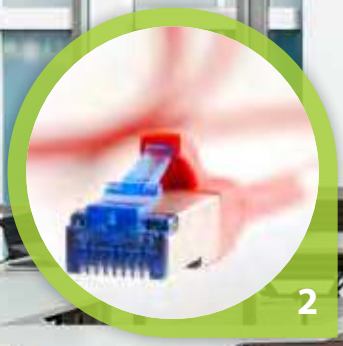
FO Splice Closure compact

Suitable for number of fiber: 12
In-/Output: 4
Cable Diamter: 4 – 9 mm
Dimension (LxBxH): 194 x 232 x 42 mm
Material: Plastic
Temperature Range: -40 – 60 °C
Splice Cassette: integrated
Splice Holder: Crimp
Degree of Protection (IP): IP68
Direct Burial: yes

Art.-No.	Version of Closure
83205.1	Junction

HIGH-QUALITY COMPONENTS FOR

COPPER CABLING



1 KEYSTONES & CONNECTION MODULES P. 100

2 PATCH CABLE P. 114

3 PATCHPANEL & DATA OUTLETS P. 132

4 INSTALLATION- & FLEX-CABLES P. 138

5 RJ45 CONNECTORS & ACCESSORIES P. 144

6 TOOLS & METERS P. 148

7 IP67/68 CONNECTING SYSTEMS P. 154

8 TELECOM P. 158

KEYSTONES & CONNECTION MODULES

Flexible snap-in mounting, a self-contained keystone housing and the wide selection of plug faces: The modular cabling system in keystone technology from EFB-Elektronik offers extensive advantages. With its features, it not only guarantees excellent transmission properties, but also allows the keystones to be mounted „tool-free“ quickly.

Keystones		**P. 101**
Snap-in Adapter		**P. 106**
Distribution Panel		**P. 108**
Keystone Frames		**P. 109**
Connection Modules		**P. 112**

YOU MAY ALSO BE INTERESTED IN:

Installation Cable	P. 140
Patch Cable	P. 114
Tools	P. 148
19“ Network Cabinets	P. 172

Summary Keystone-Portfolio

Comparaison RJ45 Keystone Jacks											
Art.-No.	**E-20092**	**E-20091**	**E-20070**	**E-20074***	**E-20095**	**E-200100**	**E-20072**	**E-20085**	**E-20080/E-20081**	**11201166**	**11201155**
Category	Cat.8 Class 1	6A (IEC)	6A (IEC)	6A (IEC)	6A (IEC)	6A (IEC)	6	6A (IEC)	6	6	5E
Connection type	IDC	IDC	IDC	IDC	IDC	IDC	IDC	IDC	IDC	LSA	LSA
Shielded	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
AWG-range stranded wire	26/7 – 24/7	26/7 – 24/7	26/7 – 24/7	26/7 – 24/7	26/7 – 24/7	26/7 – 22/7	26/7 – 24/7	26/7 – 24/7	26/7 – 24/7	-	-
AWG-range for solid wire	24/1 – 22/1	24/1 – 22/1	24/1 – 22/1	24/1 – 22/1	24/1 – 22/1	24/1 – 22/1	24/1 – 22/1	24/1 – 22/1	24/1 – 22/1	26/1 – 22/1	26/1 – 22/1
Special tool necessary	No	No	No	No	No	No	No	No	No	Yes	Yes
Housing material	Zinc die cast	Zinc die cast	Zinc die cast	Zinc die cast	Zinc die cast	Zinc die cast	Zinc die cast	Plastic	Platic	Plastic	Plastic
Dust cover	Captive/**	Captive/**	Yes	Yes	Captive/**	No	Yes	Captive/**	Yes	Yes	Yes
For UAE suitable/Slimline	No	No	No	No	Yes	Yes	No	No	No	No	No
Max. cable diameter	8.5mm	8.5mm	8.0mm	8.0mm	8.5mm	8.5mm	8.0mm	8.5mm	8.5mm	8.5mm	8.5mm
Separate earthing flag	Yes	Yes	No	No	Yes	No	No	No	No	No	No
Sliding shield contact for different cable diameters	Yes	Yes	No	No	Yes	No	No	No	No	No	No
360° shield contact	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No	No
Shielding and strain relief separated	Yes	Yes	No	No	Yes	No	No	No	No	No	No
Installation dimension	14.8x19.25-20mm	14.8x19.25-20mm	14.8x19.25-20mm	14.8x19.25-20mm	14.8x19.25-20mm	14.8x19.5mm	14.8x19.25-20mm	14.8x19.25-20mm	14.8x19.25-20mm	14.8x19.5mm	14.8x19.5mm
Length	40.95mm	40.00mm	37.50mm	37.75mm	40.66mm	37.66mm	37.50mm	37.50mm	37.50mm	34.4mm	34.4mm
Mating cycles	≥ 750										
Temperature range	-40 – 66°C	-40 – 66°C	-40 – 66°C	-40 – 66°C	-40 – 66°C	-10 – 60°C	-40 – 66°C	-40 – 66°C	-40 – 66°C	-40 – 66°C	-40 – 66°C
Test voltage Dieelektrikum	1000V AC 60Hz	1000V AC 60Hz	1000V AC 60Hz	1000V AC 60Hz	1000V AC 60Hz	700V AC 60Hz	1000V AC 60Hz	1000V AC 60Hz	1000V AC 60Hz	1000V AC 60Hz	1000V AC 60Hz
Current rating	1,5A										
Insulation withstanding	≥ 500MΩ										
Contact withstanding	≤ 20mΩ										
According to fire protection class UL94	V-0										
UL approved	No	No	No	No	No	No	No	No	No	Yes	Yes
POE	PoE, PoE+, 4PPOE	PoE, PoE+, 4PPOE	PoE, PoE+, 4PPOE	PoE, PoE+, 4PPOE	PoE, PoE+, 4PPOE	PoE, PoE+	PoE, PoE+, 4PPOE	PoE, PoE+, 4PPOE	PoE, PoE+, 4PPOE	PoE, PoE+	PoE, PoE+
Certification	-	Type Approval GHMT	Type Approval GHMT	-	-	-	-	Type Approval ETL	-	-	-
PU	1	1	1	1	1	1	1	1	1	12	12

* Cable entrance 90° left or right

** available in different colours (E-2009Xxx)

Cat. 8.1
40 Gigabit
Force certified
4PPOE certified

2 Connector
Permanent Link Tested

RJ45 Keystone STP, Cat.8 Class 1

40 Gbit Cat.8.1 2000MHz

The high-quality of the RJ45 keystone modules warrants very good characteristics for **40 Gbit** Ethernet application. Special tools are not needed. The assembling is being carried out fast and easy. With the RJ45 module you get a full shielded module, which provides you good longterm service in your network infrastructure.

Compact cable presorter for AWG 24/1 .. 22/1 and AWG 26/7 .. AWG 24/7
Pair management according to TIA 568A /B colour codes
Appropriate for distribution panels and frames with keystone slots, not for UAE
Flexibel strain relief for different cable diameter

Scope of delivery:
1 x RJ45 keystone, captive dust cover, copper foil, cable ties, mounting instruction

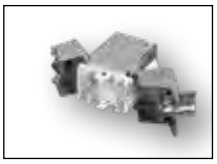
Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-20092	metal	V-0	yes

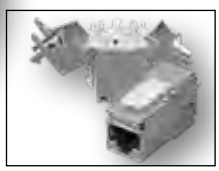
Accessory

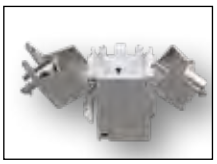
Art.-No.	Description
37580.1	Distribution Panel 19" 1U, 24-Port, black RAL9005
88035.2	Field installable connector, RJ45 Cat.8 Class 1 AWG22 - 27, zinc alloy
37578.1	Distribution Panel 19" 1U, 24-Port, grey RAL7035

Ultra slim - 14.68 mm
Strain relief and 360° Screen connection separated
Connection according to Standard possible
Separate grounding contact
4PPOE certified

NEW







RJ45 Keystone Slimline, STP, Cat.6A, 500MHz

10Gbit Cat.6A 500MHz

Extremely small design „Slimline" for installation with UAE frame sets, design capable
Shielded keystone zinc diecast body
Compact cable presorter for contacting IDC-Terminals AWG 26/1 .. 22/1 and AWG 26/7 .. AWG 24/7
Re-termination capability up to 5 times with the same width
Max. cable diameter: 8.5 mm
Pair management according to TIA 568A /B colour codes
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for all distribution panels and frames with keystone slots
Independent 360 °-shield contact and strain relief of the cable with two cable ties
Flexibel strain relief for different cable diameter
Captive dust cover

Scope of delivery:
1 x RJ45 keystone, 1 x captive dust cover, 1 x copper foil, 2 x cable ties, mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-20095	metal	V-0	yes

GHMT Component certified
Strain relief and 360° Screen connection separated - Connection according to Standard possible
Separate grounding contact
Flexibel strain relief for different cable diameter
4PPOE certified

RJ45 Keystone STP, Cat.6A 500MHz 10Gbit

Component Tested

Shielded keystone zinc diecast body
Compact cable presorter for AWG 24/1 .. 22/1 and AWG 26/7 .. AWG 24/7
Max. cable diameter: 8.5 mm
Pair management according to TIA 568A /B colour codes
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for distribution panels and frames with keystone slots, not for UAE
Independent 360 °-shield contact and strain relief of the cable with two cable ties

Scope of delivery:
1 x RJ45 keystone, captive dust cover, copper foil, cable ties, mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-20091	metal	V-0	yes

Accessory

Art.-No.	Description
EHT-010	Crimping tool for E-20070 and E-20091
E-2009XSW	Dust Cover for E-2009X Series, captive, black, 10 PU
E-2009XGN	Dust Cover for E-2009X Series, captive, green, 10 PU
E-2009XGE	Dust Cover for E-2009X Series, captive, yellow, 10 PU
E-2009XRT	Dust Cover for E-2009X Series, captive, red, 10 PU
E-2009XGR	Dust Cover for E-2009X Series, captive, grey, 10 PU
E-2009XBL	Dust Cover for E-2009X Series, captive, blue, 10 PU

E-2009XSW

GHMT / ETL Component certified
4PPOE certified

TOPSELLER

Component Tested

Component Tested

RJ45 Keystone STP, Cat.6A / Class EA 500MHz 10Gbit

Shielded keystone zinc diecast body with separate dust cap
Compact cable presorter for AWG 24/1 .. AWG 22/1 and AWG 26/7 .. AWG 24/7
Max. cable diameter: 8.0 mm
Pair management according to TIA 568A /B colour codes
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for distribution panels and frames with keystone slots, not for UAE
Strain relief with cable ties

Scope of delivery:
1 x RJ45 keystone, 1 x copper foil, 1 x cable tie, dust cover, mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-20070	metal	V-0	yes

Accessory

Art.-No.	Description
EHT-010	Crimping tool for E-20070 and E-20091

GHMT Link certified
Ultra slim - 14,86 mm
4PPOE certified

2 Connector
Permanent
Link Tested

RJ45 Keystone Slimline, Cat.6A, zinc alloy

The high-quality of the RJ45 Slimeline keystone modules warrants very good characteristics for 10Gbit Ethernet application. Special tools are not needed. The assembling is being carried out fast and easy. With the RJ45 module you get a full shielded module, which provides you good longterm service in your network infrastructure.

Extremely small design „Slimline" for installation with UAE frame sets, design capable
Shielded keystone zinc diecast body
Compact cable presorter for AWG 24/1 .. 22/1 and AWG 26/7 .. AWG 24/7
Max. cable diameter: 8.5 mm
Pair management according to TIA 568A /B colour codes
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for distribution panels and frames with keystone slots

Scope of delivery:
1 x RJ45 keystone, cable tie, mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-200100 NEW	metal	V-0	no

Accessory

Art.-No.	Description
ET-25111	Frame Set 2-Port, for Keystones, design capable TAE
ET-25111K	Keystone Frame revolving 2-Port, for Keystones, design capable TAE

RJ45 Keystone STP, Cat.6A / Class EA 500MHz 10Gbit, angled

Shielded keystone zinc diecast body with separate dust cap
Class EA performance according to ISO 11801 AMD2 2010-04
Compact cable presorter for AWG 24/1 .. AWG 22/1 and
AWG 26/7 .. AWG24/7
Max. cable diameter: 8.0 mm
Pair management according to TIA 568A /B colour codes
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for distribution panels and frames with keystone slots,
not for UAE
Side entry 90° left or right (*)
Strain relief with cable ties

Scope of delivery:
1 x RJ45 keystone, 1 x grounding clip, 1 x cable tie, dust cover,
mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-20074	metal	V-0	yes

RJ45 Keystone STP, Cat.6 250MHz 5Gbit

Shielded keystone zinc diecast body with separate dust cap
Compact cable presorter for AWG 24/1 .. AWG 22/1 and AWG26/7 .. AWG24/7
Max. cable diameter: 8.0 mm
Pair management according to TIA 568A /B colour codes
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for all distribution panels and frames with keystone slots,
not for UAE
Strain relief with cable ties

Scope of delivery:
1 x RJ45 keystone, 1 x copper foil, 1 x cable tie, dust cover,
mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-20072	metal	V-0	yes

ECOLAN® RJ45 Keystone UTP, Cat.6A 500MHz 10Gbit

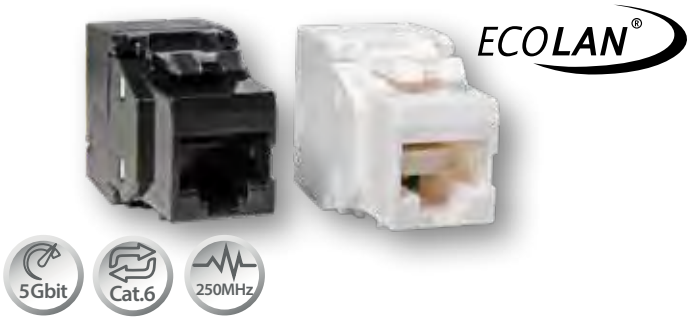
Plastic housing PC+ABS
Cat.6A component certified acc. to ANSI/TIA-568-C.2 and ISO/IEC 11801
Compact cable presorter for AWG 24/1 .. 22/1 and AWG 26/7 .. AWG 24/7
Max. cable diameter: 8.5 mm
Pair management according to TIA 568A /B colour codes
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for all distribution panels and frames with keystone slots, not for UAE
Recommended distribution panel, A-NEXT optimzed: 37589.1

Scope of delivery:
1 x RJ45 keystone, 1 x hinged dust cover, 1 x cable tie, 1 x mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-20085	white	V-0	yes

Accessory

Art.-No.	Description
37589.1	ECOLAN® Distribution Panel 19" 1U, 24-Port shifted, A-NEXT optimized, black



ECOLAN® RJ45 Keystone UTP, Cat.6 250MHz 5Gbit

Cat.6 de-embedded zertifiziert (DELTA) acc. to ISO 11801 2nd Edition 2002
PoE Plus acc. to IEEE 802.3at
Plastic housing PC+ABS
Compact cable presorter for AWG 24/1 .. 22/1 and AWG 26/7 .. AWG 24/7
Max. cable diameter: 8.5 mm
Pair management according to TIA 568A /B colour codes
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for distribution panels and frames with keystone slots, not for UAE
Strain relief via cable tie

Scope of delivery:
1 x RJ45 keystone, 1 x hinged dust cover, 1 x cable tie, 1 x mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
E-20080	white	V-0	yes
E-20081	black	V-0	yes

ECOLAN® RJ45 Keystone Set UTP, Cat.6 250MHz 5Gbit

Plastic housing PC+ABS for AWG26/1 .. AWG22/1
Cat.6 component certified acc. to ANSI/TIA-568-C.2 and ISO/IEC 11801
Max. cable diameter: 8.5 mm
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for distribution panels and frames with keystone slots, not for UAE
LSA terminal with colour code according to TIA/EIA 568A/B
Fixing aid (39908.1) and LSA insertion tool (39951.1) or EHT-040 recommended

Scope of delivery:
12 polybags each with:1 x RJ45 keystone, 1 x dust cover, 1 x cable tie, 1 x mounting instruction

Art.-No.	Colour	Complaint to UL94	4PPOE certified
11201166	white	V-0	yes

Accessory

Art.-No.	Description
39931.1	LSA/IDC Insertion Tool for UTP Keystones
EHT-040	Crimping tool for UTP Keystones

ECOLAN® RJ45 Keystone Set UTP, Cat.5e 100MHz 2,5Gbit

Plastic housing PC+ABS for AWG26/1 .. AWG22/1
Max. cable diameter: 8.5 mm
PoE and PoE Plus according to IEEE802.3af/at
Appropriate for distribution panels and frames with keystone slots, not for UAE
LSA terminal with colour code according to TIA/EIA 568A/B
Fixing aid (39908.1) and LSA insertion tool (39951.1) or EHT-040 recommended

Scope of delivery:
12 polybags each with:1 x RJ45 keystone, 1 x dust cover, 1 x cable tie, 1 x mounting instruction

Art.-No.	Colour	Complaint to UL94
11201155	white	V-0

Accessory

Art.-No.	Description
39931.1	LSA/IDC Insertion Tool for UTP Keystones
EHT-040	Crimping tool for UTP Keystones

Keystone Snap-In Adapter RJ45 STP, Cat.6A, 90° angled

Snap-In mounting (Keystone)
Cat.6A
90° angled
Connecting adapter for patch cables
2x RJ45 connectors shielded
Allocation: 1:1
Metal housing
Snap-in spring: plastic

Art.-No.
37484.2V2

Keystone Snap-In Adapter RJ45 STP, Cat.6A

Snap-In mounting (Keystone)
Cat.6A/Class EA
Connecting adapter for patch cables
2x RJ45 connectors shielded
Allocation: 1:1
Metal housing
Snap-in spring: plastic

Art.-No.
37521.1V2

Keystone Snap-In Adapter RJ45 STP, Cat.6A 90° access

Snap-In mounting (Keystone)
Cat.6A
Connecting adapter for patch cables
2x RJ45 connectors shielded, with on one side 90° entry
Allocation: 1:1
Stainless steel housing
Snap-in spring: metal

Art.-No.
37483.1

Keystone Snap-In Adapter RJ45 STP, Cat.6

Snap-In mounting (Keystone)
Cat.6
Connecting adapter for patch cables
2x RJ45 connectors shielded
Allocation: 1:1
Metal housing
Snap-in spring: plastic

Art.-No.
37486.1

Keystone Snap-In Adapter RJ45 UTP, Cat.6

Snap-In mounting (Keystone)
Cat.6
Connecting adapter for patch cables
2x RJ45 connectors unshielded
Allocation: 1:1
Plastic housing
Snap-in spring: plastic

Art.-No.
37488.1

Keystone Snap-In Adapter RJ45 STP, Cat.5e

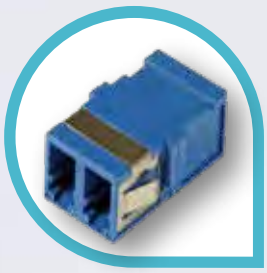
Snap-In mounting (Keystone)
Cat.5e
Connecting adapter for patch cables
2x RJ45 connectors shielded
Allocation: 1:1
Metal housing
Snap-in spring: metal

Art.-No.
37508.1V2

Keystone types at EFB-Elektronik

RJ45 keystone types at page 102-104

Fiber optic keystone types at page 38



HDMI keystone types

EB479V2	HDMI A - A	white
EB520V2	HDMI A - A	black

USB 2.0 keystone types

EB498V2	USB2.0 A - A	white
EB527V2	USB2.0 A - A	black
EB534	USB2.0 A - B	black

USB3.2/3.1 Type-C keystone types,10Gbit/s, 60W

EB552	Type-C-Jack/ Typ-C-Jack	black
EB552WS	Type-C-Jack/ Typ-C-Jack	white

Cinch keystone types

EB493	Jack/Jack, red ring	white
EB494	Jack/Jack, white ring	white
EB495	Jack/Jack, yellow ring	white
EB522	Jack/Jack, red ring	black
EB523	Jack/Jack, white ring	black
EB524	Jack/Jack, yellow ring	black

3,5 mm keystone types

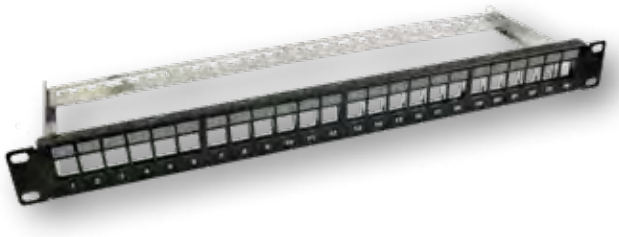
EB526	Jack/Jack	black
EB497	Jack/Jack	white

F-Connector keystone types

EB539	F-Connector	white
EB540	F-Connector	black

USB 3.0 keystone type

EB537	USB3.0 Typ A - A	black



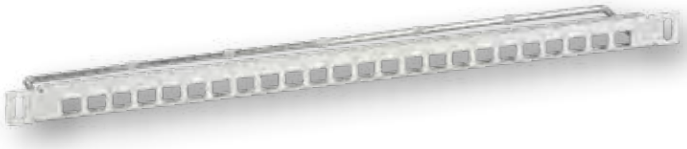
Distribution Panel 19“ 1U 24-Port

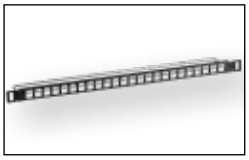
For holding of modules in keystone format
Inclusive cable management
Labeling fields with transparent cover
Stain relief via cable tie
Delivery without modules

Art.-No.	Description
37576.1	Distribution Panel 19“ 1U, 24-Port, metallic
37578.1	Distribution Panel 19“ 1U, 24-Port, grey RAL7035
37580.1	Distribution Panel 19“ 1U, 24-Port, black RAL9005

Accessory

Art.-No.	Description
38018.2-100	RJ45 Blind Inserts black RAL9011, for keystone holes, PU 100
38018.1-100	RJ45 Blind Inserts white RAL9010, for keystone holes, PU 100





Distribution Panel 19“ 0,5U 24-Port

For holding of modules in keystone format
Inclusive cable management
Labeling fields with transparent cover
Stain relief via cable tie
Delivery without modules

Art.-No.	Description
37586.1	Distribution Panel 19“ 0,5U, 24-Port, grey, RAL7035
37586.1SW	Distribution Panel 19“ 0,5U, 24-Port, black, RAL9005

Accessory

Art.-No.	Description
38018.2-100	RJ45 Blind Inserts black RAL9011, for keystone holes, PU 100
38018.1-100	RJ45 Blind Inserts white RAL9010, for keystone holes, PU 100

ECOLAN® Distribution Panel 19“ 1U 24-Port

For holding of modules in keystone format
Inclusive cable management
Stain relief via cable tie
Delivery without modules

Art.-No.	Colour
11124115	black

Accessory

Art.-No.	Description
38018.1-100	RJ45 Blind Inserts white RAL9010, for keystone holes, PU 100

ECOLAN® Distribution Panel 19“ 1U 24-Port, shifted

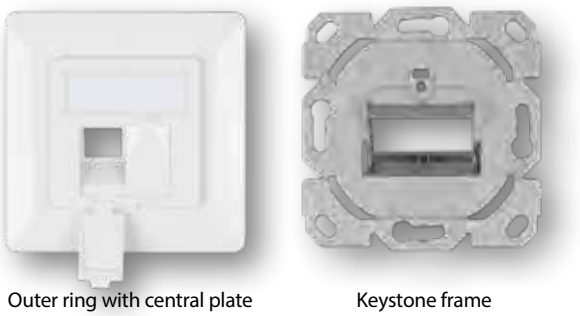
ECOLAN® Unshielded distribution panel 19“ for holding up to 24 keystones modules
ANSI/TIA-568-C.2 and ISO/IEC 11801 Cat.6A certified by ETL
Steel frame with (ABS+PC) plastic frontcover
Compatible to each UTP Keystone from EFB-Elektronik
Alien NEXT optimized for the E-20085 keystone due to shifted 24-port layout
Inclusive cable management
Strain relief via cable tie
Delivery without modules

The E-20085 Keystone is Cat.6$_A$ certified only in combination with this distribution panel

Art.-No.	Colour
37589.1	black

Accessory

Art.-No.	Description
E-20085	ECOLAN® RJ45 Keystone UTP, Cat.6A, 500MHz, component certified



Outer ring with central plate

Keystone frame

Frame Set 1/2 - Port for Keystones, DIN49075

For holding all EFB RJ45 Keystone modules
Frame set in 1-port or 2-port
40° slanted outlet
Outer ring 80 x 80 mm and central plate 50 x 50 mm according to DIN49075
Compatibel to common switch programms with adapter plate
Separate earthing lead for 6.3 mm fast-on connection
With dust covers and labeling fields

Scope of delivery: Keystone frame, outer ring, central plate

Art.-No.	Description	Colour
ET-25087V2	Frame Set 1-port, for keystones, DIN49075, RAL9010	white
ET-25085V2	Frame Set 2-port, for keystones, DIN49075, RAL9010	white

Frame Set for 2 x E-20095, design capable UAE

Zinc diecast mounting frame
For holding 2 keystone slimline modules e.g. E-20095, E-200100
40° slanted outlet
RAL 9010
Design capable, compatible to the **UAE** central plates of switch range manufacturers
Embedded dust cap
Embedded grounding lead for 6.3 mm blade receptacle

Scope of delivery ET-25090: keystone frame, outer ring, central plate
Scope of delivery ET-25090K: keystone frame

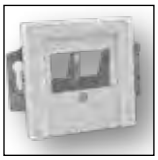
Art.-No.	Description	Colour
ET-25090	Frame Set 2-Port, for slimline keystone module, design capable UAE	white
ET-25090K NEW	UAE mounting frame for 2x Keystone Module, slimline, design capable	metal

Accessory

Art.-No.	Description
E-20095	RJ45 Keystone Slimline, Cat.6A, silver
E-200100	RJ45 Keystone Slimline, Cat.6A, zinc alloy, 10GE

Mertens

Gira



Jung

Keystone Frame revolving 2-Port, for Keystones, design capable TAE

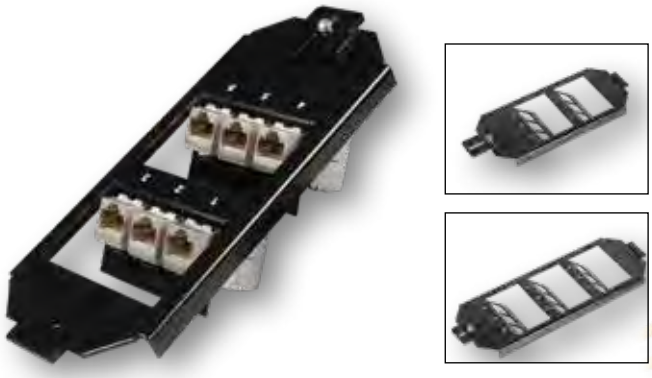
Takes 2 RJ45 keystone modules
Housing material: aluminium diecast
40° slanted outlet
Design capable, compatible to the **TAE** central plates of switch range manufacturers
Revolving mounting ring at ET-25111K for horizontal and vertical fixing
Delivery without modules and central frame

Art.-No.	Colour
ET-25111K	metal

Frame Set 2-Port, for Keystones, design capable TAE

Takes 2 RJ45 keystone modules
Housing material: aluminium diecast
40° slanted outlet
Design capable, compatible to the **TAE** central plates of switch range manufacturers
Delivery without modules and central frame

Art.-No.	Colour
ET-25111	metal



Floor Tank Holder for 6 or 9 Keystones

Frame set for mounting 6 (ET-25178V2) or 9 (ET-25179V2) keystone modules
For installation in OBO Bettermann floor tanks GB2/GB3
Delivery unequipped

Art.-No.	Description	Colour
ET-25178V2	Floor tank holder 2 x for 6 Keystones	black
ET-25179V2	Floor tank holder 3 x for 9 Keystones	black

Accessory

Art.-No.	Description
E-20070	RJ45 Keystone STP, Cat.6A, 500MHz, component certified
E-20072	RJ45 Keystone STP, Cat.6, 250 MHz
E-20091	RJ45 Keystone STP, Cat.6A, 500MHz, component certified

Consolidation Point CP-Box

Robust steel case with divided cover
Suitable for installation of 4, 8, 12 or 24 keystone modules
Front cover hinged and can be opened tool-free
Screwed Rear cover for protection against access
Cable entries front and rear with dust-tight sealing strips
Separate grounding bolt
Protection class IP20
Black powder coating

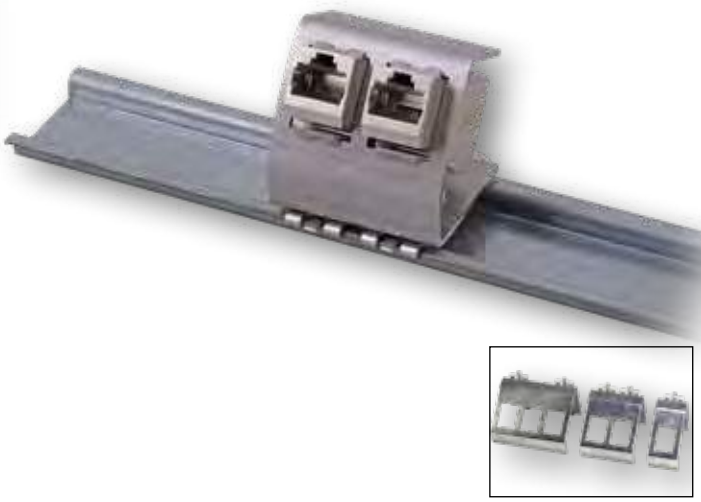
Art.-No.	Version	Colour
ET-25172	for 4 x Keystones	black
ET-25172.1	for 8 x Keystones	black
ET-25172.2	for 12 x Keystones	black
ET-25172.3	for 24 x Keystones	black

Matching this:
Keystones on page 101

Keystone holder 1-Port, for DIN-Rail, plastic

Module holder for mounting on DIN-Rail TH35 acc. to DIN EN60715.
1 DU (> 18 mm) width (DIN 43880).
For Keystone RJ45 (E-20070, E-20072, E-20090). Side-by-side mountable, with earthing spring.
An end plate is always necessary. Module holder requires an end plate, several connected module holders also require only one end plate.

Art.-No.	Version	Colour
ET-25186.V2	Keystone holder 1-Port, for DIN Rail, plastic	RAL7035 light grey
ET-25185.1	Endplate left for Keystone holder ET-25186.V2	RAL7035 light grey



Keystone holder for DIN-Rail, Stainless Steel

Keystone holder, stainless steel
Intended for mounting on DIN-Rail
Delivery without Keystone Modules

Art.-No.	Version	Colour
ET-25184.V2	for 1 x Keystone	metal
ET-25184.1V2	for 2 x Keystone	metal
ET-25184.2V2	for 3 x Keystone	metal

Keystone installation frame 1-Port

Takes 1 keystone modul
Housing material: zinc-diecast
Universal use on every flat surface/housing, cable duct or wood/metal cover
Staight outlet: 0°
Breakout hole: 24 x 18 mm
Dimensions: 35.5 x 19.2 x 9.8 mm

Scope of delivery:
Installation frame 1-Port (without modules), 2x installation screws

Art.-No.	Colour
ET-25188.1	metal

Keystone Distribution Box

For 6 or 12 keystone modules from the EFB-Elektronik portfolio
Material: ABS
Dimensions: 170 x 110 x 40 mm
Suitable for wall mounting

Plastic housing consisting of:
1 x upper housing shell, 1 x lower housing shell, 2 x adapter inserts with openings for 6 x keystones, 1 x adapter insert for 6 cable entries,
2 x side cover
Delivery without modules

Art.-No.	Colour
ET-25174.1	RAL9010 pure white

Keystone distribution box surface mounting, Dust protection self-closing

For 1 or 2 keystone modules from the EFB-Elektronik portfolio
Material: ABS
Suitable for wall mounting
Dust cap self closing
Labeling field hinged
Delivery without modules

Scope of delivery:
1 x case, 1 x double sided tape, 1 x cable tie, 2 x self tapping screws 4x14

Art.-No.	Version	Dimension	Colour
ET-25166	1-Port	37 x 65 x 30 mm	RAL9010 pure white
ET-25168	2-Port	63 x 65 x 30 mm	RAL9010 pure white

Accessory

Art.-No.	Description
H83030.1	DIN Rail adapter

KDO-Outlet (AP), IP44

Labeling field hinged
Lockable
Cable entry upside M25 (optional left/right/downside or in the base prepared)
Plastic material poly carbonate + PE
Cable entry for cable Ø up to 18 mm
Dimensions: 93 x 90 x 90 mm
Weight: ca. 265 g

Scope of delivery:
1 x KDO-Outlet, 2 x keys
Delivery without modules

Art.-No.	Version	Colour
ET-25021V2	for Data Outlet	RAL7035 light grey
ET-25023V2	for 2 x Keystones	RAL7035 light grey

Cat.6

Modular-Adapter RJ45 UTP, Cat.6

Cat.6
Connecting adapter for patch cables
2x RJ45 connectors unshielded
Allocation: 1:1
Plastic housing

Art.-No.
37487.1

Cat.6

Modular-Adapter RJ45 STP, Cat.6

Cat.6
Connecting adapter for patch cables
2x RJ45 connectors shielded
Allocation: 1:1
Metal housing

Art.-No.
37489.1

Cat.5e

Modular-Adapter RJ45 STP, Cat.5e, metal coloured

Connecting adapter for patch cables
2x RJ45 connectors shielded
Allocation: 1:1
Housing metal coloured

Art.-No.
37529.1

Modular-Adapter RJ45 UTP, metal coloured

Connecting adapter for patch cables
2x RJ45 connectors unshielded
Allocation: 1:1
Housing metal coloured

Art.-No.
37507.1

Modular-Adapter RJ45 UTP

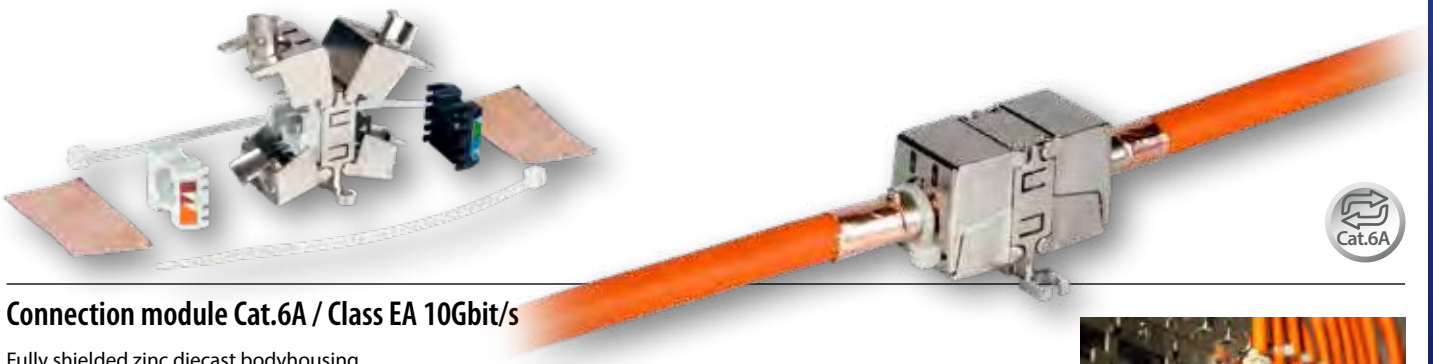
Connecting adapter for patch cables
2x RJ45 connectors unshielded
Allocation: 1:1
Plastic housing

Art.-No.
37503.1

Modular-Adapter RJ12 UTP

Connecting adapter for ISDN telephone cables
2x RJ12 connectors unshielded
Allocation: 1:1
Plastic housing

Art.-No.
37502.1



Connection module Cat.6A / Class EA 10Gbit/s

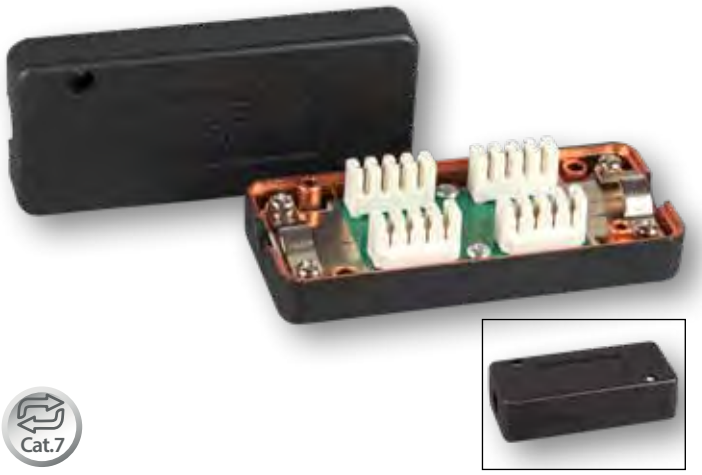
Fully shielded zinc diecast bodyhousing
Dimension: 18 x 26 x 39 mm
Link performance 10 Gbit/s Class EA acc. to ISO 11801
2 x compact cable manager for AWG26/1..AWG22/1 and AWG26/7..AWG24/7
Max. cable diameter: 8.5 mm
Pair management with colour code, printed on cable manager
Reliable differentiation of cable managers by mechanical and colour assignment (plastic black / white) on the cable coupler and on cable managers
PoE and PoE Plus according to IEEE802.3af/at
360° shield contact and strain relief independent from each other
Gliding stored shield contact
Screw- and line-up through loops at the side of the module
19" panel for holding of 24 x modules available as accessory

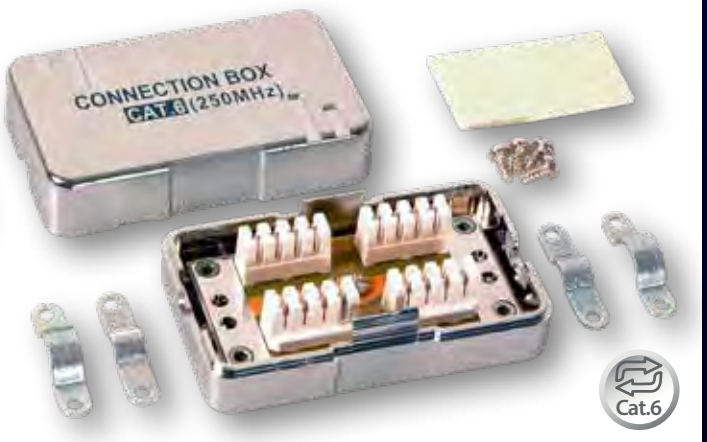
Scope of delivery:
1 x connection module, 2 x cable pre-sorter (black + white), 2 x copper foil, 2 x cable ties

Art.-No.	Colour
37597.1	metal

Accessory

Art.-No.	Description
37597.P	Holding Panel for 19" / Wall Mounting of 24 x Coupler 37597.1





Connection module Cat.7 600MHz

Connection module Cat.7 up to 600 MHz
With IDC-terminals
For extending installation cables
For reconnecting damaged cables
For all standard 4- or 8-core installation cables from AWG 26-22
Max. sheath diameter of 10 mm
Housing metallized inside

Scope of delivery:
Screw-type strain relief (M3x12 mm), Cable inlet (4 x), with adhesive tapes for fixing

Art.-No.	Colour
37596.1	black

Connection module Cat.6 250MHz

Connection module Cat.6 up to 250 MHz
With IDC-terminals
For extending installation cables
For reconnecting damaged cables
For all standard 4- or 8-core installation cables from AWG 26-22
Screw-type strain relief
Max. sheath diameter of 7.5 mm
Housing metallized

Scope of delivery:
Screw-type strain relief (M3x12 mm), Cable inlet (4 x), with adhesive tapes for fixing

Art.-No.	Colour
37596.2	metal

PATCH CABLE

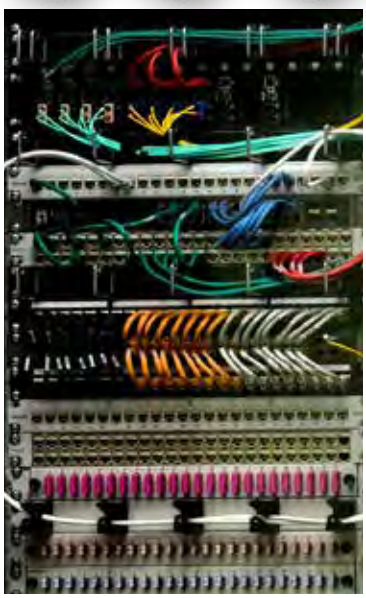
EFB-Elektronik offers a wide range of twisted pair patch cables in different colors, lengths and categories. In addition to numerous standard cables, our manufacturing expertise lies in the special manufacturing of patch cables with special cable material, individual labeling and connectors according to individual requirements.

Patch cable office shielded		P. 115
Patch cable office unshielded		P. 123
Patch cable industry		P. 127

YOU MAY ALSO BE INTERESTED IN:

Patchpanel	P. 132
Network Switches	P. 312
Media Converter	P. 306
Cable Management	P. 226
Product Refinement	P. 9
Keystones	P. 101

Art.-No:	Category/ Bandwidth	Shielded AWG	Boot/ Length imprint	Jacket	Cable diameter	Gigabit Ethernet	2,5 Gigabit Ethernet	5 Gigabit Ethernet	10 Gigabit Ethernet	40 Gigabit Ethernet	Flexibility	Conductive shield	Rawcable acc. to Cat.7	Conductor material	Plug	Temperature range
DCK1001xx.x	Cat.6A / 500MHz	S/FTP AWG27/7	mounted/ yes	LSZH coloured	6.2mm	X	X	X	X		usual	RJ45 with 360° shield contact	X	100% copper	RJ45 LED	-20°C - +60°C
K0993.x	Cat.5e / 100MHz	S/UTP AWG26/7	mounted/ no	PVC coloured Dätwyler 5502	5.1mm	X	X				good	RJ45 with 360° shield contact		100% copper	1 x TM11 HRS 1 x TM11 90°	-20°C - +60°C
K2793.x	Cat.5e / 100MHz	SF/UTP AWG26/7	mounted/ no	LSZH red Draka UC300	5.7mm	X	X				usual	RJ45 with 360° shield contact		100% copper	TM11 HRS	-20°C - +60°C
K4137x.x	Cat.6A / 500MHz	S/FTP AWG27/7	mounted/ no	LSZH coloured Draka UC900	5.9mm	X	X	X	X		usual	RJ45 with 360° shield contact	X	100% copper	TM21 90° HRS red	-20°C - +60°C
K54xx.x	Cat.5e / 100MHz	SF/UTP AWG26/7	moulded/ yes	PVC coloured	5.7mm	X	X				usual	selected shield contact		CCA	RJ45 Standard	0°C - +60°C
K5450.x	Cat.5e / 100MHz	SF/UTP AWG26/7	red, moulded/ yes	PVC grey	5.7mm	X	X				usual	selected shield contact		CCA	RJ45 Standard	0°C - +60°C
K551x.x	Cat.6 / 250MHz	S/FTP AWG27/7	moulded/ yes	LSZH coloured	6.2mm	X	X	X	X		usual	selected shield contact	X	100% copper	RJ45 red	0°C - +60°C
K5525Fxx.x	Cat.6A / 500MHz	S/FTP AWG26/7	moulded/ yes	TPE coloured	6.0mm	X	X	X	X		superflex	selected shield contact	X	100% copper	RJ45 blue	-20°C - +75°C
K5545xx.x	Cat.6A / 500MHz	U/FTP AWG30/7	moulded/ no	PVC coloured	7.0 x 2.2mm	X	X	X	X		very good	selected shield contact		100% copper	RJ45 ultra short	-20°C - +55°C
K5547xx.x	Cat.6A / 500MHz	U/FTP AWG30/7	moulded/ no	TPE coloured	4.0 mm	X	X	X	X		ultraflex	selected shield contact		100% copper	RJ45 ultra short	-20°C - +75°C
K801x.x	Cat.5e / 100MHz	SF/UTP AWG26/7	mounted/ no	LSZH coloured Draka UC300	5.7mm	X	X				usual	RJ45 with 360° shield contact		100% copper	TM11 HRS	-20°C - +60°C
K805x.x	Cat.6A / 500MHz	S/FTP AWG27/7	mounted/ no	LSZH coloured Draka UC900	5.9mm	X	X	X	X		usual	RJ45 with 360° shield contact	X	100% copper	TM21 HRS red	-20°C - +60°C
K807x.x	Cat.5e / 100MHz	F/UTP AWG26/7	mounted/ no	LSZH coloured	5.4mm	X	X				usual	RJ45 with 360° shield contact		100% copper	TM11 HRS	-20°C - +60°C
K8210xx.x	Cat.6A / 500MHz	S/FTP AWG27/7	moulded/ no	LSZH coloured Leoni-Kerpen	5.7mm	X	X	X	X		usual	RJ45 with 360° shield contact	X	100% copper	TM21 HRS red	-20°C - +60°C
K8452.x	Cat.5e / 100MHz	F/UTP AWG26/7	mounted/ no	LSZH grey	5.4mm	X	X				usual	RJ45 with 360° shield contact		100% copper	TM11 HRS	-20°C - +60°C
K8560xx.x	Cat.6A / 500MHz	S/FTP AWG27/7	mounted/ no	LSZH coloured Draka UC900	5.9mm	X	X	X	X		usual	RJ45 with 360° shield contact	X	100% copper	TM31 HRS yellow	-20°C - +60°C
K8580xx.x	Cat.6A / 500MHz	S/FTP AWG27/7	mounted/ no	LSZH coloured Dätwyler	5.9mm	X	X	X	X		usual	RJ45 with 360° shield contact	X	100% copper	TM31 HRS yellow	-20°C - +60°C
K870x.x	Cat.5e / 100MHz	S/UTP AWG26/7	mounted/ no	PVC coloured Dätwyler 5502	5.1mm	X	X				good	RJ45 with 360° shield contact		100% copper	TM11 HRS	-20°C - +60°C
K8708xx.x	Cat.6A / 500MHz	S/FTP AWG27/7	mounted/ no	LSZH coloured Dätwyler	6.0mm	X	X	X	X		usual	RJ45 with 360° shield contact	X	100% copper	TM21 HRS red	-20°C - +60°C
MK7001.xxx	Cat.6A / 500MHz	S/FTP AWG26/7	moulded/ yes	LSZH coloured	6.5mm	X	X	X	X		usual	selected shield contact	X	100% copper	RJ45 yellow	0°C - +60°C
K5528xx.x	Cat.8.1 / 2000MHz	S/FTP AWG24/7	moulded/ yes	LSZH coloured	8.0mm	X	X	X	X	X	usual	selected shield contact		100% copper	RJ45 Standard	0°C - +60°C
MK6001.xxx	Cat.6A / 500MHz	S/FTP AWG27/7	moulded/ yes	LSZH coloured	6.0mm	X	X	X	X		usual	selected shield contact		100% copper	RJ45 yellow	-20°C - +60°C



10 Colours
Length imprint on the boot

Cat.6 | 5Gbit | 250MHz | CU 100%

RJ45 Patch cable S/FTP, Cat.6, LSZH

The shielded Cat.6 RJ45 patch cable with ensures excellent performance for **5 Gigabit** Ethernet applications.

Moulded grommet **(patented)**

Category:.....6
Bandwidth:.....250MHz
Allocation:.....acc. TIA/EIA 568B
Conductor Material:.....Copper
Connector type:.....RJ45 Standard, IEC 60603-7-5
Contacts:.....Gold plated
Locking lever:.....yes
Cable structure:.....S/FTP
Flame-retardant:.....acc. IEC60332-1
Halogen free:.....yes
Low smoke:.....yes
Jacket material:.....LSZH
Cable construction:.....4x2x27/7
Outer diameter of the cable:.....6.2 mm

Length-Variants Matrix

	TOP SELLER grey	yellow	red	blue	green	black	orange	brown	white	magenta
0,15 m	K5510.0,15	K5511.0,15	K5512.0,15	K5513.0,15	K5514.0,15	K5515.0,15	K5516.0,15	K5517.0,15	K5518.0,15	K5519.0,15
0,25 m	K5510.0,25	K5511.0,25	K5512.0,25	K5513.0,25	K5514.0,25	K5515.0,25	K5516.0,25	K5517.0,25	K5518.0,25	K5519.0,25
0,5 m	K5510.0,5	K5511.0,5	K5512.0,5	K5513.0,5	K5514.0,5	K5515.0,5	K5516.0,5	K5517.0,5	K5518.0,5	K5519.0,5
1,0 m	K5510.1	K5511.1	K5512.1	K5513.1	K5514.1	K5515.1	K5516.1	K5517.1	K5518.1	K5519.1
1,5 m	K5510.1,5	K5511.1,5	K5512.1,5	K5513.1,5	K5514.1,5	K5515.1,5	K5516.1,5	K5517.1,5	K5518.1,5	K5519.1,5
2,0 m	K5510.2	K5511.2	K5512.2	K5513.2	K5514.2	K5515.2	K5516.2	K5517.2	K5518.2	K5519.2
3,0 m	K5510.3	K5511.3	K5512.3	K5513.3	K5514.3	K5515.3	K5516.3	K5517.3	K5518.3	K5519.3
5,0 m	K5510.5	K5511.5	K5512.5	K5513.5	K5514.5	K5515.5	K5516.5	K5517.5	K5518.5	K5519.5
7,5 m	K5510.7,5	K5511.7,5	K5512.7,5	K5513.7,5	K5514.7,5	K5515.7,5	K5516.7,5	K5517.7,5	K5518.7,5	K5519.7,5
10,0 m	K5510.10	K5511.10	K5512.10	K5513.10	K5514.10	K5515.10	K5516.10	K5517.10	K5518.10	K5519.10
15,0 m	K5510.15	K5511.15	K5512.15	K5513.15	K5514.15	K5515.15	K5516.15	K5517.15	K5518.15	K5519.15
20,0 m	K5510.20	K5511.20	K5512.20	K5513.20	K5514.20	K5515.20	K5516.20	K5517.20	K5518.20	K5519.20
25,0 m	K5510.25	K5511.25	K5512.25	K5513.25	K5514.25	K5515.25	K5516.25	K5517.25	K5518.25	K5519.25
30,0 m	K5510.30	K5511.30	K5512.30	K5513.30	K5514.30	K5515.30	K5516.30	K5517.30	K5518.30	K5519.30
40,0 m	K5510.40	K5511.40	K5512.40	K5513.40	K5514.40	K5515.40	K5516.40	K5517.40	K5518.40	K5519.40
50,0 m	K5510.50	K5511.50	K5512.50	K5513.50	K5514.50	K5515.50	K5516.50	K5517.50	K5518.50	K5519.50

RJ45 Patch cable S/FTP Cat.8.1, BC

The Cat.8.1 patch cable is suitable for **25GBASE-T** and **40GBASE-T** applications based on RJ45. The Cat.8.1 has a frequency range of up to **2000 MHz** and a maximum transmission distance of currently 30m.

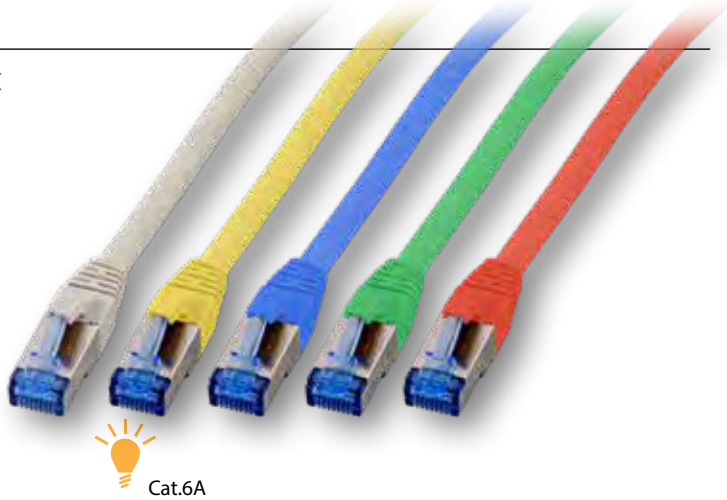
Category: 8.1
Bandwidth: 2000MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 Standard
Contacts: ..... Gold plated
Locking lever: ..... yes
Cable structure: ..... S/FTP
Jacket material: ..... LSZH
Cable construction: 4x2x24/7
Outer diameter of the cable: ..... 8 mm
Anti-kink sleeve: ..... plugged in

Cat.8.1
25GBASE-T / 40GBASE-T
2000 MHz

Cat.8.1 | 40 Gbit | 2000MHz | CU 100%

Length-Variants Matrix

	blue	yellow	grey	green	red	black
0,5 m	K5528BL.0,5	K5528GE.0,5	K5528GR.0,5	K5528GN.0,5	K5528RT.0,5	K5528SW.0,5
1,0 m	K5528BL.1	K5528GE.1	K5528GR.1	K5528GN.1	K5528RT.1	K5528SW.1
2,0 m	K5528BL.2	K5528GE.2	K5528GR.2	K5528GN.2	K5528RT.2	K5528SW.2
3,0 m	K5528BL.3	K5528GE.3	K5528GR.3	K5528GN.3	K5528RT.3	K5528SW.3
5,0 m	K5528BL.5	K5528GE.5	K5528GR.5	K5528GN.5	K5528RT.5	K5528SW.5
7,5 m	K5528BL.7,5	K5528GE.7,5	K5528GR.7,5	K5528GN.7,5	K5528RT.7,5	K5528SW.7,5
10,0 m	K5528BL.10	K5528GE.10	K5528GR.10	K5528GN.10	K5528RT.10	K5528SW.10



RJ45 Patch cable S/FTP, Cat.6A, Cat.7 Raw cable TPE superflex

The shielded Cat.6A RJ45 patch cable with **component certification** from the GHMT ensures excellent performance for **10 Gigabit** Ethernet applications. The **TPE** outer sheath makes the cable **highly flexible** and thus easier to handle. The moulded grommet captivates with its **slim design** and thus simplifies the insertion process in cramped conditions.
Length imprint on boot

Category: ..... 6A (IEC)
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 Standard, IEC 60603-7-51
Contacts: ..... 50 µ" gold plated
Locking lever: ..... Yes
Cable structure: ..... S/FTP
Raw cable: Cat.7
Flame-retardant: ..... acc. IEC60332-1
Halogen free: ..... acc. IEC60754-2
Low smoke: ..... acc. IEC61034
Jacket material: ..... TPE/LSZH
Cable construction: 4x2x26/7
Outer diameter of the cable: ..... 6.5 mm

Cat.6A
High flexible TPE Jacket
Slim Grommet for easy connection
GHMT Component certified

GHMT | Cat.6A | 10Gbit | 500MHz | CU 100% | TPE

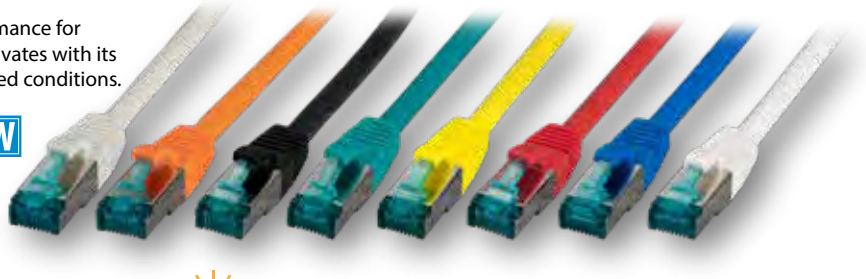
Length-Variants Matrix

	blue	yellow	grey	green	red	black	white
0,15 m	K5525FBL.0,15	K5525FGE.0,15	K5525FGR.0,15	K5525FGN.0,15	K5525FRT.0,15	K5525FSW.0,15	K5525FWS.0,15
0,25 m	K5525FBL.0,25	K5525FGE.0,25	K5525FGR.0,25	K5525FGN.0,25	K5525FRT.0,25	K5525FSW.0,25	K5525FWS.0,25
0,5 m	K5525FBL.0,5	K5525FGE.0,5	K5525FGR.0,5	K5525FGN.0,5	K5525FRT.0,5	K5525FSW.0,5	K5525FWS.0,5
1,0 m	K5525FBL.1	K5525FGE.1	K5525FGR.1	K5525FGN.1	K5525FRT.1	K5525FSW.1	K5525FWS.1
1,5 m	K5525FBL.1,5	K5525FGE.1,5	K5525FGR.1,5	K5525FGN.1,5	K5525FRT.1,5	K5525FSW.1,5	K5525FWS.1,5
2,0 m	K5525FBL.2	K5525FGE.2	K5525FGR.2	K5525FGN.2	K5525FRT.2	K5525FSW.2	K5525FWS.2
3,0 m	K5525FBL.3	K5525FGE.3	K5525FGR.3	K5525FGN.3	K5525FRT.3	K5525FSW.3	K5525FWS.3
5,0 m	K5525FBL.5	K5525FGE.5	K5525FGR.5	K5525FGN.5	K5525FRT.5	K5525FSW.5	K5525FWS.5
7,5m	K5525FBL.7,5	K5525FGE.7,5	K5525FGR.7,5	K5525FGN.7,5	K5525FRT.7,5	K5525FSW.7,5	K5525FWS.7,5
10,0 m	K5525FBL.10	K5525FGE.10	K5525FGR.10	K5525FGN.10	K5525FRT.10	K5525FSW.10	K5525FWS.10
15,0 m	K5525FBL.15	K5525FGE.15	K5525FGR.15	K5525FGN.15	K5525FRT.15	K5525FSW.15	K5525FWS.15
20,0 m	K5525FBL.20	K5525FGE.20	K5525FGR.20	K5525FGN.20	K5525FRT.20	K5525FSW.20	K5525FWS.20
25,0 m	K5525FBL.25	K5525FGE.25	K5525FGR.25	K5525FGN.25	K5525FRT.25	K5525FSW.25	K5525FWS.25
30,0 m	K5525FBL.30	K5525FGE.30	K5525FGR.30	K5525FGN.30	K5525FRT.30	K5525FSW.30	K5525FWS.30

RJ45 Patch cable S/FTP, Cat. 6A

The shielded Cat.6A RJ45 patch cable ensures excellent performance for **10 Gigabit** Ethernet applications. The moulded grommet captivates with its **slim design** and thus simplifies the insertion process in cramped conditions.

NEW



Category: ..... 6A (TIA)
Transmission: 10Gbit
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 Standard, IEC 60603-7-51
Contacts: ..... Gold plated
Locking lever: ..... Yes
Cable structure: ..... S/FTP
Raw cable: Cat.6A
Flame-retardant: ..... Yes
Halogen free: ..... Yes
Low smoke: ..... Yes
Jacket material: ..... LSZH
Cable construction: 4x2x27/7
Outer diameter of the cable: .....6,0 mm

8 Colours
Length imprint on the boot
Slim Grommet for easy connection

Cat.6A 10Gbit 500MHz CU 100%

Length-Variants Matrix

	blue	yellow	grey	green	orange	red	black	white
0.15 m	MK6001.0,15BL	MK6001.0,15Y	MK6001.0,15G	MK6001.0,15GR	MK6001.0,150	MK6001.0,15R	MK6001.0,15B	MK6001.0,15W
0.25 m	MK6001.0,25BL	MK6001.0,25Y	MK6001.0,25G	MK6001.0,25GR	MK6001.0,250	MK6001.0,25R	MK6001.0,25B	MK6001.0,25W
0.5 m	MK6001.0,5BL	MK6001.0,5Y	MK6001.0,5G	MK6001.0,5GR	MK6001.0,50	MK6001.0,5R	MK6001.0,5B	MK6001.0,5W
1.0 m	MK6001.1BL	MK6001.1Y	MK6001.1G	MK6001.1GR	MK6001.10	MK6001.1R	MK6001.1B	MK6001.1W
1.5 m	MK6001.1,5BL	MK6001.1,5Y	MK6001.1,5G	MK6001.1,5GR	MK6001.1,50	MK6001.1,5R	MK6001.1,5B	MK6001.1,5W
2.0 m	MK6001.2BL	MK6001.2Y	MK6001.2G	MK6001.2GR	MK6001.20	MK6001.2R	MK6001.2B	MK6001.2W
3.0 m	MK6001.3BL	MK6001.3Y	MK6001.3G	MK6001.3GR	MK6001.30	MK6001.3R	MK6001.3B	MK6001.3W
5.0 m	MK6001.5BL	MK6001.5Y	MK6001.5G	MK6001.5GR	MK6001.50	MK6001.5R	MK6001.5B	MK6001.5W
7.5 m	MK6001.7,5BL	MK6001.7,5Y	MK6001.7,5G	MK6001.7,5GR	MK6001.7,50	MK6001.7,5R	MK6001.7,5B	MK6001.7,5W
10.0 m	MK6001.10BL	MK6001.10Y	MK6001.10G	MK6001.10GR	MK6001.100	MK6001.10R	MK6001.10B	MK6001.10W
15.0 m	MK6001.15BL	MK6001.15Y	MK6001.15G	MK6001.15GR	MK6001.150	MK6001.15R	MK6001.15B	MK6001.15W
20.0 m	MK6001.20BL	MK6001.20Y	MK6001.20G	MK6001.20GR	MK6001.200	MK6001.20R	MK6001.20B	MK6001.20W
25.0 m	MK6001.25BL	MK6001.25Y	MK6001.25G	MK6001.25GR	MK6001.250	MK6001.25R	MK6001.25B	MK6001.25W
30.0 m	MK6001.30BL	MK6001.30Y	MK6001.30G	MK6001.30GR	MK6001.300	MK6001.30R	MK6001.30B	MK6001.30W
40.0 m	MK6001.40BL	MK6001.40Y	MK6001.40G	MK6001.40GR	MK6001.400	MK6001.40R	MK6001.40B	MK6001.40W
50.0 m	MK6001.50BL	MK6001.50Y	MK6001.50G	MK6001.50GR	MK6001.500	MK6001.50R	MK6001.50B	MK6001.50W

RJ45 Patch cable S/FTP, Cat.6A, LSZH, Cat.7 Raw cable

The shielded Cat.6A RJ45 patch cable with ensures excellent performance for **10 Gigabit** Ethernet applications. The moulded grommet captivates with its **slim design** and thus simplifies the insertion process in cramped conditions.

Category: ..... 6A (TIA)
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 Standard, IEC 60603-7-51
Contacts: ..... Gold plated
Locking lever: ..... yes
Cable structure: ..... S/FTP
Raw cable: Cat.7
Flame-retardant: ..... acc. IEC60332-1
Halogen free: ..... acc. IEC60754-2
Low smoke: ..... acc. IEC61034
Jacket material: ..... LSZH
Cable construction: 4x2x26/7
Outer diameter of the cable: ..... 6.5 mm

8 Colours
Length imprint on the boot
Slim Grommet for easy connection

Cat.6A 10Gbit 500MHz CU 100%

Length-Variants Matrix

	blue	yellow	grey	green	orange	red	black	white
0,15 m	MK7001.0,15BL	MK7001.0,15Y	MK7001.0,15G	MK7001.0,15GR	MK7001.0,150	MK7001.0,15R	MK7001.0,15B	MK7001.0,15W
0,25 m	MK7001.0,25BL	MK7001.0,25Y	MK7001.0,25G	MK7001.0,25GR	MK7001.0,250	MK7001.0,25R	MK7001.0,25B	MK7001.0,25W
0,5 m	MK7001.0,5BL	MK7001.0,5Y	MK7001.0,5G	MK7001.0,5GR	MK7001.0,50	MK7001.0,5R	MK7001.0,5B	MK7001.0,5W
1,0 m	MK7001.1BL	MK7001.1Y	MK7001.1G	MK7001.1GR	MK7001.10	MK7001.1R	MK7001.1B	MK7001.1W
1,5 m	MK7001.1,5BL	MK7001.1,5Y	MK7001.1,5G	MK7001.1,5GR	MK7001.1,50	MK7001.1,5R	MK7001.1,5B	MK7001.1,5W
2,0 m	MK7001.2BL	MK7001.2Y	MK7001.2G	MK7001.2GR	MK7001.20	MK7001.2R	MK7001.2B	MK7001.2W
3,0 m	MK7001.3BL	MK7001.3Y	MK7001.3G	MK7001.3GR	MK7001.30	MK7001.3R	MK7001.3B	MK7001.3W
5,0 m	MK7001.5BL	MK7001.5Y	MK7001.5G	MK7001.5GR	MK7001.50	MK7001.5R	MK7001.5B	MK7001.5W
7,5 m	MK7001.7,5BL	MK7001.7,5Y	MK7001.7,5G	MK7001.7,5GR	MK7001.7,50	MK7001.7,5R	MK7001.7,5B	MK7001.7,5W
10,0 m	MK7001.10BL	MK7001.10Y	MK7001.10G	MK7001.10GR	MK7001.100	MK7001.10R	MK7001.10B	MK7001.10W
15,0 m	MK7001.15BL	MK7001.15Y	MK7001.15G	MK7001.15GR	MK7001.150	MK7001.15R	MK7001.15B	MK7001.15W
20,0 m	MK7001.20BL	MK7001.20Y	MK7001.20G	MK7001.20GR	MK7001.200	MK7001.20R	MK7001.20B	MK7001.20W
25,0 m	MK7001.25BL	MK7001.25Y	MK7001.25G	MK7001.25GR	MK7001.250	MK7001.25R	MK7001.25B	MK7001.25W
30,0 m	MK7001.30BL	MK7001.30Y	MK7001.30G	MK7001.30GR	MK7001.300	MK7001.30R	MK7001.30B	MK7001.30W

DC10001USB

RJ45 Patch cable S/FTP, Cat.6A, VC LED

The shielded Cat.6A RJ45 patch cable provides excellent performance for **10 Gigabit Ethernet** applications. With the help of a detector (Art.-Nr. DC10001 oder DC10001USB) **light emitting diodes** are excited in both RJ45 plugs of the patch cable. The **illuminated RJ45 plugs** make it easy to **track the cable path**.

Cat.6A | 10Gbit | 500MHz | CU 100% | LED

Integrated LEDs for tracing the cable route
Length imprint on the boot

Category: ..... 6A (TIA)
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 LED, IEC 60603-7-51
Contacts: ..... Gold plated
Locking lever: ..... yes
Cable structure: ..... S/FTP
Flame-retardant: ..... acc. IEC60332-3
Halogen free: ..... acc. IEC60754-2
Low smoke: ..... acc. IEC61034
Jacket material: ..... LSZH
Cable construction: 4x2x26/7
Outer diameter of the cable: ..... 6.2 mm
Anti-kink sleeve: ..... put-on

Art.-No.	Colour outer sheath
DCK1001GR.x	grey

Accessory

Art.-No.	Description
DC10001	Detector, activates LED in LED Patch Cable
DC10002	Spare Coin Cell for Detector V 13 GA 1.5 V LR41
DC10001USB	Detector, activates LED in LED Patch Cable, with USB interface

Stock Lengths: 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 m

Cat.6A | 10Gbit | 500MHz | CU 100% | PVC

RJ45 Flat patch cable U/FTP, Cat.6A, PVC

The pair-shielded Cat.6A RJ45 **flat patch cable** ensures excellent performance for **10 Gigabit** Ethernet applications. The flat patch cable impresses with its flat construction and is with **2.2 mm height perfect for laying e.g. behind ledges or under a carpet**. The cast grommet captivates with its **slim design** and thus simplifies the plugging process in confined spaces.

Very flat - perfect for laying behind Carpet strips or under carpets
Slim Grommet for easy connection
Very short connector for cramped space

Category: ..... 6A (TIA)
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 short version, IEC 60603-7-51
Contacts: ..... Gold plated
Locking lever: ..... yes
Cable structure: ..... U/FTP
Jacket material: ..... PVC
Cable construction: 4x2x30/7
Outer diameter of the cable: ..... 7.0*2.2 mm
Anti-kink sleeve: ..... moulded

Art.-No.	Colour outer sheath
K5545BL.x	blue
K5545GE.x	yellow
K5545GN.x	green
K5545GR.x	grey
K5545RT.x	red
K5545SW.x	black
K5545WS.x	white

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 m

The Cat.6A RJ45 patch cable **manufactured in Europe** guarantees very good characteristics for **10 Gigabit** Ethernet applications. The patch cables are assembled from high quality Hirose connectors in combination with raw cables from renowned European manufacturers.

Allocation:..... acc. TIA/EIA 568B
Contacts:..... Gold plated
Locking lever:..... yes

Features of Patch cable

Type designation	Art.-No.	Category	Jacket	AWG/Wire	Ø in mm	Euro Class	Cable Construction	Max. Frequency
Draka UC900 SS27	9970x.x	7	FRNC-B	27/7/ Cu, tinned	5.9	Eca	S/FTP	1000 MHz
Leoni-Kerpen F6-90S/F	9962x.x	7	FRNC-B	27/7/Cu, blank	5.7	Dca	S/FTP	900 MHz
Dätwyler CU 7702 flex	9871x.x	7	FRNC-C	26/7/Cu, blank	5.8		S/FTP	1000 MHz
Dätwyler CU 5502 flex	9870x.x	5e	PVC	26/7/ Cu, tinned	5.1		S/UTP	300 MHz
Draka UC300 HS26	9925x.x	5e	FRNC-B	26/7/ Cu, tinned	5.7		SF/UTP	300 MHz
Draka UC300 S26	9915x.x	5e	FRNC-B	26/7/ Cu, tinned	5.0		F/UTP	300 MHz

Draka Comteq DÄTWYLER HIROSE ELECTRIC GMBH

RJ45 Patch Cable S/FTP, Cat.6A, TM31

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 -1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 m

Art.-No. Draka UC900	Art.-No. Dätwyler CU 7702 flex	Colour outer jacket
K8560BL.x	K8580BL.x	blue
K8560GE.x	K8580GE.x	yellow
K8560GN.x	K8580GN.x	green
K8560GR.x	K8580GR.x	grey
K8560OR.x		orange
K8560RT.x	K8580RT.x	red
K8560SW.x	K8580SW.x	black
K8560WS.x		white

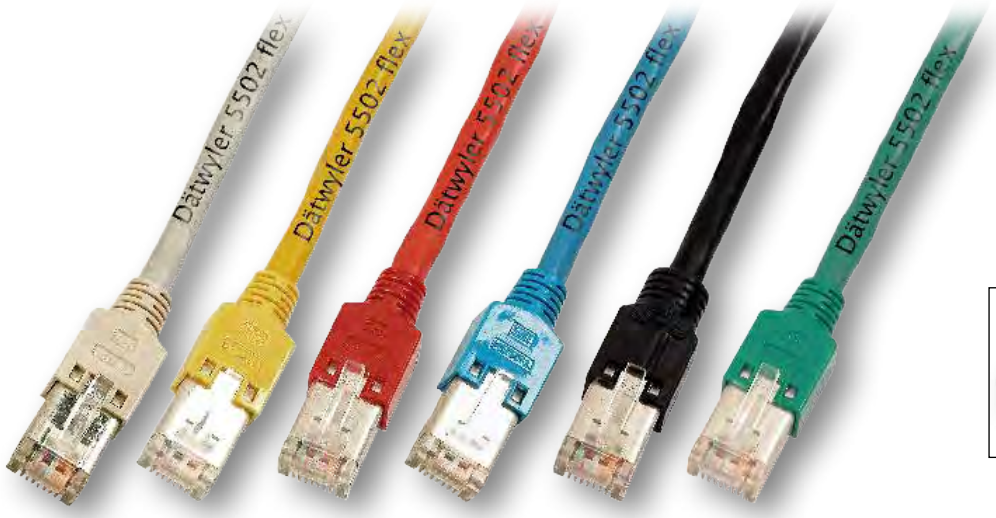
K4137BL.x

KERPEN Competence in Cable Technology · Draka Comteq · DÄTWYLER · HRS HIROSE ELECTRIC GMBH

RJ45 Patch Cable S/FTP, Cat.6A, TM21

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 -1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 m

Art.-No. Draka UC900	Art.-No. Draka UC900 2xTM21 90°	Art.-No. Leoni-Kerpen F6-90S/F	Art.-No. Dätwyler CU 7702 flex	Colour outer jacket
K8050.x	K4137SW.x		K8708SW.x	black
K8051.x	K4137GR.x	K8210GR.x	K8708GR.x	grey
K8052.x	K4137RT.x	K8210RT.x	K8708RT.x	red
K8053.x	K4137GN.x	K8210GN.x	K8708GN.x	green
K8054.x	K4137BL.x	K8210BL.x	K8708BL.x	blue
K8055.x	K4137GE.x	K8210GE.x	K8708GE.x	yellow
K8056.x	K4137OR.x		K8708OR.x	orange
K8058.x	K4137WS.x			white



K0993.x

Draka Comteq · DÄTWYLER · HRS HIROSE ELECTRIC GMBH

RJ45 Patch Cable, Cat.5e, TM11

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 -1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 m
Stock Lengths K2793.x: 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 10 m

Art.-No. Draka UC300 SF/UTP	Art.-No. Draka UC300 F/UTP	Art.-No. Dätwyler CU 5502 flex	Colour outer jacket
K8012.x	K8076.x	K8703.x	red
K8013.x	K8073.x	K8706.x	green
K8014.x	K8074.x	K8704.x	blue
K8015.x	K8075.x	K8702.x	yellow
K8017.x	K8452.x	K8701.x	grey
	K8072.x	K8705.x	black
K2793.x / Cross connection			red
		K0993.x / 1x 90° TM11	black

Cat.6A 10Gbit 500MHz CU 100% TPE

RJ45 Patch cable U/FTP, Cat.6A, Raw cable TPE, 4,0mm ultraflex

The shielded Cat.6A RJ45 patch cable ensures excellent performance for **10 Gigabit** Ethernet applications. The **TPE** outer sheath makes the cable **highly flexible** and thus easier to handle. The moulded grommet captivates with its **slim design** and simplifies the plugging process in cramped conditions. The **short connector** in combination with the **thin outer jacket** enables a very **high packing density**.

High flexible TPE Jacket
very thin - small bending radius
High packing density

Category: ..... 6A (TIA)
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 short version, IEC 60603-7-51
Contacts: ..... Gold plated
Locking lever: ..... yes
Cable structure: ..... U/FTP
Jacket material: ..... TPE/LSZH
Cable construction: 4x2x30/7
Outer diameter of the cable: ..... 4.0 mm
Anti-kink sleeve: ..... moulded

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 m

Art.-No.	Colour outer sheath
K5547SW.x	black
K5547WS.x	white

Length imprint on boot

Cat.5e 2,5Gbit 100MHz CCA PVC

RJ45 Patch cable SF/UTP, Cat.5e, PVC, CCA

The Cat.5e RJ45 **crossover patch cable** ensures very good characteristics for 2.5 Gigabit Ethernet applications. Due to the **double shielding**, the patch cable is even **better protected against EMC radiation**.

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 m
Stock Lengths K5450.x: 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 10 m

Category: 5E
Allocation: ..... 1:1 / K5450: Crossover
Conductor Material: ..... CCA
Connector type: ..... RJ45 Standard
Contacts: ..... Gold plated
Locking lever: ..... Yes
Cable structure: ..... SF / UTP
Jacket material: ..... PVC
Cable construction: 4x2x26/7
Outer diameter of the cable: ..... 5,7 mm
Anti-kink sleeve: ..... plugged in

Art.-No.	Colour outer sheath	
K5455.x	grey	
K5456.x	black	
K5457.x	yellow	
K5458.x	red	
K5459.x	blue	
K5460.x	green	
K5450.x	grey	Crossover Patch Cable

Art.-No.:	Category/ Bandwidth	Unshielded AWG	Boot / Length imprint	Jacket	Cable diameter	Gigabit Ethernet	2,5 Gigabit Ethernet	5 Gigabit Ethernet	10 Gigabit Ethernet	Flexibility	Clip Protection	Conductor material	Plug	Temperature range
K8097.x	Cat.5e / 100 MHz	U/UTP AWG24/7	red moulded / yes	PVC grey	5.4 mm	X	X			usual	no	CCA	RJ45 Standard	0°C - +60 °C
K809x.x	Cat.5e / 100 MHz	U/UTP AWG24/7	moulded/ yes	PVC coloured	5.4 mm	X	X			usual	no	CCA	RJ45 Standard	0°C - +60 °C
K8100xx.x	Cat.6 / 250 MHz	U/UTP AWG24/7	moulded/ yes	PVC coloured	5.9 mm	X	X	X		usual	no	CCA	RJ45 Standard	0°C - +60 °C
K8103GR.x	Cat.6A / 500 MHz	U/UTP AWG24/7	moulded/ no	LSZH grey	6.0 mm	X	X	X	X	usual	yes	100% copper	RJ45 blue	0°C - +60 °C
K8104xx.x	Cat.6 / 250 MHz	U/UTP AWG24/7	moulded/ yes	LSZH coloured	5.9 mm	X	X	X		usual	yes	CCA	RJ45 Standard	0°C - +60 °C
K8107xx.x	Cat.6A / 500 MHz	U/UTP AWG30/7	moulded/ no	PVC coloured	6.0 x 1.6 mm	X	X	X	X	very good	yes	100% copper	RJ45 ultra short	-20°C - +55 °C
K8108xx.x	Cat.6A / 500 MHz	U/UTP AWG30/7	moulded/ yes	TPE coloured	3.6 mm	X	X	X	X	ultraflex	yes	100% copper	RJ45 ultra short	-20°C - +75 °C
K8110xx.x	Cat.5e / 100 MHz	U/UTP AWG24/7	moulded/ yes	LSZH coloured	5.4 mm	X	X			usual	yes	CCA	RJ45 Standard	0°C - +60 °C
K8456.x	Cat.5e / 100 MHz	U/UTP AWG24/7	moulded/ yes	PVC grey	5.4 mm	X	X			usual	no	CCA	RJ45 Standard	0°C - +60 °C

Traceable through serial number
Guaranteed quality through 100% inspection and enclosed measurement report
Slim Grommet for easy connection

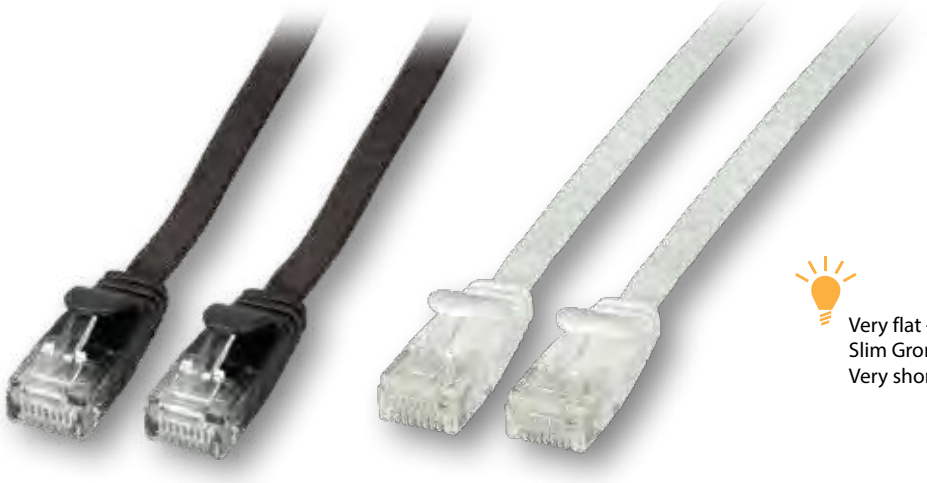
RJ45 Patch cable U/UTP, Cat.6A, LSZH, Premium, 500MHz

The unshielded Cat.6A RJ45 premium patch cable ensures very good characteristics for **10 Gigabit Ethernet** applications. The patch cable is **100% tested**. A label on the cable with the **serial number** guarantees traceability. The moulded grommet captivates with its **slim design** and thus simplifies the insertion process in cramped conditions.

Stock Lengths: 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 m

Art.-No.	Colour outer sheath
K8103GR.x	grey

Category: ..... 6A (TIA)
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 Standard, IEC 60603-7-41
Contacts: ..... 50 µ" gold plated
Locking lever: ..... yes
Cable structure: ..... U/UTP
Flame-retardant: ..... acc. IEC60332-1
Halogen free: ..... yes
Low smoke: ..... yes
Jacket material: ..... LSZH
Cable construction: 4x2x24/7
Outer diameter of the cable: ..... 6.0 mm
Anti-kink sleeve: ..... moulded



Very flat - perfect for laying behind carpet strips or under carpets
Slim Grommet for easy connection
Very short connector for cramped space

RJ45 Flat patch cable U/UTP, Cat.6A, PVC

The unshielded Cat.6A RJ45 **flat patch cable** ensures excellent performance for **10 Gigabit** Ethernet applications. The flat patch cable impresses with its flat construction and is with **1.6 mm height perfect for laying e.g. behind ledges or under a carpet**. The cast grommet captivates with its **slim design** and thus simplifies the plugging process in confined spaces.

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 m

Art.-No.	Colour outer sheath
K8107SW.x	black
K8107WS.x	white

Category: ..... 6A (TIA)
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 short version, IEC 60603-7-51
Contacts: ..... Gold plated
Locking lever: ..... Yes
Cable structure: ..... U/UTP
Jacket material: ..... PVC
Cable construction: 4x2x30/7
Outer diameter of the cable: ..... 6.0*1.6 mm
Anti-kink sleeve: ..... moulded

High Packing density
High felxible TPE Jacket
Very thin - small bending radius
Very short connector for cramped space

RJ45 Patch cable U/UTP, Cat.6A, Raw cable TPE, 3,6mm ultraflex

The shielded Cat.6A RJ45 patch cable ensures excellent performance for **10 Gigabit** Ethernet applications. The **TPE** outer sheath makes the cable **highly flexible** and thus easier to handle. The moulded grommet captivates with its **slim design** and simplifies the plugging process in cramped conditions. The **short connector** in combination with the **thin outer jacket** enables a very **high packing density**.

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 m

Art.-No.	Colour outer sheath
K8108SW.x	black
K8108WS.x	white

Category: ..... 6A (TIA)
Bandwidth: 500MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 short version, IEC 60603-7-41
Contacts: ..... Gold plated
Locking lever: ..... Yes
Cable structure: ..... U/UTP
Jacket material: ..... TPE/LSZH
Cable construction: 4x2x30/7
Outer diameter of the cable: ..... 3.6 mm
Anti-kink sleeve: ..... moulded

RJ45 Patch cable U/UTP, Cat.6, PVC, CCA

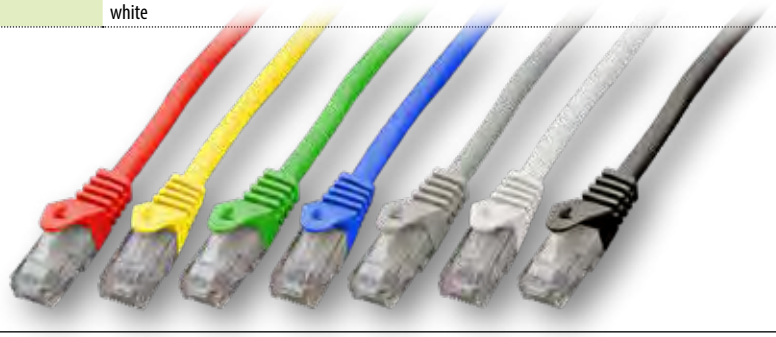
The unshielded Cat.6 RJ45 patch cable with ensures excellent performance for **5 Gigabit** Ethernet applications. The moulded grommet captivates with its **slim design** and thus simplifies the insertion process in cramped conditions.

Length imprint on boot
9 Colours
Slim Grommet for easy connection

Category: 6
Bandwidth: 250MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... CCA
Connector type: ..... RJ45 Standard, IEC 60603-7-4
Contacts: ..... Gold plated
Locking lever: ..... No
Cable structure: ..... U/UTP
Jacket material: ..... PVC
Cable construction: 4x2x24/7
Outer diameter of the cable: ..... 5.9 mm
Anti-kink sleeve: ..... moulded

Stock Lengths: 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Colour outer sheath
K8100GR.x	grey
K8100BL.x	blue
K8100GE.x	yellow
K8100GN.x	green
K8100MA.x	magenta
K8100OR.x	orange
K8100RT.x	red
K8100SW.x	black
K8100WS.x	white



RJ45 Patch cable U/UTP, Cat.6, LSZH, CCA

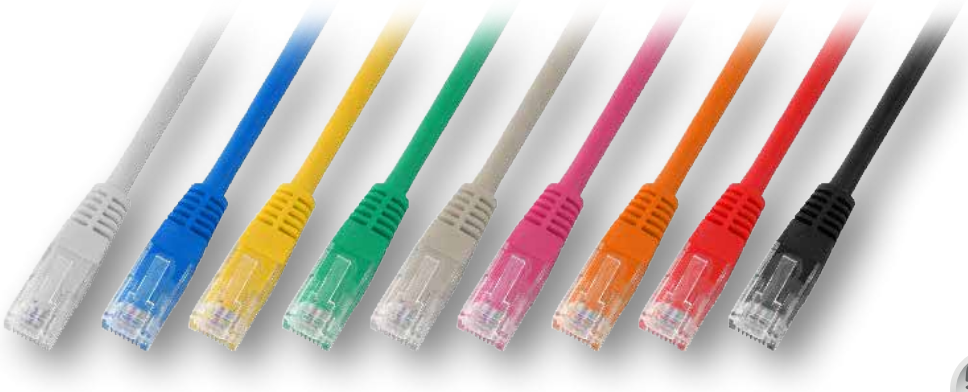
The unshielded Cat.6 RJ45 patch cable with ensures excellent performance for **5 Gigabit** Ethernet applications. The moulded grommet captivates with its **slim design** and thus simplifies the insertion process in cramped conditions.

Slim Grommet for easy connection

Category: 6
Bandwidth: 250MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... CCA
Connector type: ..... RJ45 Standard, IEC 60603-7-4
Contacts: ..... Gold plated
Locking lever: ..... yes
Cable structure: ..... U/UTP
Flame-retardant: ..... yes
Halogen free: ..... yes
Low smoke: ..... yes
Jacket material: ..... LSZH
Cable construction: 4x2x24/7
Outer diameter of the cable: ..... 5.9 mm
Anti-kink sleeve: ..... moulded

Stock Lengths: 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Colour outer sheath
K8104BL.x	blue
K8104GE.x	yellow
K8104GN.x	green
K8104GR.x	grey
K8104RT.x	red
K8104SW.x	black
K8104WS.x	white



9 Colours
Length imprint on boot

Cat.5e 2,5Gbit 100MHz CCA PVC

RJ45 Patch cable U/UTP, Cat.5e, PVC, CCA

The unshielded Cat.5e RJ45 patch cable with ensures excellent performance for **2.5 Gigabit** Ethernet applications. The moulded grommet captivates with its **slim design** and thus simplifies the insertion process in cramped conditions.

Art.-No.	Colour outer sheath
K8091.x	magenta
K8092.x	white
K8093.x	green
K8094.x	blue
K8095.x	yellow
K8096.x	red
K8098.x	black
K8099.x	orange
K8456.x	grey

Stock Lengths: 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 m

Category: 5e
Transmission: 2.5Gbit
Bandwidth: 100MHz
Allocation: acc. TIA/EIA 568B
Conductor Material: CCA
Connector type: RJ45 Standard, IEC 60603-7-2
Contacts: Gold plated
Locking lever: No
Cable structure: U/UTP
Jacket material: PVC
Cable construction: 4x2x24/7
Outer diameter of the cable: 5.4 mm
Anti-kink sleeve: moulded

Slim Grommet for easy connection

Cat.5e 2,5Gbit 100MHz CCA PVC

RJ45 Patch Cable Cat.5e U/UTP LSZH

The unshielded Cat.5e RJ45 patch cable guarantees very good Features for **2.5 Gigabit** Ethernet applications. The molded grommet impresses with its **slim design** and thus simplifies Insertion in confined spaces.

Art.-No.	Colour outer sheath
K8110BL.x	blue
K8110GE.x	yellow
K8110GN.x	green
K8110GR.x	grey
K8110RT.x	red
K8110WS.x	white

Stock Lengths: 0.25 - 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 m

Category: 5E
Transmission: 2.5 Gbit
Bandwidth: 100 MHz
Allocation: acc. to TIA/EIA 568B
Conductor Material: CCA
Connector type: RJ45 Standard, IEC 60603-7-2
Contacts: Gold plated
Locking lever: Yes
Cable structure: U/UTP
Jacket Material: LSZH
Cable Construction: 4x2x24/7
Outer diameter of cable: 5.4 mm
Flame-retardant: yes
Halogen free: yes
Low smoke: yes

Art.-No.:	Category/ Bandwidth	Shielded AWG	Boot / Length imprint	Jacket	Cable diameter	Gigabit Ethernet	2,5 Gigabit Ethernet	5 Gigabit Ethernet	10 Gigabit Ethernet	Flexibility	Conductive shield	Raw cable acc. to Cat.7	Conductor material	Plug	IP protection	Temperature range	UL approval	Exceptional features
K2460.x	Cat.6 / 250 MHz	S/FTP AWG26/7	moulded/ no	FR-PVC black	6.2 mm	X	X	X		usual	selected shield contact	yes	100% copper	RJ45 ultra short	IP20	-10°C - +75 °C	yes	VOIP use favored
K3130.x	Cat.6A / 500 MHz	S/FTP AWG26/7	mounted/ no	PUR red	6.4 mm	X	X	X	X	superflex	RJ45 with 360° shield contact	yes	100% copper	TM31 HIROSE	IP20	-40°C - +70 °C	no	Superflex, UV-resistant, outdoor, temperature stable, Made in Europe, EMC safe, TM31
K5530.x	Cat.5e / 100 MHz	SF/UTP AWG26/7	moulded/ no	PUR RAL6018 green	6.2 mm	X	X			superflex	RJ45 with 360° shield contact	no	100% copper	RJ45 Standard	IP20	-40 °C - +80 °C	no	EtherCat, temperature stable
K5535xx.x	Cat.6A / 500 MHz	S/FTP AWG26/7	moulded/ no	FR-PVC grey	6.2 mm	X	X	X	X	usual	selected shield contact	yes	100% copper	RJ45 Standard	IP20	-10°C - +75 °C	yes	100% test, single test protocol
K5537xx.x	Cat.6A / 500 MHz	S/FTP AWG24/7	moulded/ no	FR-PVC grey	6.8 mm	X	X	X	X	usual	RJ45 with 360° shield contact	yes	100% copper	RJ45 Special	IP20	-10°C - +75 °C	yes	Longlink up to 90m
K5538xx.x	Cat.6A / 500 MHz	S/FTP AWG26/7	moulded/ no	TPE black	6.2 mm	X	X	X	X	superflex	RJ45 with 360° shield contact	yes	100% copper	RJ45 Special	IP20	-40°C - +80 °C	no	Superflex, UV-resistant, temperature stable
K8032.x	Cat.5e / 100 MHz	S/UTP AWG26/19	mounted/ no	PUR RAL1021 yellow	6.9 mm	X	X			extremely good/ drag chain	RJ45 with 360° shield contact	no	100% copper	TM21 HIROSE	IP20	-40 °C - +85 °C	no	Extremely flexible, dragline capable, oil-resistant, Made in Europe, EMC safe, TM21
K8048PUIx	Cat.6A / 500 MHz	S/FTP AWG27/7	mounted/ no	PUR red	5.9 mm	X	X	X	X	superflex	RJ45 with 360° shield contact	yes	100% copper	TM21 HIROSE	IP20	-35°C - +75 °C	no	Superflex, oil-and UV-resistant, , Made in Europe, EMC safe, TM21
K8670.x	Cat.6A / 500 MHz	S/FTP AWG27/7	IP20 + IP67 mounted / no	PUR red	5.9 mm	X	X	X	X	superflex	RJ45 with 360° shield contact	yes	100% copper	TM21 HIROSE	IP20 + IP67	-35°C - +75 °C	no	Superflex, oil-and UV-resistant, , Made in Europe, EMC safe, TM21 + TM21 IP67

European Production
UV-retardant
High flexible PUR -Jacket
Suitable for outdoor use

RJ45 Patch cable S/FTP, Cat.6A, PUR, Cat.7 Raw cable, TM31

The Cat.6A RJ45 patch cable **manufactured in Europe** guarantees very good characteristics for **10 Gigabit** Ethernet applications. The patch cable is composed of the Cat.7 raw cable **Patch Pro flex Cat 7** from Draka and **TM31** connectors from Hirose. Due to the **PUR** outer sheath, the patch cable is also **suitable for outdoor use** (except for direct burial).

Category:	6A (TIA)
Bandwidth:	500MHz
Allocation:	acc. TIA/EIA 568B
Conductor Material:	Copper
Connector type:	TM31, IEC 60603-7-51
Contacts:	Gold plated
Locking lever:	No
Cable structure:	S/FTP
Raw cable:	Cat.7
Jacket material:	PUR
Cable construction:	4x2x26/7
Outer diameter of the cable:	6.4 mm
Cable type:	Draka Patch Pro flex Cat 7
Anti-kink sleeve:	put-on

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 -1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 m

Art.-No.	Colour outer sheath
K3130.x	black

European Production
Oil retardant
High flexible PUR -Jacket
Extended Temperature Range

K8670.x

53730.1V2

Suitable for outdoor use
IP67 Connector

RJ45 Patch cable S/FTP, Cat.6A, TM21, UC900, PUR

The Cat.6A RJ45 patch cable **manufactured in Europe** guarantees very good characteristics for **10 Gigabit** Ethernet applications. The patch cable is composed of the Cat.7 raw cable **UC900 SS27 Cat.7 PUR** from Draka and **TM21** connectors from Hirose. On one side the TM21 connector is provided with a special grommet and is therefore suitable for **IP67** use. Due to the **highly abrasion-resistant PUR** outer sheath, the cable is **resistant to mineral oil and ASTM oil**.

Temperature range: **-35 °C ~ +75 °C**

Category:	6A (IEC)
Bandwidth:	500MHz
Allocation:	acc. TIA/EIA 568B
Conductor Material:	Copper
Connector type:	TM21, IEC 60603-7-51
Contacts:	Gold plated
Locking lever:	yes
Cable structure:	S/FTP
Raw cable:	Cat.7
Flame-retardant:	acc. IEC60332-1
Halogen free:	acc. IEC60754-2
Low smoke:	acc. IEC61034
Jacket material:	PUR
Cable construction:	4x2x27/7
Outer diameter of the cable:	5.9 mm

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 -1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 m

Art.-No.	Colour outer sheath	Version
K8048PUIx	red	IP20
K8670.x	red	IP67 + IP20

High flexible TPE -Jacket
UV retardant
Extended Temperature Range

Cat.6A 10Gbit 500MHz CU 100% TPE

RJ45 Patch cable S/FTP, Cat.6A, TPE

The shielded Cat.6A RJ45 patch cable provides excellent performance for **10 Gigabit** Ethernet applications. The **TPE** outer sheath makes the cable **highly flexible** and therefore easier to handle. In addition, the patch cable is suitable for temperature ranges from **-40°C to +80°C**. The cast grommet captivates with its **slim design** and thus simplifies the plugging process in confined spaces.

Category:.....6A (TIA)
Bandwidth:.....500MHz
Allocation:.....acc. TIA/EIA 568B
Conductor Material:.....Copper
Connector type:.....RJ45 Standard, IEC 60603-7-51
Contacts:.....50 µ" gold plated
Locking lever:.....yes
Cable structure:.....S/FTP
Flame-retardant:.....yes
Halogen free:.....yes
Low smoke:.....yes
Jacket material:.....TPE/LSZH
Cable construction:.....4x2x26/7
Outer diameter of the cable:.....6.2 mm
Anti-kink sleeve:.....moulded

Stock Lengths: 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Colour outer sheath
K5538SW.x	black

Traceable though serial number
UL approved
Assured quality through 100% inspection and enclosed measurement report
Slim grommet for easy connection

Cat.6A 10Gbit 500MHz CU 100% UL

RJ45 Patchkabel S/FTP, Cat.6A, PVC, UL

The **UL approved** and shielded Cat.6A RJ45 patch cable ensures very good characteristics for **10 Gigabit** Ethernet applications. The patch cable is **100% tested**. Traceability is guaranteed by the enclosed **measurement protocol** and the **serial number** on the patch cable. The cast grommet impresses with its **slim design** and simplifies the plugging process in confined spaces.

Category:.....6A (TIA)
Bandwidth:.....500MHz
Allocation:.....acc. TIA/EIA 568B
Conductor Material:.....Copper
Connector type:.....RJ45 Standard, IEC 60603-7-51
Contacts:.....50 µ" gold plated
Locking lever:.....yes
Cable structure:.....S/FTP
Jacket material:.....PVC
Cable construction:.....4x2x26/7
Outer diameter of the cable:.....6.5 mm
Anti-kink sleeve:.....moulded

Stock Lengths: 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Colour outer sheath
K5535GR.x	grey

UL approved
Longlink up to 90 m
Small gromet for easy connection

RJ45 Patch cable S/FTP, Cat.6A, PVC, UL, Longlink

The **UL approved** and shielded Cat.6A RJ45 patch cable ensures very good characteristics for **10 Gigabit** Ethernet applications and is specially designed for **Longlink** applications up to **90m**. Due to the stranded construction, the cable offers several advantages compared to installation cables with field-attachable RJ45 connectors:
The patch cable is **more flexible**, has a **smaller bending radius** and is already **pre-assembled**. The cast grommet impresses with its **slim design** and thus simplifies the plugging process in confined spaces.

Cat.6A (TIA) patch cable lengths: Up to **90 m**
Class EA (ISO) Patch cable lengths: Up to **80 m**
Delivery: Ring or coil

Category:	6A (TIA)
Transmission:	2.5Gbit
Bandwidth:	500MHz
Allocation:	acc. TIA/EIA 568B
Conductor Material:	Copper
Connector type:	RJ45 Standard, IEC 60603-7-51
Contacts:	50 µ" gold plated
Locking lever:	yes
Cable structure:	S/FTP
Jacket material:	PVC
Cable construction:	4x2x24/7
Outer diameter of the cable:	6.8 mm
Anti-kink sleeve:	moulded

Stock Lengths: 20 - 30 - 40 - 50 - 60 - 70 - 80 - 90 m

Art.-No.	Colour outer sheath
K5537GR.x	grey

UL approved
Short plug for cramped spaces
Slim grommet for easy connection

RJ45 Patch cable S/FTP, Cat.6, PVC, short boot, UL

The **UL approved** and shielded Cat.6 RJ45 patch cable ensures very good characteristics for 5 Gigabit Ethernet and **VOIP** applications. The connector is **extremely short** with its **27.3mm** including bend protection. The cast grommet impresses with its **slim design** and simplifies the plugging process in confined spaces.

Category:	6
Transmission:	2.5Gbit
Bandwidth:	250MHz
Allocation:	acc. TIA/EIA 568B
Conductor Material:	Copper
Connector type:	RJ45 Standard, IEC 60603-7-5
Contacts:	50 µ" gold plated
Locking lever:	yes
Cable structure:	S/FTP
Jacket material:	PVC
Cable construction:	4x2x26/7
Outer diameter of the cable:	6.5 mm
Anti-kink sleeve:	moulded

Stock Lengths: 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 6.0 - 10 - 15 - 20 m

Art.-No.	Colour outer sheath
K2460.x	black

High flexible PUR Jacket
Suitable for drag chain
Oil retardant
European Production

RJ45 Patch cable S/UTP, Cat.5e, PUR Superflex drag chain suitable

The Cat.5e RJ45 patch cable **manufactured in Europe** guarantees very good characteristics for 2.5 Gigabit Ethernet applications. The patch cable is composed of the raw cable **MegaLine superflex** from Leoni-Kerpen and **TM21** connectors from Hirose. Due to the strand construction **AWG26/19** and the **very flexible PUR sheath** the cable is **suitable for applications in drag chains**.

Very flexible **PUR** sheath superflex (RAL1021)
Alternating bending test (with load): according to VDE0472 part 603
Suitable for drag chains, typical 5 million cycles
Oil resistance according to EN60811-2-1
Ozone resistance according to EN60811

Category: 5e
Transmission: 2.5Gbit
Bandwidth: 100MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... TM21, IEC 60603-7-3
Contacts: ..... Gold plated
Locking lever: ..... yes
Cable structure: ..... S/UTP
Flame-retardant: ..... acc. IEC60332-1
Halogen free: ..... yes
Low smoke: ..... yes
Jacket material: ..... PUR
Cable construction: 4x2x26/19
Outer diameter of the cable: ..... 6.9 mm

Stock Lengths: 0.15 - 0.25 - 0.5 - 1.0 -1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 - 40 - 50 m

Art.-No.	Colour outer sheath
K8032.1	yellow

Ethercat
Slim grommet for easy connection
High flexbile PUR Jacket
Extended Temperature Range

RJ45 Patch cable SF/UTP, Cat.5e, PUR, RAL6018

The **double shielded** Cat.5e RJ45 patch cable provides excellent performance for 2.5 Gigabit Ethernet and **EtherCat** applications. It is also suitable for temperature ranges from **-40°C to +80°C**. The cast grommet captivates with its **slim design** and simplifies the plugging process in confined spaces.

High flexible **PUR** jacket superflex **(RAL6018)**

Category: 5E
Transmission: 2.5Gbit
Bandwidth: 100MHz
Allocation: ..... acc. TIA/EIA 568B
Conductor Material: ..... Copper
Connector type: ..... RJ45 Standard, IEC 60603-7-3
Contacts: ..... 50 µ" gold plated
Locking lever: ..... yes
Cable structure: ..... SF / UTP
Jacket material: ..... PUR
Cable construction: 4x2x26/7
Outer diameter of the cable: ..... 6.2 mm
Anti-kink sleeve: ..... moulded

Stock Lengths: 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10 - 15 - 20 - 25 - 30 m

Art.-No.	Colour outer sheath
K5530.x	green

PATCHPANEL & DATA OUTLETS

Complex cable structures in buildings can be structured using patch panels. It is good if various height units and port numbers are available for the 10 "and 19" patch fields - as with EFB-Elektronik. To get from the distribution cabinet to the user, the installation cables are simply connected in data boxes at the end of the user. The double data sockets are available in classifications up to Cat.6A.

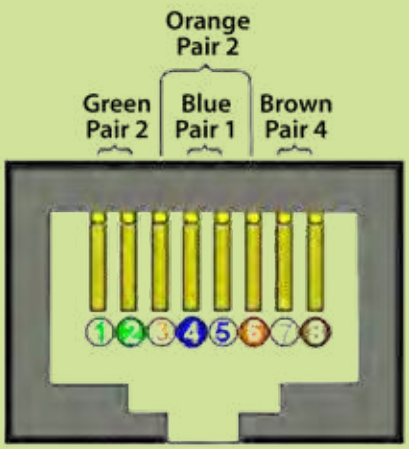
Patchpanel		**P. 134**
Data outlets		**P. 137**

YOU MAY ALSO BE INTERESTED IN:

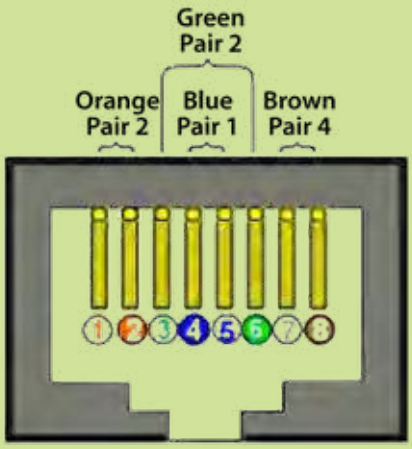
Installation Cable	P. 140
Patch Cable	P. 114
19" Network Cabinets	P. 172
Tools & Measurement Equipment	P. 148

RJ 45 according to IEC 60603-7-x

Pinning at RJ 45 jack according to TIA/EIA 568



TIA568A

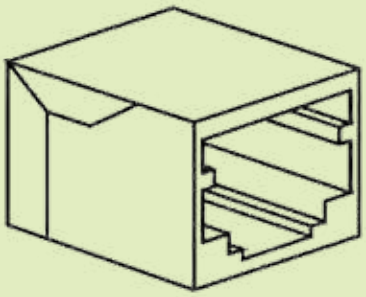


TIA568B

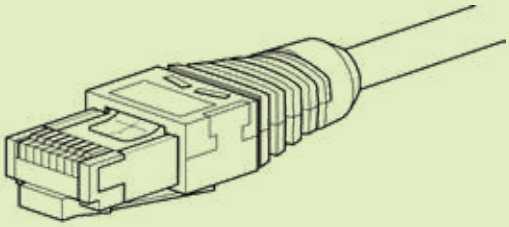
Pinning at LSA Connection according to TIA/EIA 568

TIA568A (left colour bar)

TIA568A (rigth colour bar)



Jack (fixed Connector)



Plug (free connector)

IEC 60603-7-1	General Information		
	Frequency	Category	Shielding
IEC 60603-7-2	100 MHz	Cat.5	unschielded
IEC 60603-7-3	100 MHz	Cat.5	shielded
IEC 60603-7-4	250 MHz	Cat.6	unshielded
IEC 60603-7-41	500 MHz	$Cat.6_A$	unshielded
IEC60603-7-5	250 MHz	Cat.6	shielded
IEC60603-7-51	500 MHz	$Cat.6_A$	shielded
IEC60603-7-7	600 MHz	Cat.7	shielded
IEC60603-7-71	1000 MHz	$Cat.7_A$	shielded

Also available as black CAT.6A and CAT.6 panel

Patchpanel STP 24xRJ45, 19“ 1U

General specifications
Shielded Version
Mounting method: 19“
Cross section: AWG24..AWG22
Connection type: LSA terminal
Colour code: according to TIA/EIA 568A/B
Contacts: gold plated
Ground terminal
Number of height units: 1
Cover: with clip closure

Dimension:..... 44.0 x 483.0 x 108.0 mm
Temperature Range (Storage):..... -40 – 85 °C
Temperature Range (Operation):..... 0 – 70 °C

Art.-No.	Category	Transmission	Bandwidth	Number of Jacks	Colour
37666.1M TOPSELLER	6A (TIA)	10 Gbit	500 MHz	24	grey
37666SW.1M	6A (TIA)	10 Gbit	500 MHz	24	black
37667.1M	6	5 Gbit	250 MHz	24	grey
37667SW.1M	6	5 Gbit	250 MHz	24	black
37668.1M	5E	2,5 Gbit	100 MHz	24	grey

Patchpanel STP 24xRJ45 Cat.6A/Class EA, 19“ 1U

General specifications
Shielded Version
Mounting method: 19“
Cross section: AWG24..AWG22
Connection type: LSA terminal
Colour code: according to TIA/EIA 568A/B
Contacts: gold plated
Ground terminal
Number of height units: 1
Cover: with screw closure
With captive dust protection

Dimension:..... 44.5 x 482.6 x 109.0 mm
Temperature Range (Storage):..... -40 – 70 °C
Temperature Range (Operation):..... -10 – 60 °C

Art.-No.	Category	Transmission	Bandwidth	Number of Jacks	Colour
37656.1	6A (TIA)	10 Gbit	500 MHz	24	black

Also available as grey panel

Mini-Patchpanel STP, 10“ 1U

General specifications
Shielded Version
Mounting method: 10“ / Wall / DIN rail
Cross section: AWG24..AWG22
Connection type: LSA terminal
Colour code: according to TIA/EIA 568A/B
Contacts: gold plated
Ground terminal
Number of height units: 1
Cover: with quick release

Mounting options: pre-assembled angles
for mounting in 10“ profile rails,
Wall mounting, DIN rail mounting
Optional with DIN Rail Set (H83030.1)

Dimension:..... 44.0 x 254.6 x 108.0 mm
Temperature Range (Storage):..... -40 – 70 °C
Temperature Range (Operation):..... -10 – 60 °C

Art.-No.	Category	Transmission	Bandwidth	Number of Jacks	Colour
37737.8	6A (TIA)	10 Gbit	500 MHz	8	grey
37737SW.8	6A (TIA)	10 Gbit	500 MHz	8	black
37737.12	6A (TIA)	10 Gbit	500 MHz	12	grey
37737SW.12	6A (TIA)	10 Gbit	500 MHz	12	black
37736.8	6	5 Gbit	250 MHz	8	grey
37736SW.8	6	5 Gbit	250 MHz	8	black
37736.12	6	5 Gbit	250 MHz	12	grey
37736SW.12	6	5 Gbit	250 MHz	12	black
37735.8	5E	2.5 Gbit	100 MHz	8	grey
37735SW.8	5E	2.5 Gbit	100 MHz	8	black
37735.12	5E	2.5 Gbit	100 MHz	12	grey
37735SW.12	5E	2.5 Gbit	100 MHz	12	black

Mini-Patchpanel STP Cat.6A, 10“ 0,5U

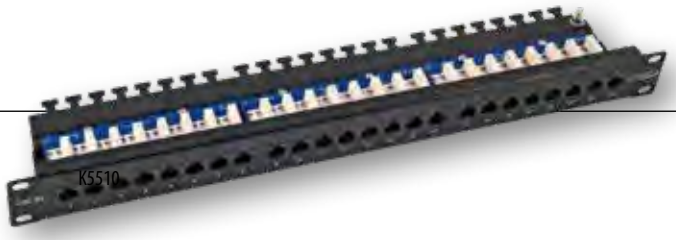
General specifications
Shielded Version
Mounting method: 10“/wall-/DIN rail mounting
Cross section: AWG24..AWG22
Connection type: LSA terminal
Colour code: according to TIA/EIA 568A/B
Contacts: gold plated
Ground terminal
Number of height units: 0.5
Cover: with quick release

Also available as grey panel

Mounting options: pre-assembled angles
for mounting in 10“ profile rails,
Wall mounting, DIN rail mounting
Optional with DIN Rail Set (H83030.1)

Dimension:..... 22.0 x 254.6 x 108.0 mm
Temperature Range (Storage):..... -40 – 70 °C
Temperature Range (Operation):... -10 – 60 °C

Art.-No.	Category	Transmission	Bandwidth	Number of Jacks	Colour
37738.8	6A (TIA)	10 Gbit	500 MHz	8	grey
37738SW.8	6A (TIA)	10 Gbit	500 MHz	8	black
37738.12	6A (TIA)	10 Gbit	500 MHz	12	grey
37738SW.12	6A (TIA)	10 Gbit	500 MHz	12	black



ECOLAN® Patchpanel UTP 24xRJ45, 19“ 1U

General specifications
Unshielded Version
Mounting method: 19“
Cross section: AWG24..AWG22
Connection type: LSA terminal
Colour code: according to TIA/EIA 568A/B
Contacts: gold plated
Number of height units: 1

Dimension:..... 44.0 x 482.6 x 109.0 mm
Temperature Range (Storage):..... -40 – 80 °C
Temperature Range (Operation):..... -10 – 60 °C

Art.-No.	Category	Transmission	Bandwidth	Number of Jacks	Colour
11324126	6	5 Gbit	250 MHz	24	black
11324123	5E	2,5 Gbit	100 MHz	24	black

Patchpanel UTP 24xRJ45, 19“ 1U, 180°

General specifications
Unshielded Version
Mounting method: 19“
Cross section: AWG24..AWG22
Connection type: LSA terminal
Colour code: according to TIA/EIA 568A/B
Contacts: gold plated
Number of height units: 1
Compact design

Dimension:..... 43.5 x 482.6 x 28.5 mm
Temperature Range (Storage):..... -40 – 80 °C
Temperature Range (Operation):..... -10 – 60 °C

Art.-No.	Category	Transmission	Bandwidth	Number of Jacks	Colour
37585.1	6	5 Gbit	250 MHz	24	black
37584.1	5E	2,5 Gbit	100 MHz	24	black

Patchpanel UTP 24xRJ45 Cat.6, 19“ 1U

General specifications
Unshielded Version
Mounting method: 19“
Cross section: AWG24..AWG22
Connection type: LSA terminal
Colour code: according to TIA/EIA 568A/B
Contacts: gold plated
Number of height units: 1

Dimension:..... 44.2 x 482.6 x 112.0 mm
Temperature Range (Storage):..... -40 – 80 °C
Temperature Range (Operation):..... -10 – 60 °C

Art.-No.	Category	Transmission	Bandwidth	Number of Jacks	Colour
37583SW.1	6	5 Gbit	250 MHz	24	black

ET-25133AV5-R

Data outlets

Data outlets with 2 x RJ45 Ports
40° outlet, 8-pole IDC terminals
Fully shielded diecast housing
Labelling field with transparent cover
For installation in ducts and underfloor systems (ET-25133AV5-R -Surface)
Central plate according to DIN49075
Central plate 50 x 50 mm, including cover plate 80 x 80 mm
Design capable, compatible with all common switch programmes
RAL 9010

Art.-No.	Category	Transmission	Bandwidth	In Wall	Surface mounted	Feed in installation Cable
ET-25130.1V1	6A (TIA)	10 Gbit	500 MHz	yes	no	left/right
ET-25133.1V1	6A (TIA)	10 Gbit	500 MHz	yes	no	up/down
ET-25133AV5-R	6A (TIA)	10 Gbit	500 MHz	yes	yes	up/down
ET-25211.1V1	6	5 Gbit	250 MHz	yes	no	up/down
ET-25211.2V1	6	5 Gbit	500 MHz	yes	no	left/right

Surface frame RAL9010

Surface frame 80 x 80 x 40 mm
Without cover
Type of plastic: ABS
RAL9010
For data outlets and keystones frame sets

Scope of delivery:
1x Surface frame, 2x Screws: 3 x 10mm

Art.-No.	Colour
ET-25084V3	white

Home /- Office Cat.6 installation Set 1

Fast, easy and optimal match to each other
Cat.6 Installation Sets
Strucured cabling is the base for future oriented, financial and application-neutral building networking. Our installation sets consist of all essential components you need for the start of your home/office network. The components are optimal matched to each other and are Cat.6 components up to 250 MHz. Also included in the Installationssets are a LSA+ insertion tool and a cable cutter.

Scope of delivery:
1x 99980.x-CPR Cat.7 Installation Cable
4x K5518.3 Cat.6 Patch Cable 3 m, white
1x 37736SW.8 Cat.6 8-Port Patchpanel, black
2x ET-25211.2V1 Cat.6 Flush-Mount Outlet, white
1x 39912.1 Cable Cutter, 1x 39933.1 LSA+ Insertion Tool

Art.-No.	Description	Category	Flush mounted (plaster)	Surface mounted
N10001.V1-25	Home /- Office Cat.6 - 25 m Installation Set 1	6	Yes	No
N10001.V1-50	Home /- Office Cat.6 - 50 m Installation Set 1	6	Yes	No

Home /- Office Cat.6 installation Set 2

Fast, easy and optimal match to each other
Cat.6 Installation Sets
Strucured cabling is the base for future oriented, financial and application-neutral building networking. Our installation sets consist of all essential components you need for the start of your home/office network. The components are optimal matched to each other and are Cat.6 components up to 250 MHz. Also included in the Installationssets are a LSA+ insertion tool and a cable cutter.

Scope of delivery:
1x 99980.x-CPR Cat.7 Installation Cable
8x K5518.3 Cat.6 Patch Cable 3 m, white
1x 37736SW.8 Cat.6 8-Port Patchpanel, black
4x ET-25211.2V1 Cat.6 Flush-Mount Outlet, white
1x 39912.1 Cable Cutter, 1x 39933.1 LSA+ Insertion Tool

Art.-No.	Description	Category	Flush mounted (plaster)	Surface mounted
N10002.V1-50	Home - Office Cat.6 - 50 m Installation Set 2	6	Yes	No
N10002.V1-100	Home/- Office Cat.6 - 100 m Installation Set 2	6	Yes	No

INSTALLATION- & FLEX-CABLE

For copper-based transmission links indoors and outdoors, EFB-Elektronik provides installation cables with a wide variety of sheath materials from 100 to 1,000m in length. Applications up to 40 Gbit Ethernet according to Cat.8 CLASS IS / FTP (up to 2000 MHz) are possible. Other lengths can be manufactured on customer request - patch cables for custom assembly are available by the meter.

Installation cable		**P. 140**
Flex-/patch cable		**P. 143**

YOU MAY ALSO BE INTERESTED IN:

Patchpanel	P. 134
Keystones	P. 101
Cable management (C-Profiles)	P. 229
Video Extender	P. 264
Data Outlets	P. 137

Construction Products-Regulation

For our customers, we ensure that the cables offered meet the requirements of the construction products-regulation. The implementation of the standard has been completed. The manufacturer of the respective installation cables is responsible for the classification. For the EFB own brands INFRALAN® and ECOLAN® the Euro brand classes can be seen in the product tables. In addition, the declarations of performance of the own brands are also available on the EFB website. It goes without saying that labelling and other delivery details are implemented in conformity with the EU regulation.

Summary Euro Classes

Reaction to fire classes Flame propagation, heat development	Additional classes			Security requirements in a building
	Smoke production/ density	Acidity development/ corrosivity	Flaming droplets/ particles	
A_{ca}				very high
$B1_{ca}$				very high
$B2_{ca}$	s1	a1	d1	very high
C_{ca}	s1	a1	d1	high
D_{ca}	s2	a1	d2	medium
E_{ca}				low
F_{ca}				none

Source: ZVEI – Low fire-hazard cables improve safety (12.10.2016)

Further information in accordance to CPR you will find on our Homepage www.efb-elektronik.de/en

Installation and stranded cables are the key element of a copper-based transmission link. EFB-Elektronik has a wide range of installation cables for indoor and outdoor use as well as for various applications up to 40 Gigabit Ethernet pursuant to Cat.8 CLASS I S/FTP (up to 2000 MHz). The delivery takes place in batch sizes from 100 to 1,000 meters, as well as lengths according to customer request. The jacket material is available in PVC, LSZH and in industrial PUR versions. In addition to installation cables, EFB-Elektronik also offers patch cables for own assembling as bulk goods.

For more information visit our Online Shop

Cat.8.2 Installation Cable

Art.-No.	Type	Jacket/Colour	AWG/Conductor	Ø in mm	Euro Class	Diameter Conductor	Construction	Max. Frequency	Length	Brand
99827.x	simplex	FRNC-C/ yellow	22/1/ Cu, tinned	8.5	Dca	0.64 mm	S/FTP	2000 MHz	1000 m	Draka Comteq

Cat.7A Installation Cable

Art.-No.	Type	Jacket/Colour	AWG/Conductor	Ø in mm	Euro Class	Diameter Conductor	Construction	Max. Frequency	Length	Brand
99983.x-CPR	simplex	FRNC/ rape yellow	22/1/ Cu, tinned	8.6	Cca	0.64 mm	S/FTP	1500 MHz	500 m	INFRALAN
MK7100.x-CPR	simplex	FRNC/ orange	22/1/ Cu, tinned	8.4	B2ca	0.62 mm	S/FTP	1200 MHz	1000 m	INFRALAN
99985.x-CPR	simplex	FRNC/ rape yellow	23/1/ Cu, tinned	7.7	Cca	0.56 mm	S/FTP	1200 MHz	500 - 1000 m	INFRALAN
99985DX.x-CPR	duplex	FRNC/ rape yellow	23/1/ Cu, tinned	7.7 x 16.1	Cca	0.56 mm	S/FTP	1200 MHz	500 m	INFRALAN

Cat.7 Installation Cable

Art.-No.	Type	Jacket/Colour	AWG/Conductor	Ø in mm	Euro Class	Diamter Conductor	Construction	Max. Frequency	Length	Brand
99981.x-CPR	simplex	FRNC/ orange	23/1/ Cu, blank	7.5	Cca	0.56 mm	S/FTP	1000 MHz	100 - 200 - 500 - 1000 m	INFRALAN
99981DX.x-CPR	duplex	FRNC/ orange	23/1/ Cu, blank	7.5 x 15.8	Cca	0.56 mm	S/FTP	1000 MHz	100 - 500 m	INFRALAN
99980.x-CPR	simplex	FRNC/ orange	23/1/ Cu, blank	7.3	Eca	0.56 mm	S/FTP	1000 MHz	100 - 250 - 500 - 1000 m	INFRALAN
99980DX.x-CPR	duplex	FRNC/ orange	23/1/ Cu, blank	7.2 x 15.0	Eca	0.56 mm	S/FTP	1000 MHz	100 - 250 - 500 m	INFRALAN
99731.x①	simplex	PE/ black	23/1/ Cu, blank	8.4	-	0.56 mm	S/FTP	900 MHz	100 - 500 m	Draka Comteq
99739.x② NEW	simplex	PE/ black	23/1/ Cu, blank	13.5	-	0.56 mm	S/FTP	900 MHz	1000 m	Draka Comteq
99732.x③	simplex	LSZH/ black	23/1/ Cu, blank	9.5	Eca	0,56 mm	S/FTP	900 MHz	100 - 500 m	Draka Comteq

① Outdoor cable ② Steel wire braid as rodent protection ③ Cable for indoor and outdoor use

Cat.6A Installation Cable

Art.-No.	Type	Jacket/Colour	AWG/Conductor	Ø in mm	Euro Class	Diameter Conductor	Construction	Max. Frequency	Length	Brand
99978.x-CPR	simplex	LSZH/ white	23/1/ Cu, blank	7.2	Dca	0.55 mm	U/FTP	500 MHz	305 - 500 m	INFRALAN

Cat.6 Installation Cable

Art.-No.	Type	Jacket/Colour	AWG/Conductor	Ø in mm	Euro Class	Diameter Conductor	Construction	Max. Frequency	Length	Brand
99962.x-CPR	simplex	LSZH/ white	23/1/ Cu, blank	6.0	Dca	0.54 mm	U/UTP	500 MHz	305 - 500 m	EFB ELEKTRONIK
99961.305-CPR	simplex	LSZH/ white	25/1/ Cu, blank	6.0	Dca	0.44 mm	U/UTP	500 MHz	305 m	EFB ELEKTRONIK

Cat.5e Installation Cable

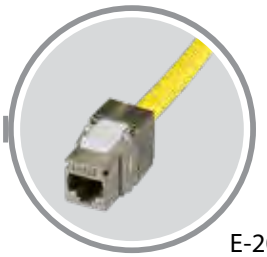
Art.-No.	Type	Jacket/Colour	AWG/Conductor	Ø in mm	Euro Class	Diameter Conductor	Construction	Max. Frequency	Length	Brand
11930515-CPR	simplex	PVC/ grey	24/1/ Cu, blank	5.0	Eca	0.49 mm	U/UTP	100 MHz	305 m	ECOLAN

Summary of our certified products

99985.x-CPR

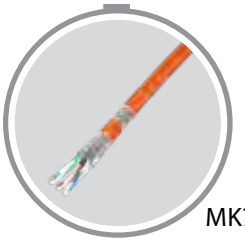
99981.x-CPR

FORCE TECHNOLOGY



E-20092

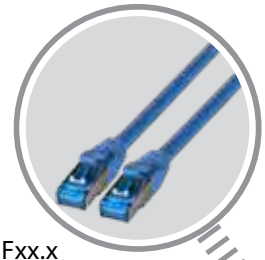
GHMT PREMIUM GHMT Verification Program



MK7100.x-CPR

GHMT PVP:
- Consistently high quality through constant monitoring
- Samples are taken from the market by GHMT
- Listing of products with status on the GHMT website

- Tests are executed as component tests or link tests
- Samples are sent in by the manufacturer
- Certificates have a validity of 2 years



K5525Fxx.x

E-20070

ETL VERIFIED

TYPE APPROVAL GHMT TYPE APPROVAL

E-200100

E-20091

99980.x-CPR

Cat.6A/ CLASS EA Installation Link S/FTP PIMF Cat.7 Installation Cable + Cat.6A RJ45 Keystones

Robust special rubber cable drum, complete with Cat.7 S/FTP installation cable, integrated outlet Cat.6A 1 x RJ45 with dust cap and 1 x Cat.6A RJ45. Very well suited to mobile use, for exhibitions, presentations, outside broadcasting vans, measuring sections etc. A standardised installation section in accordance with structured cabling Cat.6A / Class EA.

Art.-No.	Description	Colour outer sheath
K9201.50	Cat.6A/classEA Installation link, S/FTP, 50m on drum	orange
K9201.90	Cat.6A/classEA Installation link, S/FTP, 90m on drum	orange

Cat.5e/ CLASS D Installation Link F/UTP PIMF Cat.5e Installation Cable+ Cat.5e RJ45 Keystones

Robust special rubber cable drum, complete with F/UTP Cat.5e installation cable, integrated outlet 1 x RJ45 with dust cap and 1 x RJ45 modular jack. Very well suited to mobile use, for exhibitions, presentations, outside broadcasting vans, measuring sections etc. A standardised installation section in accordance with structured cabling Cat.5e.

Art.-No.	Description	Colour outer sheath
K9200.50	Cat.5e Installation link F/UTP, 50m on drum	grey
K9200.90	Cat.5e Installation link F/UTP, 90m on drum	grey

X X/X X X Cable-Type Codes according to ISO/IEC11801 (2002)

- **symmetric pair/quad** → TP (Twisted Pair)
- **shielding over twisted pair element** → U = unshielded; F = foil shielded
- **overal screen of the cable** → F = foil shielding; S = braid shielding; SF = foil- and braid shielding; U = unshielded

Beispiel:

SF/UTP = Double shielded cable, overall shield of foil/braid with unshielded pairs

S/FTP = Braid as overall shield, pairs foil shielded

Cable type S/FTP

- Pair shielding with aluminium foil
- Copper braid as overall shield
- Area of application up to > 1000MHz
- Very good EMC-characteristics

Cable type SF/UTP

- Aluminium foil and copper braid as overall shielding
- Unshielded pairs
- Area of application up to > 500MHz
- Good EMC-characteristics

Cable type F/UTP

- Aluminium foil als overall shielding
- Unshielded pairs
- Area of application up to > 100MHz
- Sufficient EMC-characteristics

Cable type U/UTP

- No overall shielding
- Unshielded pairs
- Recommended for closed, metallic installation systems
- No EMC-characteristics

Characteristics of patch cable

Type Designation	Art.-No.	Category	Jacket	AWG/Conductor	Ø in mm	Euro Class	Construction	Max. Frequency
Kerpen MegaLine F10-120 S/F flex	99726.x	7A	FRNC-B	26/7/ Cu, tinned	6.0	-	S/FTP	1200 MHz
Draka UC900 SS27 Cat.7	9970x.x	7	FRNC-B	27/7/ Cu, tinned	5.9	Eca	S/FTP	1000 MHz
Draka UC900 SS27 Cat.7 PUR ①	99710.x	7	PUR (Polyurethan)	27/7/ Cu, tinned	5.9	-	S/FTP	1000 MHz
EFB MK7104	MK7104.100x	7	FRNC-B	26/7/ Cu, tinned	6.5	-	S/FTP	600 MHz
Dätwyler CU 5502 flex	9870x.x	5e	PVC	26/7/ Cu, tinned	5.1	-	S/UTP	300 MHz
Kerpen MegaLine D1-20 S/U PUR superflex ②	99526MC.x	5e	PUR (Polyurethan)	26/19/ Cu, tinned	6.8	-	S/UTP	200 MHz
Kerpen MegaLine D1-20 SF/U flex	99525.x	5e	PVC	26/7/ Cu, tinned	5.3	-	SF/UTP	200 MHz
Kerpen MegaLine D1-20 SF/U flex	99526.x	5e	FRNC	26/7/ Cu, tinned	5.3	-	SF/UTP	200 MHz
EFB 99956	99956.x	5e	PVC	26/7/ Cu, tinned	6.2	-	SF/UTP	350 MHz
Draka UC300 HS26	9925x.x	5e	FRNC-B	26/7/ Cu, tinned	5.7	-	SF/UTP	300 MHz
Draka UC300 S26	9915x.x	5e	FRNC-B	26/7/ Cu, tinned	5.0	-	F/UTP	300 MHz

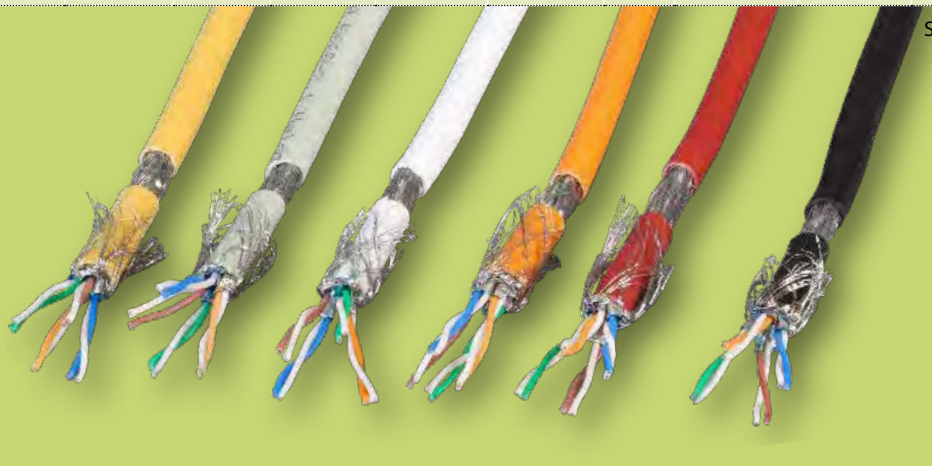
① Resistant to mineral oil, ASTM oil and UV radiation, highly abrasion resistant
② Suitable for drag chain

Stock Lengths: 100 - 1000 m

Colour table of patch cable

	Dätwyler CU 5502 flex	Draka UC300 HS26	Draka UC300 S26	Draka UC900 SS27	Draka UC900 SS27 Cat.7 PUR	EFB MK7104	EFB 99956	Kerpen MegaLine D1-20 S/U PUR superflex	Kerpen MegaLine F10-120 S/F flex	Kerpen MegaLine D1-20 SF/U flex PVC	Kerpen MegaLine D1-20 SF/U flex LSZH
red	98703.x	99256.x	99156.x	99703.x	99710.x	MK7104.100R					
blue	98704.x	99254.x	99154.x	99704.x		MK7104.100BL					
yellow	98702.x	99255.x	99155.x	99702.x		MK7104.100Y		99526MC.x			
grey	98701.x	99258.x	99158.x	99701.x		MK7104.100G	99956.x		99726.x	99525.x	99526.x
green	98706.x	99253.x	99153.x	99706.x		MK7104.100GR					
white				99708.x		MK7104.100W					
brown						MK7104.100BR					
orange				99707.x		MK7104.100O					
magenta				99709.x		MK7104.100P					
black	98705.x		99157.x	99705.x		MK7104.100B					
violet						MK7104.100V					

Stock Lengths: 100 - 1000 m



RJ45 CONNECTORS & ACCESSORIES

Whether shielded or unshielded, with classic crimping technology or for tool-free assembly in the field: EFB-Elektronik offers an extensive range of RJ45 connectors. All are internationally standardized according to IEC60603-7-x and thus categorized according to the well-known seals of approval. They are suitable for a wide variety of applications.

Field Installable Connector		**P. 145**
Connector Sets		**P. 146**

YOU MAY ALSO BE INTERESTED IN:

Installation Cable	P. 140
Flex-/ Patch Cable	P. 143
Keystones	P. 101
Tools	P. 148
Data Outlets	P. 137

Field installable connector RJ45 Cat.8 Class 1

The RJ45 plug provides a combination of excellent transmission quality and fast and easy tool-free assembly. Fully shielded zinc diecast housing ensures the best EMC features especially in industrial environments. IDC terminals and very low contact resistances assure high quality contacting for installation cables up to 9mm diameter and wire gauge from AWG22 - AWG27.

Shielded zinc diecast body with separate dust cap and anti-kink sleeve
Compact cable manager for AWG 22/1 .. AWG 26/1 or AWG22/7 .. AWG27/7
Pair management according to TIA 568A /B colour codes and industrial Profinet 1-2-3-6
Re-termination capability up to 5 times with the same width, for AWG27/7 up to 2 times
Suitable for cable dia from 6.0mm .. 9.0 mm
Strain relief with cable gland
Tension relief with cable gland and sliding lever

Art.-No.	Colour	Category	Screened
88035.2	metal	Cat.8 Class 1	Yes

Accessory

Art.-No.	Description
E-20092	RJ45 Keystone STP, Cat.8 Class 1, 2000MHz
99827.1	UC FUTURE C22 Cat.8.2 S/FTP 4P 2GHz, LSHF-FR

88035UTP.1

RJ45 Premium plug STP, Cat.6A/ClassEA, Field-plug

The Cat. 6A Premium RJ45 is a highlight in the chain of further development of RJ45 connectors for field assembly. An extraordinarily robust full metal housing made of zinc die-casting paired with the unique variable cable feed opens up a wide range of application possibilities. Installation can be done in **9 different positions**: 8 different angled positions and a 180° straight cable entry. The conical metal cable gland allows cable diameters from 6.0mm to 9.0mm. The connector meets the requirements of transmission class Cat. 6A/ Class EA and supports the Ethernet protocol up to **10 Gigabit** per second.

9 Positions for cable entry

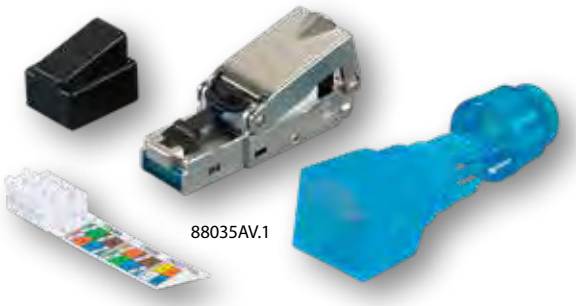
Art.-No.	Colour	Category	Screened
88035P8.1	metal	6A (IEC)	Yes

88035.1

RJ45 Connector, Field-Plug

The RJ45 plug provides a combination of excellent transmission quality and fast and easy tool-free assembly. IDC terminals and very low contact resistances assure high quality contacting for installation cables up to 9 mm diameter and wire gauge from AWG22 - AWG27.

Compact cable manager for AWG 22/1 .. AWG 26/1 or AWG22/7 .. AWG27/7
Pair management according to TIA 568A /B colour codes and industrial Profinet 1-2-3-6
Re-termination capability up to 5 times with the same width, for AWG27/7 up to 2 times
Suitable for cable dia from 6.0 mm .. 9.0 mm


88035AV.1

Art.-No.	Colour	Category	Screened	Housing Material	Strain Relief
88035AV.1	aqua	6A (TIA)	Yes	Zinc diecast	Cable gland
88035.1 TOPSELLER	black	6	Yes	Zinc diecast	Cable Tie
88035UTP.1	black	6	No	Polycarbonat	Cable Tie

Characteristics Hirose Connector:

Shielded version
Core insulation about 0.9 - 1.0 mm
The set consists of RJ plug,
anti-kink sleeve and guide plate
Suitable crimping tool
DCW1002 + DCW1002.1 or 39934.2

RJ45 Hirose Connector Set TM31 Cat.6A

HIROSE ELECTRIC GMBH

Art.-No.	Colour	AWG-range for litz wire conductor	Category	Cable Diameter Max.
H7642.1-1	beige	24 – 27	6A (TIA)	6.6 mm
H7642.4-1	black			
H7642.5-1	yellow			
H7642.6-1	red			
H7642.7-1	blue			
H7642.8-1	green			
H7642.10-1	orange			
H7642.12-1	grey			

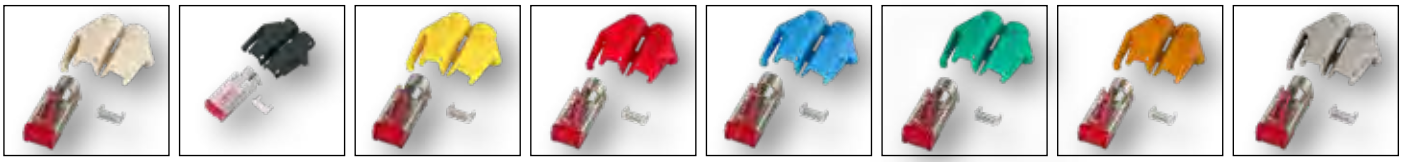
Order unit: -50 PU 50 pieces, -100 PU 100 pieces

RJ45 Hirose Connector Set TM21 Cat.6

HIROSE ELECTRIC GMBH

Art.-No.	Colour	AWG-range for litz wire conductor	Category	Cable Diameter Max.
H7641.1-x	beige	24 – 27	6	6.6 mm
H7641.4-x	black			
H7641.5-x	yellow			
H7641.6-x	red			
H7641.7-x	blue			
H7641.8-x	green			
H7641.10-x	orange			
H7641.12-x	grey			

Order unit: -50 PU 50 pieces, -100 PU 100 pieces



RJ45 Hirose Connector Set TM11 Cat.5e

HIROSE ELECTRIC GMBH

Art.-No.	Color	AWG-range for litz wire conductor	Category	Cable Diameter Max.
H7540.1-x	beige	24 – 27	5E	5.8 mm
H7540.4-x	black			
H7540.5-x	yellow			
H7540.6-x	red			
H7540.7-x	blue			
H7540.8-x	green			
H7540.12-x	grey			

Order unit: -50 PU 50 pieces, -100 PU 100 pieces

Cat.6 RJ45 Plug STP

Up to 250 MHz (Cat.6)
For stranded wires (AWG 24/7, AWG 26/7, AWG 27/7)
Shielded version
Core insulation about 0.9 - 1.0 mm
Cable diameter max. 6.2 mm
Suitable crimping tool DCW1003 + DCW1003.1
Anti-kink sleeve not included

Art.-No.	Description	Colour
37640.1-100	RJ45 Connector STP, Cat.6, 100pcs	metal

Accessory

Art.-No.	Description
DCW1003	Crimping tool (frame) for die inserts DCW1003.x
DCW1003.1	Die insert for DCW1003, suit. 37640.1, 37541.3, 37519.1
E-SK312	Crimping tool for modular connector

Cat.5e RJ45 Plug STP

Up to 100 MHz (Cat.5e)
For stranded wires (AWG 24/7, AWG 26/7, AWG 27/7)
Shielded version
Core insulation about 0.9 - 1.0 mm
Cable diameter max. 6.3 mm
Suitable crimping tool DCW1003 + DCW1003.1
Anti-kink sleeve not included

Art.-No.	Description	Colour
37541.3-100	RJ45 Connector STP, Cat.5e, 100pcs	metal

Accessory

Art.-No.	Description
37546.8-100	Anti-Kink sleeve RJ45 Green, with Latch Protection, 100 Pcs.
37546.6-100	Anti-Kink sleeve RJ45 Red, with Latch Protection, 100 Pcs.
37546.4-100	Anti-Kink Sleeve RJ45 Black, with Latch Protection, 100 Pcs.
37546.1-100	Anti-Kink Sleeve RJ45 Beige, with Latch Protection, 100 Pcs.
37546.7-100	Anti-Kink sleeve RJ45 Blue, with Latch Protection, 100 Pcs.
37546.5-100	Anti-Kink Sleeve RJ45 Yellow, with Latch Protection, 100 Pcs.
E-SK312	Crimping tool for modular connector
DCW1003	Crimping tool (frame) for die inserts DCW1003.x
DCW1003.1	Die insert for DCW1003, suit. 37640.1, 37541.3, 37519.1

RJ45 Anti-Kink sleeve

Anti-Kink sleeve for 37541.3, 37514.1, 37519.1, 37539.1, 37640.1, 34600.1
Cable entry max. 6.6 mm

Art.-No.	Description	Colour
37546.1-100	Anti-Kink Sleeve RJ45 Beige, with Latch Protection, 100 Pcs.	beige
37546.4-100	Anti-Kink Sleeve RJ45 Black, with Latch Protection, 100 Pcs.	black
37546.5-100	Anti-Kink Sleeve RJ45 Yellow, with Latch Protection, 100 Pcs.	yellow
37546.6-100	Anti-Kink sleeve RJ45 Red, with Latch Protection, 100 Pcs.	red
37546.7-100	Anti-Kink sleeve RJ45 Blue, with Latch Protection, 100 Pcs.	blue
37546.8-100	Anti-Kink sleeve RJ45 Green, with Latch Protection, 100 Pcs.	green

Dust protection cap for RJ45 plug

Dust cap for RJ45 Connectors

Art.-No.	Description
88048.1-10	Dust protection cap for RJ45 Connector, black, 10 Pcs.

TOOLS & METERS

Installers need the right technology to be able to optimally install and accept a copper-based transmission link. EFB-Elektronik provides everything from special tools to measuring equipment. This way, transmission links can be safely certified according to the applicable standards.

Crimping Tools		**P. 149**
Installation Tools		**P. 150**
Measurement Equipment		**P. 151**

YOU MAY ALSO BE INTERESTED IN:

Patchpanel	P. 134
Patch Cable	P. 114
Keystones	P. 101
Installation Cable	P. 140

DCW Crimping tool without tray

High precision crimping tool
Delivery without inserts
Inserts for DCW1002: DCW1002.x
Inserts for DCW1003: DCW1003.x
High-quality aluminium case for transport and protection available as accessories

Art.-No.	Description
DCW1002	Crimping tool(frame) for die inserts DCW1002.x
DCW1003	Crimping tool (frame) for die inserts DCW1003.x

Accessory

Art.-No.	Description
DCW1002.1	Die insert Hirose TM11/21/31 for DCW1002
DCW1002.2	Die insert Stewart SS39200-12 for DCW1002
DCW1003.1	Die insert for DCW1003, suit. 37640.1, 37541.3, 37519.1
39841.1	PRIMO Hirose Crimping Tools Case, Alu

39841.1
Delivery unequipped

Crimping tool E-MUC410 for RJ Plug

For 4-, 6-, 6-DEC-, 8-, AMP, and shielded RJ45 Far East and for cutting and stripping
Ideal for local assembly
Following plugs can be crimped:
37517.1, 37516.1, 37518.1, 37512.1, 37511.1, 37513.1, 37514.1, 37542.1-100

Art.-No.	Description
E-MUC410	Crimping tool for Modular Connector 4-8 pole

Crimping tool for RJ45 Hirose TM Series

For crimping 8-pole Hirose plugs incl. strain relief in one operation
Particularly suitable for local assembly
Without Accessories

Art.-No.	Description
39934.1	Crimping tool for RJ45 Hirose connector TM11,TM21,TM31

Crimping tool E-SK310 for RJ Connectors

For crimping 4-pole, 6-pole, 8-pole, cutting and stripping
Ideal for local assembly
Following plugs can be crimped:
37516.1, 37518.1, 37519.1,
37511.1, 37513.1, 37514.1, 37541.3, 37640.1

Art.-No.	Description
E-SK310	Crimping tool for RJ connector

Crimping tool for RJ45 Stewart

For 8-pole Stewart connectors
Recommended for field preassembling
The following plugs can be crimped: 37560.T, 37515.T

Art.-No.	Description
39946.1	Crimping tool for RJ45 Stewart

LSA/IDC Insertion Tool

For applying the cable cores to LSA connection technology
For cable diameter 0.4..0.8 mm
Simultaneous wire cutting

Art.-No.		Description
39951.1	TOP SELLER	Krone LSA Insertion Tool with Sensor
39933.1		LSA Insertion Tool

Stripping Tool

Tool for stripping the jacket and additionally the metal foil shield of data cables (S/FTP, U/FTP)
Material plastic, colour blue

Art.-No.	Description
DCW1008	Stripping Tool for jacket and foil shield

Stripping Tool for PIMF Cable

For removing the outer jacket and shielding of PIMF cables
With adjustment block for fixing the correct length of wire for easy installation

Art.-No.	Description
39910.1	Stripping Tool for PIMF cable

Cable knife Ø 8 - 28 mm

For stripping of all standard round cable
Blade titan-nitride coated,
which allows an higher cutting speed, lower erosion, higher tool life
Cutting deph adjusting screw on handle end
Automatic setup to round- or longitudinal cut
Secure grip through soft components inlay on handle and frame
Titan-Nitride coated blade of high-grade wear resistant polyamide
TÜV/GS-tested
Dimension (LxWxH): 132 x 29 x 35 mm, Weight: 75 g

Art.-No.	Description
39950.3	Cable cutting tool for Ø 8 - 28mm

Cable cutter

For installation and patch cables
For cutting and stripping the individual wires

Art.-No.	Description
39912.1	Cable Cutter

Quickloader Multibit Screwdriver

Multi-bit screwdriver with multi-bit automatic magazine
Bit changing in less than 2 seconds
Including 6 bits (3 x cross-recess/ 3 x slotted)
Each 1 x P1, P2, P3 (cross-recess)
Each 1 x 1/4, 3/16, 1/8 (slotted)

Art.-No.	Description
39935.1V2	QUICKLOADER Multi-Bit screwdriver

Accessory

Art.-No.	Description
39935.3	Bitset 31-pieces, metric for Quickloader

Crimp tool for RJ Connector UTP plus Cable Tester

Testing for both UTP and STP cable
Testing cable for continuity, opens, shorts, and mis–wires
Pin–to–pin indication
Test mode selection for run once or test repeatedly
Auto Power Saving
Low power indications
Single and multi–wired cable crimping
Modular Crimping Plugs: 8P8C (RJ45), 6P6C (RJ12), 6P4C (RJ11)
Integrated cable stripped and cutter
Crimping Tool and Cable Tester in One
Cable Tester can be detachable from the Tool

Art.-No.	Description
39969.1	Tooltest HTC-0022

LAN Test Kit

Network and modular test
Line tester for structured cabling and patch cables
Advantage: Not pairs only, but any individual core can be tested for assignment
For testing 10BaseT, 10Base2 Thin Ethernet (coax), RJ45 / RJ11modular cable
TIA-568A, 568B

Art.-No.	Description
39936.1	Lan test kit, network and modular cable

Cable Tester

For structured cabling and patch cables
Save expensive troubleshooting with a LAN analyzer
Standardisation TIA/EIA 568A, TIA/EIA 568B, 365A and Token Ring

Art.-No.	Description
39938.1	Cable tester, remote adapter case

LAN Tester Network

LAN test kit, master and remote unit network and modular test
Cable tester for twisted pair cabling and patch cables
RJ11/12/45 local or remote connections can be tested
Separate LED for Pin 1 - 8 and ground
Each individual core is automatically scanned
Scan speed low/high, adjustable
Incl. black plastic case
Battery 9 V, E-block not included

Art.-No.	Description
39939.1	Lantester network & modular cable, RJ11/12/45

LAN Smart Network Tester

Handy high-tech measuring for network professionals
Technology: Time-domain reflectometer based
Cable length measurement possible without remote unit
RJ45 patch cable or raw cable measurable
Detects pinning, pair assignment, short-cuts
Port finder function:
LANSmart makes the link LED of the hub/switch/MC/NIC light up
Master and remote unit RJ45, plugable
LCD display: 122 x 32 dot matrix 56 x 29 mm
Measuring accuracy: Below 10 m +-2 m, above 10 m +-5%
Length measuring range: min.: 1 m - max.: 500 m
Tone generator: 1 kHz
Dimensions: 82 x 138 x 32 mm, 220 g
Power supply: 4.5 VDC (3 x AAA micro) (not included)
CE tested

Art.-No.	Description
39978.1	LANSmart network tester with LCD display, TDR technology

Network Tool Set

This Tool Kit is ideal for field service. You can use the Tool Kit for fault diagnostics, testing and for new installations.

Scope of delivery:
LAN-Tester RJ11/RJ12/RJ45 (battery 9 V E-Block not included)
39918.1: Crimping Tool for Hirose connectors TM11 / TM21 / TM31
39919.1: Crimping Tool for RJ11/RJ12/RJ45
Cut and Stripping Tool
IDC Insert Tool

Art.-No.	Description
39919.1	Network Tool Kit with 4 units
39918.1	Network Tool Kit Hirose, with 4 units, with bag

	Verifier		Qualifier	Certifier	
optimize! softing					
Art.-No.	CM600/CM650	CM800/CM850	NX_XG_10G	Upgrade to WX4500 possible WX500	WX4500-FA-V2
Application	Copper	Copper	Copper, Fiber	Copper	Copper, Fiber
Typical areas of application					
Home Cabling	■	■	■	■	■
Office Cabling	■	■	■	■	■
Industrial Cabling			■	■	■
Data center				■	■
Measurements to Standards					
ANSI/TIA 568 (US)				■	■
ISO/IEC 11801 (International)				■	■
EN 50173 (Europe)				■	■
Testing by application					
IEEE802.3 Fast Ethernet 100Mbit/s Clause 25			■		
IEEE802.3 Gigabit Ethernet 1000Mbit/s Clause 40			■		
IEEE 802.3af PoE 12.95W	■	■	■		
IEEE 802.3at PoE+ 21.9W	■	■	■		
Passive Test- and Measurement Parameters					
Wire map	■	■	■	■	■
Length measurement	■	■	■	■	■
Tone Generator	■	■	■		
RF Measurements (NEXT; Insertion Loss, Return Loss,..)				■	■
Signal-to-Noise-Ratio			■		
Delay Skew			■	■	■
Measuring frequency				up to 500 MHz	up to 2.500 MHz
Active Test Parameters					
Ethernet detection and display the transfer rate	up to 1Gbit/s	up to 1Gbit/s	up to 10Gbit/s		
DHCP test		■	■		
Ping Test		■	■		
Discovery function (LLDP;CDP;NDP)		■	■		
Port LED Activation	■	■	■		
VLAN Recognitaion		■	■		
Trace Route			■		
Bit-Error-Rate Test			■		
Reporting					
Screenshot	■	■			
Report generation already in tester			■		
PC Reporting software				■	■

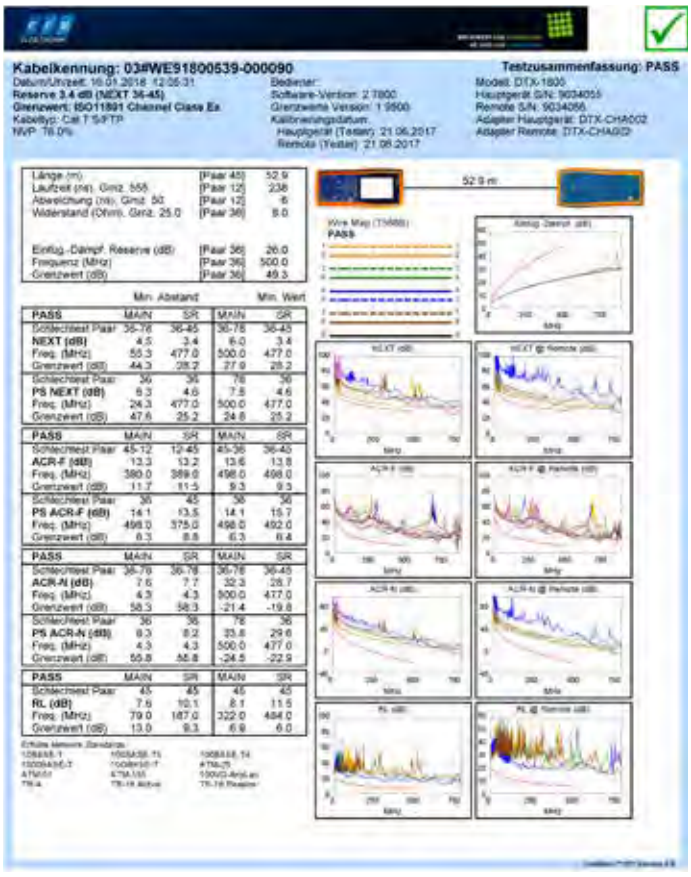
Copper Fiber

OUR SERVICE IN THE FIELD OF COPPER CABLING

EFB-Elektronik offers various measurements for all kind of cable assemblies of the portfolio. At the Headquarter in Bielefeld, attenuation measurements are carried out on patch cables or pre-assembled links. The measured cables can be assigned via a serial number attached to the cable.

1. DLOKUPFER-Dämpfung	IL measurement for patch cable inclusive, label with serial number, lead time for 200pcs. approx. 3 working days plus regular picking time
2. DLOWICKEL2	Assembling of label on both sides of cable, lead time for 200pcs. approx. 3 working days plus regular picking time

* lead time for other quantities on request



IP 67/68 CONNECTING SYSTEMS

Thanks to their high-quality workmanship, the IP67 and IP68 connectors from EFB-Elektronik guarantee reliable production processes: The dustproof and watertight connector systems of the highest degrees of protection are ready-made - or as connectors with suitable components for individual solutions.

IP68 Components		**P. 155**
IP67 Components		**P. 156**

YOU MAY ALSO BE INTERESTED IN:

HDMI cable	P. 272
USB	P. 280
Patch Cable	P. 114
Jumper	P. 18

IP68 Receptacle for keystone modules and adapters

IP68 Socket Housing for all EFB-Elektronik keystone modules and adapters
With bayonet lock to IEC61076-3-106
M30 mounting with silicone seal
Mounting diameter: 30mm
Suitable for use with Keystone modules, Snap-in and keystone mounting adapters
Straight outlet 180 °
Delivery unequipped

Accessories:
IP68 Cap: IP68EBCAP

Utilization:.....Modular-Jack
With dust cover: .....Yes
Material:.....plastic
Type of locking: .....Bayonet lock
Suitable for degree of protection (IP):.....IP68

IP68EBCAP

Art.-No.
IP68EBKS

Accessory

Art.-No.	Description
IP68EBCAP	IP68 Dust cap for receptacles, Bayonet locking acc. to IEC61076-3-106

IP68 Cable gland for RJ45 Hirose TM11/21/31

IP68 cable gland for RJ45 plug: Hirose TM11/21/31
With bayonet lock to IEC61076-3-106
Straight outlet 180 °
Delivery unequipped

Scope of delivery: 3-part consisting of:
1x IP68 cable gland housing (without plug)
1x Cable gland 4,5-6,5mm
1x Strain relief fitting

Accessories:
IP68 Cap: IP68STCAP

Utilization:.....Cable outlet
With dust cover: .....Yes
Material:.....plastic
Type of locking: .....Bayonet lock
Suitable for degree of protection (IP):.....IP68

IP68STCAP

Art.-No.
IP68ST6ATM

Accessory

Art.-No.	Description
IP68STCAP	IP68 Dust cap for cable gland, Bayonet locking acc. to IEC61076-3-106

IP68 Cable gland for RJ45 field installable plugs, 4.5-6.5mm

IP68 cable gland for RJ45 field-assembly plugs
With bayonet lock to IEC61076-3-106
Straight outlet 180 °
Delivery unequipped

Scope of delivery: 3-part consisting of:
1x IP68 cable gland housing (without plug)
1x Cable seal (IP68FST6AA: 4.5 - 6.5 mm / IP68FST6AB: 6.5 - 9 mm)
1x Strain relief fitting

Accessories:
IP68 Cap: IP68STCAP
Field assembly plug: 88035.1, 88035UTP.1, 88035AV.1, IVB-6A-S

Utilization:.....Cable outlet
With dust cover: .....Yes
Material:.....plastic
Type of locking: .....Bayonet lock
Suitable for degree of protection (IP):.....IP68

IP68STCAP

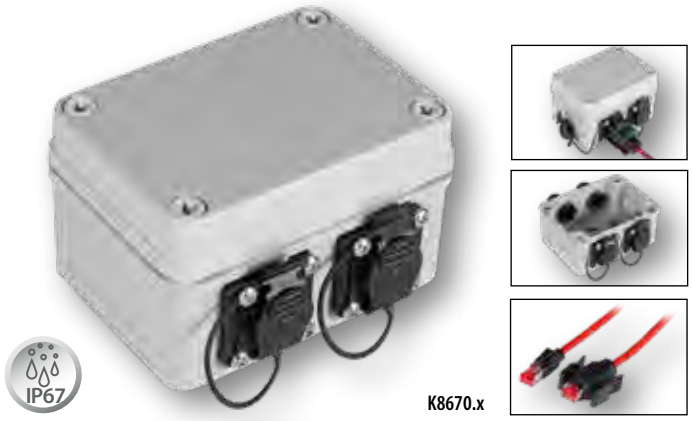
Art.-No.
IP68FST6AA
IP68FST6AB

Accessory

Art.-No.	Description
IP68STCAP	IP68 Dust cap for cable gland, Bayonet locking acc. to IEC61076-3-106

What does IP 67/68 stand for?

Look up all common terms quickly in the glossary. Simply and briefly explained starting on **page 328**.



Cat.6A Distribution box IP67

Housing: Complete with 2 x Cat.6A RJ45 Keystone, IP67 strip for patch cable IP67 (K8670.x) and 2 x cable glands M16
Housing entry: 2 x cable glands M16 for data cable (reference Cat.7 UC900)
Housing outlet: 2 x Cat.6A RJ45 Keystone with IP67 strip
Plastic housing
Dimension: 80 x 45 x 110 mm

Recommended Patch Cable: K8670.x

Category: ..... 6A (TIA)
Material connector of connector housing: ..... plastic
Type of connector: ..... RJ45 8(8)
Connection type: ..... LSA
Outlet direction: ..... straight
With dust cover: ..... Yes
Degree of protection (IP): IP67

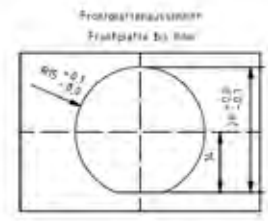
Art.-No.
53730.1V2

Accessory

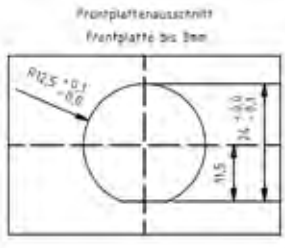
Art.-No.	Description
K8670.10	RJ45 Patch cable S/FTP, Cat.6A, IP67/TM21 / TM21, PUR, for 53730.1V2, 10m

Installation dimension for cable glands and adapters:

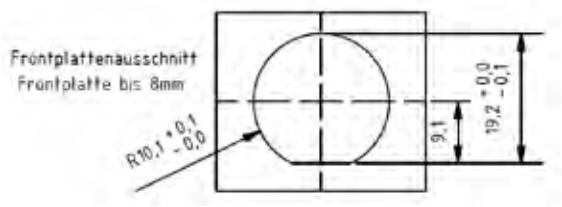
IP67 Fiber + RJ45 Module:



IP67 HDMI:



IP67 USB:



Stock Lengths: 1.0 - 2.0 - 5.0 - 10 m

IP67 Cable gland, M25, RJ45 TM31, M-M

Category: ..... 6A (TIA)
Cable structure: ..... S/FTP
Type of connector connection 1: ..... RJ45 8(8)
Type of connector connection 2: ..... RJ45 8(8)
Flame retardant version: ..... Yes
Halogen free: ..... Yes
Cable construction: 4x2
Pin assignment: 1:1
AWG-size/strands per core: 27
Type of housing: ..... Brass Nickel-plated

Art.-No.	Colour outer sheath
IP67KVRJ45TM31-x	blue

IP67 Metal adapter, M25, RJ45 Cat.6A, F-F

Connection 1: ..... RJ45 8(8) Jack
Connection 2: ..... RJ45 8(8) Jack
Type of housing: ..... Brass nickel-plated
Type of locking: M25
Suitable for degree of protection (IP): IP67

Art.-No.	Dust cover
IP67DFKRJ45FL	Yes
IP67DFKRJ45FLHS	Captive (Service)

IP67 Receptacle, M25, RJ45 Cat.6A E-20070

Category: ..... 6A (TIA)
Model: ..... Jack (Jack)
Type of connector: ..... RJ45 8(8)
Screened: ..... Yes
Connection type: ..... IDC
AWG-range for litz wire conductor: ..... 26 – 24
AWG-range for solid core: ..... 24 – 22
Housing material: ..... Brass Nickel-plated
Type of locking: M25
Dust cover: ..... Yes

Art.-No.
IP67EBRJ45KSFL

IP67 Metal adapter, M25, LC Duplex

Type of connector connection 1:.....LC-Duplex
Type of connector connection 2:.....LC-Duplex
Type of housing:.....Brass nickel-plated
Type of locking:.....M25
Suitable for degree of protection (IP):.....IP67

Art.-No.	Dust cover
IP67DFKLCDM	Yes
IP67DFKLCDMHS	Captive (Service)

Stock Lengths: 2,0 - 5,0 - 10 - 20 m

IP67 Cable gland, M25, LC-Duplex

Number of fibers:.....2
APC-version:.....No
Cable Ø:.....2.0
Flame retardant:.....According to EN 50265-2-1
Halogen free (according to EN 50267-2-3):.....Yes
Type of connector connection 1:.....LC-Duplex
Connector colour 1:.....beige
Type of connector connection 2:.....LC-Duplex
Connector colour 2:.....beige
Jacket Material:.....LSZH

Art.-No.	Colour outer sheath	Fiber type	Category
IP67KVLCDOS2-2,0	yellow	Singlemode 9/125	OS2
IP67KVLCDOM3-2,0	aqua	Multimode 50/125	OM3

IP67 Cable gland, M20, USB2.0

Type of housing:.....Brass nickel-plated
Type of locking:.....M20
Suitable for degree of protection (IP):.....IP67

Art.-No.	Version	Connector Connection 1	Connector Connection 2	Dust cover
IP67KVUSBA-A1,0	Cable gland, 1.0m	USB-A Plug	USB-A Plug	/
IP67EBUSBA-A0,5FL	Receptacle, 0,5m	USB-A Jack	USB-A Plug	Yes
IP67EBUSBA-A0,5FLHS	Receptacle, 0,5m	USB-A Jack	USB-A Plug	Captive (Service)

IP67 Metal adapter, M20, USB3.0, F-F, A-A

Connection 1:.....USB-A Jack
Connection 2:.....USB-A Jack
Type of housing:.....Brass nickel-plated
Type of locking:.....M20
Suitable for degree of protection (IP):.....IP67

Art.-No.	Dust cover
IP67DFKUSBFL	Yes
IP67DFKUSBFLHS	Captive (Service)

IP67 Cable gland, M25, HDMI2.0

Type of housing:.....Brass nickel-plated
Type of locking:.....M25
Suitable for degree of protection (IP):.....IP67

Art.-No.	Version	Connector Connection 1	Connector Connection 2	Dust cover
IP67KVHDMIA-A1,0	Cable gland, 1.0m	HDMI Plug	HDMI Plug	/
IP67EBHDMIA-A1,0FL	Receptacle, 1.0m	HDMI Jack	HDMI Jack	Yes
IP67EBHDMIA-A1,0FLHS	Receptacle, 1.0m	HDMI Jack	HDMI Jack	Captive (Service)

IP67 Metal adapter, M25, HDMI2.0, F-F, A-A

Connection 1:.....HDMI-A Jack
Connection 2:.....HDMI-A Jack
Type of housing:.....Brass nickel-plated
Type of locking:.....M25
Suitable for degree of protection (IP):.....IP67

Art.-No.	Dust cover
IP67DFKHDMIFL	Yes
IP67DFKHDMIFLHS	Captive (Service)

TELECOM

The twin-wire technology enjoys the highest level of trust in the field of telecommunications technology - and the last mile from the cable junction to the customer is bridged by a two-wire line. The soldering, screwing and stripping-free LSA + technology ensures fast, reliable contacting technology between the double wire and components. EFB-Elektronik provides a wide range for this.

Free standing housing / wall-mount-housing		**P. 159**
LSA-range 1, 2		**P. 160**
Overvoltage Protection range 2		**P. 161**
LSA tools		**P. 162**
VKA / VKU		**P. 163**
ISDN Patchpanel		**P. 166**
Adapter		**P. 167**
Modular Cables		**P. 168**

Wall-Mounted Distribution Cabinets TWL

Closed sheet steel cabinet with swivel turning handle for profile half-cylinder
Cable entry at top and bottom via brush terminal
Colour RAL7035, light grey
Degree of protection IP40

Art.-No.	Type	Module Slots	in Pairs	Width	Height	Depth	Weight
46074.1V2	TWL 300	2 x 18	300	600 mm	600 mm	240 mm	25 kg
46075.1V2	TWL 500	2 x 26	500	600 mm	800 mm	240 mm	29 kg
46076.1V2	TWL 900	2 x 46	900	600 mm	1300 mm	240 mm	35 kg
46077.1V2	TWL 1350	3 x 46	1350	800 mm	1300 mm	240 mm	40 kg

Profile Half-Cylinder

Profile half-cylinder acc. to DIN 18252 / EN1303
With push-button for unlocking
Suitable for EFB standard turning handles (Art.-No. 102179), compact turning handle (Art.-No. 699989) and telecom distributors TWL/TSL

Art.-No.	Description
46086.1	Profil Half-Cylinder Locking 15, with 1 Key Q15
46087.1	Profil Half-Cylinder Locking T3, incl. 2 Keys
46087.2	Profil Half-Cylinder Locking T4, incl. 2 Keys
46087.3	Profile Half-Cylinder for Locking 3524E
46087.4	Profile Half-Cylinder with Push-Button

19" Subracks 2U and 3U

With LSA backmount frames
For accommodating from 3 x 2 to 3 x 5 LSA modules 2/10 10pairs horizontal
Width 480 mm, depth 100 mm
RAL9005, jet black

Art.-No.	Description	Module Slots
46055.2	19" Subrack 1U 60pairs with Backmount Frames	3 x 2
46055.3	19" Subrack 3U 150pairs with Backmount Frames	3 x 5

Plinth for Free-Standing Distribution Cabinet TSL

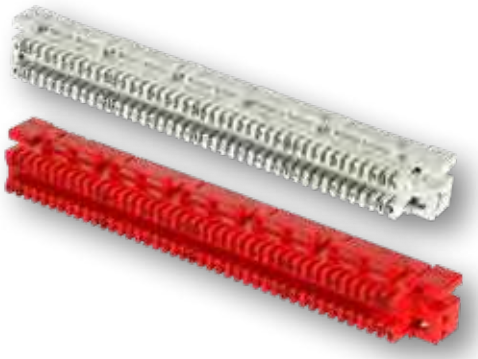
Plinth for free-standing
distribution cabinet TSL

Art.-No.	Suitable for	Width	Height	Depth
46121.1	TSL 1200	600 mm	100 mm	400 mm

Free-Standing Distribution Cabinets TSL

Cabinet with removable side walls, suitable for in-line arrangement
With turning handle for profile half-cylinder and three-point bar lock
Cable entry from top via rubber clamp, from bottom via three-part base plate
Colour RAL7035, light grey
Protection degree IP54 with cable infeed from bottom, otherwise IP40
Socket 100/200 mm as accessory

Art.-No.	Type	Module Slots	in Pairs	Width	Height	Depth	Weight
46078.1V2	TSL 1200	2 x 72	1200	600 mm	2000 mm	400 mm	98 kg
46079.1V2	TSL 1800	3 x 72	1800	800 mm	2000 mm	400 mm	120 kg
46080.1V2	TSL 2400	4 x 72	2400	1000 mm	2000 mm	400 mm	135 kg



LSA - Connection Modules 170 mm

LSA connection 1/20 and earth modules 1/84 for screw fastening
Fixing dimension 170 mm

Art.-No.	Description
46001.1V2	LSA Connection Module 1/20 20pairs
46002.1V2	LSA Earth Module 1/84 84-pole

LSA - Connection Modules 96 mm

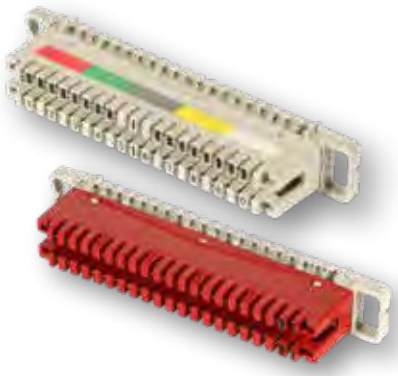
LSA connection 1/10 and earth modules 1/44 for screw fastening
Fixing dimension 96 mm

Art.-No.	Description
46001.2	LSA Connection Module 1/10 10pairs
46002.2	LSA Earth Module 1/44 44-pole

Hinged Label Holder

Hinged
One-side printed with 1..10 (46003.2)
One-side printed with 2 x 1..10 (46003.1)

Art.-No.	Description
46003.2	Hinged Label Holder 1/10
46003.1	Hinged Label Holder 1/20



LSA Connection & Disconnetion Modules 2/10

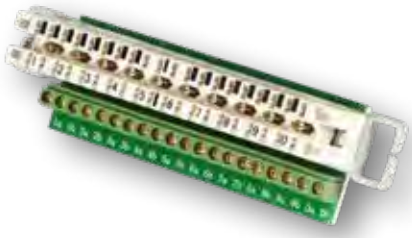
For LSA backmount frames / channels
All contacts jumpered with the earth connection

Art.-No.	Description
46005.1	LSA Disconnection Module 2/10 10pairs w/o Colour Code
46005.1F	LSA Disconnection Module 2/10 10pairs with Colour Code
46006.1	LSA Connection Module 2/10 10pairs w/o Colour Code
46006.1F	LSA Connection Module 2/10 10pairs with Colour Code
46007.1	LSA Earth Module 2/38 38-pole

Modular Label Holder 2/10 for backmount frames

For snapping onto LSA backmount frames / channels
Not printed

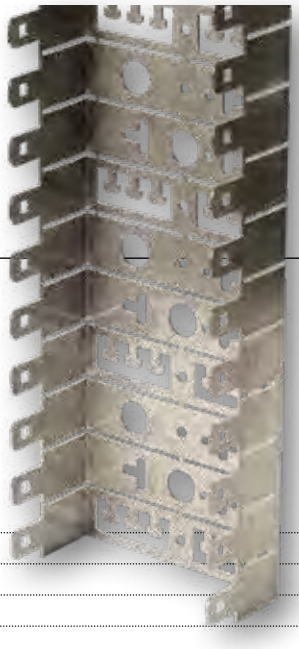
Art.-No.	Description
46008.1	Modular Label Holder 2/10



LSA Adapters Disc. Module/ Screw Contact

For LSA backmount frames / channels
Disconnection module with 20 screw contacts on the routing side for wires up to 2.5 mm²

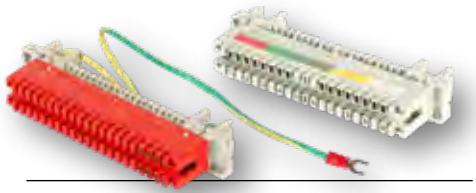
Art.-No.	Description
46085.1	LSA Adapter Disc. Module 10 pairs / Screw Terminals



LSA - Backmount Frames Universal

For LSA modules 2/10 10pairs
Pitch (terminal-terminal distance) 25 mm
The depths are 22 / 30 / 50 mm
Individual modules are easy to cut off from the LSA backmount frame with diagonal cutter by customer, making them universally usable
Number of modules = 50

Art.-No.	Description
46010.50	LSA Back Mount Frame, 50 Modules, D=22 mm, P=25 mm, PU 2 pcs.
46011.50	LSA Back Mount Frame, 50 Modules, D=30 mm, P=25 mm, PU 2 pcs.
46012.50	LSA Back Mount Frame, 50 Modules, D=50 mm, P=25 mm, PU 2 pcs.



LSA - Connection & Disconnection Modules 2/10

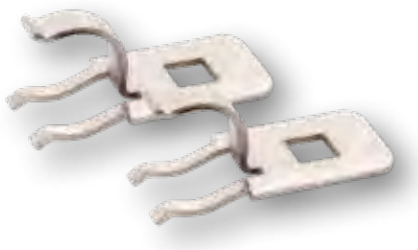
For profil rod mounting
All contacts jumpered with the earth connection

Art.-No.	Description
46006.2	LSA Connection Module 2/10 10pairs for Profil Rods, w/o Colour Code
46006.2F	LSA Connection Module 2/10 10pairs for Profil Rods, with Colour Code
46005.2	LSA Disconnection Module 2/10 10pairs for Profile Rods, w/o Colour Code
46005.2F	LSA Disconnection Module 2/10 10pairs for Profile Rods, with Colour Code
46007.2	LSA Earth Module 2/34 34pole for Profil Rods

19" Subrack 3U for LSA Modules 8pairs and 10pairs

With 2 horizontal mounting rods 12 mm stainless steel,depth-adjustable
For accommodation of up to 18 LSA modules 10pairs and 8pairs vertically
For accommodation of up to 18 LSA modules
Cable infeed from rear or side possible
Rear-sided cable clamping
Earth connection with nut M6 on the side part
Front-sided cable clamping optionally, e.g. for DSLAM cable: Art.-No. 46054.2A
Material stainless steel
Weight 0.5 kg

Art.-No.	Description
46054.2	19" Subrack 3U for LSA Modules 8pairs & 10pairs



Earthing Contact Clip

For overvoltage protection contacting during profile rod installation
Per magazine 2 pieces required

Art.-No.	Description
46148.1	Earth Connection Clip for Profil Rod

Hinged Label Holder 2/10

Can be mounted on LSA modules 2/10 10pairs and surge protection magazines
Unprinted
Can be labelled on both sides

Art.-No.	Description
46009.1	Hinged Label Holder 2/10

LSA Overvoltage Protection Magazine 2/10

46140.1 - 20 arresters per magazine
46141.1 - 10 arresters per magazine

Art.-No.	Description
46140.1	LSA-Overvoltage Protection Magazine 2/10 10pairs 8x6
46141.1	LSA-Overvoltage Protection Magazine 2/10 10pairs 8x13

Fine Protection 1pair

Overvoltage and overcurrent protection for signal and data lines
Coarsel protection, fine protection, overload protection » Fail-Safe
Integrated overcurrent protection by PTC resistor
Leakage current 10 kA, impulse spark-over voltage 230 V
For direct and alternating voltage
Operating current 150 mA nominal

Art.-No.	Description
46150.24	1pair Fine Protection with Failsafe V= 24V
46150.48	1pair Fine Protection with Failsafe V= 48V
46150.60	1pair Fine Protection with Failsafe V= 60V

Profil Modular Label Holder 2/10 for profil rod mounting

For snapping onto profile rods
Unprinted

Art.-No.	Description
46008.2	Profil Modular Label Holder

LSA Surge Arrester ÜsAg

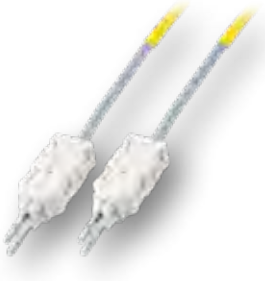
Gas-filled
Rated discharge current 10 kA

Art.-No.	Description
46142.1	8 x 6 / 90 V / 10 kA
46143.1	8 x 6 / 230 V / 10 kA
46144.1	8 x 6 /230 V / 10 kA + Failsave
46145.1	8 x 13 / 90 V / 10 kA
46146.1	8 x 13 / 230 V / 10 kA
46147.1	8 x 13 / 230 V / 10 kA + Failsave

Earthing Bar 2/10

For connecting the 1pair fine protection plug to the earth potential
1 x earthing bar required per LSA connection module 2/10

Art.-No.	Description
46152.1	Earthing Bar 2/10



Connection Cord 2/4 4-pole, Plugs for LSA Disconnection-Modules 2/10 10pairs

With 2 LSA plugs 2/4 4-pole, for 2-pole and 4-pole switching
Stock lengths: 1.0 - 2.0 - 3.0 m

Art.-No.	Description
46119.x	Connection Cord 2/4 4-pole, Plugs for LSA Disconnection-Modules 2/10 10pairs

Connection Cord RJ45 - LSA 1pair

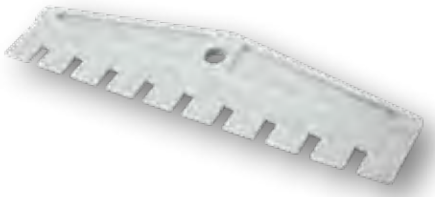
For the connection of 4 wiring telecommunication services into structured cabling systems
Assignment 4/5 - 3/6
Stock lengths: 1.0 - 2.0 - 3.0 m

Art.-No.	Description
46130.x	Connection Cord RJ45 - LSA 1pair
46131.x	Connection Cord RJ45 - LSA 1pair

Disconnection Plug 1pair

For LSA disconnection modules 2/10 10pairs
Disconnects the line path
Other colours on request

Art.-No.	Description
46154.1	Disconnection Plug 1pair Red



Disconnection Plug 2/10 10pairs

Cable and routing side can be separated on LSA disconnection modules 2/10 to 10pairs

Art.-No.	Description
46014.1	LSA Disconnection Plug 2/10 10pairs

LSA/IDC Insertion Tool

For applying the cable cores to LSA connection technology
For cable diameter 0.4..0.8 mm
Simultaneous wire cutting

Art.-No.	Description
39933.1	LSA Insertion Tool

LSA/IDC Insertion Tool for Keystones

Insertion tool for twisted pair cables
Especially recommended for UTP keystone jacks

Art.-No.	Description
39931.1	LSA/IDC Insertion Tool for UTP Keystones

LSA/IDC Insertion Tool with Sensor

LSA insertion tool for LSA terminals and simultanuous cutting
The sensor (only Art.-No. 39951.1) ensures correct positioning of the wire in the LSA/IDC contact

Art.-No.	Description
39951.1	Krone LSA Insertion Tool with Sensor

VKA Housing

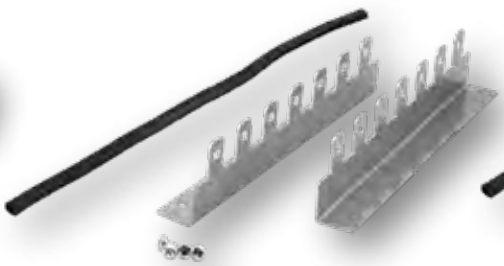
Consists of sheet steel box with basic plate and cover with latch
VKA mounting kits for 10pairs and 20pairs can be screwed on the basic plate
Cable entries on the bottom and the top of the cover
Colour of the cover: RAL9016 traffic white
Protection degree IP30
Sheet of paper for connection registration
Advice: weight including mounting kit

Art.-No.	Type	Width	Height	Depth	Weight
46017.1V1	VKA2	200 mm	330 mm	100 mm	2.8 kg
46018.1V1	VKA4	330 mm	330 mm	100 mm	3.22 kg
46019.1V1	VKA8	330 mm	550 mm	100 mm	5.23 kg
46020.1V1	VKA12	550 mm	550 mm	100 mm	9.0 kg

Locking T3 for VKA

With 2 keys

Art.-No.	Description
46040.1	Locking T3/1333 for VKA and VKU with 2 Keys



VKA Mounting Kit 10pairs

Mounting kit for snapping of LSA technology 2/10 10pairs
Including cable entry protection and set of screws for mounting
Overvoltage protection magazines mountable (VKA2 50pairs, VKA4 100pairs, VKA8 240pairs, VKA12 380pairs)

Art.-No.	Type	Module Slots	Max. Pairs
46017.10	VKA2	1 x 7	70
46018.10	VKA4	2 x 7	140
46019.10	VKA8	4 x 7	280
46020.10	VKA12	6 x 7	420

VKA Mounting Kit 20pairs

Mounting kit for screwing of LSA technology 1/20 20pairs
Including cable entry protection and set of screws for mounting

Art.-No.	Type	Module Slots	Max. Pairs
46017.20	VKA2	1 x 5	100
46018.20	VKA4	2 x 5	200
46019.20	VKA8	4 x 5	400
46020.20	VKA12	6 x 5	600

VKA with assembled Mounting Kit 10pairs

Consists of sheet steel box with basic plate and cover with latch
With assembled mounting kit 10pairs (for LSA modules 2/10 10pairs)

Art.-No.	Type	Module Slots	in Pairs	Width	Height	Depth	Weight
46017.1V10	VKA2	1 x 7	70	200 mm	330 mm	100 mm	2.8 kg
46018.1V10	VKA4	2 x 7	140	330 mm	330 mm	100 mm	3.22 kg
46019.1V10	VKA8	4 x 7	280	330 mm	550 mm	100 mm	5.23 kg
46020.1V10	VKA12	6 x 7	420	550 mm	550 mm	100 mm	9.0 kg

VKA with assembled Mounting Kit 20pairs

Consists of sheet steel box with basic plate and cover with latch
With assembled mounting kit 20pairs (for LSA module 1/20 20pairs)

Art.-No.	Type	Module Slots	in Pairs	Width	Height	Depth	Weight
46017.1V20	VKA2	1 x 5	100	200 mm	330 mm	100 mm	2.8 kg
46018.1V20	VKA4	2 x 5	200	330 mm	330 mm	100 mm	3.22 kg
46019.1V20	VKA8	4 x 5	400	330 mm	550 mm	100 mm	5.23 kg
46020.1V20	VKA12	6 x 5	600	550 mm	550 mm	100 mm	9.0 kg

VKU with assembled Mounting Kit 20pairs

Consists of sheet steel box with basic plate and cover with latch
With assembled VKU mounting kit 20pairs (for LSA technology 1/20 20pairs)

Art.-No.	Type	Module Slots	in Pairs	Width	Height	Depth	Weight
46017.3	VKU2	3	60	280 mm	380 mm	83 mm	2.8 kg
46018.3	VKU4	5	100	380 mm	380 mm	83 mm	2.8 kg

LSA Miniboxes 201C 20pairs

Fitted with 2 LSA disconnection modules 2/10 10pairs

Art.-No.	Type	in Pairs	Width	Height	Depth	Weight
46053.1	LSA Mini Box 201C 20DA	20	120 mm	170 mm	42 mm	0.25 kg

TT Small Distributor Box 1 / 2 / 3 IP54

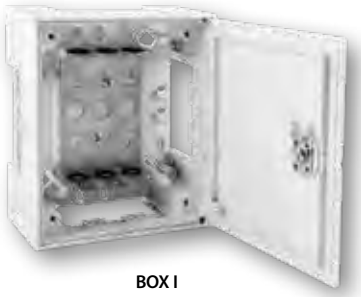
With LSA backmount frame for LSA connection modules 2/10 10pairs
With screw closure
Protection degree IP54

Art.-No.	Type	in Pairs	Width	Height	Depth	Weight
46050.2	TT Small Distribution Box 1	30	166 mm	240 mm	99 mm	0.37 kg
46051.1	TT Small Distribution Box 2	50	190 mm	215 mm	90 mm	0.52 kg
46052.1	TT Small Distribution Box 3	100	190 mm	375 mm	115 mm	1.04 kg

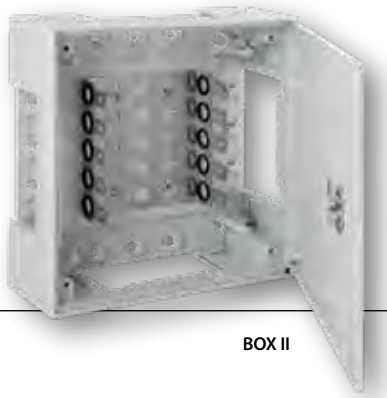
TT Small Distribution Boxes 4 IP54

With LSA backmount frame for LSA connection modules 2/10 10pairs
With lock
Protection degree IP54

Art.-No.	Type	in Pairs	Width	Height	Depth	Weight
46049.1	TT Small Distribution Box 4	20	103 mm	185 mm	90 mm	0.3 kg



BOX I



BOX II

BOX III

Plastic Distributor Box

Plastic distributor, indoor
Protection degree IP30
With 1 x backmount frame for 3/5/10 x LSA connection modules 2/10 10pairs
Incl. 4/6 top strip

Art.-No.	Type	in Pairs	Width	Height	Depth	Weight
46025.3	Box I 30pairs with Latch	30	140 mm	170 mm	76 mm	0.5 kg
46025.4	Box I 30pairs with Lock	30	140 mm	170 mm	76 mm	0.5 kg
46025.1	Box II 50pairs with Latch	50	215 mm	215 mm	76 mm	0.83 kg
46025.2	BOX II 50pairs with Lock	50	215 mm	215 mm	76 mm	0.83 kg
46026.1	Box III 100pairs with Latch	100	215 mm	320 mm	76 mm	1.4 kg
46026.2	Box III 100pairs with Lock	100	215 mm	320 mm	76 mm	1.4 kg

Stacking Frame

Necessary for plugging in surge protection
Suitable for Box I/II/III

Art.-No.	Description
46025.5	Stacking Frame for Box I
46027.1	Stacking Frame for Box II
46029.1	Stacking Frame for Box III

Flush-Mount Frame

Flush mounting frame for flush mounting
Suitable for Box I/II/III

Art.-No.	Description
46025.6	Flush Mounting Frame Box I (46025.3, 46025.4)
46028.1	Flush mounting frame Box II (46025.1, 46025.2)
46030.1	Flush Mounting Frame for Box III (46026.1, 46026.2)

TOPSELLER

Fire Protection Boxes VKA E30

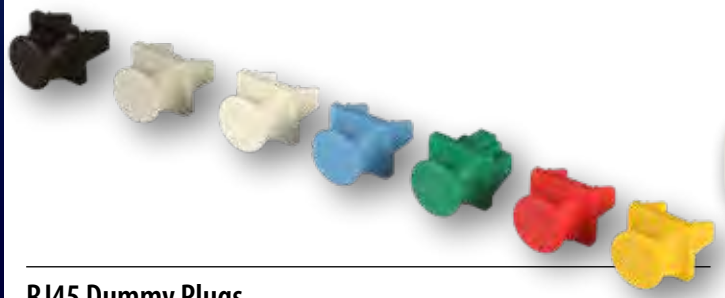
With built-in LSA backmount frame 2/10
Galvanised sheet steel housing
Protection degree IP43
Lining with fire protection panels and intumescence material in cable entry area
Inner depth enables plug-in of surge protection magazines
Tested acc. to DIN 4102 Part 2
Building approval by the DIBT-Berlin Z-86.1-39

Art.-No.	Type	Width	Height	Depth	Module Slots	in Pairs	Cable Entry	Weight
46042.1	VKA E30/20	200 mm	250 mm	130 mm	2	20	2 x PG29, 8 x PG16	5.1 kg
46042.2	VKA E30/60	250 mm	350 mm	130 mm	6	60	2 x PG29, 24 x PG16	7.9 kg
46042.3	VKA E30/100	250 mm	450 mm	130 mm	10	100	2 x PG29, 24 x PG16	10 kg
46042.4	VKA E30/200	450 mm	450 mm	130 mm	20	200	4 x PG29, 40 x PG16	16.3 kg
46042.5	VKA E30/400	450 mm	700 mm	130 mm	40	400	4 x PG29, 40 x PG16	24.2 kg

ISDN Patch Panel 19“1U, Unshielded, Cat.3

Category 3
Unshielded RJ45 8(4) jacks
4-pole LSA IDC terminals
Assignment: 3-6/4-5
High packing density
Strain relief via cable ties

Art.-No.	Description	Number of Ports	Colour	RAL Code
37588.1	Patch Panel 25 x RJ45 8/4 1U ISDN, RAL7035, Cat. 3	25	Grey	RAL7035
37588SW.1	Patch Panel 25 x RJ45 8/4 1U ISDN, RAL9005, Cat. 3	25	Black	RAL9005
37595.2	Patch Panel 50 x RJ45 8/4 1U ISDN, RAL7035, Cat. 3	50	Grey	RAL7035
37595SW.2	Patch Panel 50 x RJ45 8/4 1U ISDN, RAL9005, Cat.3	50	Black	RAL9005



RJ45 Dummy Plugs

Dust protection for unused ports
For RJ45 patch panels, RJ45 outlets and RJ45 Keystone jacks

Art.-No.	Description
37520.2-100	RJ45 Dummy Plug Black, 100 Pcs.
37520.4-100	RJ45 Dummy Plug Grey, 100 Pcs.
37520.5-100	RJ45 Dummy Plug Red, 100 Pcs.
37520.6-100	RJ45 Dummy Plug Green, 100 Pcs.
37520.7-100	RJ45 Dummy Plug Blue, 100 Pcs.
37520.8-100	RJ45 Dummy Plug Yellow, 100 Pcs.

RJ45 Strain Relief Boots

Anti-Kink sleeve for 37541.3, 37514.1, 37519.1, 37539.1, 37640.1, 34600.1
Cable entry max. 6.6 mm

Art.-No.	Description
37546.1-100	Anti-Kink Sleeve RJ45 Beige, with Latch Protection, 100 Pcs.
37546.4-100	Anti-Kink Sleeve RJ45 Black, with Latch Protection, 100 Pcs.
37546.5-100	Anti-Kink Sleeve RJ45 Yellow, with Latch Protection, 100 Pcs.
37546.6-100	Anti-Kink sleeve RJ45 Red, with Latch Protection, 100 Pcs.
37546.7-100	Anti-Kink sleeve RJ45 Blue, with Latch Protection, 100 Pcs.
37546.8-100	Anti-Kink sleeve RJ45 Green, with Latch Protection, 100 Pcs.

Modular Plug UTP for Round Cable

Modular-Connector unshielded RJ69 10P10C
For round cable
Suitable crimping tool for RJ10/RJ11/RJ12/RJ45:
Art.-No. E-MUC410
Suitable Crimping tool for RJ69: Art.-No. 39945.2

Art.-No.	Description
37517.1-100	Modular-Connector RJ10 UTP, E-MO 4/4 SR, 100 pcs.
37516.1-100	Modular-Connector RJ11 UTP, E-MO 6/4 SR, 100 pcs.
37518.1-100	Modular-Connector RJ12 UTP, E-MO 6/6 SR, 100 pcs.
37519.1-100	Modular-Connector RJ45 UTP, E-MO 8/8 SR, 100 pcs.
37539.1-100	Modular-Connector RJ69 UTP, E-MO 10/10 SR, 100 pcs.

Modular Plug UTP for Flat Cable

Modular-Connector unshielded RJ45 8P4C
For flat cable
Suitable crimping tool for RJ10/RJ11/RJ12/RJ45:
Art.-No. E-MUC410
Suitable crimping tool for RJ69: Art.-No. 39945.2

Art.-No.	Description
37512.1-100	Modular-Connector RJ10 UTP, E-MO 4/4 SF, 100 pcs.
37511.1-100	Modular-Connector RJ11 UTP, E-MO 6/4 SF, 100 pcs.
37513.1-100	Modular-Connector RJ12 UTP, E-MO 6/6 SF, 100 pcs.
37514.1-100	Modular-Connector RJ45 UTP, E-MO 8/8 SF, 100 pcs.
37542.1-100	Modular-Connector DEC UTP, E-MO 6/6 SF, 100 pcs.
37673.1-100	Modular-Connector RJ45 UTP, E-MO 8/4 SF, 100 pcs.

Crimping Tool for Modular Plugs

For 4-, 6-, 6-DEC-, 8-, AMP, and shielded RJ45 Far East and for cutting and stripping
Ideal for field assembly
Following plugs can be crimped:
37517.1, 37516.1, 37518.1, 37512.1, 37511.1, 37513.1, 37514.1, 37542.1

Art.-No.	Description
E-MUC410	Crimping tool for Modular Connector 4-8 pole

ISDN Adapters terminated

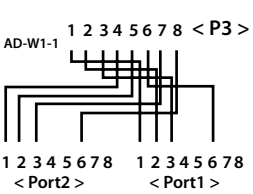
RJ45 plug to 8 x RJ45 jack
Shielded RJ45 jacks
Assignment 1:1
Pins 3-6, 4-5 terminated

Art.-No.	Description	Colour	Cable Length
K5067.015	ISDN Adapter RJ45 Plug/Jack, Terminated	Black	0.15 m
K5116.015	ISDN 2 x Adapter, RJ45 Plug / 2 x RJ45 Jack, Terminated	Black	0.15 m
K5117.015	ISDN 5 x Adapter RJ45 Plug / 5 x RJ45 Jack, Terminated	Black	0.15 m
K5269.015	ISDN 8 x Adapter, RJ45 Plug / 8 x RJ45 Jack, Terminated	Black	0.15 m

ISDN Adapters

Pins 3-6, 4-5 terminated

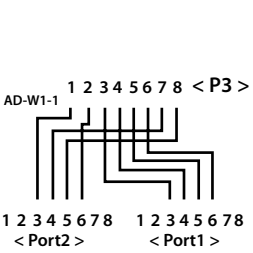
Art.-No.	Description	Colour	Cable Length
37531.1	Multiport-Adapter 1 x RJ45 Plug to 4 x RJ45 Jack	black	0.15 m
37532.1	ISDN Adapter RJ45 Plug / Jack	Beige	-



Cat.5e 2 x 10/100BaseT

RJ45 plug to 2 x RJ45 jack
15 cm cable
Serves as port doubler for the structured cabling

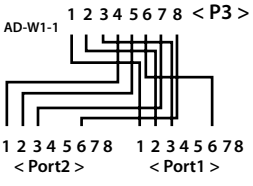
Art.-No.	Description	Cable Length
K5122.015	T-Adapter Cat.5e 2 x 10/100BaseT for Cable Sharing	0.15 m

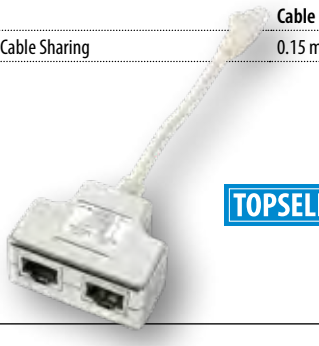


2 x ISDN

RJ45 plug to 2 x RJ45 jack
15 cm cable
Serves as port doubler for the structured cabling

Art.-No.	Description	Cable Length
K5124.015	T-Adapter 2 x ISDN for Cable Sharing	0.15 m



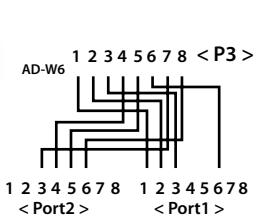


TOPSELLER

Cat.6 2 x 10/100BaseT

RJ45 plug to 2 x RJ45 jack
15 cm cable
Serves as port doubler for the structured cabling

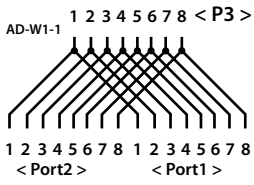
Art.-No.	Description	Cable Length
K5126.015	T-Adapter Cat.6 2 x10/100BaseT for Cable Sharing	0.15 m

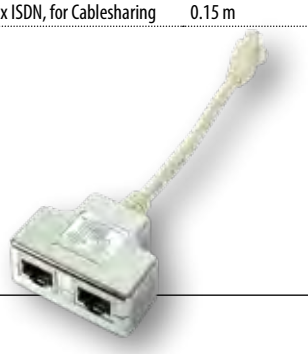


Cat.5e 2 x 10/100BaseT / ISDN

RJ45 plug to 2 x RJ45 jack
15 cm cable
Serves as port doubler for the structured cabling

Art.-No.	Description	Cable Length
K5123.015	T-Adapter Cat.5e 1 x 10/100BaseT 1 x ISDN, for Cablesharing	0.15 m

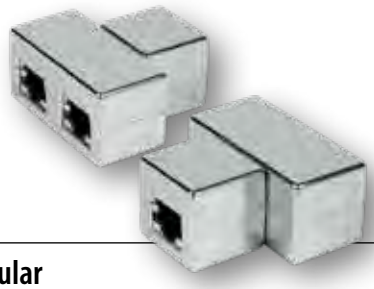




2 x 1:1

RJ45 plug to 2 x RJ45 jack
15 cm cable
Serves as port doubler for the structured cabling

Art.-No.	Description
K5125.015	T-Adapter 1:1 parallel



T-Adapter Modular

T adapter for network cables
RJ45 jack / 2 x RJ45 jack
8-pole wired
RJ45 jacks shielded, assignment 1:1

Art.-No.	Description
37528.1	T-Modular-Adapter, RJ45 Jack/2 x Jack 1:1, shielded

TAE-N to RJ12 6pol.

N-coding for extension devices (e.g. answering machine, modem, fax)

Stock lengths: 3.0 - 6.0 - 10.0 m

Art.-No.	Description
K5400.x	TAE-N to RJ12 6pol.

Modular Cable RJ12 - RJ45

Assignment: 1-2, 2-3, 3-4, 4-5, 5-6, 6-7
Flat cable
Colour black

Stock lengths: 1.0 - 3.0 - 6.0 m

Art.-No.	Description
K2406SW.x	Modular Cable RJ12 - RJ45 black

Modular Cable RJ10 - RJ10

Assignment 1:1
Flat cable
Colour black

Stock lengths:
0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 10 - 15 - 20 m

Art.-No.	Description
K2402SW.x	Modular Cable RJ10 - RJ10 black

ISDN-Cable RJ45 - RJ45

Assignment 1:1
Colour black
Flat cable
Stock lengths: 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 6.0 - 10.0 m

Art.-No.	Description
K2407SW.x	ISDN-Cable RJ45 - RJ45

Modular Cable RJ12 - RJ12

Assignment 1:1
Colour black
Flat cable
Stock lengths: 1.0 - 2.0 - 3.0 - 6.0 - 10.0 m

Art.-No.	Description
K2404SW.x	Modular Cable RJ12 - RJ12 black

Modular Cable RJ11 - RJ11

Assignment 1:1
Colour black
Flat cable
Stock lengths: 0.20 - 0.50 - 1.0 - 1.5 - 2.0 - 3.0 m

Art.-No.	Description
K2413SW.x	Modular Cable RJ11 - RJ11 black

ISDN-Cables RJ45 - RJ45

Assignment: 3-3, 4-4, 5-5, 6-6
Colour black
Round cable

Stock lengths: 0.5 - 1.0 - 2.0 - 3.0 - 6.0 - 10.0 m

Art.-No.	Description
K2408.x	ISDN-Cables RJ45 - RJ45

ISDN-Cable RJ45 - RJ45, Moulded

Assignment: 3-3, 4-4, 5-5, 6-6
Colour black
Round cable

Stock lengths: 0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 6.0 - 10.0 m

Art.-No.	Description
K2422.x	ISDN-Cable RJ45 - RJ45, Moulded

Connection Wire YV, Ø Core: 2 x 0.5 / 0.9 mm

100 m drum
Other types on request

Art.-No.	Outer Diameter (Approx.)	Colour Outer Sheath	Cores
46088.100	0.9	red/green	2
46090.100	0.9	white/brown	2
46091.100	0.9	red/blue	2
46092.100	0.9	white/green	2
46093.100	0.9	white/yellow	2
46094.100	0.9	white/blue	2
46095.100	0.9	white/red	2
46096.100	0.9	white/black	2
46097.100	0.9	white/pink	2
46098.100	0.9	black/red	2

Connection Wire YV, Ø Core: 2 x 0.6 / 1.1 mm

100 m drum
Other types on request

Art.-No.	Outer Diameter (Approx.)	Colour Outer Sheath	Cores
46099.100	1.1	white/brown	2
46100.100	1.1	white/blue	2
46101.100	1.1	white/pink	2
46102.100	1.1	white/green	2
46103.100	1.1	white/red	2
46104.100	1.1	white/black	2
46106.100	1.1	red/black	2
46107.100	1.1	white/yellow	2
46108.100	1.1	red/green	2

Modular Flat Cable Unshielded

According German Post Office standard
1=white, 2=brown, 3=green, 4=yellow, 5=grey, 6=pink, 7=blue, 8=red, 9=black, 10=violet
Unshielded

Art.-No.	Outer Diameter	Colour	Cores
91104.100	2.5 x 5.0 (100 m)	Black	4
91104.500	2.5 x 5.0 (500 m)	Black	4
91106.100	2.0 x 7.0 (100 m)	Black	6
91106.500	2.0 x 7.0 (500 m)	Black	6
91108.100	2.5 x 8.8 (100 m)	Black	8
91108.500	2.5 x 8.8 (500 m)	Black	8
91110.100	2.5 x 10.7 (100 m)	Black	10
91105.100	2.5 x 5.0 (100 m)	Grey	4
91107.100	2.5 x 7.0 (100 m)	Grey	6
91109.100	2.5 x 8.8 (100 m)	Grey	8

Modular Flat Cable Shielded, Black

According German Post Office standard
1=white, 2=brown, 3=green, 4=yellow, 5=grey, 6=pink, 7=blue, 8=red, 9=black, 10=violet
Colour black, with drain wire

Art.-No.	Outer Diameter	Colour	Cores
92704.100	5.2	Black	4
92706.100	7.0	Black	6
92706.100	7.0	Black	6

Modular Flat Cable Unshielded, International, Black

According international standard
1=grey, 2=orange, 3=black, 4=red, 5=green, 6=yellow, 7=blue, 8=brown
Unshielded

Art.-No.	Outer Diameter	Colour	Cores
92804.100	5.0	Black	4
92806.100	7.0	Black	6
92808.100	8.8	Black	8

CABINET SYSTEMS

FOR FLEXIBLE USE

1 CABINET SYSTEMS: PRO SERIES S. 172

2 CABINET SYSTEMS: OFFICE SERIES S. 192

3 CABINETS WITH RAISED IP PROTECTION DEGREE S. 196

4 ACTIVE COOLING & ACOUSTICAL CABINETS S. 202

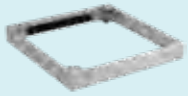
5 WALL HOUSINGS S. 208

6 INTERIOR ACCESSORIES & CABLE MANAGEMENT S. 218

7 POWER SUPPLY S. 240

CABINET SYSTEMS: PRO SERIES

The network and server cabinets of the PRO series impress with a high load capacity and a flexible construction philosophy. The cabinets can be completely and quickly dismantled and offer numerous, clever options for adapting the functionality to individual requirements.

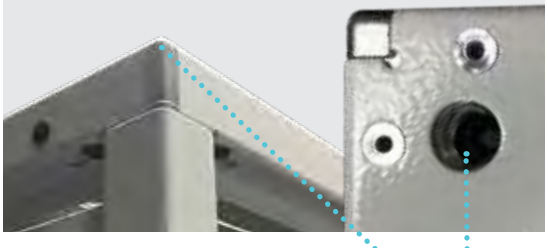
19“ Network Cabinets		P. 174
19“ Network Cabinets Modular		P. 175
19“ Server Cabinets		P. 176
Doors & Side Walls		P. 178
Plinth / Line-Up / Castors		P. 180
Inner Accessories		P. 185

YOU MAY ALSO BE INTERESTED IN:

Splice Boxes	P. 44
Converter Chassis	P. 307
19“ Switches (Copper and Fiber Optic)	P. 312
Keystones & Installation Cable	P. 101 / P. 140

HIGHLIGHTS OF NETWORK- & SERVER CABINETS PRO

Easy & fast dismountable:
Only 4 screws each for roof and bottom plate



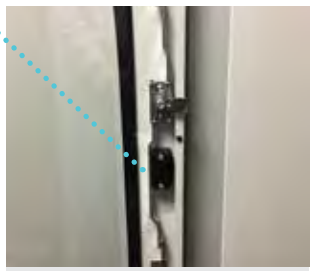
Roof prepared for transport eyes M12

Depth rails:
- Step-less depth-adjustable
- Can be positioned at any height & in any number

Door opening angle > 180° due to outside hinges

Door stop changeable le/ri

Standard rear door (steel)
with 3U cable entry



3-Point bar-locking
for all door types > 24U
(Profile half-cylinder exchangeable)

Pre-installed earthing bar included
in cabinet as standard (ports: 20 x M5 + 2 x 8 mm)

Modular plinth system

Roof with fan openings and surrounding cable entries

Cabinet bottom with pre-installed earthing bar, surrounding cable entries and pre-punched cutout 380 x 380 mm

19“ Network Cabinets PRO

19“ network cabinet according to DIN41494
Steel sheet housing with screwed frame, completely pre-assembled, self-ventilated, dismountable
Inside front and rear 4 x 19“profiles (2 front, 2 rear-sided), galvanised, step-less depth-adjustable
Contrariwise numbering of rack units at the 19“ profiles
Front door with window of certified safety glass (thickness 5 mm)
Front door with 3-point turning handle (up to 24U 1-point), lockable, incl. profile half-cylinder acc. to DIN18252 / EN 1303
Profile half-cylinder exchangeable by customer (30/10 mm)
Rear door steel, 1-part, shortened, with 2 x latch locking (lock equal to door lock), 3U panel for cable entry below (690 x 67 mm)
Door stop for front and rear door possible left- or right-sided
Detachable side walls with 2 x latch locking (lock equal to the door lock)
Cabinets stackable side-by-side with and without removal of the side walls, baying set (Art.-No. PRO-ANR0X)
Roof and bottom with 4/6 pre-punched openings for cable entry (450 x 90 mm), for 600 mm cabinet width cable entry only rear
Roof prepared for accommodation of 2-fan or 4-fan units, bottom with pre-punched opening for filter or cable entry modules
Internal earthing of all cabinet sections
Pre-assembled earthing bar rear-sided in the middle of the cabinet (ports: 2 x M5 + 2 x 8 mm)
Max. load 1000 kg (depths 600 / 800 mm) resp. 1360 kg (depths 1000 / 1200 mm for >24U)
Paint finish RAL7035, light grey
Protection degree IP20
Included accessories: 1 x brush, 1 x set of captive nuts (PU 20 pcs.), earthing bar and earthing cables, 4 x levelling feet M12, 2 x key
Delivery in transport packaging on disposable pallet

Front door Glass door 1-part
Rear door Steel door 1-part

Art.-No.	U	Width	Depth	Height
PRO-1866GR.G1SV	18	600 mm	600 mm	896 mm
PRO-1868GR.G1SV	18	600 mm	800 mm	896 mm
PRO-1888GR.G1SV	18	800 mm	800 mm	896 mm
PRO-2466GR.G1SV	24	600 mm	600 mm	1163 mm
PRO-2468GR.G1SV	24	600 mm	800 mm	1163 mm
PRO-2488GR.G1SV	24	800 mm	800 mm	1163 mm
PRO-3366GR.G1SV	33	600 mm	600 mm	1563 mm
PRO-3368GR.G1SV	33	600 mm	800 mm	1563 mm
PRO-3360GR.G1SV	33	600 mm	1000 mm	1563 mm
PRO-3388GR.G1SV	33	800 mm	800 mm	1563 mm
PRO-4266GR.G1SV	42	600 mm	600 mm	1963 mm
PRO-4268GR.G1SV	42	600 mm	800 mm	1963 mm
PRO-4260GR.G1SV	42	600 mm	1000 mm	1963 mm
PRO-4286GR.G1SV	42	800 mm	600 mm	1963 mm
PRO-4288GR.G1SV	42	800 mm	800 mm	1963 mm
PRO-4280GR.G1SV	42	800 mm	1000 mm	1963 mm
PRO-4282GR.G1SV	42	800 mm	1200 mm	1963 mm
PRO-4768GR.G1SV	47	600 mm	800 mm	2186 mm
PRO-4788GR.G1SV	47	800 mm	800 mm	2186 mm
PRO-4780GR.G1SV	47	800 mm	1000 mm	2186 mm
PRO-4782GR.G1SV	47	800 mm	1200 mm	2186 mm

19“ Network Cabinet PRO-Advanced, Rear Door with Turning Handle, RAL7035

Similar to PRO, but rear door steel full height (without cable entry), 1-part, turning handle and 3-point bar-locking

Front door Glass door 1-Part
Rear door Steel door 1-Part

Art.-No.	U	Width	Depth	Height
PRO-4288GR.G1S1	42	800 mm	800 mm	1963 mm
PRO-4280GR.G1S1	42	800 mm	1000 mm	1963 mm

Roof with fan openings and surrounding cable entries

Cabinet bottom with pre-installed earthing bar, surrounding cable entries and pre-punched cutout 380 x 380 mm

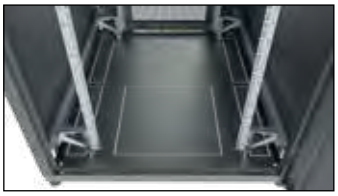
19" Network Cabinet PRO-Modular „Open Rack"

19" rack frame according to DIN41494
Screwed steel sheet frame, completely pre-assembled, self-ventilated, detachable
Inside front and rear 4 x 19"profiles (2 front, 2 rear-sided), galvanised, step-less depth-adjustable
Contrariwise numbering of rack units at the 19" profiles
Delivery without front/rear door and side walls for modular, individual configuration
For installed front and rear door, door stop left or right-sided possible
Cabinets stackable side-by-side with and without removal of the side walls, baying set (Art.-No. PRO-ANR0X), otherwise screwable via screw set M6
Roof and bottom with 4/6 pre-punched openings for cable entry (450 x 90 mm), for 600 mm cabinet width cable entry only rear
Roof prepared for accommodation of 2-fan or 4-fan units, bottom with pre-punched opening for filter or cable entry modules
Internal earthing of all cabinet sections
Pre-assembled earthing bar rear-sided in the middle of the cabinet (ports: 2 x M5 + 2 x 8 mm)
Max. load 1000 kg (depths 600 / 800 mm) resp. 1360 kg (depths 1000 / 1200 mm for >24U)
Paint finish RAL7035, light grey / RAL9005, jet black
Protection degree IP20
Included accessories: 1 x brush, earthing bar pre-installed, 4 x levelling feet M12, 2 x key
Delivery in transport packaging on disposable pallet

Art.-No.	U	Width	Depth	Height	Front Door	Rear Door	Colour
PRO-4266GR.0D	42	600 mm	600 mm	1963 mm	Without	Without	RAL7035
PRO-4268GR.0D	42	600 mm	800 mm	1963 mm	Without	Without	RAL7035
PRO-4260GR.0D	42	600 mm	1000 mm	1963 mm	Without	Without	RAL7035
PRO-4262GR.0D	42	600 mm	1200 mm	1963 mm	Without	Without	RAL7035
PRO-4286GR.0D	42	800 mm	600 mm	1963 mm	Without	Without	RAL7035
PRO-4288GR.0D	42	800 mm	800 mm	1963 mm	Without	Without	RAL7035
PRO-4280GR.0D	42	800 mm	1000 mm	1963 mm	Without	Without	RAL7035
PRO-4282GR.0D	42	800 mm	1200 mm	1963 mm	Without	Without	RAL7035
PRO-4266TS.0D	42	600 mm	600 mm	1963 mm	Without	Without	RAL9005
PRO-4268TS.0D	42	600 mm	800 mm	1963 mm	Without	Without	RAL9005
PRO-4260TS.0D	42	600 mm	1000 mm	1963 mm	Without	Without	RAL9005
PRO-4262TS.0D	42	600 mm	1200 mm	1963 mm	Without	Without	RAL9005
PRO-4286TS.0D	42	800 mm	600 mm	1963 mm	Without	Without	RAL9005
PRO-4288TS.0D	42	800 mm	800 mm	1963 mm	Without	Without	RAL9005
PRO-4280TS.0D	42	800 mm	1000 mm	1963 mm	Without	Without	RAL9005
PRO-4282TS.0D	42	800 mm	1200 mm	1963 mm	Without	Without	RAL9005
PRO-4780GR.0D	47	800 mm	1000 mm	1963 mm	Without	Without	RAL7035
PRO-4782GR.0D	47	800 mm	1200 mm	1963 mm	Without	Without	RAL7035
PRO-4780TS.0D	47	800 mm	1000 mm	1963 mm	Without	Without	RAL9005
PRO-4782TS.0D	47	800 mm	1200 mm	1963 mm	Without	Without	RAL9005

19" Server Cabinets PRO

19" server cabinet according to DIN41494
Steel sheet housing with screwed frame, completely pre-assembled, self-ventilated, detachable
Inside front and rear 4 x 19"profiles (2 front, 2 rear-sided), galvanised, step-less depth-adjustable
Contrariwise numbering of rack units at the 19" profiles
Front and rear door with 3-point turning handle (up to 24U 1-point), lockable, incl. profile half-cylinder acc. to DIN18252 / EN 1303
Profile half-cylinder exchangeable by customer (30/10 mm)
Door stop for front and rear door possible left- or right-sided
Detachable side walls with 2 x latch locking (lock equal to the door lock)
Cabinets stackable side-by-side with and without removal of the side walls, baying set (Art.-No. PRO-ANR0X), otherwise screwable via screw set M6
Roof and bottom with 4/6 pre-punched openings for cable entry (450 x 90 mm), for 600 mm cabinet width cable entry only rear
Roof prepared for accommodation of 2-fan or 4-fan units, bottom with pre-punched opening for filter or cable entry modules
Internal earthing of all cabinet sections
Pre-assembled earthing bar rear-sided in the middle of the cabinet (ports: 20 x M5 + 2 x 8 mm)
Max. load 1000 kg (depths 600 / 800 mm) resp. 1360 kg (depths 1000 / 1200 mm for >24U)
Paint finish RAL9005, jet black
Protection degree IP20
Included accessories: 1 x brush, 1 x set of captive nuts (PU 20 pcs.), earthing bar and earthing cables, 4 x levelling feet M12, 2 x key
Delivery in transport packaging on disposable pallet



Art.-No.	U	Width	Depth	Height	Front Door	Rear Door
PRO-2460TS.P1	24	600 mm	1000 mm	1163 mm	Steel perforated 1-part	Steel perforated 1-part
PRO-4260TS.P1	42	600 mm	1000 mm	1963 mm	Steel perforated 1-part	Steel perforated 1-part
PRO-4262TS.P1	42	600 mm	1200 mm	1963 mm	Steel perforated 1-part	Steel perforated 1-part
PRO-4288TS.P1	42	800 mm	800 mm	1963 mm	Steel perforated 1-part	Steel perforated 1-part
PRO-4288TS.P2	42	800 mm	800 mm	1963 mm	Steel perforated 2-part	Steel perforated 2-part
PRO-4280TS.P1	42	800 mm	1000 mm	1963 mm	Steel perforated 1-part	Steel perforated 1-part
PRO-4280TS.P1P2	42	800 mm	1000 mm	1963 mm	Steel perforated 1-part	Steel perforated 2-part
PRO-4280TS.P2	42	800 mm	1000 mm	1963 mm	Steel perforated 2-part	Steel perforated 2-part
PRO-4282TS.P1	42	800 mm	1200 mm	1963 mm	Steel perforated 1-part	Steel perforated 1-part
PRO-4282TS.P1P2	42	800 mm	1200 mm	1963 mm	Steel perforated 1-part	Steel perforated 2-part
PRO-4282TS.P2	42	800 mm	1200 mm	1963 mm	Steel perforated 2-part	Steel perforated 2-part
PRO-4780TS.P1	47	800 mm	1000 mm	2186 mm	Steel perforated 1-part	Steel perforated 1-part
PRO-4780TS.P1P2	47	800 mm	1000 mm	2186 mm	Steel perforated 1-part	Steel perforated 2-part
PRO-4780TS.P2	47	800 mm	1000 mm	2186 mm	Steel perforated 2-part	Steel perforated 2-part
PRO-4782TS.P1	47	800 mm	1200 mm	2186 mm	Steel perforated 1-part	Steel perforated 1-part
PRO-4782TS.P1P2	47	800 mm	1200 mm	2186 mm	Steel perforated 1-part	Steel perforated 2-part
PRO-4782TS.P2	47	800 mm	1200 mm	2186 mm	Steel perforated 2-part	Steel perforated 2-part

Prefix	U	Cabinet Width	Cabinet Depth	Colour	Door Types	Options
PRO-	42	8	8	GR	.G1SV	0S = without Side Walls
	47	6 = 600 mm	6 = 600 mm	TS = RAL9005, jet black	.G1 = Glass door 1-Part	
	42	8 = 800 mm	8 = 800 mm	GR = RAL7035, light grey	.S1 = Steel door 1-Part / S2 = Steel door 2-Part	
	33		0 = 1000 mm		.P1 = Steel door, perf., 1-Part / P2 = Steel door, perf., 2-Part	
	24		2 = 1200 mm		.SV = Steel door 1-Part, 2 x Latch (=Standard Rear door)	
	18				.RW = Rear wall	
					.0D = unequiped Cabinet Frame with Roof („Open Rack")	

The first and second positions after the point define the front door, the third and fourth position the rear door (resp. -wall). For only one spec., front- and rear door are identical.

4-Fan Variant

Power Connector IEC C14

NEW Switchable „Silent-Mode“

2-Fan Variant

Step switch for „Silent“- and „Normal“-Mode (only 4-fan variant)

Roof Fan 2-/4-Way for PRO, incl. Thermostat

Fan unit with integrated thermostat for use in roof of cabinets PRO
For 4-fan variant: 3-stage switch (0/I/II) for speed reduction („Silent-Mode“) for especially quiet operation
For 2-fan variant: ON/OFF switch
Easy mounting at prepared opening (380 x 380 mm) hanging at cabinet roof
Housing material plastic
Paint finish RAL7035, light grey / RAL9005, jet black
Scope of delivery: fan unit incl. thermostat, mounting accessories

Art.-No.	Description	Volume Flow, Freeblowing	Noise Level	Remark
PRO-LFD04AT.GR	Roof Fan 4-Way for PRO, Opening A, incl. Thermostat, RAL7035	660 (Silent Mode: 330) m^3/h	54 (Silent Mode: 44) dB	Switchable Silent Mode
PRO-LFD02AT.GR	Roof Fan 2-Way for PRO, Opening A, incl. Thermostat, RAL7035	330 m^3/h	48 dB	
PRO-LFD04AT.TS	Roof Fan 4-Way for PRO, Opening A, incl. Thermostat, RAL9005	660 (Silent Mode: 330) m^3/h	54 (Silent Mode: 44) dB	Switchable Silent Mode
PRO-LFD02AT.TS	Roof Fan 2-Way for PRO, Opening A, incl. Thermostat, RAL9005	330 m^3/h	48 dB	

Set of Captive Nuts, 50 x M6 for Front Mounting

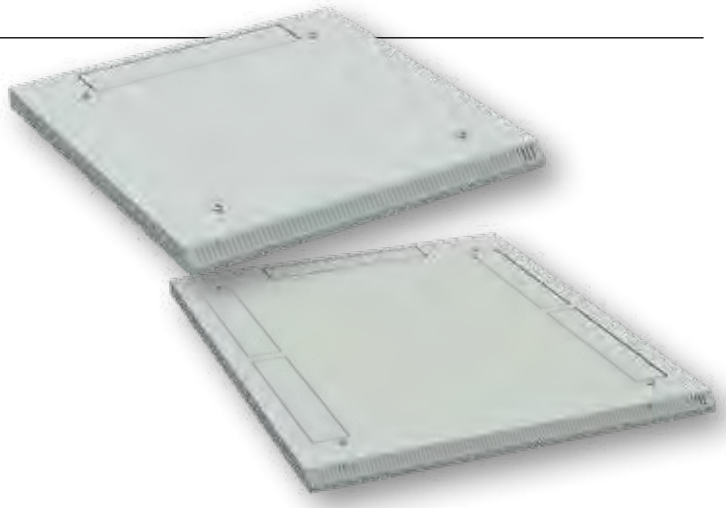
For front-sided mounting into the 19“ profile
Easy and fast - no more wounded fingers!
Set of 50 x screw M6 x 20 mm T30, washer and cage nut
Material steel, nylon

Art.-No.	Description
691102	Set of Captive Nuts 50 x M6 for Front Mounting (50 x Nut., Screw, Washer)
691104	Set of Captive Nuts, 50 x M6 Torx for Front Mounting (50 x Nut., Screw, Washer)

Also available as TORX type

Additional Roof with Cable Entries for PRO

Art.-No.	Description	Width	Depth	Colour
PRO-DCH66B.GR	Additional Roof H=40 mm	600 mm	600 mm	RAL7035
PRO-DCH68B.GR	Additional Roof H=40 mm	600 mm	800 mm	RAL7035
PRO-DCH60B.GR	Additional Roof H=40 mm	600 mm	1000 mm	RAL7035
PRO-DCH62B.GR	Additional Roof H=40 mm	600 mm	1200 mm	RAL7035
PRO-DCH86B.GR	Additional Roof H=40 mm	800 mm	600 mm	RAL7035
PRO-DCH88B.GR	Additional Roof H=40 mm	800 mm	800 mm	RAL7035
PRO-DCH80B.GR	Additional Roof H=40 mm	800 mm	1000 mm	RAL7035
PRO-DCH82B.GR	Additional Roof H=40 mm	800 mm	1200 mm	RAL7035
PRO-DCH66B.TS	Additional Roof H=40 mm	600 mm	600 mm	RAL9005
PRO-DCH68B.TS	Additional Roof H=40 mm	600 mm	800 mm	RAL9005
PRO-DCH60B.TS	Additional Roof H=40 mm	600 mm	1000 mm	RAL9005
PRO-DCH62B.TS	Additional Roof H=40 mm	600 mm	1200 mm	RAL9005
PRO-DCH86B.TS	Additional Roof H=40 mm	800 mm	600 mm	RAL9005
PRO-DCH88B.TS	Additional Roof H=40 mm	800 mm	800 mm	RAL9005
PRO-DCH80B.TS	Additional Roof H=40 mm	800 mm	1000 mm	RAL9005
PRO-DCH82B.TS	Additional Roof H=40 mm	800 mm	1200 mm	RAL9005



For aesthetic supplement and covering of roof ventilation openings of the cabinet
Cable entries rear-sided resp. lateral (see sketch)
Material steel sheet, height 40 mm
Paint finish RAL7035, light grey / RAL9005, jet black

Glass Door for PRO 42U, 1-Part, Width 800 mm, 3-Pt.-Locking

1-part glass door for 42U cabinets PRO in width 600 mm
Window made of certified safety glass (thickness 5 mm)
3-point-locking with turning handle and profile half-cylinder acc. to DIN18252 / EN1303 (PHC exchangeable by customer)
Door opening angle 180°
Paint finish (steel elements) RAL7035, light grey / RAL9005, jet black
Delivery pre-assembled incl. all hinges, screws, 2 x key

Also available as divided glass door (2-part)

Art.-No.	Description	For Cabinet Width	Colour
PRO-TUR428G1.GR	Door for PRO 42U, W=800, Glass, 1-Part, TH	800 mm	RAL7035
PRO-TUR426G1.GR	Door for PRO 42U, W=600, Glass, 1-Part, TH	600 mm	RAL7035

Steel Door for PRO 42U, 1-Part, Width 800 mm, 3-Pt.-Locking

1-part steel door for 42U cabinets PRO in width 600 mm
3-point-locking with turning handle and profile half-cylinder acc. to DIN18252 / EN1303 (PHC exchangeable by customer)
Door opening angle 180°
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery pre-assembled incl. all hinges, screws, 2 x key

Art.-No.	Description	For Cabinet Width	Colour
PRO-TUR428S1.GR	Door for PRO 42U, W=800, Steel, 1-Part, TH	800 mm	RAL7035
PRO-TUR426S1.GR	Door for PRO 42U, W=600, Steel, 1-Part, TH	600 mm	RAL7035

Steel Door for PRO 42U, 1-Part, Width 800 mm, 2 x Latch Locking

1-part steel door for 42U cabinets PRO in width 600 mm
For use as standard rear door, 3U panel for cable entry below the door
2 x latch locking (T3 / 1333)
Door opening angle 110°
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery pre-assembled incl. all hinges, screws, 2 x key

Art.-No.	Description	For Cabinet Width	Colour
PRO-TUR428SV.GR	Door for PRO 42U, W=800, Steel, 1-Part, LL, Rear Door	800 mm	RAL7035
PRO-TUR426SV.GR	Door for PRO 42U, W=600, Steel, 1-Part, LL, Rear Door	600 mm	RAL7035

Steel Door for PRO 42U, 2-Part, Width 800 mm, 3-Pt.-Locking

2-part steel door, perforated, for 42U cabinets PRO in width 800 mm
Perforation 80 %
3-point-locking with turning handle and profile half-cylinder acc. to DIN18252 / EN1303 (PHC exchangeable by customer)
Door opening angle 180°
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery pre-assembled incl. all hinges, screws, 2 x key

Art.-No.	Description	For Cabinet Width	Colour
PRO-TUR428S2.GR	Door for PRO 42U, W=800, Steel, 2-Part, TH	800 mm	RAL7035
PRO-TUR428S2.TS	Door for PRO 42U, W=800, Steel, 2-Part, TH	800 mm	RAL9005

Steel Door Perforated for PRO 42U, 1-Part, Width 800 mm, 3-Pt.-Locking

1-part steel door, perforated, for 42U cabinets PRO in width 600 mm
Perforation 80%
3-point-locking with turning handle and profile half-cylinder acc. to DIN18252 / EN1303 (PHC exchangeable by customer)
Door opening angle 180°
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery pre-assembled incl. all hinges, screws, 2 x key

Art.-No.	Description	For Cabinet Width	Colour
PRO-TUR428P1.GR	Door for PRO 42U, W=800, Steel perf., 1-Part, TH	800 mm	RAL7035
PRO-TUR426P1.GR	Door for PRO 42U, W=600, Steel perf., 1-Part, TH	600 mm	RAL7035

Steel Door Perforated for PRO 42U, 2-Part, Width 800 mm, 3-Pt.-Locking

2-part steel door, perforated, for 42U cabinets PRO in width 800 mm
Perforation 80 %
3-point-locking with turning handle and profile half-cylinder acc. to DIN18252 / EN1303 (PHC exchangeable by customer)
Door opening angle 180°
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery pre-assembled incl. all hinges, screws, 2 x key

Art.-No.	Description	For Cabinet Width	Colour
PRO-TUR428P2.GR	Door for PRO 42U, W=800, Steel perf., 2-Part, TH	800 mm	RAL7035
PRO-TUR428P2.TS	Door for PRO 42U, W=800, Steel perf., 2-Part, TH	800 mm	RAL9005

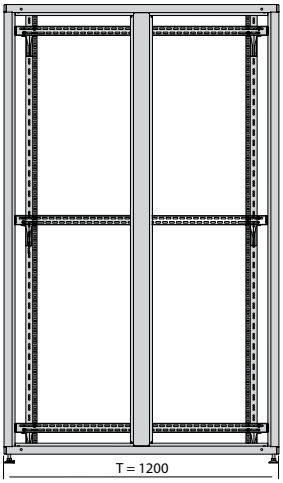
Side Walls for PRO 42U

Side wall for 47U cabinets PRO in depth 1200 mm
Consisting of 2 elements 600 mm each
With 2 x latch locking (locking T3 / 1333)
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Scope of delivery: side wall, 1 x key, earthing cable

Art.-No.	Description	For Cabinet Depth	Colour
PRO-W426E.GR	Side Wall for PRO 42U, D=600, 1-Part	600 mm	RAL7035
PRO-W428E.GR	Side Wall for PRO 42U, D=800, 1-Part	800 mm	RAL7035
PRO-W420E.GR	Side Wall for PRO 42U, D=1000, 1-Part	1000 mm	RAL7035
PRO-W422Z.GR	Side Wall for PRO 42U, D=1200, 2-Part	1200 mm	RAL7035
PRO-W426E.TS	Side Wall for PRO 42U, D=600, 1-Part	600 mm	RAL9005
PRO-W428E.TS	Side Wall for PRO 42U, D=800, 1-Part	800 mm	RAL9005
PRO-W420E.TS	Side Wall for PRO 42U, D=1000, 1-Part	1000 mm	RAL9005
PRO-W422Z.TS	Side Wall for PRO 42U, D=1200, 2-Part	1200 mm	RAL9005

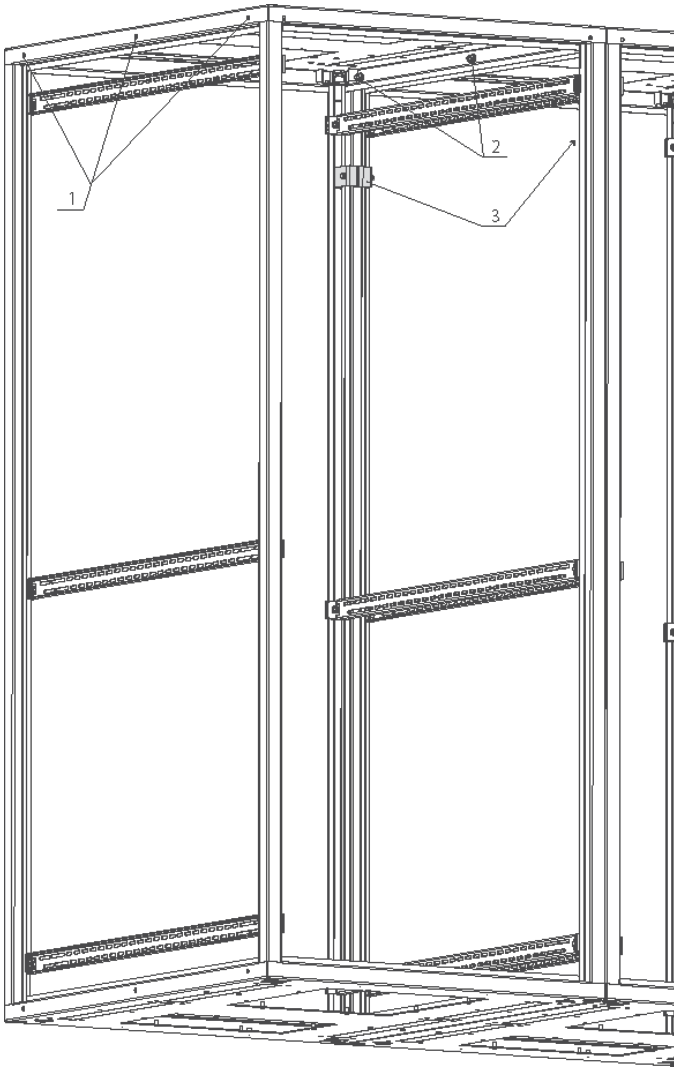
Prefix	Type	U	Cabinet Depth	Type	Colour
PRO-	W	42	8	E	.GR
	W = Wall	47	6 = 600 mm	E = 1-Part	.GR = RAL7035, light grey
		42	8 = 800 mm	Z = 2-Part	
		33	0 = 1000 mm		.TS = RAL9005, jet black
		24	2 = 1200 mm		
		18			

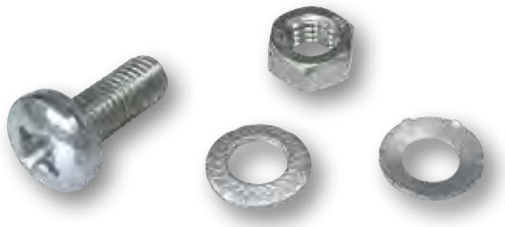
Side walls for cabinet depths 600 mm, 800 mm and 1000 mm consisting of one part.
Side walls for cabinet depth 1200 mm consisting of 2 parts 600 mm each.



For cabinet depth 1200 mm 2 side walls type 600 mm are used

1 - Line-Up Openings in Frame
2 - Line-Up Set Screws (4 Pcs. in Set)
3 - Lin-Up Clamping Connector Set





Line-Up Connectors for PRO, 4 Pcs. in Set

Connection set for connection of cabinets PRO at the lateral openings in roof and bottom
Usable with and without side walls
Also suitable for connection of server cabinets e.g. with side coolers or In-Row coolers
1 set suitable for connection of 2 cabinets
Scope of delivery: 4 x screw M8, 4 x nut M8, 8 x washer

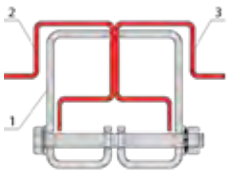
Art.-No.	Description
PRO-ANR01	Line-Up Set for PRO

Line-Up Clamping Connector Set for PRO

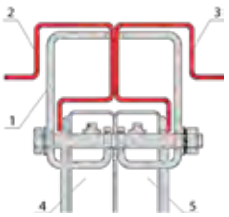
Clamp connector for raising the stability of lined-up cabinets PRO
Recommended for load over 400 kg
Suitable for use with and without side walls
Scope of delivery: 1 set consisting of 4 x clamp connector

Art.-No.	Description
PRO-ANR02	Set of Clamp Connectors for PRO

Use of Clamping Connector without Side Walls

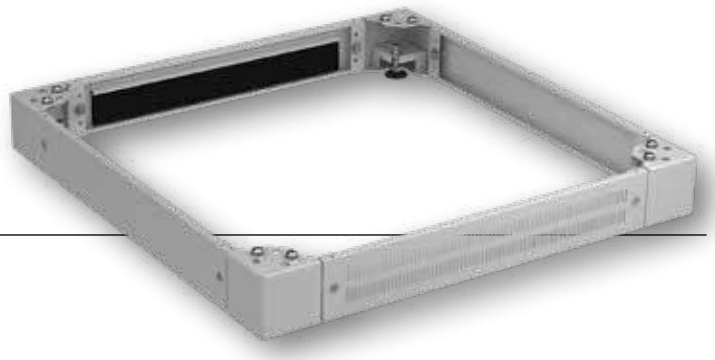


Use of Clamping Connector with Side Walls



Important Note for Use with Side Walls:
Therefore the walls must be ordered and manufactured with holes or drilled by customer at construcion site - please speak with us !

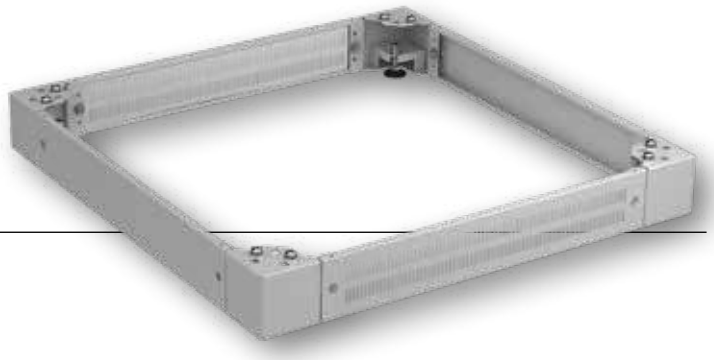
Description of Drawing:
1 - Clamp connector
2 - Pole left cabinet
3 - Pole right cabinet
4 - Side wall left cabinet
5 - Side wall right cabinet



Plinth 100 mm for PRO

Consisting of 4 very solid, levelable plinth corners and 4 covers
Front cover perforated, rear cover with cable entry via brush
Side covers closed
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery unassembled, incl. mounting material

Art.-No.	For Cabinet Width	For Cabinet Height	Colour
PRO-SOK66PB.GR	600 mm	600 mm	RAL7035
PRO-SOK68PB.GR	600 mm	800 mm	RAL7035
PRO-SOK60PB.GR	600 mm	1000 mm	RAL7035
PRO-SOK62PB.GR	600 mm	1200 mm	RAL7035
PRO-SOK86PB.GR	800 mm	600 mm	RAL7035
PRO-SOK88PB.GR	800 mm	800 mm	RAL7035
PRO-SOK80PB.GR	800 mm	1000 mm	RAL7035
PRO-SOK82PB.GR	800 mm	1200 mm	RAL7035
PRO-SOK66PB.TS	600 mm	600 mm	RAL9005
PRO-SOK68PB.TS	600 mm	800 mm	RAL9005
PRO-SOK60PB.TS	600 mm	1000 mm	RAL9005
PRO-SOK62PB.TS	600 mm	1200 mm	RAL9005
PRO-SOK86PB.TS	800 mm	600 mm	RAL9005
PRO-SOK88PB.TS	800 mm	800 mm	RAL9005
PRO-SOK80PB.TS	800 mm	1000 mm	RAL9005
PRO-SOK82PB.TS	800 mm	1200 mm	RAL9005



Plinth 100 mm, Perforated, for PRO

Consisting of 4 very solid, levellable plinth corners and 4 covers
Front and rear cover perforated
Side covers closed
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery unassembled, incl. mounting material

Art.-No.	For Cabinet Width	For Cabinet Height	Colour
PRO-SOK88PP.GR	800 mm	800 mm	RAL7035
PRO-SOK88PP.TS	800 mm	800 mm	RAL9005

Plinth incl. Tilt Protection for PRO

Consisting of 4 very stable plinth corners (fixed heigth), 3 covers and 1 tilt protection element
For cabinet depths 1000 and 1200 mm
All sides closed
Material steel sheet
Paint finish RAL9005, jet black
Delivery unassembled, incl. mounting material

Art.-No.	For Cabinet Width	For Cabinet Height	Colour
PRO-SKI60.TS	600 mm	1000 mm	RAL9005
PRO-SKI62.TS	600 mm	1200 mm	RAL9005
PRO-SKI80.TS	800 mm	1000 mm	RAL9005
PRO-SKI82.TS	800 mm	1200 mm	RAL9005

4 Plinth Corners PRO, Levellable, H=100 mm

Set of 4 very stable plinth corners
Plinth height 100 mm, levellable
Suitable for individual assembly with plinth covers PRO-SOBxx
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
PRO-SOE100N.GR	4 Plinth Corners for PRO, Levellable, H=100 mm, RAL7035	RAL7035
PRO-SOE100N.TS	4 Plinth Corners for PRO, Levellable, H=100 mm, RAL9005	RAL9005

4 Plinth Corners PRO, Levellable, H=200 mm

Set of 4 very stable plinth corners
Plinth height 200 mm, levellable
Suitable for individual assembly with plinth covers PRO-SOBxx
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
PRO-SOE200N.GR	4 Plinth Corners for PRO, Levellable, H=200 mm, RAL7035	RAL7035
PRO-SOE200N.TS	4 Plinth Corners for PRO, Levellable, H=200 mm, RAL9005	RAL9005

4 Plinth Corners PRO, Fixed, H=100 mm

Set of 4 very stable plinth corners
Plinth height 100 mm fix (not levellable)
Suitable for individual assembly with plinth covers PRO-SOBxx
Suitable for screwing at the floor and for use with vibration dampers PRO-VIB01
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
PRO-SOE100F.GR	4 Plinth Corners for PRO, Fixed, H=100 mm, RAL7035	RAL7035
PRO-SOE100F.TS	4 Plinth Corners for PRO, Fixed, H=100 mm, RAL9005	RAL9005

4 Plinth Corners PRO, Fixed, H=200 mm

Set of 4 very stable plinth corners
Plinth height 200 mm fix (not levellable)
Suitable for individual assembly with plinth covers PRO-SOBxx
Suitable for screwing at the floor and for use with vibration dampers PRO-VIB01
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
PRO-SOE200F.GR	4 Plinth Corners for PRO, Fixed, H=200 mm, RAL7035	RAL7035
PRO-SOE200F.TS	4 Plinth Corners for PRO, Fixed, H=200 mm, RAL9005	RAL9005

Delivery without plinth corner

Vibration Damper for PRO

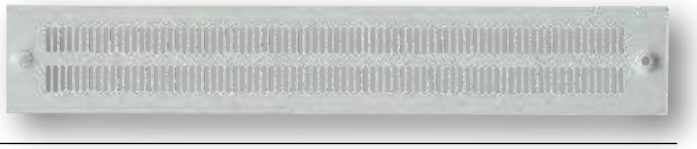
Vibration damper for use under the plinths of cabinet series PRO
Additional screwing of the plinth corners an the floor is recommended
Suitable for use with plinths corners PRO-SOE100F.xx and PRO-SOE200F.xx
Material rubber
Included in delivery 4 x vibration damper

Art.-No.	Description
PRO-VIB01	Vibration Damper, Set 4 Pieces, for PRO

Plinth Cover PRO with Brush

Covers for plinths of cabinet series PRO
Suitable for use at all 4 corners of the plinth (front/rear/left/right)
1 cover necessary per 100 mm plinth height (2 covers for 200 mm)
Material steel sheet
Paint finish RAL7035, licgt grey / RAL9005, jet black
Scope of delivery: 1 cover incl. mounting accessories

Art.-No.	For Cabinet Width	For Cabinet Depth	Colour
PRO-SOB06B.GR	600 mm	600 mm	RAL7035
PRO-SOB08B.GR	800 mm	800 mm	RAL7035
PRO-SOB10B.GR	1000 mm	1000 mm	RAL7035
PRO-SOB12B.GR	1200 mm	1200 mm	RAL7035
PRO-SOB06B.TS	600 mm	600 mm	RAL9005
PRO-SOB08B.TS	800 mm	800 mm	RAL9005
PRO-SOB10B.TS	1000 mm	1000 mm	RAL9005
PRO-SOB12B.TS	1200 mm	1200 mm	RAL9005



Plinth Cover PRO Perforated

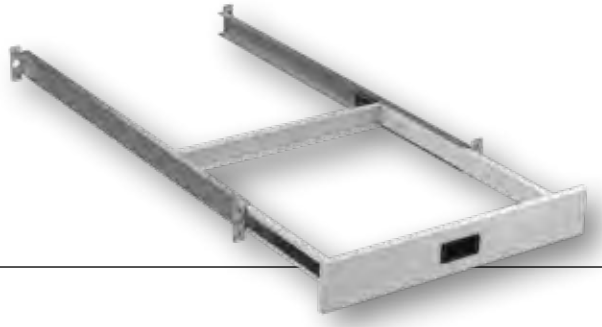
Covers for plinths of cabinet series PRO
Suitable for use at all 4 corners of the plinth (front/rear/left/right)
1 cover necessary per 100 mm plinth height (2 covers for 200 mm)
Material steel sheet
Paint finish RAL7035, licgt grey / RAL9005, jet black
Scope of delivery: 1 cover incl. mounting accessories

Art.-No.	For Cabinet Width	For Cabinet Depth	Colour
PRO-SOB06P.GR	600 mm	600 mm	RAL7035
PRO-SOB08P.GR	800 mm	800 mm	RAL7035
PRO-SOB10P.GR	1000 mm	1000 mm	RAL7035
PRO-SOB12P.GR	1200 mm	1200 mm	RAL7035
PRO-SOB06P.TS	600 mm	600 mm	RAL9005
PRO-SOB08P.TS	800 mm	800 mm	RAL9005
PRO-SOB10P.TS	1000 mm	1000 mm	RAL9005
PRO-SOB12P.TS	1200 mm	1200 mm	RAL9005

Plinth Cover PRO Full

Covers for plinths of cabinet series PRO
Suitable for use at all 4 corners of the plinth (front/rear/left/right)
1 cover necessary per 100 mm plinth height (2 covers for 200 mm)
Material steel sheet
Paint finish RAL7035, licgt grey / RAL9005, jet black
Scope of delivery: 1 cover incl. mounting accessories

Art.-No.	For Cabinet Width	For Cabinet Depth	Colour
PRO-SOB06V.GR	600 mm	600 mm	RAL7035
PRO-SOB08V.GR	800 mm	800 mm	RAL7035
PRO-SOB10V.GR	1000 mm	1000 mm	RAL7035
PRO-SOB12V.GR	1200 mm	1200 mm	RAL7035
PRO-SOB06V.TS	600 mm	600 mm	RAL9005
PRO-SOB08V.TS	800 mm	800 mm	RAL9005
PRO-SOB10V.TS	1000 mm	1000 mm	RAL9005
PRO-SOB12V.TS	1200 mm	1200 mm	RAL9005



Tilt Protection, Slideable, for PRO

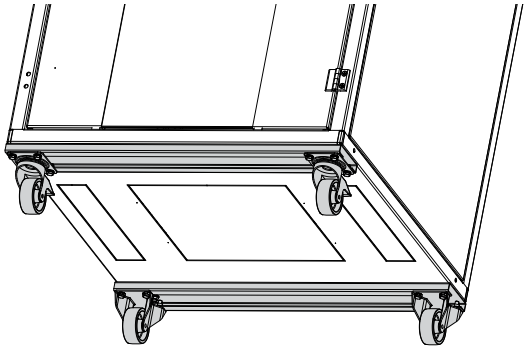
Tilt protection for plinths of cabinet series PRO
Consisting of extendable support frame and two guide rails
Suitable for plinth heights 100 mm and 200 mm
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Included in delivery: 1 x tilt protection incl. mounting accessories

Art.-No.	For Cabinet Width	For Cabinet Depth	Colour
PRO-KIS60.GR	600 mm	1000 mm	RAL7035
PRO-KIS80.GR	800 mm	1000 mm	RAL7035
PRO-KIS60.TS	600 mm	1000 mm	RAL9005
PRO-KIS80.TS	800 mm	1000 mm	RAL9005

Castor Set for PRO, Max. Load 400 kg

Castor set for cabinet series PRO
Max. load 400 kg
Scopy of delivery 2 x castor without brake, 2 x castor with brake, mounting accessories

Art.-No.	Description
PRO-ROL01	Castor Set 400 kg for PRO



Castor Set for PRO, Max. Load 600 kg

Castor set for cabinet series PRO
Max. load 400 kg
Scopy of delivery 2 x castor without brake, 2 x castor with brake, 2 x support rail, mounting accessories

Art.-No.	Description	Colour
PRO-ROL026.GR	Castor Set 600 kg, for W=600 mm, for PRO	RAL7035
PRO-ROL028.GR	Castor Set 600 kg, for W=800 mm, for PRO	RAL7035

Leveling Feet M12x40 Set - 4 Pcs.

Height adjustable 25 .. 35 mm
Thread M12 x 40, incl. locknuts
Adjustment possible by 19 mm wrench and Allen 5 mm

Art.-No.	Description
PRO-NIV01	Leveling Feet M12, Set of 4 Pieces, for PRO

Module Closed for PRO

Module insert for cabinet bottom in cabinet series PRO
Suitable for opening 380 x 380 mm (A-type, see sketch)
Material steel sheet
Paint finish RAL7035, light grey / RAL9009, jet black
Delivery incl. mounting material

Art.-No.	Description	Colour
PRO-MOD01A.GR	Module, Closed	RAL7035
PRO-MOD01A.TS	Module, Closed	RAL9005

Module with Perforation for PRO

Module insert for cabinet bottom in cabinet series PRO
Air inlet via perforation
Suitable for opening 380 x 380 mm (A-type, see sketch)
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery incl. mounting material

Art.-No.	Description	Colour
PRO-MOD02A.GR	Module with Perforation	RAL7035
PRO-MOD02A.TS	Module with Perforation	RAL9005

Module with Filter Mat for PRO

Module insert for cabinet bottom in cabinet series PRO
Air inlet via filter mat
Suitable for opening 380 x 380 mm (A-type, see sketch)
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery incl. mounting material

Art.-No.	Description	Colour
PRO-MOD03A.GR	Module with Filter Mat	RAL7035
PRO-MOD03A.TS	Module with Filter Mat	RAL9005

Module with Brush Entry for PRO

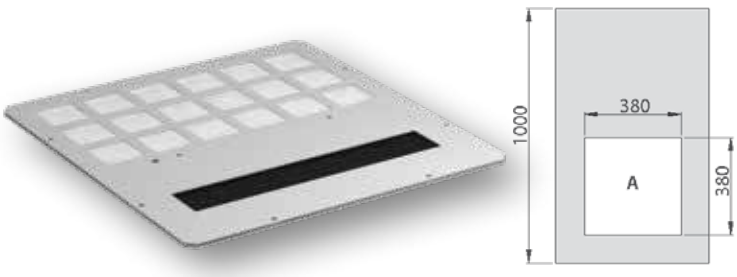
Module insert for cabinet bottom in cabinet series PRO
Cable entry via brush
Cutout 170 x 300 mm, one side can be opened for retrofitting
Suitable for opening 380 x 380 mm (A-type, see sketch)
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery incl. mounting material

Art.-No.	Bezeichnung	Colour
PRO-MOD04A.GR	Module with Brush Entry	RAL7035
PRO-MOD04A.TS	Module with Brush Entry	RAL9005

Module w. Foam Entry for PRO

Module insert for cabinet bottom in cabinet series PRO
Cable entry via foam
Suitable for opening 380 x 380 mm (A-type, see sketch)
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery incl. mounting material

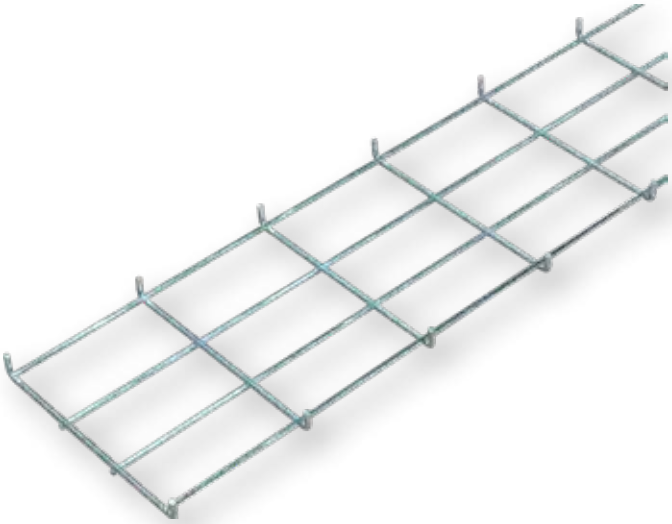
Art.-No.	Description	Colour
PRO-MOD05A.GR	Module with Foam Entry	RAL7035
PRO-MOD05A.TS	Module with Foam Entry	RAL9005



Module with Filter and Brush for PRO

Module insert for cabinet bottom in cabinet series PRO
Cable entry via brush, air inlet via filter mat
Suitable for opening 380 x 380 mm (A-type, see sketch)
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery incl. mounting material

Art.-No.	Bezeichnung	Colour
PRO-MOD06A.GR	Module with Filter and Brush	RAL7035
PRO-MOD06A.TS	Module with Filter and Brush	RAL9005



Vertical Cable Tray for PRO 40-42U, Mesh

For vertical cable routing in the cabinet
Mounting at the lateral depth rails
Note: for 600 mm cabinet width the cable tray fits in the space between depth rail and side wall
Other U-types available on request
Material steel sheet, galvanised
Scope of delivery: 1 x cable tray incl. mounting accessories

Art.-No.	Depth	Depth
PRO-KRI42G	Vertical Cable Tray for 40-42U, Mesh	15 mm

Vertical Cable Tray for PRO 40-42U, Steel Sheet

For vertical cable routing in the cabinet
Mounting at the lateral depth rails
Note: for 600 mm cabinet width only mountable at the inner side of the depth rail (fits not between depth rail and side wall)
Other U-variants available on request
Material steel sheet, galvanised
Scope of delivery: 1 x cable tray incl. mounting accessories

Art.-No.	Depth	Depth
PRO-KRI42B	Vertical Cable Tray for 40-42U, Steel Sheet	30 mm

Swing Frame for PRO 42/40U, Asymmetrical

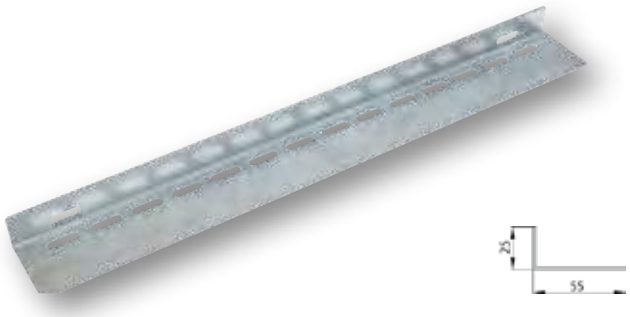
19" swing frame for mounting in 600 or 800 mm wide cabinets PRO
Usable height 40U
Max. mounting depth 440 mm due to asymmetrical construction
With door fixing and locking with 2 x latch
Frame stop left and right possible due to turn around 180°
Opening angle max. 120°
Max. load 150 kg
Material Steel sheet, steel profiles
Paint finish RAL7035, light grey

Art.-No.	Description	For Cabinet Width	Max. Load	Colour
PRO-SWR426A.GR	Swing Frame for PRO 42U	600 mm	150 kg	RAL7035
PRO-SWR428A.GR	Swing Frame for PRO 42U	800 mm	150 kg	RAL7035

Mounting Plate for PRO 42U, Cabinet Width 800 mm

For mounting of various devices in the cabinet
Material steel sheet Aluzinc, 3 mm
Delivery incl. mounting material

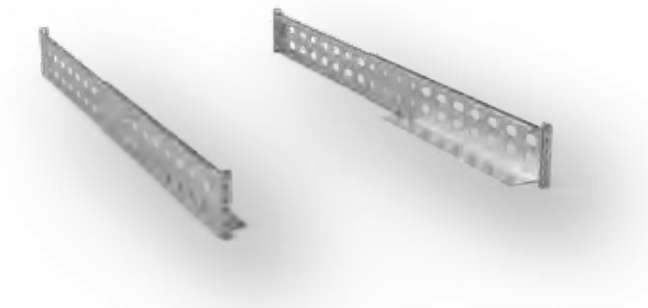
Art.-No.	Description
PRO-MOP428	Mounting Plate for 42U, Cabinet Width 800 mm



Heavy-Duty Sliding Rails for PRO

For mounting of heavy devices in network or server cabinets
Mounting at the front and rear-sided 19“ profiles
Max. load 100 kg
Material steel sheet
PU 2 pieces

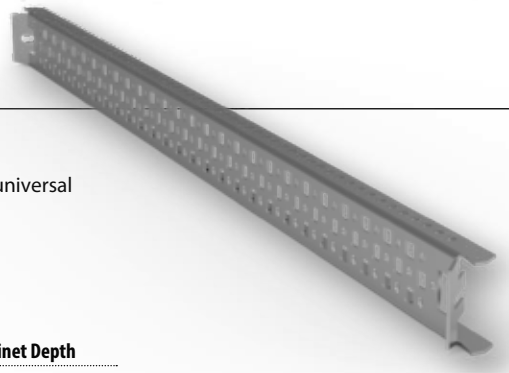
Art.-No.	Description	Cabinet Depth
PRO-SGL06	Heavy-Duty Sliding Rails	600 mm
PRO-SGL08	Heavy-Duty Sliding Rails	800 mm
PRO-SGL10	Heavy-Duty Sliding Rails	1000 mm



Sliding Rails, Telescopic, for PRO

For mounting of heavy devices e.g. servers
Telescopic extendable
Material steel, galvanised
Max. load 50 kg
Delivery as set of 2 left/right

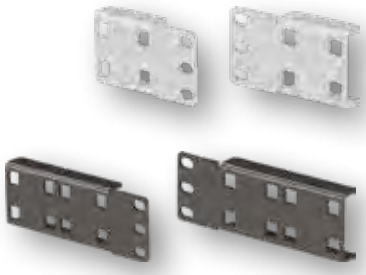
Art.-No.	Description	Adjustment	Cabinet Depth
PRO-GLT06	Sliding Rails, Telescopic, for PRO	350 – 600 mm	600 - 800 mm
PRO-GLT08	Sliding Rails, Telescopic, for PRO	550 – 900 mm	800 - 1000 mm
PRO-GLT10	Sliding Rails, Telescopic, for PRO	850 – 1150 mm	1000 - 1200 mm



Multi Function Rail Horizontal, for PRO

Multi function rail for mounting between the cabinet poles, for universal mounting of accessories, cable routing etc.
Positioning in any height possible
Material steel
Delivery 1 x rail incl. mounting material

Art.-No.	Description	Cabinet Depth
PRO-MFH06	Multi Function Rail, Horizontal	600 mm
PRO-MFH08	Multi Function Rail, Horizontal	800 mm
PRO-MFH10	Multi Function Rail, Horizontal	1000 mm
PRO-MFH12	Multi Function Rail, Horizontal	1200 mm



PDU Holder, Set of 2, for PRO

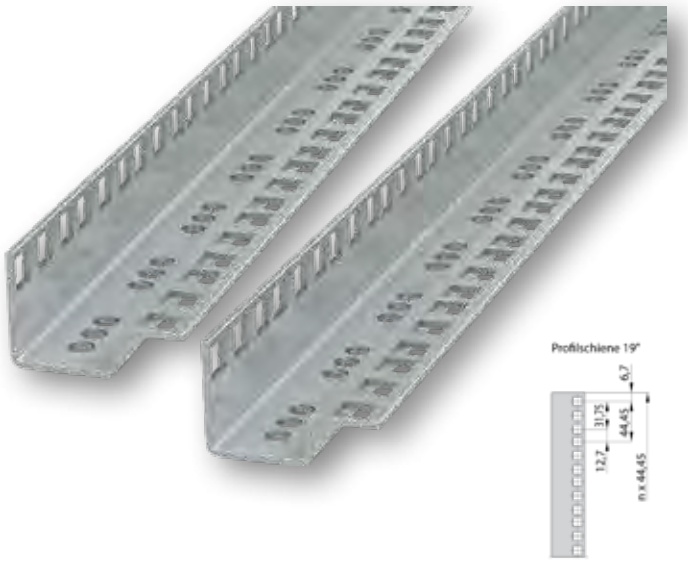
For vertical mounting of socket strips (PDU) lateral at 19“ profiles and racks
Only for cabinet depth 800 mm
Available in variants 1-way (for 1 PDU) and 2-way (for 2 PDU beside eachother)
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Scope of delivery 2 x PDU holder inxl. mounting material

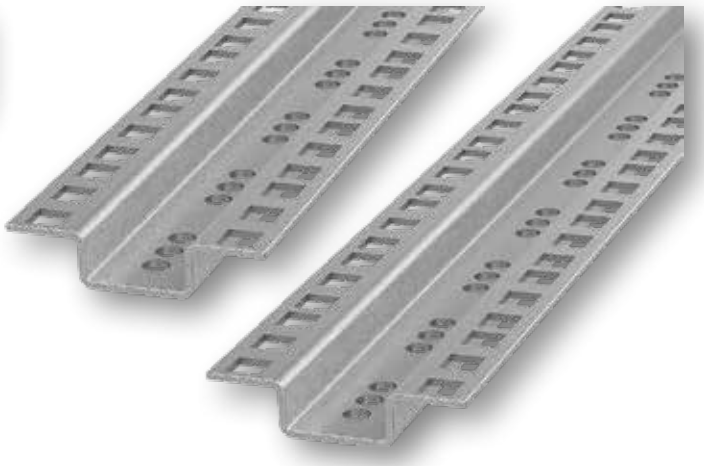
Art.-No.	Description	Colour
PRO-PDU01.GR	PDU Holder 1-Way für PRO, Set of 2	RAL7035
PRO-PDU01.TS	PDU Holder 1-Way für PRO, Set of 2	RAL9005
PRO-PDU02.TS	PDU Holder 2-Way für PRO, Set of 2	RAL9005

PDU Carrier 42U, for PRO

For vertical mounting of socket strips (PDU) in cabinets PRO in width 800 mm
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Scope of delivery 1 x PDU carrier incl. mounting material
Other U on request

Art.-No.	Description	For Cabinet Width	Colour
PRO-PDU03.GR	PDU Carrier for PRO 42U	800 mm	RAL7035
PRO-PDU03.TS	PDU Carrier for PRO 42U	800 mm	RAL9005





19“ Profile Rail for PRO, Set 2 Pieces

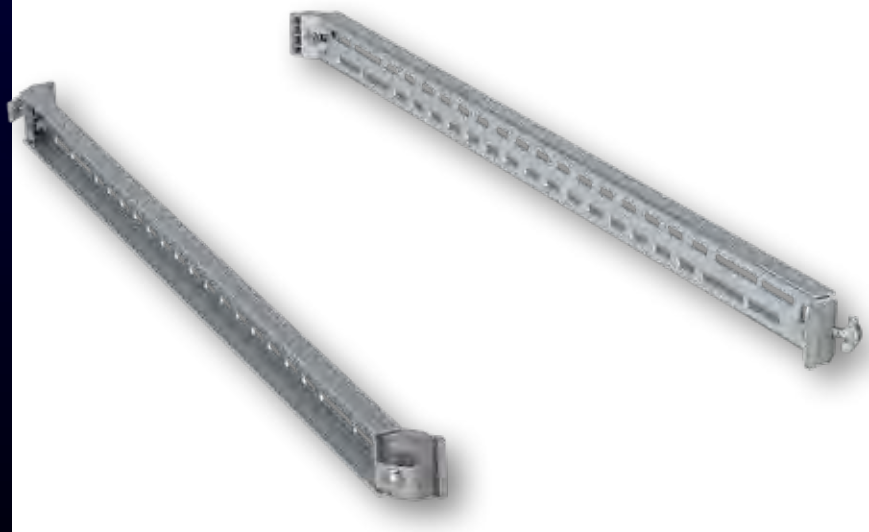
For Retrofitting in network and server cabinets PRO
Double-contrariwise numbering of the rack units
For cabinet width 800 mm outriggers are necessary for mounting
Material steel, galvanised

Art.-No.	Description	U
PRO-PR018	Profile Rail for 18U, Set 2 Pieces, for PRO	18
PRO-PR024	Profile Rail for 24U, Set 2 Pieces, for PRO	24
PRO-PR033	Profile Rail for 33U, Set 2 Pieces, for PRO	33
PRO-PR042	Profile Rail for 42U, Set 2 Pieces, for PRO	42
PRO-PR047	Profile Rail for 47U, Set 2 Pieces, for PRO	47

Middle Profiles for PRO, Set of 2 Pieces

Vertical middle profile for support of heavy devices
Mounting between the front and rear 19“ level
Material steel, galvanised

Art.-No.	Description	U
PRO-MPR24	Middle Profile for PRO 24U, Set 2 Pieces	24
PRO-MPR33	Middle Profile for PRO 33U, Set 2 Pieces	33
PRO-MPR42	Middle Profile for PRO 42U, Set 2 Pieces	42
PRO-MPR47	Middle Profile for PRO 47U, Set 2 Pieces	47



Also available for mounting type
21“ / ETSI - ask your sales contact !

Depth Rails Set for PRO, 2 Pieces

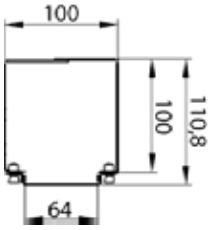
For mounting of profile rails, ducts or cable trays in cabinet series PRO
Material steel / aluzinc diecast
Included in delivery: 2 x depth rails incl. mounting accessories

Art.-No.	Description	Cabinet Depth
PRO-TST06	Depth Rails Set, 2 Pieces	600 mm
PRO-TST08	Depth Rails Set, 2 Pieces	800 mm
PRO-TST10	Depth Rails Set, 2 Pieces	1000 mm
PRO-TST12	Depth Rails Set, 2 Pieces	1200 mm

Cantilever Set for PRO, 4 Pieces

For mounting of the 19“ profile rails in cabinets width 800 mm
For each profile 2 outriggers are necessary
Material aluzinc diecast
Delivery incl. mounting accessories

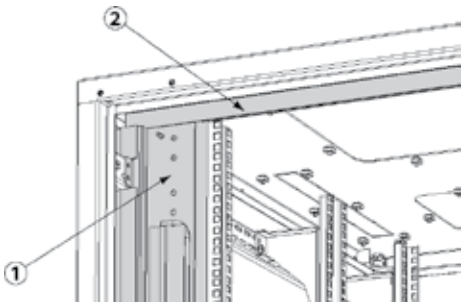
Art.-No.	Description
PRO-AUS01	Cantilever Ser, 4 Pieces



Vertical Cable Management for PRO

For vertical cable routing in network and server cabinets PRO
Mounting at the horizontal depth rails left- and right-sided in cabinet
Incl. removable front cover with quick fastener
Material steel sheet
Scope of delivery: 1 x vertical cable manager incl. mounting accessories

Art.-No.	Description	U	Colour
PRO-VKM42.GR	Vertical Cable Management, 1 Piece	42 U	RAL7035
PRO-VKM47.GR	Vertical Cable Management, 1 Piece	47 U	RAL7035
PRO-VKM42.TS	Vertical Cable Management, 1 Piece	42 U	RAL9005
PRO-VKM47.TS	Vertical Cable Management, 1 Piece	47 U	RAL9005



1 - Side Cover with Cable Entry
2 - Horizontal Brush

Horizontal Brush for PRO

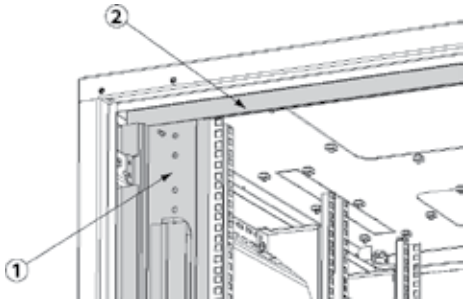
For control of the cold air flow upside and below of the 19" level
Mounting below resp. upside of the cabinet roof and bottom
Scope of delivery 1 x brush

Art.-No.	Description	For Cabinet Width	Colour
PRO-HOB600	Horiontal Brush for PRO	600 mm	Black
PRO-HOB800	Horiontal Brush for PRO	800 mm	Black

Side Cover for PRO, Width 800 mm

Side cover for cabinets PRO in width 800 mm
For mounting at the lateral depth rails
Material Steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	U	Colour
PRO-SIB42.GR	Side Cover for PRO, W=800, 2 Pcs.	42	RAL7035
PRO-SIB47.GR	Side Cover for PRO, W=800, 2 Pcs.	47	RAL7035
PRO-SIB42.TS	Side Cover for PRO, W=800, 2 Pcs.	42	RAL9005
PRO-SIB47.TS	Side Cover for PRO, W=800, 2 Pcs.	47	RAL9005

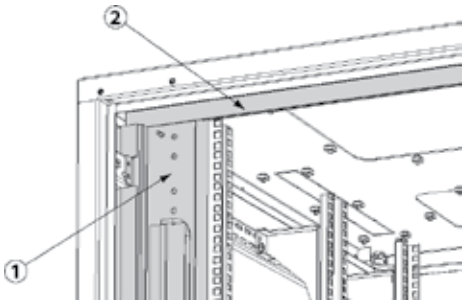


1 - Side Cover with/without Cable Entry
2 - Horizontal Brush

Side Cover for Air Control for PRO, Width 800

For covering the area beside the 19" profiles in network- and server cabinets
PRO in width 800 mm
Serves as blinding and control of the air flow
Mounting left- and right-sided possible
Screw mounting on the lateral depth-rails
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Scope of delivery: 2 x panel incl. mounting accessories

Art.-No.	Description	U	Colour
PRO-SA0428.GR	Side Cover / Air Baffle for PRO, W=800, 2 Pcs.	42	RAL7035
PRO-SA0478.GR	Side Cover / Air Baffle for PRO, W=800, 2 Pcs.	47	RAL7035
PRO-SA0428.TS	Side Cover / Air Baffle for PRO, W=800, 2 Pcs.	42	RAL9005
PRO-SA0478.TS	Side Cover / Air Baffle for PRO, W=800, 2 Pcs.	47	RAL9005



1 - Side Cover with/without Cable Entry
2 - Horizontal Brush

Side Cover for Air Control for Width 600

For covering the area beside the 19" profiles in network- and server cabinets
PRO in width 600 mm
Serves as blinding and control of the air flow
Mounting left- and right-sided possible
Screw mounting on the lateral depth-rails
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Scope of delivery: 2 x panel incl. mounting accessories

Art.-No.	Description	U	Colour
PRO-SA0426.GR	Side Cover / Air Baffle for PRO, W=600, 2 Pcs.	42	RAL7035
PRO-SA0476.GR	Side Cover / Air Baffle for PRO, W=600, 2 Pcs.	47	RAL7035
PRO-SA0426.TS	Side Cover / Air Baffle for PRO, W=600, 2 Pcs.	42	RAL9005
PRO-SA0476.TS	Side Cover / Air Baffle for PRO, W=600, 2 Pcs.	47	RAL9005

Side Cover with Cable Openings for PRO, Width 800

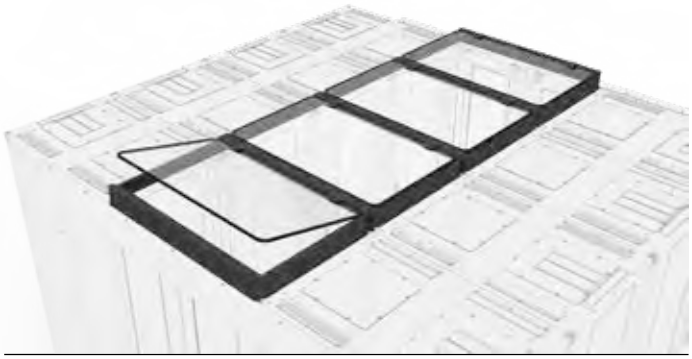
For covering the area beside the 19" profiles in network- and server cabinets
PRO in width 800 mm
With 3 openings for throughput of cables
Serves as blinding and control of the air flow
Mounting left- and right-sided possible
Screw mounting on the lateral depth-rails
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Scope of delivery: 2 x panel incl. mounting accessories

Art.-No.	Description	U	Colour
PRO-SA3428.GR	Side Cover with 3 Openings for PRO, W=800, 2 Pcs.	42	RAL7035
PRO-SA3478.GR	Side Cover with 3 Openings for PRO, W=800, 2 Pcs.	47	RAL7035
PRO-SA3428.TS	Side Cover with 3 Openings for PRO, W=800, 2 Pcs.	42	RAL9005
PRO-SA3478.TS	Side Cover with 3 Openings for PRO, W=800, 2 Pcs.	47	RAL9005

Sliding Door for Cold/Warm Aisle PRO, Aisle Width 1200 mm

Sliding door for cold/warm aisle containment
Complete set incl. 2 x door element, upper and lower guide rails, two side walls and mounting material
Sliding door with turning handle and profile half-cylinder DIN 18252 /EN1303
Profile half-cylinder exchangeable by customer
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery incl. mounting material

Art.-No.	Description	Height	Aisle Width	Colour
PRO-STR4220M.GR	Sliding Door for Cold/Warm Aisle for PRO	42U	1200 mm	RAL7035
PRO-STR4221M.GR	Sliding Door for Cold/Warm Aisle for PRO	42U + 100 mm	1200 mm	RAL7035
PRO-STR4720M.GR	Sliding Door for Cold/Warm Aisle for PRO	47U	1200 mm	RAL7035
PRO-STR4721M.GR	Sliding Door for Cold/Warm Aisle for PRO	47U + 100 mm	1200 mm	RAL7035
PRO-STR4220M.TS	Sliding Door for Cold/Warm Aisle for PRO	42U	1200 mm	RAL9005
PRO-STR4221M.TS	Sliding Door for Cold/Warm Aisle for PRO	42U + 100 mm	1200 mm	RAL9005
PRO-STR4720M.TS	Sliding Door for Cold/Warm Aisle for PRO	47U	1200 mm	RAL9005
PRO-STR4721M.TS	Sliding Door for Cold/Warm Aisle for PRO	47U + 100 mm	1200 mm	RAL9005



Roof Elements for Cold-/Warm Aisle PRO

Roof elements for cold/warm aisle containment
Screw mounting directly at the cabinet roof
Raised construction +100 mm
Other widths on request (e.g. for In-Row coolers)
Material steel sheet, Acryl glass

Art.-No.	Description	Width	Depth	Colour
PRO-GDE62F.GR	Aisle Roof, Raised, für PRO	600 mm	1200 mm	RAL7035
PRO-GDE82F.GR	Aisle Roof, Raised, für PRO	800 mm	1200 mm	RAL7035
PRO-GDE32F.GR	Aisle Roof, Raised, für PRO	300 mm	1200 mm	RAL7035
PRO-GDE62F.TS	Aisle Roof, Raised, für PRO	600 mm	1200 mm	RAL9005
PRO-GDE82F.TS	Aisle Roof, Raised, für PRO	800 mm	1200 mm	RAL9005
PRO-GDE32F.TS	Aisle Roof, Raised, für PRO	300 mm	1200 mm	RAL9005

We support you in configuration of your cold/warm aisle containment

Please ask your sales contact !

Aisle End for Cold-/Warm Aisle PRO

Steel sheet wall as aisle end for cold/warm aisle containment
Complete set of 2 x wall element with glass window of certified safety glass
Variant +100 mm for use with cabinet plinths available
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery incl. mounting material

Art.-No.	Description	For Aisle Width	Colour
PRO-GEN4220S.GR	Aisle End for Cold-/Warm Aisle for PRO 42U, 1200 mm	1200 mm	RAL7035
PRO-GEN4221S.GR	Aisle End for Cold-/Warm Aisle for PRO 42U +100 mm, 1200 mm	1200 mm	RAL7035
PRO-GEN4220S.TS	Aisle End for Cold-/Warm Aisle for PRO 42U, 1200 mm	1200 mm	RAL9005
PRO-GEN4221S.TS	Aisle End for Cold-/Warm Aisle for PRO 42U +100 mm, 1200 mm	1200 mm	RAL9005

CABINET SYSTEMS: OFFICE SERIES

The OFFICE cabinet series provides the ideal accommodation for devices in smaller network installations e.g. in the office. Thanks to the diverse design options, this type of cabinet can be successfully integrated into almost any environment.

19“ Network Cabinets OFFICE P. 194

YOU MAY ALSO BE INTERESTED IN:

Patch Cable P. 114

Single Fan Unit P. 197

19“ Socket Strips P. 143

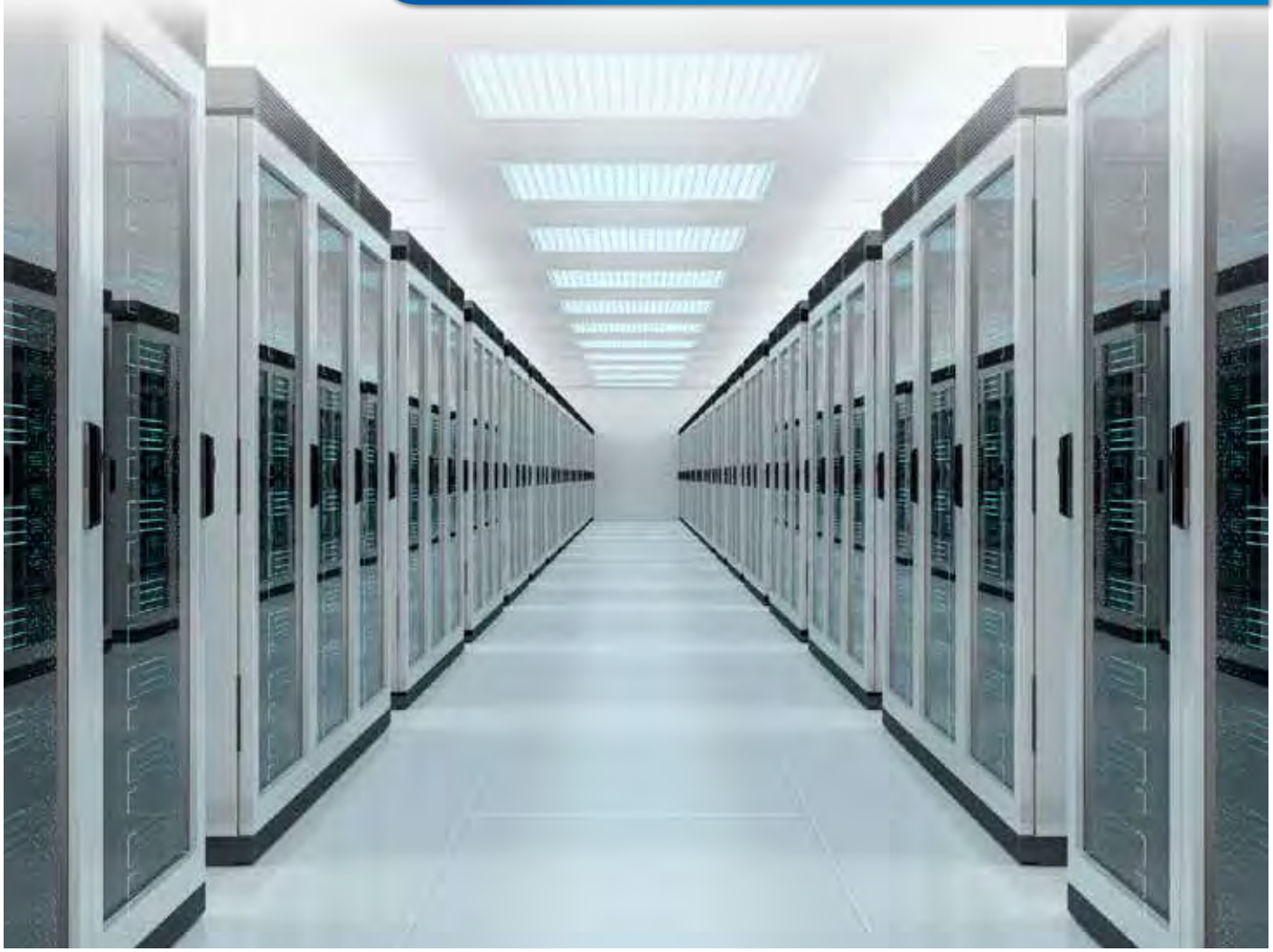
19“ Switches (Copper and Fiber Optic) P. 312

EFB-ELEKTRONIK IS A MEMBER IN THE VIRZ (ASSOCIATION OF INNOVATIVE DATA CENTRES) EXPERT NETWORK

As a member of the Verband Innovatives Rechenzentrum e.V. (Association of Innovative Data Centres), EFB-Elektronik advocates for innovative ideas and concepts that are being developed in cooperation with other members. This creates sustainable benefits within the collaboration.
Furthermore, the association promotes the exchange of experience between experts and those responsible for data centres to combine expertise and know-how, and thus ensure an ongoing qualification of experts, engineers and staff in charge of the computing centre.

The association also nurtures the constructive dialogue between operators of data centres and their planners, the industry as well as research and science. The association strives for a sustainable further development - demand and user ready - of planning, installation and operation of data centres and all associated products.

For further information regarding the association, please refer to:
www.virz.de



Picture shows cabinet OFF-1566GR.V1RW with optional worktop (black) and distancce sleeves, castor set and further 19" cabinet accessories

19" network cabinet according to DIN41494
Steel sheet housing, self-supporting, completely pre-assembled, self-ventilated
Inside front and rear 4 x 19"profiles (2 front, 2 rear-sided), galvanised, steplessly depth-adjustable
Front door full glass, 1-part (thickness 4 mm)
Front door with 1-point latch-locking
Door stop possible left or right-sided
Bottom and rear with pre-punched openings for cable entry
Roof and bottom prepared for accommodation of 1 x fan unit (Art.-No. 691664)
Internal earthing of all cabinet sections
Paint finish RAL7035, light grey / RAL9005, jet black
Max. load 600 x 600 mm 12U 30 kg, 15U 38 kg, 18U 45 kg
Protection degree IP20
Included in delivery: 1 x brush, 4 x leveling feet M8, 2 x key
Delivery in transport packaging on disposable pallet

Matching this:

19" Network Cabinet OFFICE - acoustically insulated you find at page 207

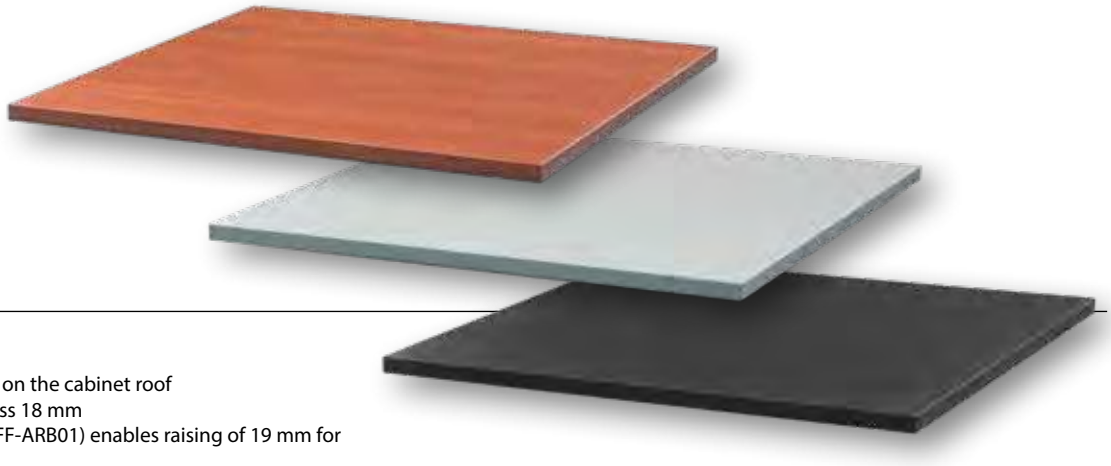
19" Network Cabinet OFFICE, RAL7035

Art.-No.	U	Width	Depth	Height	Front Door	Rear Door
OFF-1266GR.V1RW	12	600 mm	600 mm	604 mm	Full glass door 1-part	Rear wall
OFF-1566GR.V1RW	15	600 mm	600 mm	737 mm	Full glass door 1-part	Rear wall
OFF-1568GR.V1RW	15	600 mm	800 mm	737 mm	Full glass door 1-part	Rear wall
OFF-1866GR.V1RW	18	600 mm	600 mm	871 mm	Full glass door 1-part	Rear wall
OFF-1868GR.V1RW	18	600 mm	800 mm	871 mm	Full glass door 1-part	Rear wall

19" Network Cabinet OFFICE, RAL9005

Art.-No.	U	Width	Depth	Height	Front Door	Rear Door
OFF-1266TS.V1RW	12	600 mm	600 mm	604 mm	Full glass door 1-part	Rear wall
OFF-1566TS.V1RW	15	600 mm	600 mm	737 mm	Full glass door 1-part	Rear wall
OFF-1568TS.V1RW	15	600 mm	800 mm	737 mm	Full glass door 1-part	Rear wall
OFF-1866TS.V1RW	18	600 mm	600 mm	871 mm	Full glass door 1-part	Rear wall
OFF-1868TS.V1RW	18	600 mm	800 mm	871 mm	Full glass door 1-part	Rear wall

Roof, rear wall and bottom plate with pre-punched cable entries.
After breaking out these are closeable with a brush strip (included in delivery).



Worktop for OFFICE

Attractive worktop for mounting on the cabinet roof
Material MDF, laminated, thickness 18 mm
Optional distance set (Art.-No. OFF-ARB01) enables raising of 19 mm for optimised ventilation
Paint finish calvados (wood) / grey / black
Delivery incl. mounting accessories

Art.-No.	Description	Width	Depth	Colour
OFF-ARB66.CV	Worktop for OFFICE	600 mm	600 mm	Calvados
OFF-ARB68.CV	Worktop for OFFICE	600 mm	800 mm	Calvados
OFF-ARB66.GR	Worktop for OFFICE	600 mm	600 mm	Grey
OFF-ARB68.GR	Worktop for OFFICE	600 mm	800 mm	Grey
OFF-ARB66.TS	Worktop for OFFICE	600 mm	600 mm	Black
OFF-ARB68.TS	Worktop for OFFICE	600 mm	800 mm	Black

Set for Raising the Worktop

For raising the worktop to 19 mm above the roof
Necessary for mounting of fans if worktop is used
Optimisation of cabinet ventilation
Included in delviery: 4 x distance sleeve, 4 x screw M5 x 34, 4 x washer

Art.-No.	Description
OFF-ARB01	Set for Raising the Worktop

Castor Set for OFFICE

Plastic castors with steel thread bolt M8
Height 68 mm (without thread bolt)
Included in delivery: 2 x castor with brake, 2 x castor without brake

Art.-No.	Description
OFF-ROL01	Castor Set for Cabinet Series OFFICE

19“ Profile Rails for OFFICE, Set 2 Pieces

Profile rails as spare part
Material steel, galvanised

Art.-No.	Description
OFF-PRO12	Profile rails for 12U, Set 2 Pieces, for Cabinet Series OFFICE
OFF-PRO15	Profile rails for 15U, Set 2 Pieces, for Cabinet Series OFFICE
OFF-PRO18	Profile rails for 18U, Set 2 Pieces, for Cabinet Series OFFICE

Leveling Feet for OFFICE, 4 Pcs., M8

Leveling feet for cabinet series OFFICE and wall housings 1-part/2-part
Thread M8, height 56 mm
With locknut

Art.-No.	Description
OFF-NIV01	Leveling Feet for OFFICE, 4 Pcs. M8

CABINETS WITH RAISED IP PROTECTION DEGREE

Our cabinets with increased degrees of protection against dust and moisture are particularly suitable for use e.g. in heavily polluted environments and for active air conditioning. These are characterized by excellent quality and an excellent price-performance ratio.

IP55 Cabinet		P. 197
IP55 Wallhousing (Steel Door / Glass Door)		P. 198
IP40 Cabinet		P. 200

YOU MAY ALSO BE INTERESTED IN:

Patch Panel	P. 134
Monitoring & IP Thermometer	P. 234
Socket Strips	P. 240
IP65 Junction Box	P. 80

Air inlets with filters in bottom

Door with sealing and metal hinges

pre-assembled plinth 100 mm

19“ Network / Industrial Cabinet, Protection Degree IP55

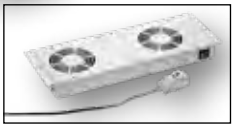
19“ Network cabinet according to DIN 41494
Steel sheet housing with welded frame, completely pre-assembled
Pre-assembled plinth 100 mm
Inside front and rear 4 x 19“ profiles (2 front, 2 rear-sided), galvanised, depth-adjustable in 25 mm raster
Numbering of rack units at the 19“ profiles
Front an rear door steel, 1-part
Front and rear door with 2-point locking with turning handle, lockable
Door opening angle front and rear > 120°
Side walls not detachable
Inner roof with pre-punched openings for fan units CLASSIC:
For cabinet depth 600 mm: 2-fan unit
For cabinet depths 800 / 1000 mm: 2/4/6-fan units
Bottom prepared with air inlet filters and rubber grommets Ø 80 mm for cable entry
Internal earthing of all cabinet sections
Max. load 1000 kg
Paint finish RAL7035, light grey / RAL9005, jet black
Protection degree IP55
Included accessories: 1 x set of captive nuts (PU 20 pcs.), pre-installed plinth, 2 x key
Delivery in transport packaging on disposable pallet

Art.-No.	U	Width	Depth	Height	Suitable Fans	Colour
692524IP55.GR	24	600 mm	600 mm	1360 mm	only 2-fan	RAL7035
692724IP55.GR	24	800 mm	800 mm	1360 mm	2/4/6-fan	RAL7035
691742IP55.GR	42	800 mm	800 mm	2160 mm	2/4/6-fan	RAL7035
692442IP55.GR	42	800 mm	1000 mm	2160 mm	2/4/6-fan	RAL7035
692524IP55.TS	24	600 mm	600 mm	1360 mm	only 2-fan	RAL9005
692724IP55.TS	24	800 mm	800 mm	1360 mm	2/4/6-fan	RAL9005
691742IP55.TS	42	800 mm	800 mm	2160 mm	2/4/6-fan	RAL9005
692442IP55.TS	42	800 mm	1000 mm	2160 mm	2/4/6-fan	RAL9005

Roof Fan Units for Standing Cabinets IP55

For installation in roof of all networking and server cabinets
19“ Mounting possible with optional mounting set (Art.-No. 691654MS / 691654MSTS)
Control via connected thermostat (Art.-No. 691642)
Thermostat and mounting material included
Rear-sided power connection via IEC C14 socket (power cable not included, e.g. Art.-No. EK504.x)
Rated voltage 230 V, 50 Hz
Illuminated switch ON/OFF
Rear sided earth connection via earth jack
Material: steel sheet
Paint finish: RAL7035 light grey / RAL9005 jet black

incl. thmeostat



2-fan unit

Art.-No.	Description	Capacity	Colour
691654V3	Roof Fan Unit, 2 Fans, for CLASSIC	320 m^3/h	RAL7035
691655V3	Roof Fan Unit, 4 Fans, for CLASSIC	640 m^3/h	RAL7035
691659V3	Roof Fan Unit, 6 Fans, for CLASSIC	920 m^3/h	RAL7035
691654TSV3	Roof Fan Unit, 2 Fans, for CLASSIC	320 m^3/h	RAL9005
691655TSV3	Roof Fan Unit, 4 Fans, for CLASSIC	640 m^3/h	RAL9005
691659TSV3	Roof Fan Unit, 6 Fans, for CLASSIC	920 m^3/h	RAL9005

Suitable for Plug & Play fan unit
Profile half-cylinder exchangeable
Usable with plinth as standing cabinet

19“ Wall Housing IP55, Steel Door

Steel sheet housing with welded frame, completely pre-assembled
Right- and left-sided metal protected air inlets for passive climatisation
Side walls not detachable
Roof hinged, inner roof prepared for mounting of Plug&Play fan unit Art.-No. 691656GR (cable not included, please order separately, e.g. Art.-No. EK504.x)
Bottom with PG glands 1 x PG48, 2 x PG21 and 3 x Ø 20 mm PVC blind grommets
Inside front 2 x 19“ profile rails, galvanised
Front door steel sheet with reinforcement and 3-point bar locking, lockable, with profile half-cylinder acc. to DIN 18252 / EN1303
Profile half-cylinder exchangeable by customer
Cabinet parts inside completely earthed
Max. load 100 kg
Paint finish RAL7035, light grey
Protection degree IP55
Plinth for use as standing cabinet available as option
Included accessories: 4 x Wall mount angle, 2 x key

Re-inforced steel door. Cabinet bottom with pre-installed cable glands.

19“ Wall Housing IP55, Steel Door, Depth 450 mm

Art.-No.	Description	U	Width	Height
691707IP55.1	19“ Wall Housing IP55, Steel Door	7	600 mm	410 mm
691709IP55.1	19“ Wall Housing IP55, Steel Door	9	600 mm	500 mm
691712IP55.1	19“ Wall Housing IP55, Steel Door	12	600 mm	630 mm
691716IP55.1	19“ Wall Housing IP55, Steel Door	16	600 mm	810 mm
691720IP55.1	19“ Wall Housing IP55, Steel Door	20	600 mm	1000 mm

19“ Wall Housing IP55, Steel Door, Depth 600 mm

Art.-No.	Description	U	Width	Height
691707IP55.2	19“ Wall Housing IP55, Steel Door	7	600 mm	410 mm
691709IP55.2	19“ Wall Housing IP55, Steel Door	9	600 mm	500 mm
691712IP55.2	19“ Wall Housing IP55, Steel Door	12	600 mm	630 mm
691716IP55.2	19“ Wall Housing IP55, Steel Door	16	600 mm	810 mm
691720IP55.2	19“ Wall Housing IP55, Steel Door	20	600 mm	1000 mm

Hinged upper roof opened, lower roof with exhaust openings for 2-fan unit

Fan Unit, 2-Fans for Wall Housings IP55, Plug & Play

Suitable for installation in wall housing series 1-PART/2-PART, FLAT PACK, IP55 and BASIC
Screw mounting hanging inside below the cabinet roof
Thermostat and mounting material included
Rear-sided power connection via IEC C14 socket (power cable not included, e.g. Art.-No. EK504.x)
Rated voltage 230 V / 50 Hz
Illuminated ON/OFF switch
Material steel sheet
Paint finish RAL7035, light grey

Art.-No.	Description	Capacity	Noise level
691656GR	2-Fan Unit, Plug & Play for Wall Housings	320 m^3/h	47 dB

Rear side with C14 power connector. Power cable please order separately, e.g. Art.-No. EK504.x

19" Wall Housing IP55, Glass Door

Steel sheet housing with welded frame, completely pre-assembled
Right- and left-sided metal protected air inlets for passive climatisation
Side walls not detachable
Roof hinged, inner roof prepared for mounting of Plug&Play fan unit Art.-No. 691656GR (cable not included, please order separately, e.g. Art.-No. EK504.x)
Bottom with PG glands 1 x PG48, 2 x PG21 and 3 x Ø 20 mm PVC blind grommets
Inside front 2 x 19" profile rails, galvanised
Front door with glass window made of cert. safety glass, reinforcement and 3-point bar locking, lockable, with profile half-cylinder acc. to DIN 18252 / EN1303
Profile half-cylinder exchangeable by customer
Cabinet parts inside completely earthed
Max. load 100 kg
Paint finish RAL7035, light grey
Protection degree IP55
Plinth for use as standing cabinet available as option
Included accessories: 4 x Wall mount angle, 2 x key

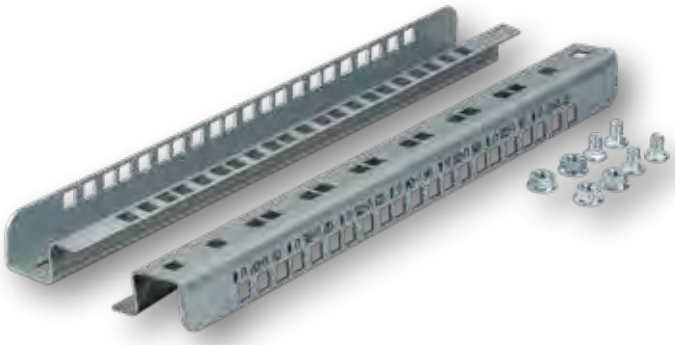
19" Wall Housing IP55, Glass Door, Depth 450 mm

Art.-No.	Description	U	Width	Height
691707IP55.1G	19" Wall Housing IP55, Glass Door	7	600 mm	410 mm
691709IP55.1G	19" Wall Housing IP55, Glass Door	9	600 mm	500 mm
691712IP55.1G	19" Wall Housing IP55, Glass Door	12	600 mm	630 mm
691716IP55.1G	19" Wall Housing IP55, Glass Door	16	600 mm	810 mm
691720IP55.1G	19" Wall Housing IP55, Glass Door	20	600 mm	1000 mm

19" Wall Housing IP55, Glass Door, Depth 600 mm

Art.-No.	Description	U	Width	Height
691707IP55.2G	19" Wall Housing IP55, Glass Door	7	600 mm	410 mm
691709IP55.2G	19" Wall Housing IP55, Glass Door	9	600 mm	500 mm
691712IP55.2G	19" Wall Housing IP55, Glass Door	12	600 mm	630 mm
691716IP55.2G	19" Wall Housing IP55, Glass Door	16	600 mm	810 mm
691720IP55.2G	19" Wall Housing IP55, Glass Door	20	600 mm	1000 mm

Wallhousing installed on plinth for use as standing cabinet



19" Profile Rails for Wall Housing IP55

For retrofitting as rear-sided 19" level in the wall housings 6917xxIP55.x
With numbering of rack units
Material steel, galvanised

Art.-No.	Description
691675.07	19" Mounting Rails for 7U, Set of 2 Pieces
691675.09	19" Mounting Rails for 9U, Set of 2 Pieces
691675.12	19" Mounting Rails for 12U, Set of 2 Pieces
691675.16	19" Mounting Rails for 16U, Set of 2 Pieces
691675.20	19" Mounting Rails for 20U, Set of 2 Pieces

Plinth for 19" Wall Housing IP55

For using the IP55 wall housings (Art.-No. 6917xxIP55.x) as standing cabinet
Plinth height 100 mm
Suitable for plane surfaces like e.g. concrete
Screw mounting at the wall housing
Openings for mounting at the floor
Material steel sheet
Paint finish RAL7035, light grey

Art.-No.	Description	For Cabinet Width	For Cabinet Depth
691750WIP.1	Plinth for 19" Wall Housing IP55	600 mm	450 mm
691750WIP.2	Plinth for 19" Wall Housing IP55	600 mm	600 mm

Rear door with 2 x latch locking

Bottom with 14 conical rubber grommets ⌀ 20 mm for cable entry (also usable in roof)

Network Cabinet 42U, Protection Degree IP40

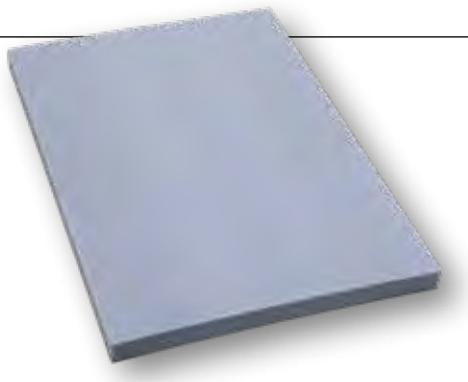
19" Network cabinet according to DIN 41494
Steel sheet housing with welded frame, completely pre-assembled
Inside front and rear 4 x 19" profiles (2 front, 2 rear-sided), galvanised, depth-adjustable in 25 mm raster
Numbering of rack units at the 19" profiles
Front door with window of certified safety glass (thickness 5 mm)
Front door with 1-point turning handle and profile half-cylinder acc. to DIN 18252 / EN1303
Profile half-cylinder exchangeable by customer (30/10 mm)
Rear door steel, 1-part, full cabinet height with 2 x latch locking (locks equal to the door lock)
Door mounting possible swiveling to the left and right side (standard: right)
Door opening angle front and rear 180° due to exterior hinges
Detachable side walls with 2 x latch locking (keys equal to the door lock)
Roof and bottom with 4 pre-punched openings for cable entry (front/rear/left/right) and for accommodation of fan/filter units (for 600 mm cabinet width cable entry only front/rear)
Internal earthing of all cabinet sections
Max. load 600 kg, increase to 1000 kg possible with traverse-set Art.-No. 691679N.x
Paint finish RAL7035, light grey
Protection degree IP40
Included accessories: 1 x brush terminal, 1 x set of captive nuts (PU 20 pcs.), 4 x levelling feet M10, 2 x key
Delivery in transport packaging on disposable pallet

Art.-No.	U	Width	Depth	Height	Front Door	Rear Door
691742NIP40	42	800 mm	800 mm	1980 mm	Glass door 1-part	Steel door 1-part
692442NIP40	42	800 mm	1000 mm	1980 mm	Glass door 1-part	Steel door 1-part

Sealing Mat, Self-Adhesive

One-side self-adhesive foam pad to seal the cable entries on top and bottom of all standard cabinets
The pre-punched, rear-sided cable entries and fan openings of all cabinets from depth 800 mm are covered
For cabinet depth 600 mm the mat can be shortened very easy
Mounting is flush with the rear side of the cabinet
Material Tect-foam, grey
Dimensions (W x H x D) 520 x 40 x 750 mm

Art.-No.	Description
698031	Tect-Foam 750x520x40 mm, One-Side Self-Adhesive, grey



THE NEW CONFIGURATOR FOR NETWORK AND SERVER CABINETS

With high-quality product lines, our new **cabinet configurator** provides adequate options for your individual customised configuration. Simply select and combine model, frame and accessories.

While selecting your parameters, your **individually designed** cabinet is always visualised to allow you to directly view and track all modifications and add suitable accessories as needed.

https://configurator.efb-elektronik.de/cabinet

ALL PRODUCTS AT ONE CLICK: OUR ONLINE SHOP

Explore the complete EFB-Elektronik product portfolio with detailed product specifications

FIND OUT MORE:
shop.efb-elektronik.de/shop/en

LOOK UP STANDARD TERMS IN THE GLOSSARY.

Brief and straightforward explanations can be found starting on page 328.

ACTIVE COOLING & ACOUSTICAL CABINETS

Want a stress-free, quiet office environment? Or a particularly energy-efficient, air-conditioned cabinet with a high degree of protection? Almost every cupboard from the EFB range can be tailored to individual requirements - with professional finishes such as acoustic insulation or active cooling.

Active Cooling		P. 203
Acoustical insulation		P. 206

YOU MAY ALSO BE INTERESTED IN:

Patch Cables	P. 114
Cable Routing Panels	P. 226
19“ Switches (Copper and FO)	P. 312
Socket Strips	P. 243

Bay Cooler 42U, 300 x 1000 mm, RAL7035

Nearly noiseless and without heat for the installation room
Ideal for all quite locations: office, conference / seminar room, libraries, hospital, …

Cooling unit as side module, equiped with state of the art climatic technology
Perfectly matching network cabinets available in combination
Nearly noiseless due to integrated noise absorption mats – practically not noticeable in the installation location!
Integrated air routing system guides the cold air into the frontside of the cabinet
Evacuating of the waste heat in top of the cabinet
No waste heat for the installation room
Side module contains the cooling unit of the split-climatic system
Outdoor unit („Chiller") is installed in next room or at a outside wall
Energy efficiency class „A" due to cooling system in Inverter Technology, means that only the actually necessary energy is used

Nearly noiseless!

Common Specifiactions:
Power variants 2500 and 3500 W
Inside fully lined with special acoustic foam for especially quite operation
Insulated side and rear wall, detachable
Rear-sided outlet for cables an cooling pipes
Control via touch panel in the front or IR remote control (included)
Paint finish RAL7035, light grey (RAL9005 or special design on request)

Technical specifications indoor unit (integrated in side module):
Modern inverter technology
Cooling power 3500 W / power consumption 880 W / yearly consumption 440 kWh
Energy efficiency class „A"
Dimensions side module (W x D x H) 300 x 1000 x 1980 mm
Left side stackable to the 42U cabinets Art.-No. 692442NKL (W=800 D=1000) / 691842NKL (D=1000)
Operation voltage 230 V / 50 Hz
De-humidifiers 1,3 l/h
Air flow 720 m^3/h
SPL max. 39 dB(A)

Complete Split climatic solution, consisting of outdoor unit, side cooler and lined-up network cabinet

Technical specifications outdoor unit:
Modern inverter technology
Cooling power 3500 W
Operation temperature -15°C .. +48°C
Dimensions (H x W x D) 545 x 770 x 288 mm, weight 35 kg
Refridgerant 1000 g R410A
Motor power 43 W
Air flow 33 m^3/h
SPL max. 45 dB(A)

Art.-No.	Description	Width	Depth	Height
693042SKL.2,5	Bay Cooler 42U 2.5 kW, W=300 D=1000 mm, RAL7035	300 mm	1000 mm	1980 mm
693042SKL.3,5	Bay Cooler 42U 3.5 kW, W=300 D=1000 mm, RAL7035	300 mm	1000 mm	1980 mm

Network Cabinet 42U for Bay Cooler, 800 x 1000 mm, RAL7035

Network cabinet prepared for use with with bay coolers Art.-No. 693042SKL.x
Basing on network cabinet Classic in protection degree IP40
Front door glass, 1-part, with turning handle and profile half-cylinder acc. to DIN18252 / EN1303
Profile half-cylinder exchangeable by customer
Rear wall with 2 x latch
Side wall right, left side open for line-up of cooling unit
Roof and bottom with screwed plates, bottom with 14 rubber grommets Ø 20 mm for cable entry (after changing cover plate, also usable in roof)
Protection degree IP40 (lined-up)
Paint finish RAL7035, light grey
Included in delivery: 1 x brush, 1 x set of captive nuts (PU 20 pcs.), 4 x leveling feet M10, 2 x key
Delivery in transport packaging on disposable pallet

For connecting the side cooler, the network cabinet is delivered without left side wall

Art.-No.	U	Width	Depth	Height	Front Door	Rear Door
692442NKL	42	800 mm	1000 mm	1980 mm	Glass door 1-part	Rear wall

The optional air funnel allows in combination with the exhaust hose the evacuation of hot air from the room.

The side wall is provided with all openings, sealings and holes for mounting

Cabinet IP55 with Side Cooler

IP55 cabinet with side-mounted cooling solution
3 power levels 1.0, 1.5 and 1.9 kW cooling capacity
Cooling device for industrial purposes at high environmental temperatures up to +55°C
Industrial-qualified steel sheet housings
Compact, rugged design and simple function
Electromechanical thermostat and fault indicating contact
Integrated condensate evaporator
Temperature selection directly at the device
Optional exhaust air funnel allows the direct discharge of waste heat through an exhaust hose (Ø 150 mm) from the installation room
Noise level 67 dB(A)
Power supply 230 V / 50 Hz
Supplied completely ready-for-installation including prepared cabinet with all openings, sealings, cables etc.

Art.-No.	Description	Width	Depth	Height	With Air Funnel Ø 150 mm
KS55-4288GR.1,0	19" Cabinet IP55 with Side Cooler 1.0 kW	1037 mm	800 mm	2144 mm	No
KS55-4288GR.1,0A	19" Cabinet IP55 with Side Cooler 1.0 kW, Air Funnel	1037 mm	800 mm	2144 mm	Yes
KS55-4288GR.1,5	19" Cabinet IP55 with Side Cooler 1.5 kW	1037 mm	800 mm	2144 mm	No
KS55-4288GR.1,5A	19" Cabinet IP55 with Side Cooler 1.5 kW, Air Funnel	1037 mm	800 mm	2144 mm	Yes
KS55-4288GR.1,9	19" Cabinet IP55 with Side Cooler 1.9 kW	1037 mm	800 mm	2144 mm	No
KS55-4288GR.1,9A	19" Cabinet IP55 with Side Cooler 1.9 kW, Air Funnel	1037 mm	800 mm	2144 mm	Yes
KS55-4280GR.1,9	19" Cabinet IP55 with Side Cooler 1.9 kW	1037 mm	1000 mm	2144 mm	No
KS55-4280GR.1,9A	19" Cabinet IP55 with Side Cooler 1.9 kW, Air Funnel	1037 mm	1000 mm	2144 mm	Yes

Exhaust Hose Ø 150 mm, incl. 1 x Clamp

Hose Ø 150 mm, length 3 m / 6 m
For use with side cooling solutions with air funnel
For evacuation of lost heat out of the room
Material PVC
Delivery incl. 1 x mounting clamp

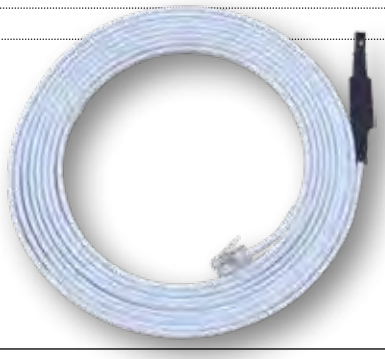
Art.-No.	Description
80165.3	Exhaust Hose Ø 150 mm, Length 3.0 m, incl. 1 x Clamp
80165.6	Exhaust Hose Ø 150 mm, Length 6.0 m, incl. 1 x Clamp

IP Thermometer with E-Mail, LAN, WiFi, PoE, SNMP

New generation of the IP Thermometers in modern Design
Connection of up to **three temperature- or humidity sensors (also combi sensors)**
Two dry contacts for control of alarms (door opening, smoke sensor, etc.)
Network connection via **LAN or WiFi**
E-Mail with TLS transport encryption
SMS via HWg-SMS gateway directly via network
Worldwide access via SensDesk portal of the manufacturer incl. web interface (Android, iOS)
Applications for the IP thermometer:
IT monitoring: control of relevant data in server room and alarm to the technicians
Health: monitoring of refridgerators incl. reporting
Food industry: monitoring of cold chain
Heating systems: fast information at failure of critical systems
Out of Band: integrated WiFi module enables connection at critical locations
Included in delivery: IP thermometer, 1 x temperature sensor (3 m), software CD, power supply (adaptable Euro/UK/USA/China)

Delivery incl. 1 x temperature sensor, Software-CD and power supply

Art.-No.	Description
DCM1002.1	IP-Thermometer with E-Mail, LAN, WiFi, PoE, SNMP



Temperature Sensor for IP Thermometer

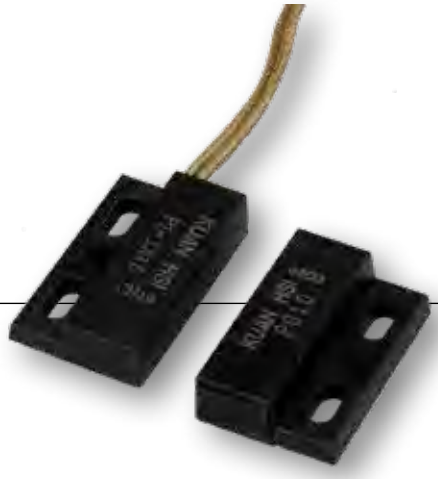
Temperature sensor, cable length 3 m (other lengths on request)
Temperature range -10°C .. +80°C
Suitable for DCM1002.1 and DCM1001.x

Art.-No.	Description
DCM1000.T	Temperature Sensor for DCM100X.x, -10°C .. +80°C, Cable 3 m

Humidity Sensor for IP Thermometer

Temperature sensor, cable length 3 m (other lengths on request)
Suitable for DCM1002.1 and DCM1001.x

Art.-No.	Description
DCM1000.H	Humidity Sensor for DCM1002.1



Door Contact Switch for IP Thermometer

Door contact switch, cable length 3 m
Suitable for DCM1002.1 and DCM1001.x (not for DCM1000.x)

Art.-No.	Description
DCM1001.D	Door Contact Sensor for DCM1002.1

19“ Roll Container 12U, Acoustically Insulated, Office Design

19“ Network cabinet acc. to DIN41494 as roll container or undercounter housing for office environments
High-quality acoustical insulated variant for ergonomic work, suitable for installation directly at the working place
Attractive, stable MDF plate at the upper side enables parking of further devices (printer etc.) on the cabinet
Use of sound insulation mats in studio technology in thickness 20, 40 und 50 mm, equal to the acoustical problem zones in cabinets
Attenuation (typ.) 8 .. 25 dB (frequency-dependent, see data sheet)
Especially decoupled, smooth runing „Silent“ fans at the rear wall guide the heat to outside, converted air volume 294 m^3/h
Fresh air feeding from bottom-front via filter grid
Cable entry rear-sided below via sound bridge and brush
Inside 4 x 19“ rails (2 front, 2 rear), depth-adjustable in 25 mm raster
Front door with window of certified safety glass (5 mm), 1-part, with turning handle and profile half-cylinder acc. to DIN18252, PHC exchangeable by customer
Rear door with 1 x latch, lock equal to door lock
Side walls detachable with 2 x latch, lock equal to door lock
Max. load 300 kg (castors) / 600 kg (leveling feet)
Paint finish und MDF plate RAL7035, light grey
Delivery incl. set of 4 castors (2 with brake), 2 x key, 1 x power supply for fans

All EFB housings are available as acoustical insulated type and in individual design - ask your sales contact!

Rear side with fans and cable entry

Fresh air inlet via filter grid in bottom

3 x Super-Silent fan

Art.-No.	Description	U	Width	Height
692612N-AK-GR	19“ Roll Container 12U, Acoustically Insulated, Office Design	12	600 mm	600 mm
692615N-AK-GR	19“ Roll Container 15U, Acoustically Insulated, Office Design	15	600 mm	900 mm

All cabinet parts earthed

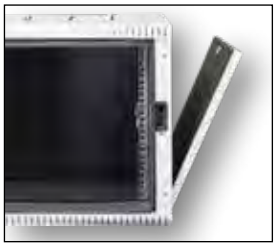
2 x Super-Silent fan

19“ Wall Housing, Acoustically Insulated

Acoustically high-quality insulated wall housing, basing on EFB standard wall housings
For realisation of network projects in SoHo environments and acoustical insulation of loud, active devices like e.g. switches, router etc.
For installation in immediate near of working places, in seminar- or conference rooms without noise pollution
Complete inner lining with especially noise absorbers
Attenuation (typ.) 8 .. 25 dB (frequenceny-dependent, see data sheet)
Special decoupled Super-Silent fans (evacuating) in roof area
Converted air volume 196 m^3/h
Closeable fresh air inlets in bottom
Cable entry in bottom via noise bridge and brush
Front door with window of certified safety glass (4 mm), lockable
Side walls detachable, lockable, lock equal to door lock
Paint finish RAL7035, light grey
Delivery incl. 2 x key, 1 x power supply for the fans

All EFB housings are available as acoustical insulated type - ask your sales contact!

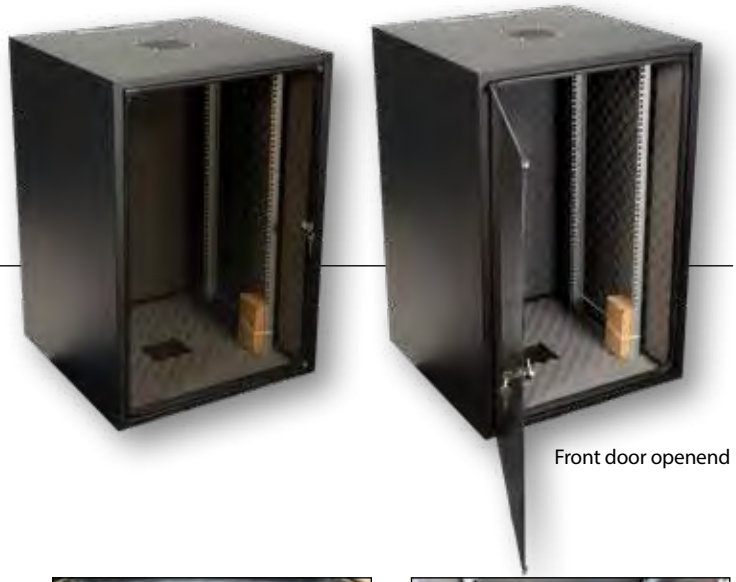
Fresh air inlets closeable



Side walls detachable

Art.-No.	Description	U	Width	Height	Depth
691706.1-AK	19“ Wall Housing, Acoustically Insulated	6	600 mm	330 mm	500 mm
691709.1-AK	19“ Wall Housing, Acoustically Insulated	9	600 mm	465 mm	500 mm
691712.1-AK	19“ Wall Housing, Acoustically Insulated	12	600 mm	600 mm	500 mm
691715.2-AK	19“ Wall Housing, Acoustically Insulated	15	600 mm	730 mm	600 mm

PRICE HIT



Front door openend

19“ Network Cabinet OFFICE - Acoustically Insulated

19“ network cabinet according to DIN41494
Steel sheet housing, self-supporting, completely pre-assembled, active ventilated
Interior lined with sound-absorbing foam, attenuation ca. 8 dB
Front door with additional, high quality rubber sealing
Inside front and rear 4 x 19“profiles (2 front, 2 rear-sided), galvanised, step-less depth-adjustable
Front door full glass, 1-part (thickness 4 mm)
Front door with 1-point latch-locking
Door stop possible left or right-sided
Bottom and rear with pre-punched openings for cable entry
Roof equiped with high quality single fan with cable open end (ca. 0,3 m, without thermostat/temperature controller + cables, please order separately)
Internal earthing of all cabinet sections
Paint finish RAL9005, jet black
Max. load 45 kg
Protection degree IP20
Included in delivery: 1 x brush, 4 x leveling feet M8, 2 x key
Delivery in transport packaging on disposable pallet

Cabinet roof with single fan
(included, cable length ca. 30 cm)

Bottom with air inlet,
door with rubber sealing

Art.-No.	U	Width	Depth	Height	Front Door	Rear Door
OFF-1866TS.V1RW-AK	18	600 mm	600 mm	871 mm	Full glass door 1-part	Rear wall

Server Cabinet 26U/600/1000m, Acoustically insulated, wooden Design Beech

Acoustically high-quality insulated server cabinet, basing on EFB server cabinets Classic
Especially attractive design with side elements and roof in wood type (Beech)
For realisation of network projects in SoHo environments and acoustical insulation of loud, active devices like e.g. switches, router etc.
For installation in immediate near of working places, in seminar- or conference rooms without noise pollution
Complete inner lining with especially noise absorbers
Attenuation (typ.) 8 .. 25 dB (frequency-dependent, see data sheet)
3 x Super-Silent fans (evacuating) in rear roof area
Converted air volume 294 m^3/h
Closeable fresh air inlets in bottom
Cable entry in bottom via perforated air entry in bottom
Front door 1-part with perforation design, acoustically insulated, lockable
Rear door 2-part with perforation design, acoustically insulated, lockable
Front and rear door with turning handle and profile half-cylinder acc. to DIN18252 / EN1303, PHC exchangeable by customer
Side walls detachable, screwed
Paint finish (frame) RAL9005, jet black, wood elements beech
Delivery incl. 2 x key, 1 x power supply for the fans, 4 x leveling feet, set of captive nuts (PU 20 pcs.)

All EFB housings are available as acoustical insulated type - ask your sales contact!

3 x Super-Silent fans
in roof area

Complete housing incl. front and
rear door acoustically insulated

Art.-No.	U	Width	Depth	Height	Front Door	Rear Door
693126.60-AK-BU	26	600 mm	1000 mm	1270 mm	Other	Other

WALL HOUSINGS

Wall housings are ideal if network components of smaller installations are to be safely housed or floor distributions are to be set up. EFB-Elektronik offers housing variants for every scenario: for small offices / home offices (SOHO), with standard or increased protection, for vertical installation with minimal wall application or distributions in the space-saving 10“ format.

19“ Wall Housings Flat Pack		P. 209
19“ Wall Housings 1-Part		P. 210
19“ Wall Housings 2-Part		P. 211
Fan Units & Accessories		P. 212
19“ Wall Housing Vertical 3+5U		P. 213
19“ Wall Housing Vertical 5U		P. 214
10“ Wall Housings		P. 216
10“ Accessories		P. 217

YOU MAY ALSO BE INTERESTED IN:

Patchpanel	P. 132
Keystones & Installation Cables	P. 100

FLAT PACK: Unassembled Delivered Wall Housings

Housings in Flat Pack design require significantly less space during transport than pre-assembled variants. The sophisticated screw and click system ensures installation in a few minutes by a single person.

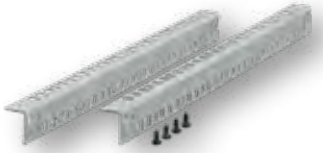
Delivery unassembled in one carton

The side wall are detachable & lockable

Rear side with cable entries and mounting openings

19" Wall Housing Flat Pack, RAL7035/RAL9005

Steel sheet housing with screwed frame
Not pre-assembled, self-ventilated
Side wall removable with quick fastener
Roof, bottom and rear wall with pre-punched openings for cable entry (230 x 41 mm)
Roof prepared for mounting of Plug & Play fan unit (Art.-No. 691656xx)
Inside 2 x 19" rails front-sided, depth-adjustable
Front door with window of certified safety glass with lock (thickness 4 mm)
Cabinet parts completely earthed
Max. load 60 kg
Protection degree IP20
Paint finish RAL7035, light grey / RAL9005, jet black
Included accessories: 2 x key
Delivery unassembled in transport packaging (1 carton)



19" Profile Rails for Wall Housings Flat Pack

For use a rear-sided 19" level in wall housings FLAT PACK (Art.-No. 6917xxFGR.x/FTS.x)
Material steel, galvanised
Delivery as set of 2 incl. mounting material

Art.-No.	Description
691676.06	19" Profile Rails 6U for 6917xxFGR.x/FTS.x, Set of 2
691676.09	19" Profile Rails 9U for 6917xxFGR.x/FTS.x, Set of 2
691676.12	19" Profile Rails 12U for 6917xxFGR.x/FTS.x, Set of 2
691676.15	19" Profile Rails 15U for 6917xxFGR.x/FTS.x, Set of 2

19" Wall Housing Flat Pack, RAL7035, Depth 450 mm

Art.-No.	U	Width	Height	Max. Load
691704FGR.1	4	570 mm	285 mm	60 kg
691706FGR.1	6	570 mm	370 mm	60 kg
691709FGR.1	9	570 mm	500 mm	60 kg
691712FGR.1	12	570 mm	635 mm	60 kg
691715FGR.1	15	570 mm	770 mm	60 kg

19" Wall Housing Flat Pack, RAL7035, Depth 600 mm

Art.-No.	U	Width	Height	Max. Load
691709FGR.2	9	570 mm	500 mm	60 kg
691712FGR.2	12	570 mm	635 mm	60 kg
691715FGR.2	15	570 mm	770 mm	60 kg
691721FGR.2	21	570 mm	1040 mm	60 kg

19" Wall Housing Flat Pack, RAL9005, Depth 450 mm

Art.-No.	U	Width	Height	Max. Load
691704FTS.1	4	570 mm	285 mm	60 kg
691706FTS.1	6	570 mm	370 mm	60 kg
691709FTS.1	9	570 mm	500 mm	60 kg
691712FTS.1	12	570 mm	635 mm	60 kg
691715FTS.1	15	570 mm	770 mm	60 kg

19" Wall Housing Flat Pack, RAL9005, Depth 600 mm

Art.-No.	U	Width	Height	Max. Load
691709FTS.2	9	570 mm	500 mm	60 kg
691712FTS.2	12	570 mm	635 mm	60 kg
691715FTS.2	15	570 mm	770 mm	60 kg
691721FTS.2	21	570 mm	1040 mm	60 kg

For Wall Housings 1-Part / 2-Part
- Suitable for Plug & Play fan unit
- Thread M8 for feet or castor sets
- Specially solid metal hinges

The matching accessories you'll find on page 212

Leveling feet available as accessory

The side walls of housings 1-part are detachable and lockable

Roof with cable entry (250 x 70 mm) and cutouts for Plug&Play 2-fan unit

Rear side with 2 x cable entry (250 x 70 mm) and mounting points for wall mounting

19" Wall Housings Fixed, 1-Part, RAL7035

Steel sheet housing with welded frame, completely pre-assembled, self-ventilated
NEW: Prepared for Plug & Play 2-fan unit Art.-No. 691656xx
NEW: Bottom with 4 x mounting point for leveling feet or castor set (please order separately)
NEW: Front door with metal hinges for increased stability
Side walls removable, lockable, locks equal to door lock
Roof, bottom and rear wall with pre-punched openings for cable entry (250 x 70 mm)
Front-sided 2 x 19" profile rails, galvanised, depth-adjustable
Front door with latch locking and window made of certified safety glass (thickness 4 mm)
Internal earthing of all cabinet sections
Paint finish RAL7035, light grey
Protection degree IP20
Included in delivery: 1 x brush terminal, 1 x set of captive nuts (PU 20 pcs.), 2 x key
Delivery in transport packaging, from 30 kg / 12U on disposable pallet

Max. Distance between 19" levels (only for mounted rear 19" level)		
Housing depth	Max. Distance of 19" levels	Max. Mounting Depth (to rear wall)
400 mm	315 mm	350 mm
500 mm	415 mm	450 mm
600 mm	515 mm	550 mm

In this assembly variant remain approx. 40 mm from 19" level to the rear wall resp. door

19" Wall Housings Fixed, 1-Part, RAL7035, Depth 400 mm

Art.-No.	U	Width	Height	Max. Load
691704VGR.40	4	600 mm	240 mm	50 kg
691706VGR.40	6	600 mm	330 mm	50 kg
691709VGR.40	9	600 mm	465 mm	50 kg
691712VGR.40	12	600 mm	600 mm	50 kg

19" Wall Housings Fixed, 1-Part, RAL7035, Depth 500 mm

Art.-No.	U	Width	Height	Max. Load
691706VGR.50	6	600 mm	330 mm	50 kg
691709VGR.50	9	600 mm	465 mm	50 kg
691712VGR.50	12	600 mm	600 mm	50 kg
691715VGR.50	15	600 mm	730 mm	50 kg

19" Wall Housings Fixed, 1-Part, RAL7035, Depth 600 mm

Art.-No.	U	Width	Height	Max. Load
691709VGR.60	9	600 mm	465 mm	50 kg
691712VGR.60	12	600 mm	600 mm	50 kg
691715VGR.60	15	600 mm	730 mm	50 kg
691718VGR.60	18	600 mm	860 mm	50 kg
691721VGR.60	21	600 mm	997 mm	50 kg

Black variants of wall housings 1-part and 2-part are available per request - ask your sales contact !

Due to the use of leveling feet or castors the housings are also suitable as standing or desk type

Wall housing 2-part, swivelled out.
Castor set available as accessory

Roof with rear-sided frame 100 mm, cable entry (250 x 70 mm) and cutouts for Plug&Play 2-fan unit

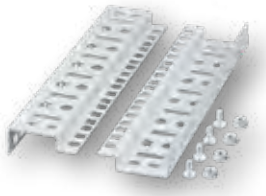
Rear side with 2 x cable entry (250 x 70 mm) and mounting points for wall mounting

19“ Wall Housing Swiveling, 2-Part, RAL7035

Steel sheet housing with welded frame, pre-assembled, self-ventilated
Rear sided swing-frame for swiveling the front part of the housing
Prepared for Plug & Play 2-fan unit Art.-No. 691656xx
Bottom with 4 x mounting point for leveling feet or castor set (please order separately)
Front door with metal hinges for increased stability
Pre-punched openings for cable entry optionally from roof or bottom
Prepared for mounting of single fan units in roof and bottom
Inside front-sided 2 x 19“ profile rails, galvanised, depth-adjustable
Front door with window made of certified safety glass
Front door lockable with latch
Internal earthing of all cabinet sections
Paint finish: RAL7035, light grey
Protection degree IP20
Included in delivery: 1 x brush terminal, 1 x set of captive nuts (PU 20 pcs.), 2 x key
Delivery in transport packaging, from 30 kg / 12U on disposable pallet

Max. Distance between 19“ levels (only for mounted rear 19“ level)		
Housing depth	Max. Distance of 19“ levels	Max. Mounting Depth (to rear wall)
500 mm	315 mm	450 mm
600 mm	415 mm	550 mm

In this assembly variant remain approx. 40 mm from 19“ level to the rear wall resp. door



19“ Wall Housing Swiveling, 2-Part, RAL7035, Depth 500 mm

Art.-No.	U	Width	Height	Max. Load
691604VGR.50	4	600 mm	240 mm	30 kg
691606VGR.50	6	600 mm	330 mm	40 kg
691609VGR.50	9	600 mm	465 mm	40 kg
691612VGR.50	12	600 mm	600 mm	40 kg
691615VGR.50	15	600 mm	730 mm	50 kg
691621VGR.50	21	600 mm	997 mm	50 kg

19“ Wall Housing Swiveling, 2-Part, RAL7035, Depth 600 mm

Art.-No.	U	Width	Height	Max. Load
691604VGR.60	4	600 mm	240 mm	30 kg
691606VGR.60	6	600 mm	330 mm	40 kg
691609VGR.60	9	600 mm	465 mm	40 kg
691612VGR.60	12	600 mm	600 mm	40 kg
691615VGR.60	15	600 mm	730 mm	50 kg
691621VGR.60	21	600 mm	997 mm	50 kg

19“ Profile Rails for Wall Housings 1-Part/2-Part

For use a rear-sided 19“ level in wall housings 1-part/2-part (Art.-No. 6917xxVGR.x/VTS.x and 6916xxVGR.x/VTS.x)
Material steel, galvanised
Delivery as set of 2 incl. mounting material

Art.-No.	Description
691776.06	19“ Mountring Rails 6U for Wall Housings, Set 2 Pieces
691776.09	19“ Mountring Rails 9U for Wall Housings, Set 2 Pieces
691776.12	19“ Mountring Rails 12U for Wall Housings, Set 2 Pieces
691776.15	19“ Mountring Rails 15U for Wall Housings, Set 2 Pieces
691776.18	19“ Mountring Rails 18U for Wall Housings, Set 2 Pieces
691776.21	19“ Mountring Rails 21U for Wall Housings, Set 2 Pieces

No cabling effort anymore!
- Plug & Play - install and turn on
- Integrated thermostat and On/Off-Switch
- Power connector IEC C14 (cold device plug)

Integrated thermostat and On/Off-Switch

Housing variant black in mounting position

Fan Unit, 2-Fans for Wall Housings, Plug & Play

Suitable for installation in wall housing series 1-PART/2-PART, FLAT PACK und IP55
Screw mounting hanging inside below the cabinet roof
Thermostat and mounting material included
Rear-sided power connection via IEC C14 socket (power cable not included, e.g. Art.-No. EK504.x)
Rated voltage 230 V / 50 Hz
Illuminated ON/OFF switch
Material steel sheet

Art.-No.	Description
691656GR	2-Fan Unit, Plug & Play for Wall Housings, RAL7035
691656TS	2-Fan Unit, Plug & Play for Wall Housings, RAL9005

Installed compact turning handle at wall housing

Power Cable CEE7/7 90° - C13 180°, Black

10 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK504.1V2	0.75 mm²	Black	1.0 m
EK504.2V2	0.75 mm²	Black	2.0 m

Compact Turning Handle for Profile Half Cylinder

Enables the use of an individual profile half-cylinder in doors of wall cabinets 1-PART/2-PART and FLAT PACK
Suitable for use with profile half-cylinder acc. to DIN 18252 / EN1303 (e.g. Art.-No. 46087.x)
Easiest mounting, included latch limits the rotation angle to 90°
Delivery without profile half-cylinder

Art.-No.	Description
699989	Compact Turning Handle for PHC, incl. Latch

Leveling Feet for 19“ Wall Housings 1-Part/2-Part

Leveling feet for cabinet series OFFICE and wall housings 1-part/2-part
Thread M8, height 56 mm
With locknut

Art.-No.	Description
OFF-NIV01	Leveling Feet for OFFICE, 4 Pcs. M8

Castor Set for 19“ Wall Housings 1-Part/2-Part

Plastic castors with steel thread bolt M8
Height 68 mm (without thread bolt)
Included in delivery: 2 x castor with brake, 2 x castor without brake

Art.-No.	Description
OFF-ROL01	Castor Set for Cabinet Series OFFICE

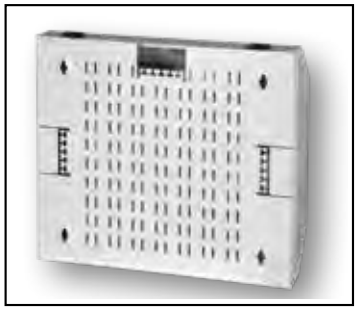
3 Colour variants available:
- RAL7035, light grey
- RAL9005, jet black
- RAL9010, pure white

19“ Wall Housing 3U+5U Vertical, RAL7035/RAL9005/RAL9010

Steel sheet housing for wall mounting, completely pre-assembled, self-ventilated
Wall raising (overall depth) only 150 mm
3U for vertical mounting of 19“ components, max. depths each 1 x 360 / 340 / 300mm
5U additionally for horizontally mounting of 19“ components, max. depth 80 mm
3U level 180° swiveling
Cover with window, hinged and lockable
Pre-punched ventilation openings in housing
Pre-punched cable clamps in rear wall
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black / RAL9010, pure white
Protection degree IP20
Included in delivery: 1 x key

The swiveling 19“ level enables different mounting positions and -depths up to 360 mm

Extremely low space requirement due to an overall height of only 150 mm



Rear side with various possibilities for fixing and cable routing

Art.-No.	U	Width	Height	Max. Load	Colour
691703V	3+5	537 mm	475 mm	30 kg	RAL7035
691703VTS	3+5	537 mm	475 mm	30 kg	RAL9005
691703VWS	3+5	537 mm	475 mm	30 kg	RAL9010

Further configuration possibilities are shown in the separate datasheet

Application example 1:
19“ level in upright position,
3U with mounting depth up to 360 mm are usable

Application example 2:
19“ level is angled, 3U with mounting depth up to 140 mm and 4U rear sided are usable

1 Housing - 2 Mounting variants:
5U 19“ vertically
10U 10“ horizontally

Wall housing opened
rear-sided viewable the cutouts for
2 x single fan Art.-No. 691664

Various mounting possibilities

Cable entry with brush

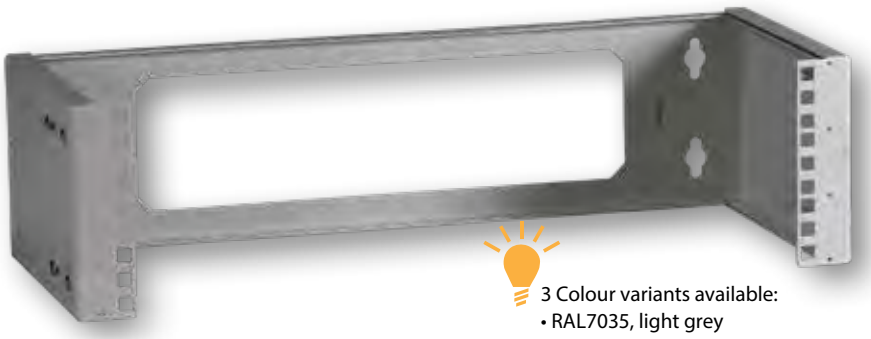
Central grounding bolt M5

19“/10“ Wall Mount Cabinet 5U Vertical / 10U Horizontal, RAL7035

Steel sheet housing 5U vertical, completely pre-assembled
Front-sided 19“ level made of punched profile
Front door with window made of certified safety glass (thickness 4 mm)
Front door with latch
Left side wall hinged for easy access
Right side wall with holes for wall mounting
Rear wall screwed, prepared for mounting of 2 fan units
Internal earthing of all cabinet sections
Additional earthing bolt M6 inside the housing
Pre-punched openings (250 x 60 mm) for cable entry from roof or bottom
Paint finish RAL7035, light grey
Protection degree IP20
Included in delivery: 2 x brush terminal, 1 x set of captive nuts (20 pcs.), 2 x key
Delivery in transport packaging

Art.-No.	U	Width	Height	Depth
691706V	5	322 mm	543 mm	500 mm

Wall brackets are depth-adjustable



3 Colour variants available:
- RAL7035, light grey
- RAL9005, jet black
- RAL9010, pure white

19" Wall Brackets, Depth-Adjustable

19" wall brachet with adjustable mounting depth (225 .. 345 mm)
Material steel
Paint finish RAL7035, light grey / RAL9005, jet black / RAL9010, pure white

19" Wall Brackets, Depth-Adjustable, RAL7035

Art.-No.	U	Width	Height	Max. Load
691831GR.2	2	528 mm	89 mm	5 kg
691831GR.3	3	528 mm	134 mm	10 kg
691831GR.4	4	528 mm	178 mm	10 kg
691831GR.6	6	528 mm	267 mm	15 kg
691831GR.9	9	528 mm	400 mm	15 kg

19" Wall Brackets, Depth-Adjustable, RAL9005

Art.-No.	U	Width	Height	Max. Load
691831TS.2	2	528 mm	89 mm	5 kg
691831TS.3	3	528 mm	134 mm	10 kg
691831TS.4	4	528 mm	178 mm	10 kg
691831TS.6	6	528 mm	267 mm	15 kg
691831TS.9	9	528 mm	400 mm	15 kg

19" Wall Brackets, Depth-Adjustable, RAL9010

Art.-No.	U	Width	Height	Max. Load
691831WS.2	2	528 mm	89 mm	5 kg
691831WS.3	3	528 mm	134 mm	10 kg
691831WS.4	4	528 mm	178 mm	10 kg
691831WS.6	6	528 mm	267 mm	15 kg
691831WS.9	9	528 mm	400 mm	15 kg

Single Fan Unit for Wall Housing

Prepared for mounting in bottom or roof of all 19" wall-mounting cabinets
1-part and 2-part
Mounting material for fixing, power supply and earthing included
Rated voltage: 230 V, 50 Hz

Art.-No.	Description
691664	Fan for 19" Wall Mounting Cabinets, 120 mm, 230 V / 50 Hz

Thermostat

Suitable for roof fan unit and all built-in fan units
Adjustable range -10°C .. +80°C
Mounting at the 19" profiles
Thermostat and mounting material are included in delivery of the roof fan units

Art.-No.	Description
691642.1	Thermostat for Fan Units 691656V3 / 691654V3 / 691655V3

Filter Panel for 691664F

Filter Panel 120 mm for single fan Art.-No. 691664

Art.-No.	Description
691664F	Filter Panel for 691664, Mounting on 120 mm Fan

Power Cable Schuko 90° - Open End WES, black

16 A / 250 V VDE tested
Open End assembled with wire end sleeves
Wire end sleeves for 1.8 m: L = 6 mm, Ø 1.7 mm, yellow insulator
Wire end sleeves for 3 + 5 m: L = 8 mm, Ø 1.7 mm, red insulator
Cable colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK504AE.1,8	0.75 mm²	Black	1.8 m
EK504AE.3	1.00 mm²	Black	3.0 m
EK504AE.5	1.00 mm²	Black	5.0 m

Mini Rack 10“

Self-ventilated steel sheet housing
Front door with window made of safety glass (4 mm)
Door opening angle 180°, lockable door lock with latch
The special construction of the door prevents possible kinking of the inserted patch cables
Cable infeed optionally from top or bottom, openings 120 mm x 35 mm
Slots for wall mounting
Material steel sheet, paint finish RAL7035, light grey
Delivery in transport packaging

Art.-No.	U	Width	Height	Max. Load
691801	7	300 mm	355 mm	20 kg

Mini Rack 10“ light

Self-ventilated steel sheet housing
Lockable door with latch, door opening angle 180°
Front door with window made of safety glass (4 mm)
Front profiles permanently mounted
Cable entry optionally from top, bottom or rear-sided, openings 120 mm x 35 mm
Long holes for wall mounting
Paint finish RAL7035, light grey
Delivery in transport packaging

Art.-No.	U	Width	Height	Max. Load
691804	4	300 mm	240 mm	20 kg
691803	6	300 mm	330 mm	20 kg
691805	9	300 mm	465 mm	20 kg

10“ Base Plate / Shelf

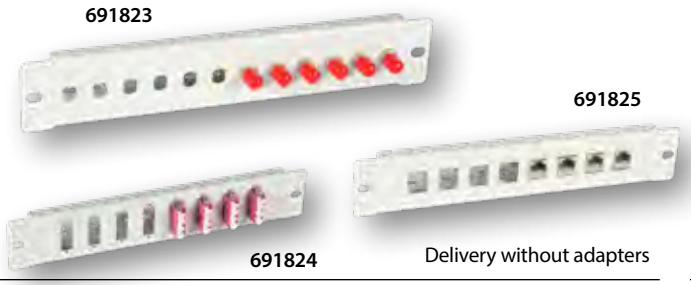
Material steel sheet
Inner dimensions 217 x 106 mm
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
691820	10“ 1U Base Plate / Shelf	RAL7035
691820TS	10“ 1U Base Plate / Shelf	RAL9005

10“ Dummy Plate

Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
691821	10“ 1U Blanking Panel	RAL7035
691821TS	10“ 1U Blanking Panel	RAL9005



Delivery without adapters

10“ 1U Front Panel

Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery unassembled

Art.-No.	Description	Colour
691822	10“ 1U FO Front Panel 8 x SC simplex	RAL7035
691824	10“ 1U FO Front Panel 8 x SC Duplex	RAL7035
691823	10“ 1U FO Front Panel 12 x ST	RAL7035
691825	10“ 1U Distribution Panel for 8 x Keystone	RAL7035
691825TS	10“ 1U Distribution Panel for 8 x Keystone	RAL9005

10“ 1U Distribution Panel for 12 x Keystone

With rear-sided cable bracket
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery unassembled

Art.-No.	Description	Colour
691826	10“ 1U Distribution Panel for 12 x Keystone	RAL7035
691826TS	10“ 1U Distribution Panel for 12 x Keystone	RAL9005

10“ 1HE Socket Strip 3-Way / 4-Way

35° turned socket inserts
2.0 metres supply cable black, H05VV-F 3 x 1.50 mm², 250 V AC / 16 A with angled plug CEE7/7
Supplied mounting brackets allow any fastening position

Art.-No.	Description	Colour
ESP.70	10“ 1U Socket Strip 3-Way, w/o Switch	RAL7035
ESP.72	10“ 1U Socket Strip 4-Way, w/o Switch	RAL7035

10“ 1U Socket Strip 4-Way with/without Switch

Outlets turned 45° in Aluminium profile
With childrens protection
Cable 2 m black, H03VV-F 3G 1.5 mm² with angled CEE7/7 plug
Certifications CE, RoHS

Art.-No.	Description	Colour
EK631DE.10	10“ 1U Socket Strip 4 x CEE 7/3 w/o Switch, in Alu Profile	RAL9005
EK631DE.11	10“ 1U Socket Strip 4 x CEE 7/3 with Switch, in Alu Profile	RAL9005

Mini-Patchpanel STP 8xRJ45 Cat.6, 10“ 1U

The high quality of the shielded Cat.6 RJ45 mini patch panel ensures excellent performance for 5 Gigabit Ethernet applications. In addition, the mini patch panel is characterized by its versatile mounting options. It is suitable for installation in a **10“ surface**, for **attachment to the wall** or in conjunction with the DIN rail clamp set (Part No. H83030.1) for **DIN rail mounting**.

10„mounting / wall mounting or DIN rail mounting possible, 1U
8 ports
LSA connection strip for installation cable AWG24..AWG22
Color code according to TIA / EIA 568 A / B
Lid with quick release
With earthing terminal

Scope of delivery:
8 cable ties, assembly instructions
4 screws (M6x16mm) and nut

Art.-No.	Description
37736.8	Mini-Patchpanel STP 8xRJ45 Cat.6, 10“ 1U, RAL7035, grey
37736SW.8	Mini-Patchpanel STP 8xRJ45 Cat.6, 10“ 1U, RAL9005 black

Mini-Patchpanel STP 12xRJ45 Cat.6, 10“ 1U

The high quality of the shielded Cat.6 RJ45 mini patch panel ensures excellent performance for 5 Gigabit Ethernet applications. In addition, the mini patch panel is characterized by its versatile mounting options. It is suitable for installation in a **10“ surface**, for **attachment to the wall** or in conjunction with the DIN rail clamp set (Part No. H83030.1) for **DIN rail mounting**.

10„mounting / wall mounting or DIN rail mounting possible, 1U
12 ports
LSA connection strip for installation cable AWG24..AWG22
Color code according to TIA / EIA 568 A / B
Lid with quick release
With earthing terminal

Scope of delivery:
12 cable ties, assembly instructions
4 screws (M6x16mm) and nut

Art.-No.	Description
37736.12	Mini-Patchpanel STP 12xRJ45 Cat.6, 10“ 1U, RAL7035 grey
37736SW.12	Mini-Patchpanel STP 12xRJ45 Cat.6, 10“ 1U, RAL9005 black

CTS

FOS-3110, 10-Port L2 Managed Gigabit Ethernet Fiber Switch, 8x 100/1000 SFP, 2x Combo RJ45/SFP

8x 100/1000Mbps SFP Slots
2x 100/1000Mbps RJ45/SFP
SFP Slots support for MiniGBICs 100-FX, 1000Base-X
Management: SNMP, WEB, RMON, Telnet and TFTP management
IPv6, IGMPv3, Multicast, VLAN, QOS, Autonegotiation, Auto MDI/MDIX and more.

1x RS232 RJ45 Port, 1 x Digital input (Terminal block), Diagnostic led
19“ and 10“ Bracket included
Metal housing Fanless (L x B x H): 210 x 235 x 44 mm

Art.-No.	Description
FOS-3110	10-Port L2 Managed Gigabit Ethernet Fiber Switch, 8x GE SFP, 2x Combo RJ45/SFP

INTERIOR ACCESSORIES & CABLE MANAGEMENT

The perfect cable routing and cable fastening are important in every IT housing. EFB-Elektronik offers the right assortment with shelves, multi-function rails, device carriers with top-hat rails and the modular vertical cable management - and at the same time guarantees as a system solution provider a high degree of accuracy and compatibility.

19“ Rack frames		P. 219
Lighting Units		P. 220
DIN rail carrier		P. 223
Energy Distribution Box		P. 223
19" Shelves		P. 224
Document & Keyboard Drawers		P. 222
Cable Routing Brackets		P. 228
19" Cable Routing Panel		P. 226
Dummy Plates / Earthing		P. 230
Accessories		P. 232

YOU MAY ALSO BE INTERESTED IN:

Network Cabinets P. 170

19" Rack Frame Duplex

Intended for accomodation of 19" components
Extremely sturdy, torsionally stiff frames
Ideal for exhibition purposes and presentations in the IT sector
Easy assembly, accessible from all sides
Material steel sheet
Paint finish: bottom RAL9005, jet black grey, frame profile RAL7035, light grey
The frame profile and both the front and rear 19" level are depth adjustable
Mounting depth I 370 mm
Mounting depth II 470 mm
Mounting depth III 580 mm
Double castors not included in delivery, please order separately: Art.-No. 691647

Art.-No.	U	Width	Height
691629	32	550 mm	1540 mm
691631	42	550 mm	1985 mm

19" Rack Frame Simplex

Intended for accomodation of 19" components
Extremely sturdy, torsionally stiff frames
Ideal for exhibition purposes and presentations in the IT sector
Easy assembly, accessible from all sides
Material steel sheet
Paint finish: bottom RAL9005, jet black, frame profile RAL7035, light grey
Double castors not included in delivery, please order separately: Art.-No. 691647

Art.-No.	U	Width	Height
691630	32	550 mm	1540 mm
691632	42	550 mm	1985 mm

19" Rack Frame Double Castors

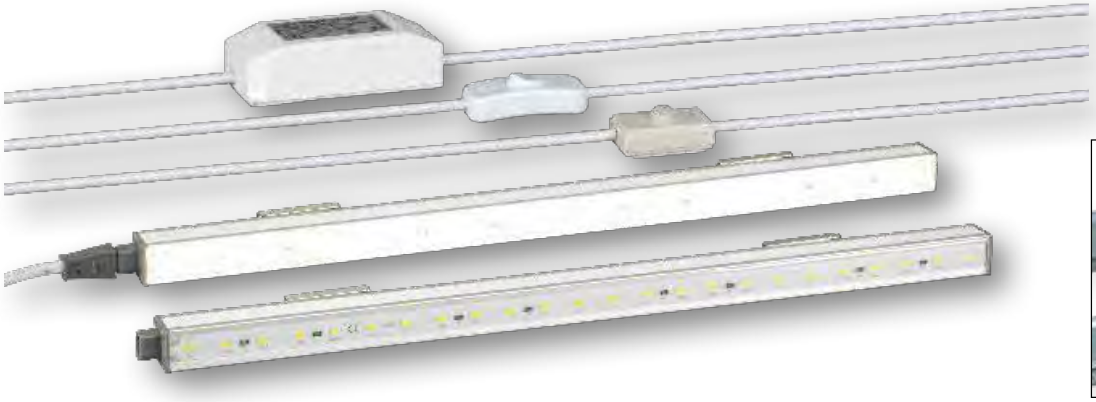
Polyamide housing and wheel (black), with plain bearing
Polyurethane running surface
With brake, castor diameter 80 mm, thread M10
Max. load per castor approx. 80 kg

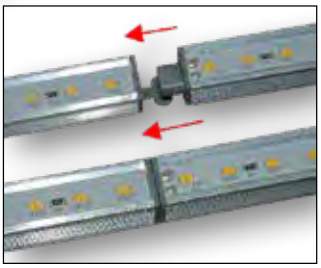
Art.-No.	Description
691647	Double Castor Set, 80 mm with Brake, 4 Pcs

19" 4U Mini Network Frame

The mini network frame is the ideal component for accommodating 19" components in smaller networking solutions
Sturdy sheet steel frame, non-slip
Dimensions: (W x H x D) 490 x 230 x 295 mm

Art.-No.	Description
699996	19" 4U Mini Network Frame, RAL7035





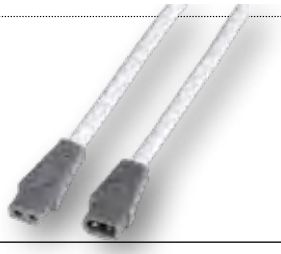
Up to 6 lighting unit are cascadable directly or via cable

LED Magnetic Lighting Unit, 230 V AC with IR-Sensor and Switch

LED lighting unit in high-quality aluminium profile for magnetic mounting at any position in cabinet
Selective lighting due to turnable magnetic holder (turning angle ca. 180°)
IR sensor replaces door contact switch: lighting unit is turned on for 45 sec. at motion detection
Self-adhesive sensor and power supply for easy mounting in cabinet
At glass and non-perforated steel doors the sensor can be easily glued directly onto the 19" profile for turning light on when door is opened, for perforated doors mounting sidely in the cabinet, e.g. at a depth-rail, is recommended

180° swiveling magnetic holder

Art.-No.	Description
698026.1	Set of LED Lighting Unit + Connection Kit 230 V, IR-Sensor, Switch



LED Magnetic Light, Single Units, 24 V / 48 V DC

Single lighting units for direct cascading unit-unit or via cable 698026.3
Up to 6 units can be connected after each other
Variant 698026.24 (24 V DC) for use with lighting/connection set 230 V, sensor and switch
Variant 698026.48 (48 V DC) for use with lighting/connection set with switch and open ends

Art.-No.	Description	For Cascading with
698026.24	LED Lighting Unit Single, 24 V DC Type	698026.1 (Type 230 V AC)
698026.48	LED Lighting Unit Single, 48 V DC Type	698026.2 (Type 48 V DC)

Cascading Cable for LED Lighting 698026.x

For connecting up to 6 pieces of LED magnetic lighting units 698026.x
Cable length 1.25 m
Reverse polarity protected plug/jack
Colour cable white, plugs grey

Art.-No.	Description
698026.3	Cascading Cable 1.25 m, White, for LED Lighting Unit 698026.x

19" 1U Temperature Controller, Electronic, 2 Relais

Control of a fan at overtemperature (via relais 1)
Control of an second fan at overtemperature (via relais 2)
Control of an heater at undertemperature (via relais 1)
Control of a fan at overtemperature (via relais 2)
Digital temperature display (actual value)
Measuring range -40°C up to +90°C
Outputs: 2 relais, dry, programmable (250 V AC / 2 A)
Free programmable switching temperatures
Display of relay status
Type of sensor: diode, cable length 3 m
Power supply 230 V / 50 Hz
Connection via rear-sided screw terminals
Recommended Accessory (not included): power cable Euro-Open End with wire-end sleeves Art.-No. EK502AE.x

Art.-No.	Description	Colour
691642T.1	19" 1U Electronic Temperature Controller, 2 Relais	RAL7035, light grey
691642TTS.1	19" 1U Electronic Temperature Controller, 2 Relais	RAL9005, jet black

19" 1U Lighting Unit "Basic"

Ready-to-connect lighting unit 19“ 1U
Operating voltage 230 V / 50 Hz
Fluorescent tube T4 12 W
Connecting cable 1.5 m Euro plug

Art.-No.	Description
698023.1	19" 1U Lighting Unit "Basic"

Cable Set for Lighting Unit "Basic", incl. Door Contact Switch

Plug & Play - no further wiring work necessary!
Connection set Euro plug to Euro-8 jack incl. door contact switch and mounting bracket
Suitable for connection and control of lighting unit "Basic" or other devices with Euro-8 plug
Completely prewired as opener (NC) (door opening switches lighting unit on)
Cable H03VVH2-F 2G 0,75 mm^2, black, 2 m
Lighting unit not included in delivery

Art.-No.	Description
691643.S	Connection Set Euro incl. Door Contact Switch, 2 m

Magnetic Lighting Unit with Service Outlet

Energy saving lamp 11 W with switch ON/Off
With service outlet CEE7/7
Connection via screw terminals 3-pole, 2.5 mm^2 max.
Connecting cable EK504AE.x available as accessory, please order separately

Art.-No.	Description
698022	Magnetic Lighting Unit

Door Contact Switch, incl. Bracket

19" door contact switch, rated voltage 230 V/50 Hz
Suitable as opening or closing contact
Cable length ca. 40 cm with 2 x 4.8 mm plugs
Mounting bracket included in delivery

Art.-No.	Description
691643	Door Contact Switch incl. Mounting Bracket

Mounting Aid "3rd Hand"

Do you know the problem?

Two hands hold the switch, the server, patch panel or the UPS which is to be mounted straight into the 19" rack. How to install the screws? Now you would need a „third hand" because releasing is impossible!

This mounting aid supports you while installing 19" components. It is fixed at one or two sides of the 19" profile, to reliably hold devices while mounting into the cabinet. So one or two hands remain free for working.
No second person is necessary anymore.

Supports 19" components while installation
Suitable for all 19" profiles
Very solid design
Material steel sheet, galvanised
Delivery as set of 2 pieces

Application example

Art.-No.	Description
39850.1	Mounting Aid for 19" Components, 2 Pieces in Set

19" Document Drawers 1-3U, Lockable

Pull-out document drawer
Lockable, 2 keys included in delivery
Inner dimensions (W x D): ca. 388 x 278 mm
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	U	Weight	Colour
691646	1	3,7 kg	RAL7035
691646.1	2	4,7 kg	RAL7035
691646.2	3	5,1 kg	RAL7035
691646TS	1	3,7 kg	RAL9005
691646TS.1	2	4,7 kg	RAL9005
691646TS.2	3	5,1 kg	RAL9005

19" 2U Keyboard Drawer, Lockable

19" 2U Keyboard drawer, telescopic pull-out
Lockable, 2 keys included
Suitable for all 19" network and server cabinets
Usable width 410 mm, depth 320 mm, pull-out 180 mm
Material steel sheet
Paint finish RAL7035, light grey / RAL 9005 jet black
Weight 6.1 kg
Suitable keyboard Art.-No. 691680.1, please order separately

Art.-No.	Depth	Weight	Colour
691649	330 mm	6,1 kg	RAL7035
691649TS	330 mm	6,1 kg	RAL9005

Circuit Diagram Bag DIN A4

Plastic circuit diagram bag
For format DIN A4
With adhesive tapes for fixing
Dimensions: (W) x (H) x (D) 232 x 220 x 30 mm
Colour similar RAL7035

Art.-No.	Description
699997	Diagram Bag DIN A4, Plastic

19" 1U Keyboard Drawer, Touchpad, Lockable, RAL7035 / RAL9005

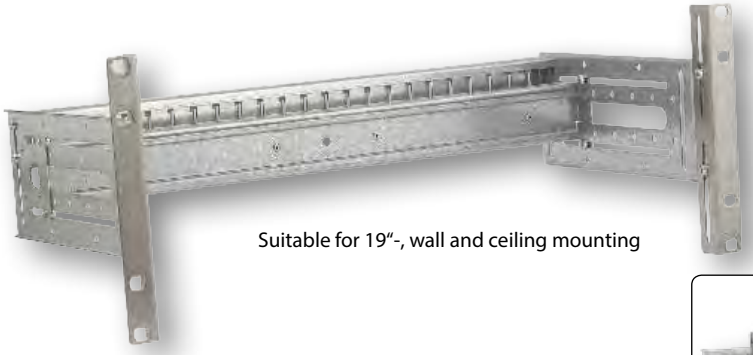
with Touchpad

US-Layout available

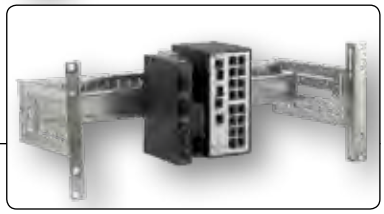
Very solid keyboard drawer incl. keyboard and touchpad
For installation in 19" cabinets, ball-beared keyboard drawer
Connection via USB, cable length 2 m
Industrial keyboard with normal sized keys and Windows function keys
Integrated touchpad with 2 mouse keys
Safety lock with two keys, solid metal handle
Paint finish RAL7035, light grey / RAL9005, jet black
Delivery incl. mounting accessories
Optional: 2 x mounting rail incl. screws for additional fixing onto the rear-sided profiles
Also available with US Layout

	Layout	Depth	Weight	Colour
691649.1TP	DE	410 mm	5,3 kg	RAL7035
691649TS.1TP	DE	410 mm	5,3 kg	RAL9005
691649TS.1TP-US	US	410 mm	5,3 kg	RAL9005

TOP SELLER



Suitable for 19“-, wall and ceiling mounting



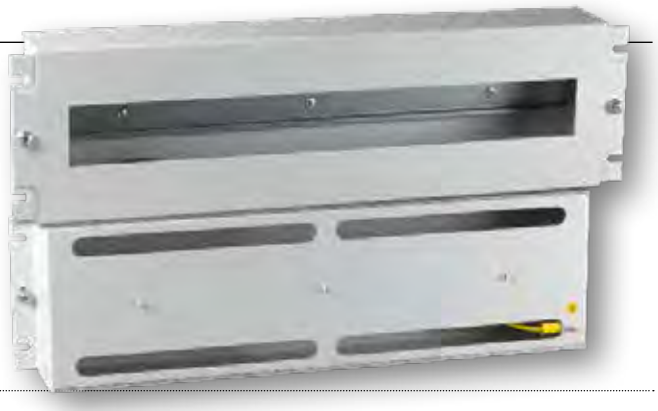
Application example
(Delivery without components)

19" 4U Universal DIN-Rail Holder

For carrying of DIN rail (hat rail) components
Also suitable for wall- and ceiling mounting
DIN rail according to DIN EN 60715 TH35 (35 x 7.5 mm)
Width of DIN rail 435 mm
DIN rail depth-adjustable from ca. 55 .. 165 mm (step-less)
Rear-sided C-rail for cable fixing, height-adjustable
DIN-rail is mountable also horizontally

Art.-No.	Description
53719.1	19" Universal DIN Rail Holder incl. 4U Bracket Set

19"/21" 3U Energy Distribution / Circuit Breaker Housing



For carrying DIN rail modules like circuit breakers, outlets etc.
Capacity 18 modules to 17.5 mm
Front opening 402.5 x 45.5 mm
Rear-sided earthing bolt M5 incl cable
Incl. mounting adapter for 19"/21" (ETSI)
Material steel sheet
Paint finish RAL7035, light grey
Dimensions (W x H x D) 482.6 x 133 x 60 mm
Mounting note: for easy opening and closing of the front cover, a captive nut M6 should be installed behind the left & right cover screw.

Art.-No.	Description
691277.1	19"/21" Energy Distribution Box with DIN Rail

Socket Outlet 1-Way for DIN-Rail

Protective contact outlet for mounting at DIN-rail TS35 acc. to EN50022 / EN60715 („Hat Rail“)“ e.g. for network cabinets, installation small distributors and counter according to VDE 0603
Rated voltage/ current 250 V / 16 A
Wire max. 10 mm² solid/stranded
Protection degree IP20
Dimensions acc. to DIN43880 („Automat measuring“)
Cap. dimension 45 mm, width 2.5 TE (< 45 mm)
Materials: clamping body brass, screw terminals steel galvanised, insulation housing plastic
Colour grey

Art.-No.	Description
EK633.1	Outlet 1-Way for DIN-Rail, grey
EK633.2	Outlet 1-Way for DIN-Rail, with Cover, grey
EK633.3	Outlet 1-Way for DIN-Rail, France (UTE), grey

DIN Rail for 19" Mounting

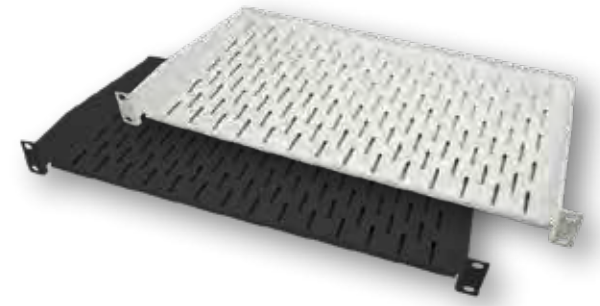
Dimensions 483 x 35 x 7.5 mm
With 2 x 19" mounting holes 6.5 x 16 mm
Material steel, galvanised

Art.-No.	Description
691274.1	DIN Rail 35 x 7.5 mm for 19" Mounting

19" 1U Pull-Out Shelves, Depth-Adjustable

For mounting in all network and server cabinets
Usable width 440 mm
Dimension depth = depth of tray
Mounting at the rear-sided profiles neccessary
Material: steel sheet, paint finish RAL7035, light grey / RAL9005, jet black

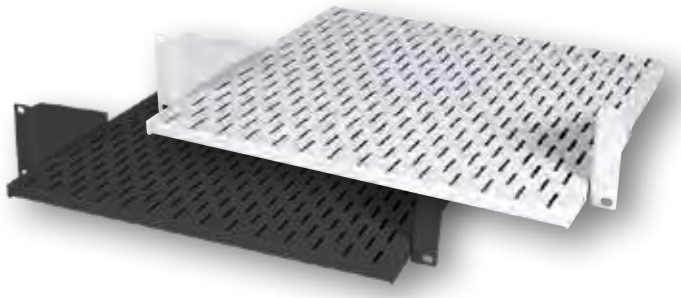
Art.-No.	Depth	Max. Pullout	Cabinet Depth	Max. Load	Weight	Colour
691651.6	350 mm	200 mm	600 mm	35 kg	3.5 kg	RAL7035
691651.8	550 mm	320 mm	800 mm	40 kg	5.0 kg	RAL7035
691651.10	750 mm	680 mm	1000 mm	40 kg	6.8 kg	RAL7035
691651.12	950 mm	920 mm	1200 mm	40 kg	8.6 kg	RAL7035
691651TS.6	350 mm	200 mm	600 mm	35 kg	3.5 kg	RAL9005
691651TS.8	550 mm	320 mm	800 mm	40 kg	5.0 kg	RAL9005
691651TS.10	750 mm	680 mm	1000 mm	40 kg	6.8 kg	RAL9005
691651TS.12	950 mm	920 mm	1200 mm	40 kg	8.6 kg	RAL9005



19" 1U Shelf, Depth 250 mm, max. 10 kg

Depth 250 mm
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Depth	Max. Load	Weight	Colour
691668	250 mm	10 kg	1.8 kg	RAL7035
691668TS	250 mm	10 kg	1.8 kg	RAL9005



19" 2U Shelves

For installation in all network and server cabinets, 19" rack frames and wall housings
691253: not depth adjustable
691667: depth adjustable in steps of 25 mm
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Depth	Max. Load	Weight	Colour
691253	300 mm	15 kg	2,0 kg	RAL7035
691667	400 mm	25 kg	2,8 kg	RAL7035
691253TS	300 mm	15 kg	2,0 kg	RAL9005
691667TS	400 mm	25 kg	2,8 kg	RAL9005

19" 1U Shelves, Depth-Adjustable, max. 10 kg

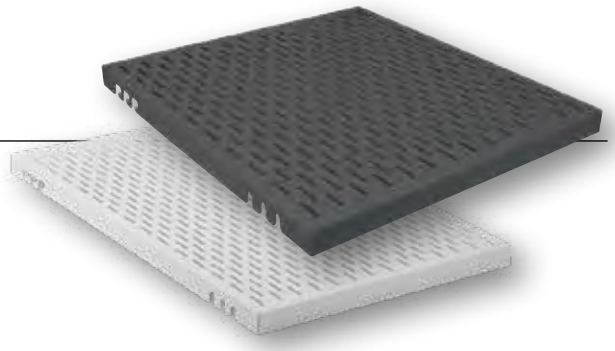
For mounting in all network and server cabinets and 19“ rack frames
Width 440 mm
250/350 mm depth for rack frames - mounting depth I
250/350 mm depth for front fixing
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Depth	Cabinet Depth	Max. Load	Weight	Colour
691641.1V2	250 mm	400 mm	10 kg	1,8 kg	RAL7035
691641.2V2	350 mm	500 mm	10 kg	2,4 kg	RAL7035
691641TS.1V2	250 mm	400 mm	10 kg	1,8 kg	RAL9005
691641TS.2V2	350 mm	500 mm	10 kg	2,4 kg	RAL9005

19" 1U Heavy-Duty Shelves, Depth-Adjustable, max. 150 kg

For mounting in all network and server cabinets and 19“ rack frames
Width 445 mm
691653 for rack frame depth I, II and III
691653.2 for rack frame depth III
Fixing to rear mounting profiles necessary
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Cabient Depth	Max. Load	Weight	Colour
691653	600 mm	150 kg	5.2 kg	RAL7035
691653.2	800-1000 mm	150 kg	7.0 kg	RAL7035
691653TS	600 mm	150 kg	5.2 kg	RAL9005
691653TS.2	800-1000 mm	150 kg	7.0 kg	RAL9005



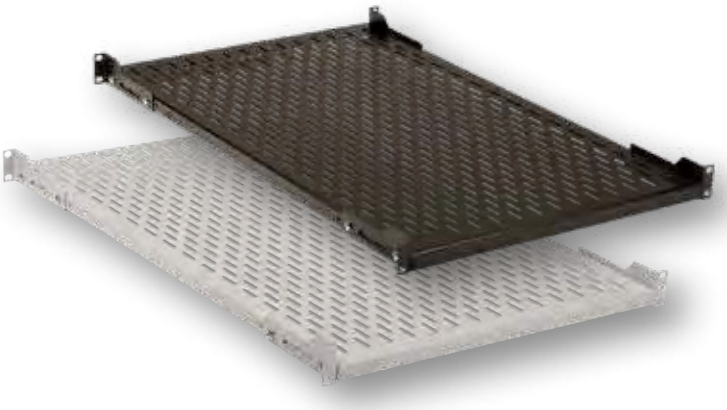
19" Heavy Duty Shelves, Bolt-Mounting, max. 100 kg, RAL7035

For mounting in all network and server cabinets and 19“ rack frames
Width 445 mm
Fixing of bolts to front and rear 19" profile rails
Fixing the shelf in the mounted bolts
4 bolts included
Shelf material: steel sheet
Bolt material: galvanised steel
Shelf finish RAL7035, light grey / RAL9005, jet black

Only for cabinet series CLASSIC

Art.-No.	Depth	Cabinet Depth	Max. Load	Weight	Colour
691640.1	470 mm	600 mm	100 kg	3.2 kg	RAL7035
691640.2	670 mm	800 mm	100 kg	4.2 kg	RAL7035
691640.3	870 mm	1000 mm	100 kg	5.6 kg	RAL7035
691640TS.1	470 mm	600 mm	100 kg	3.2 kg	RAL9005
691640TS.2	670 mm	800 mm	100 kg	4.2 kg	RAL9005
691640TS.3	870 mm	1000 mm	100 kg	5.6 kg	RAL9005

19" 1U Heavy-Duty Shelves, Depth-Adjustable, max. 80 kg



For mounting in all networking and server cabinets and 19“ rack frames
Width 440 mm
450 mm depth for rack frame - mounting depth II
550/650 mm depth for rach frame - mounting depth III
450/550/650/750/850 mm depth front fixing and rear fixing necessary
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Depth	Cabinet Depth	Max. Load	Weight	Colour
691641.3V2	450 mm	600 mm	80 kg	2.4 kg	RAL7035
691641.4V2	550 mm	800 mm	80 kg	3.2 kg	RAL7035
691641.6V2	750 mm	1000 mm	80 kg	4.0 kg	RAL7035
691641.7V2	850 mm	1200 mm	80 kg	4.8 kg	RAL7035
691641TS.3V2	450 mm	600 mm	80 kg	2.4 kg	RAL9005
691641TS.4V2	550 mm	800 mm	80 kg	3.2 kg	RAL9005
691641TS.6V2	750 mm	1000 mm	80 kg	4.0 kg	RAL9005
691641TS.7V2	850 mm	1200 mm	80 kg	4.8 kg	RAL9005

Especially solid type !

Bügel drehbar

Abb. zeigt Bügellänge 75 mm

19" 1U Cable Routing Panel, 5 x Metal Bracket

For clear and orderly cable routing in the 19" level
Especially solid steel brackets, diameter 5 mm
Bracket turnable in steps of 90°
Bracket length 75 or 110 mm
Material bracket + panel steel, holder PA
Colour RAL7035, light grey / RAL9005, jet black

Art.-No.	Description
699980.1	19" 1U Cable Routing Panel, 5 x Steel Bracket 75 mm, Front Panel RAL7035
699980.2	19" 1U Cable Routing Panel, 5 x Steel Bracket 110 mm, Front Panel RAL7035
699980TS.1	19" 1U Cable Routing Panel, 5 x Steel Bracket 75 mm, Front Panel RAL9005
699980TS.2	19" 1U Cable Routing Panel, 5 x Steel Bracket 110 mm, Front Panel RAL9005

19" 1U Cable Routing Panel, 5 Brackets, Plastic

For orderly and clear cable routing in the 19" level
Material plastic
Colour RAL7035, light grey

Art.-No.	Description	Colour
699992	19" 1U Cable Routing Panel, 5 Brackets, Plastic	RAL7035

19" 1U Cable Routing Panel, 5 Brackets, Steel

For orderly and clear cable routing in the 19" level
Material steel sheet
Paint finish RAL7035, light grtey / RAL9005, jet black

Art.-No.	Description	Colour
699995.1	19" 1U Cable Routing Panel, 5 Brackets, Steel	RAL7035
699995TS.1	19" 1U Cable Routing Panel, 5 Brackets, Steel	RAL9005

Especially solid type !

Bügel drehbar

Abb. zeigt Bügellänge 110 mm

19" 1U Cable Routing Panel, 5 x Metal Double Brackets

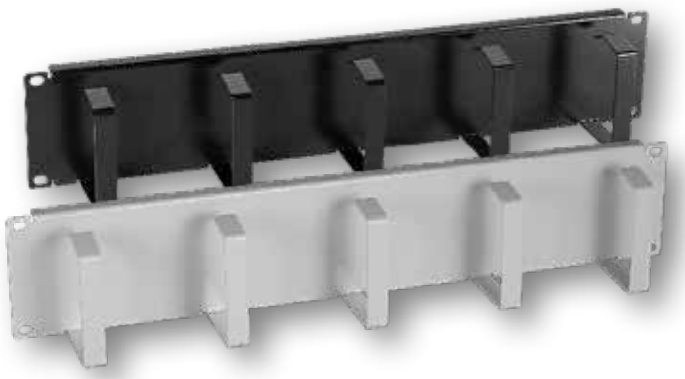
For clear and orderly cable routing in the 19" level
Especially solid steel double brackets, diameter 5 mm
Bracket turnable in steps of 90°
Bracket length 75 or 110 mm
Material bracket + panel steel, holder PA
Colour RAL7035, light grey / RAL9005, jet black

Art.-No.	Description
699981.1	19" 1U Cable Routing Panel, 5 x Double Bracket 75 mm, Front Panel RAL7035
699981.2	19" 1U Cable Routing Panel, 5 x Double Bracket 110 mm, Front Panel RAL7035
699981TS.1	19" 1U Cable Routing Panel, 5 x Double Bracket 75 mm, Front Panel RAL9005
699981TS.2	19" 1U Cable Routing Panel, 5 x Double Bracket 110 mm, Front Panel RAL9005

19" 1U Cable Routing Panel, 4 Brackets, Steel

For orderly and clear cable routing in the 19" level
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

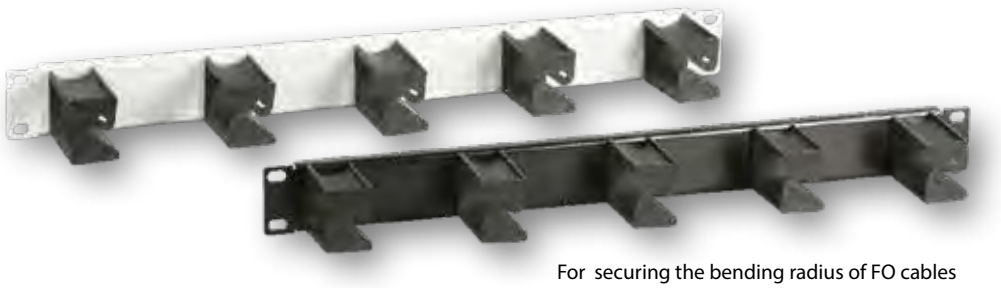
Art.-No.	Description	Colour
699995	19" 1U Cable Routing Panel, 4 Brackets, Steel	RAL7035
699995TS	19" 1U Cable Routing Panel, 4 Brackets, Steel	RAL9005



19" 2U Cable Routing Panel, 5 Brackets, Steel

For orderly and clear cable routing in the 19" level
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
699998	19" 2U Cable Routing Panel, 5 Brackets, Steel	RAL7035
699998TS	19" 2U Cable Routing Panel, 5 Brackets, Steel	RAL9005

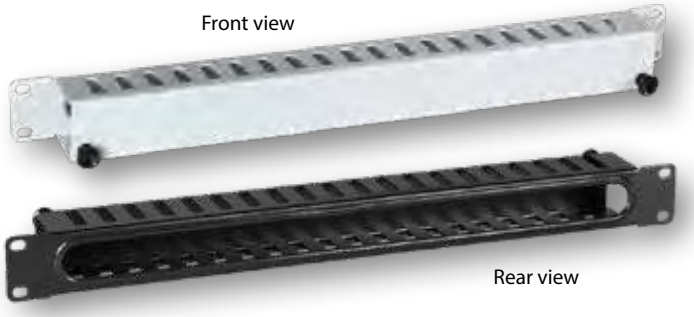


For securing the bending radius of FO cables

19" 1U Cable Routing Panel, 5 x Plastic Brackets

For clear and orderly cable routing in the 19" level
Especially rounded brackets for securing the bending radius of FO cables
Bracket turnable in steps of 90°
Bracket length 56 mm
Material panel steel, brackets plastic
Colour RAL7035, light / RAL9005, jet black

Art.-No.	Description
699982.1	19" 1U Cable Routing Panel, 5 x Plastic Brackets for FO, Front Panel RAL7035
699982TS.1	19" 1U Cable Routing Panel, 5 x Plastic Brackets for FO, Front Panel RAL9005



19" 1U Cable Routing Panel with Cover, Steel

With front-sided cover with quick-fastener
For orderly and clearly cable routing in the 19" level
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
699999.1	19" 1U Cable Routing Panel with Cover	RAL7035
699999TS.1	19" 1U Cable Rounting Panel with Cover	RAL9005

19" 1U Cable Feedtrough Panel with Brush

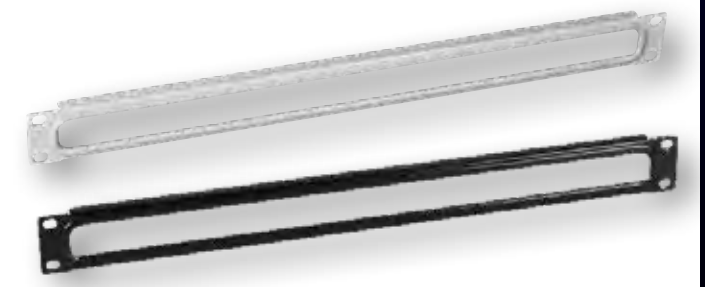
Opening 440 x 25 mm
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
699993V2	19" 1U Cable Feedtrough Panel with Brush	RAL7035
699993TSV2	19" 1U Cable Feedtrough Panel with Brush	RAL9005

19" 2U Cable Routing Panel with Cover, Steel

With front-sided cover with quick-fastener
For orderly and clearly cable routing in the 19" level
Paint finish RAL7035, light grey / RAL9005, jet black

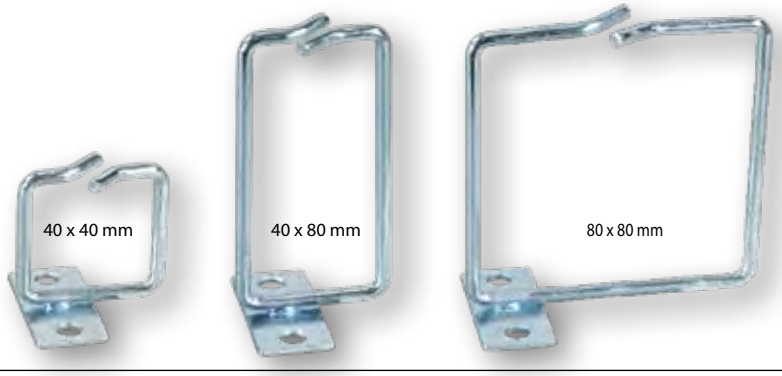
Art.-No.	Description	Colour
699999.2	19" 2U Cable Routing Panel with Cover	RAL7035
699999TS.2	19" 2U Cable Routing Panel with Cover	RAL9005



19" 1U Cable Feedtrough Panel with Edge Protection, Steel

Opening 440 x 25 mm
Material steel sheet
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
699993	19" 1U Cable Feedtrough Panel, Edge Protection, Steel	RAL7035
699993TS	19" 1U Cable Feedtrough Panel, Edge Protection, Steel	RAL9005

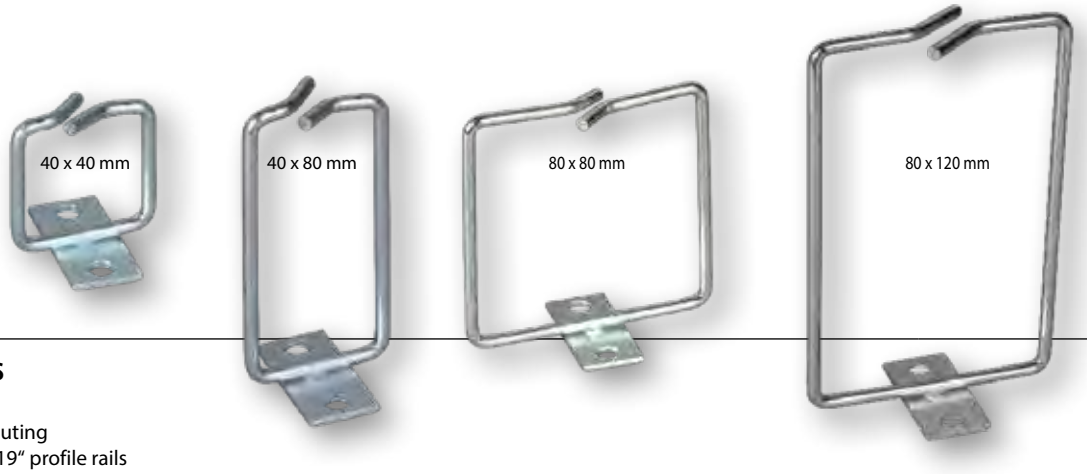


Due to the offset mounting plate, the ports of the 19" devices stay accessible

Cable Routing Brackets for Frontside Mounting

Cable routing bracket for mounting at the front side or lateraly at the 19“ level
Lateral offset mounting plate enables access to all ports of 19" devices (e.g. patch panel, switch, etc.)
Screw mounting in 1U or in lateral openings of the 19" profile rails
Material steel, galvanised

Art.-No.	Description
699991.1S	Cable Routing Bracket 40 x 40 mm with Lateral Offset Mounting Plate
699991.2S	Cable Routing Bracket 40 x 80 mm with Lateral Offset Mounting Plate
699991.3S	Cable Routing Bracket 80 x 80 mm with Lateral Offset Mounting Plate



Cable Routing Brackets

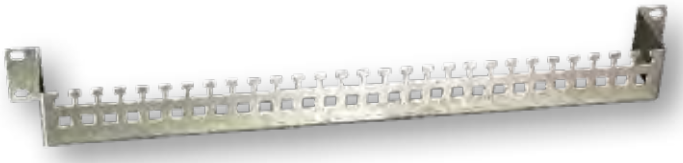
For orderly and clear cable routing
Mounting on the side of the 19“ profile rails
Material steel, galvanised

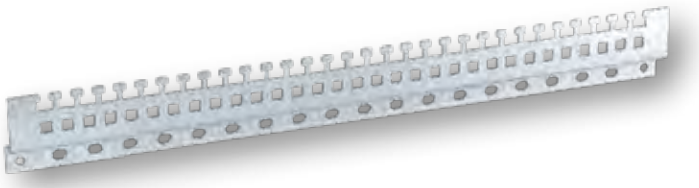
Art.-No.	Description
699991.1	Cable Routing Bracket 40 x 40 mm
699991.2	Cable Routing Bracket 40 x 80 mm
699991.3	Cable Routing Bracket 80 x 80 mm
699991.4	Cable Routing Bracket 80 x 120 mm

Cable Routing Brackets 80 x 250 mm

For orderly and clear cable routing
Mounting on the side of the 19“ profile rails
Material steel
Paint finish RAL7035 light grey / RAL9005 jet black

Art.-No.	Description
699991.5	Cable Routing Bracket Big 85 x 250 mm, RAL7035
699991TS.5	Cable Routing Bracket Big 85 x 250 mm, RAL9005





19" 1U Cable Tidy Rail

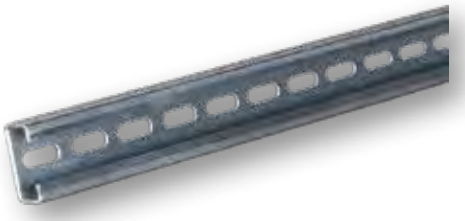
Cable tidy rail for mounting on the 19“ profile in network and server cabinets
For orderly installation and strain-relief of cables via cable ties
Width 482 mm, Depth 60 mm
Material steel, galvanised

Art.-No.	Description
691660	19“ 1U Cable Tidy Rail

Cable Tidy Rail for Side Mounting

Cable tidy rails for side mounting on the 19“ profile in network and server cabinets
Organised installation and strain relief of cables via cable ties
Material steel, galvanised

Art.-No.	Description	For Cabinet Depth
691670	Cable Tidy Rail, Length 500 mm	600 mm
691665	Cable Tidy Rail, Length 700 mm	800 mm
691661	Cable Tidy Rail, Length 900 mm	1000 mm
691661.1	Cable Tidy Rail, Length 1100 mm	1200 mm



DIN Rail for 19" Mounting

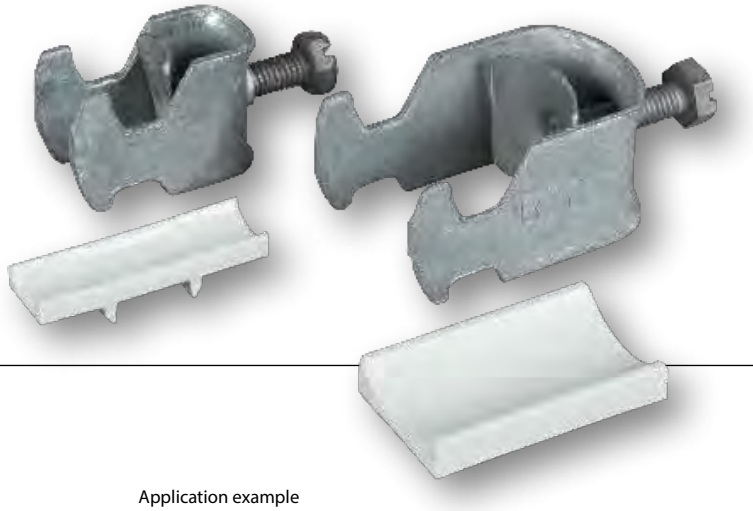
Dimensions 483 x 35 x 7.5 mm
With 2 x 19" mounting holes 6.5 x 16 mm
Material steel, galvanised

Art.-No.	Description
691273.1	C-Profil zur 19“ Montage

C-Profiles for Side-Mounting

Dimensions 483 x 30 x 15 mm
With 2 x 19" mounting holes 6.5 x 16 mm
Slot wide 16 mm
Material steel, galvanised

Art.-No.	Description	For Cabinet Depth
691273.8	C Profile Rail 30 x 15 mm	800 mm
691273.10	C Profile Rail 30 x 15 mm	1000 mm
691273.12	C Profile Rail 30 x 15 mm	1200 mm



U-Clamps for C-Profile Rails, incl. Bottom Saddle

U-clamps for C-profile rails with slot width 16..17 mm
Material steel sheet, galvanised
Delivery incl. bottom saddle
Other dimensions available on request

Art.-No.	Description
691275.3	U-Clamp incl. Bottom Saddle, for Cable Ø 16..22 mm
691275.5	U-Clamp incl. Bottom Saddle, for Cable Ø 28..34 mm
691275.7	U-Clamp incl. Bottom Saddle, for Cable Ø 38..42 mm

Application example

19" Dummy Plates

For covering open areas in the 19“ level
High stability
Paint finish RAL7035, light grey / RAL9005, jet black

Art.-No.	Description	Colour
691265	19" 1U Dummy Plate	RAL7035, light grey
691266	19" 2U Dummy Plate	RAL7035, light grey
691267	19" 3U Dummy Plate	RAL7035, light grey
691268	19" 6U Dummy Plate	RAL7035, light grey
691269	19" 9U Dummy Plate	RAL7035, light grey
691265TS	19" 1U Dummy Plate	RAL9005, jet black
691266TS	19" 2U Dummy Plate	RAL9005, jet black
691267TS	19" 3U Dummy Plate	RAL9005, jet black
691268TS	19" 6U Dummy Plate	RAL9005, jet black
691269TS	19" 9U Dummy Plate	RAL9005, jet black

Application example

19" 1U Dummy Plate Snap-In, Tool-Less, RAL9005

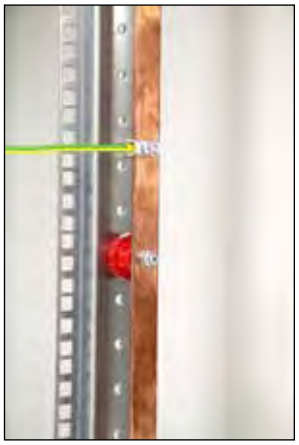
Very fast and easy snap-in mounting, screw-less
Easy to remove
Material plastic
Colour similar RAL9005, jet black

Art.-No.	Description
691271	Dummy Plate 19" 1U "Snap-In", Plastic, black

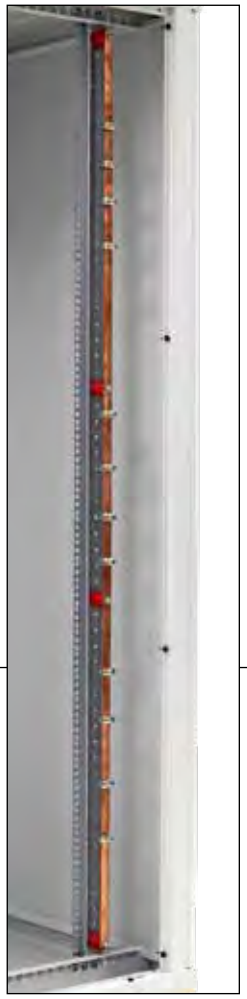
19" 10U Mounting Plate

For screw mounting of devices in area of the 19" level
Material steel sheet, galvanised, thickness 3 mm
Unperforated

Art.-No.	Description
693046.10	19" 10U Mounting Plate, Steel Sheet galvanised, Unperforated



Mounting via supporting insulators at the 19" profiles



Earthing Set for Cabinets 42U, Vertically

For vertically installation in 42U network cabinets
Mounting via supporting insulators on the sidely round holes of the 19“ profiles
Mountable also in combination with vertically blind panekls 691251/691251TS
For mounting in server cabinets the installation of an additional 19“ profile is recommended (Art.-No. 691678, Set of 2)
Scope of delivery: copper earthing bar 1800 x 15 x 5 mm, 12 x busbar terminal 1.5 .. 16 mm², 4 x supporting insulator, 8 x thread bolt M6 x 25, 8 x washer, 8 x nut M6, self-locking

Also suitabe for 47U cabinets

Art.-No.	Description
K3930V42	Earthing Bar for Network Cabinets Classic 42U, vertically, incl. 12 x Busbar Clamp

Earthing Set for Cabinets CLASSIC, small

For mounting in all network and server cabinets CLASSIC and wall-mounting cabinets

• Earthing kit consisting of:
Copper earthing bar 9 connection points, 9 x copper screws with washer for connection points, 2 x M5 nuts, 6 x earthing cable H07V-K, 1 x 6 mm², gn/ye, with M5 ring cable lug on both sides
Lengths: 2 x 390 mm, 2 x 580 mm, 1 x 670 mm, 1 x 800 mm
All parts packed in polybag

Art.-No.	Description
K3930V2	Earthing Set for Cabinets, small

Earthing Cable 6 mm² RCL M6/WES

For use with 42U earthing bar K3930V42
With ring cable lug ⌀ 6 mm and wire end sleeve
Cable H07 V-K 6.0 mm² green/yellow

Art.-No.	Description
K2303.0,5	Earthing Cable 6 mm² RCL M6/WES
K2303.1	Earthing Cable 6 mm² RCL M6/WES
K2303.1,5	Earthing Cable 6 mm² RCL M6/WES
K2303.2	Earthing Cable 6 mm² RCL M6/WES

Turning Handle, Complete, without Cylinder

Suitable for all front and rear doors (full height) of network and server cabinets
For EFB cutout 25-50-50
• For use with profile half-cylinders DIN 18252 / EN1303 (30/10 mm)
Profile half-cylinder not included, please order separately
Material plastic / metal

Art.-No.	Description
102179	Turning Handle, Complete, without Cylinder

Compact Turning Handle for Profile Half Cylinder

Easiest retrofitting for all 19" wall mounting cabinets 1-part and 2-part as well as wall and standing cabinets Flat Pack
Suitable for use with profile half-cylinder acc. to DIN 18252 / EN1303 (e.g. Art.-No. 46087.x)
Included latch limits the rotation angle to 90°
Delivery without profile half-cylinder

Art.-No.	Description
699989	Compact Turning Handle for PHC, incl. Latch

Profile Half-Cylinder (Standard Locking)

Profile half-cylinder acc. to DIN 18252 / EN1303
Suitable for EFB standard turning handles (Art.-No. 102179), compact turning handle (Art.-No. 699989) and telecom distrbutors TWL/TSL

Art.-No.	Description
46087.1	Profil Half-Cylinder Locking T3 (1333), incl. 2 Keys
46087.2	Profil Half-Cylinder Locking T4, incl. 2 Keys
46087.3	Profile Half-Cylinder for Locking 3524E
46087.4	Profile Half-Cylinder with Push-Button
46086.1	Profil Half-Cylinder Locking 15, with 1 Key Q15

Spare Keys for Standard Cabinet/Wall Housing

2 spare keys for Locking T3 / 1333
Suitable for all EFB standing and wall mount cabinets with standard locking
Suitable for profile half-cylinder Art.-No. 46087.1
Not for wall housing IP55 and wall housing 3+5U vertical

Art.-No.	Description
102115	Keys for Network, Server Cabinets, Wall Housings (T3 / 1333)

Electronic Locking via Code - Plug & Play Complete Set

Complete set consisting of electronically unlocking turning handle for EFB breakout with separate keypad
After input of access code the turning handle is unlocked for a definable time
Locking status is shown via LED on the handle
Mechanical override by means of profile half-cylinder possible after removing the cylinder cover, replaceable cylinder cover will be destroyed to show manipulation
Fast and easy connection of the components via screw terminals
699990.2 for all doors with 3-point-locking
699990.3 for all doors with 1-point-locking
A second turning handle per set is controllable (e.g. for rear door)
Scope of delivery: 1 x electr. unlocking turning handle, 1 x keypad, 1 x control board, 1 x power supply, all cables, mounting instructions

Art.-No.	Description
699990.2	Complete Set Electronic Handle with Keypad, for 3-Point-Locking
699990.3	Complete Set Electronic Handle with Keypad, for 1-Point-Locking

Set of Captive Nuts

Consisting of
20/50 x captive nuts M6
20/50 x washer M6 plastic
20/50 x screw M6 x 20 mm

Art.-No.	Description
691099	Set of Captive Nuts 20 x M6, complete
691100	Set of Captive Nuts 50 x M6, complete

Set of Captive Nuts, 50 x M6 for Front Mounting

For front-sided mounting into the 19“ profile
Easy and fast - no more wounded fingers!
Set of 50 x screw M6 x 20 mm PH2, washer and cage nut
Material steel, nylon

Art.-No.	Description
691102	Set of 50 x Screw M6 x 20 mm PH2, Washer and Cage Nut

Set of Captive Nuts, 50 x M6 Torx for Front Mounting

For front-sided mounting into the 19“ profile
Easy and fast - no more wounded fingers!
Set of 50 x screw M6 x 20 mm T30, washer and cage nut
Material steel, nylon

Art.-No.	Description
691104	Set of 50 x Screw M6 x 20 mm TORX, Washer and Cage Nut

Set of Captive Nuts, 50 x M5 for Front Mounting

For front-sided mounting into the 19“ profile
Easy and fast - no more wounded fingers!
Set of 50 x screw M5 x 20 mm PH2, washer and cage nut
Material steel, nylon

Art.-No.	Description
691103	Set of 50 x Screw M5 x 20 mm PH2, Washer and Cage Nut

Labelling System for 19"/1U

Installation in server, network and equipment cabinets with 19“ frame
For devices with 19“ standard mounting like Patch-panel
Transparent window in the cover
Easy installation via included screws
Left and right side mountable
With insert binder expandable
Without screws max. expandable to 4U
Colour RAL7035, light grey / RAL9005, jet black
Dimensions (W x H x D) 42 x 44 x 10 mm

Art.-No.	Description	Colour
37680.1	Labelling System for 19" 1U	RAL7035, light grey
37681.1	Labelling Sheet, 1 Sheet = 40 Labels	

IP Thermometer with E-Mail, LAN, WiFi, PoE, SNMP

New generation of the IP Thermometers in modern Design
Connection of up to **three temperature- or humidity sensors (also combi sensors)**
Two dry contacts for control of alarms (door opening, smoke sensor, etc.)
Network connection via **LAN or WiFi**
E-Mail with TLS transport encryption
SMS via HWg-SMS gateway directly via network
Worldwide access via SensDesk portal of the manufacturer incl. web interface (Android, iOS)
Applications for the IP thermometer:
IT monitoring: control of relevant data in server room and alarm to the technicians
Health: monitoring of refridgerators incl. reporting
Food industry: monitoring of cold chain
Heating systems: fast information at failure of critical systems
Out of Band: integrated WiFi module enables connection at critical locations
Included in delivery: IP thermometer, 1 x temperature sensor (3 m), software CD, power supply (adaptable Euro/UK/USA/China)

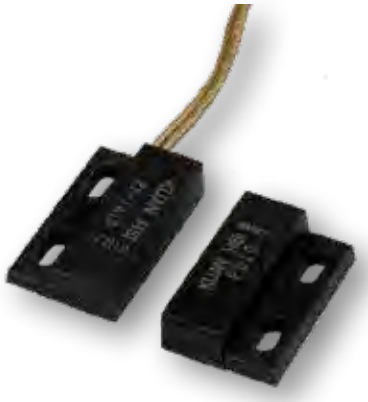
Delivery incl. 1 x temperatur sensor and power supply
Via webinterface also usable without software

Art.-No.	Description
DCM1002.1	IP-Thermometer with E-Mail, LAN, WiFi, PoE, SNMP

Temperature Sensor for IP-Thermometer

Temperature sensor, cable length 3 m (other lengths on request)
Temperature range -10°C .. +80°C
Suitable for DCM1002.1 and DCM1001.x

Art.-No.	Description
DCM1000.T	Temperature Sensor for DCM1002.1, -10°C .. +80°C, Cable 3 m



Humidity Sensor for DCM100x

Temperature sensor, cable length 3 m (other lengths on request)
Suitable for DCM1002.1 and DCM1001.x

Art.-No.	Description
DCM1000.H	Humidity Sensor for DCM1002.1

Door Contact Switch for DCM100x

Door contact switch, cable length 3 m
Suitable for DCM1002.1 and DCM1001.x (not for DCM1000.x)

Art.-No.	Description
DCM1001.D	Door Contact Sensor for DCM1002.1

Scalable for any Application

The ELM Rack Management System consists of a central Control Unit as well as up to 100 functional modules for handles and locks, sensors, card readers and keypads connected to it. Due to its modular structure it can be adjusted to any requirement: from a single cabinet in stand-alone operation up to centrally administered server racks in data centres. The functional modules are the interfaces to the system administration and user authorisation (e. g. for opening doors). This includes e. g. the entering of code numbers on keypads, the reading out of contactless cards, the control of the system via mobile phone and many others.

ELM Control Unit USB

The Control Unit is the central control unit within the EMKA Rack Management System. The function modules for handles, locks, sensors and card readers are connected to the Control Unit. It administers both the data exchange between the modules (CAN bus) and the data exchange to external computers (Ethernet network among others).

Art.-No.	Description
DCE-U140-02	ELM Control Unit USB

ELM Keypad

The keypad is used in combination with handle modules to locally open selected locks by entering the designated PIN code. In combination with the Access Unit Wired only the lock number is entered on the keypad while the transponder card contains the authorisation. The Access Unit Wired also makes a double authentication possible (keypad with personal PIN code and card).

Art.-No.	Description
DCE-U08-01	ELM Keypad

ELM Card Reader

The card reader HID is connected to the Access Unit Wired as an external reading unit and can read various contactless cards on the basis of HID and other card technologies. The reader has terminals and is connected with the Access Unit Wired by means of a 4-wire cable. The maximum cable length between module and reader is 10 m.

Art.-No.	Description
DCE-U09-02	ELM Card Reader

ELM Handle Unit

This module can control up to 8 one-point latches, handles with locking set or turning handles and read in 8 status contacts. It is possible to activate several locks simultaneously. In this case it is recommendable to connect a power supply unit to each control unit. The opening pulse for the respective lock is triggered by keypad, card or the software Control Cockpit. The states (open / closed) of locking systems, doors and side walls can be analysed via the existing inputs. For supplying the locking systems with 24 V operating voltage a suitable power supply unit can additionally be connected using the input "ext. DC" on the front.

Art.-No.	Description
DCE-U32-02	ELM Handle Unit for 8 x Electronical Handle DCE-1150-U56/U58

Electronic Turning Handle

Electronically unlocking turning handle for use with doors with 1-point locking in EFB standing cabinets
With reed-contact for detection of locking status and 4 m connection cable
LED (green) shows unlocked status
DCE-1150-U58: delivery incl. mounting bracket and connection cable

Art.-No.	Description
DCE-1150-U56S	Electr. Handle for 3-Point-Lock, Unlocking, EFB Cut-Out, Status LED
DCE-1150-U58	Electr. Handle for 1-Point-Lock, Unlocking, EFB Cut-Out, Status LED

Highest Process Stability During Operation

The monitoring of various parameters in the server racks is done by specific sensors. Measured data are centrally captured and analysed. They can trigger alarms, switch on fans or air-conditioning units or effect emergency openings of the cabinet / rack doors when user-defined limits are exceeded. In combination with the software Control Cockpit, the data provide the base for increasing the energy efficiency of data centres. The sensor program includes all relevant parameters for measuring and monitoring the operating statuses of server racks.

ELM Sensor Unit

The Sensor Unit is connected with specific sensors for measuring different operating states in the server racks. When limits are exceeded, it triggers alarms, switches fans or air-conditioning units on and effects the emergency opening of doors.

Product Details
- Capturing and analysing of different measurements such as temperature, humidity, smoke or electrical parameters
- Connection of max. 4 sensors to analogue inputs
- Switching of max. 4 alarm relay outputs (e. g. switching fans on or off) depending on the sensor measurements.
- Programming of the sensors with different limits for each

Art.-No.	Description
DCE-U13-02	ELM Sensor Module 4 x Input or 4 x Output

ELM Climatic Sensor

Vorbereitet zum Anschluss an das Sensormodul DCE-U13-02
Vormontierter Stecker zum problemlosen Anschluss
Inkl. ausführlicher Dokumentation zur Einbindung ins ELM System
Verlängerungs- und Splitterkabel sind als Zubehör erhältlich

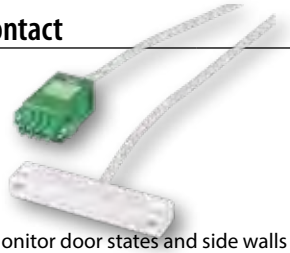
Art.-No.	Description
DCE-U25-01	ELM Climatic Sensor (Temperature + Humidity)

ELM Optical Smoke Detector

Optical smoke sensor with VdS certification G29219. The sensor is connected to the Sensor Unit. In non-operating state the sensor delivers an output signal of approx. 400 mV. When detecting smoke the signal jumps to over 1,800 mV.

Art.-No.	Description
DCE-U34-01	ELM Optical Smoke Detector

ELM Flat Reed / Door Contact



This digital sensor is used to monitor door states and side walls in combination with the Rack Management System. The sensor is connected to the Handle Units.

Art.-No.	Description
DCE-U35-01	ELM Flat Reed Contact as Door Contact

ELM Vandalism Sensor

This analogue sensor can be used in safety-related applications to protect against vandalism, destruction and theft. It measures accelerations in an axis. The sensor is connected to a Sensor Unit.

Plastic housing with two fixing holes

Art.-No.	Description
DCE-U38-01	Acceleration Sensor, analog

ELM Temperature Sensor

The analogue sensor is suitable for monitoring temperatures of both gaseous and liquid media. The sensor is connected to the Sensor Unit.

Art.-No.	Description
DCE-U39-01	Temperature Sensor, analog

Agent E Stand Alone 13.56 MHz

The swinghandle Agent E Stand Alone consists of a battery-driven handle with integrated card reader for 125 kHz or 13.56 MHz transponder cards. Via the integrated USB interface in combination with the software Control Cockpit you can programme cards , delete them, create time profiles or read out the integrated data storage. This handle does not require any external wiring for functioning. The stand-alone system is a low-cost locking system for applications where no data networking and no remote-controlled monitoring are required. Keypad and handles are available as individual components and as a constructive unit.

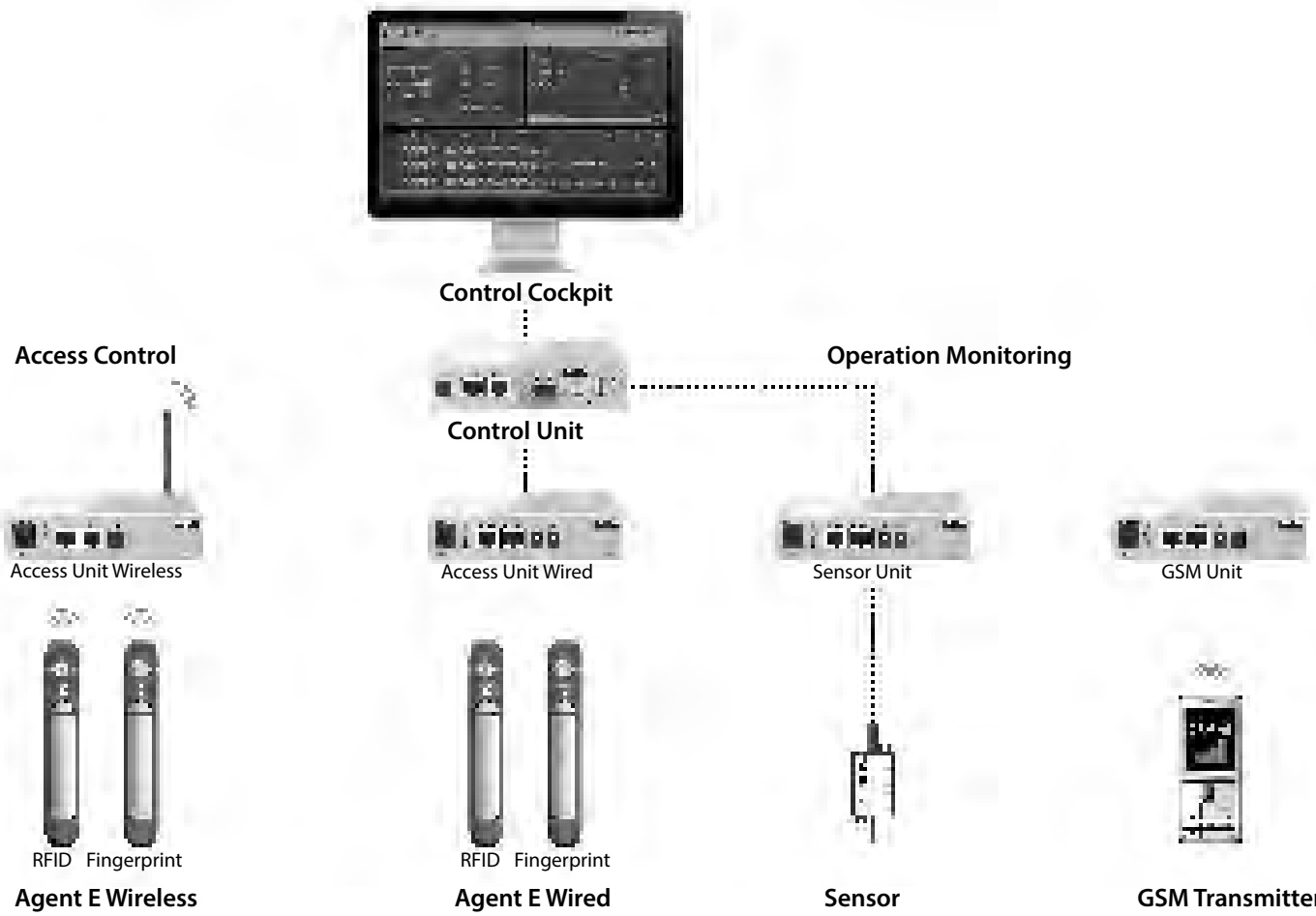
Product features
Configuration via USB port with AGENT E configuration software (programming, deleting cards or fingers, creating authorisation and time profiles, reading out event logs)
Authentication via 13.56 MHz transponder cards or via fingerprint (125 kHz variant available on request).
All handles excel at extremely energy-efficient battery operation (service life battery min. 3 years) and have one port for one door contact
Emergency power function or emergency opening via integrated USB port.

Stand-Alone Type:

No cabling &
No modules required !

Art.-No.	Description
DCE-U900-21	Agent E Stand Alone 13.56 MHz for bar lock
DCE-U900-22	Agent E Stand Alone 13.56 MHz for latch

Variant for 125 kHz transponder cards available on request



Got it on Lock

The swinghandle product family AGENT E has been specially developed for the use on server racks and enables central monitoring, remote-controlled opening and system configuration. The authentication is performed directly on the handle either by the RFID cards available in the company or via the individual fingerprint. In combination with a multi-level emergency concept the function is also always guaranteed in case of a malfunction or battery failure. A highly-efficient power management guarantees a long battery life. Due to its wireless and thus cost-saving mounting it is equally suitable for new installations as well as for retrofitting.

Agent E Wired 13,56 MHz

The Agent E Wired is the wired version of the electromechanical turning handle range. It enables a central and complete logging of events. The personified access is realised securely and conveniently via RFID card reader and fingerprint.

Product features
Wired communication via CAN bus by Access Units and Control Unit
Authentication via 125 kHz or 13,56 MHz transponder cards or via fingerprint.
Remote-controlled opening is also always possible
Handle type Wired Slave does not have its own authentication and is un-locked in combination with master handle, central keyboard / central card reader or by remote-controlled opening. The opening is effected by touching the sensor field
All handles have one port for one door contact
In combination with the Access Unit, the middle LED in the sensor field can be activated to signal possible malfunctions in the rack such as increased temperature (does not apply to the type fingerprint)
Emergency opening by integrated USB port
One Control Unit can control up to 64 handles

Art.-No.	Description	Suitable for Module
DCE-U900-41	Agent E Wired 13.56 MHz for bar lock	DCE-U47-02 (Access Unit Wired)
DCE-U900-42	Agent E Wired 13.56 MHz for latch	DCE-U47-02 (Access Unit Wired)

Variant for 125 kHz transponder cards available on request

Access Unit Wired HID

The Access Unit controls up to 2 turning handles of the Agent E wired. It is in turn directly connected to the central Control Unit.

Product features
Direct connection of 2 turning handles of the type series Agent E Wired
Control of the central LED in the handle via terminal block on the back
Alternatively, connection of 2 electromechanical locks and 2 external card readers or one reader antenna type Legic®
Max. 32 Access Units Wireless per Control Unit: Administration of up to 64 handles under one IP address
Double authentication (PIN code and card) in combination with keypad possible

Type Access Unit Wired HID
Power supply: 12 ... 30 V DC, 200 mA + outputs
Handle outputs: 2 (RJ45), max. 12 V / 1.000 mA, or max. 24 V / 500 mA per output
Ports for card reader: 2 (RJ45), HID
Relay outputs: 2 (max. 10 V DC, 1 mA)
CAN bus ports: 2
Operating temperature: +5 ... +45 °C
Dimensions (L x B x H): 107 x 135 x 33 mm
Scope of supply: bracket

Art.-No.	Description	Suitable for Handle
DCE-U47-02	Access Unit Wired HID for 2 Handles	DCE-900-xx (Agent E Wired)

Agent E Wireless with Card Reader or Fingerprint

Art.-No.	Description	Suitable Control Module
DCE-U901-41	Agent E Wireless 13.56 MHz for 3-Point-Locking	DCE-U980-02 (Access Unit Wireless)
DCE-U901-42	Agent E Wireless 13.56 MHz for 1-Point-Locking	DCE-U980-02 (Access Unit Wireless)
DCE-U901-61	Agent E Wireless Fingerprint for 3-Point-Locking	DCE-U980-02 (Access Unit Wireless)
DCE-U901-62	Agent E Wireless Fingerprint for 1-Point-Locking	DCE-U980-02 (Access Unit Wireless)

The Agent E Wireless is the only turning handle basing on wireless communication. Due to its wireless and thus cost-saving mounting it is most suitable for retrofitting in data centres. The authentication is performed by RFID or fingerprint. Highly-efficient power management guarantees a long battery life.

Product features

Wireless communication via wireless network 868 MHz (industry standard)
Control of up to 1,200 doors in a wireless network via access units and control unit
Authentication via 13,56 MHz transponder cards or via fingerprint (125 kHz variant available on request)
Remote-controlled opening always possible
All handles excel at extremely energy-efficient battery operation (service life battery min. 3 years) and have one port for one door contact
Emergency power function or emergency opening via integrated USB port

Access Unit Wireless Europa

In combination with the Control Unit each individual Access Unit Wireless can administer up to 500 Agent E Wireless handles.

Product Features

Wireless Unit to administer up to 500 handles Agent E Wireless in combination with Control Unit
Max. 4 Access Units Wireless per Control Unit: Administration of up to 2000 handles under one IP address
Frequency 868 MHz (type Europe)

Technical Data
Power supply 12 V DC
Housing metal
Dimensions (L x B x H): 117 X 135 X 33 mm

Art.-No.	Description	Suitable for Handle Type
DCE-U980-02	Access Unit Wireless (Europe)	DCE-U901-xx (Agent E Wireless)

POWER SUPPLY

Wherever active devices and accessory components in the network area need a reliable power supply, EFB-Elektronik has the solution: the portfolio ranges from country-specific supply lines to power strips and monitoring systems with electronic monitoring of the power supply to alarm functions if the specified parameters are not complied with.

Vertical Socket Strips		P. 241
BlueNET 500		P. 241
BlueNET 2000		P. 242
BlueNET 3000		P. 242
19“ Socket Strips		P. 243
Other Socket Strips		P. 246
Power Cables		P. 250

YOU MAY ALSO BE INTERESTED IN:

Network Cabinets	P. 172
Active Components	P. 304

Example picture of 691787

BACH MANN

Socket Strips Vertical

Aluminium profile width 44 mm, depth 47 mm
Cable 3.0 m black
Supplied mounting brackets allow any fastening position

Art.-No.	Description	Number of CEE7/7 Outlets	Number of Cold Device Outlets	Feeding
691781	Socket Strip Vertical, 24 x C13 + 3 x C19	-	27	1-phase, Plug CEE 16 A blue
691782	Socket Strip Vertical 20 x C13, 2 x CB C 16 A	-	20	1-phase, Plug CEE 32 A blue
691783	Socket Strip Vertical, 12 x C13 + 6 x CEE7/7	6	12	3-phase, Plug CEE 16 A red
691784	Socket Strip Vertical 15 x CEE7/7	15	-	3-phase, Plug CEE 16 A red
691785	Socket Strip Vertical 18 x C13	-	18	3-phase, Plug CEE 16 A red
691786	Socket Strip Vertical, 24 x C13 + 3 x C19	-	27	3-phase, Plug CEE 16 A red
691787	Socket Strip Vertical, 36 x C13 + 12 x CEE7/7	12	36	2 x 3-phase, wire end sleeves

Example picture of 691790.18

BACH MANN

Power Distribution Units BlueNET500 with Power Measuring (Display)

BlueNET500 socket strip vertical
With power measuring (display V/A/kW/Hz/PF)
Cable 3.0 m, black
Incl. mounting brackets

Art.-No.	Description	Number of CEE7/ Outlets	Number of C13 Outlets	Number of C19 Outlets	Feeding
691790.1	PDU 19" 1U BlueNET500 8 x CEE7/7 with Power Measuring (Display)	8	-	-	1-phase, CEE 7/7
691790.2	PDU 19" 1U BN500 12 x C13 with Power Measuring (Display)	-	12	-	1-phase, CEE 7/7
691790.4	PDU 19" 1U BN500 8 x C19 with Power Measuring (Display)	-	-	8	1-phase, CEE 7/7
691790.5	PDU Vertical BN500 24xC13 3xC19 400V 16A with Power Measuring (Display)	-	24	3	3-phase, CEE 16 A red
691790.6	PDU Vertical BN500 24xC13 4xC19 230V 16A with Power Measuring (Display)	-	24	4	1-phase, CEE 16 A blue
691790.10	PDU Vertical BN500 24xC13 6xC19 400V 16A with Power Measuring (Display)	-	24	6	3-phase, CEE 16 A red
691790.11	PDU Vertical BN500 24xC13 6xCEE7/3 400V 16A with Power Measuring (Display)	6	24	-	3-phase, CEE 16 A red
691790.12	PDU Vertical BN500 24xC13 6xC19 6xCEE7/3 400V 16A with Power Measuring (Display)	6	24	6	3-phase, CEE 16 A red
691790.13	PDU Vertikal BN500 36xC13 6xC19 400V 16A with Power Measuring (Display)	-	36	6	3-phase, CEE 16 A red
691790.17	PDU Vertical BN500 24xC13 4xC19 230V 32A with Power Measuring (Display)	-	24	4	1-phase, CEE 32 A blue
691790.18	PDU Vertical BN500 24xC13 6xC19 400V 32A with Power Measuring (Display)	-	24	6	3-phase, CEE 32 A red

Example picture of 691791.8

Power Distribution Units BN2000 Monitored (Display & Network)

Vertical PDU BlueNet BN2000 Monitored
Integrated function for measuring of current, voltage, reactive-, apparent-, active power, frequency and power factor
Integrated temperature sensor + two interfaces for external sensors
With integrated display, integrated web server with 10/100 Mbit/s Ethernet port (RJ45)
Cable 3.0 m black
Housing aluminium profile
Delivery incl. mounting brackets and screws
Packed in carton

Art.-No.	Description	Number of CEE7/7 Outlets	Number of C13 Outlets	Number of C19 Outlets	Feeding
691791.1	19" 1U PDU BN2000 Monitored 6 x CEE 7/5 Outlet	6	-	-	1-phase, CEE 7/7
691791.2	19" 1U PDU BN2000 Monitored 8 x C13	-	8	-	1-phase, CEE 7/7
691791.3	PDU Vertical BN2000 Monitored 36 x C13 + 6 x CEE7/7, 3-Phase	6	36	-	3-phase, CEE 16 A red
691791.4	PDU Vertikal BN2000 Monitored 36 x C13 + 6 x C19, 3-Phase	-	36	6	3-phase, CEE 16 A red
691791.5	PDU Vertical BN2000 Monitored 24 x C13 + 4 x C19 + 2 x CB 16 A	-	24	4	1-phase, CEE 32 A blue
691791.6	PDU Vertical BN2000 Monitored 24 x C13 + 3 x C19	-	24	3	1-phase, CEE 16 A blue
691791.7	PDU Vertical BN2000 Monitored 24 x C13 + 6 x C19 + 6 x CB	-	24	6	3-phase, CEE 16 A red
691791.8	PDU Vertical BN2000 Monitored 24 x C13 + 6 x C19	-	24	6	3-phase, CEE 16 A red

Example picture of BlueNET3000 PDU

Power Distribution Unit Vertical BlueNet3000

Vertical PDU BlueNet BN3000 RCM Monitored
Residual Current Monitoring per infeed
Integrated function for measuring voltage, reactive-, apparent-, active power, frequency and power factor
Integrated temperature sensor + two interfaces for external sensors
With integrated display, integrated web server with 10/100 Mbit/s Ethernet port (RJ45)
Cable 3.0 m black
Housing aluminium profile
Delivery incl. mounting brackets and screws
Packed in carton

Art.-No.	Description	Number of CEE 7/7 Outlets	Number of C13 Outlets	Number of C19 Outlets	Feeding
691795.1	PDU Vertical BN3000 Monitored 18 x C13 + 3 x C19 +1 x RCM, 16 A	-	12	3	3-phase, CEE 16 A red
691795.2	PDU Vertical BN3000 Monitored 12 x C13 + 6 x C19 +1 x RCM, 16 A	-	12	6	3-phase, CEE 16 A red
691795.3	PDU Vertical BN3000 Monitored 12 x C13 + 6 x C19 + 3 x CEE7/7+1 x RCM, 16 A	3	12	6	3-phase, wire end sleeves
691795.4	PDU Vertikal BlueNet3000 24 x CEE7/7+1 x RCM, 16 A	24	-	-	3-phase, wire end sleeves

19" 1U Socket Strip Kopp

Socket strip PROFIversal
45° turned socket inserts in aluminium profile
Cable 2.0 m grey, H05VV-F 3G 1.5 mm², 250 V AC / 10 A
Included metal brackets allow any fastening position

Art.-No.	Description	Number of CEE7/7 Outlets
691685K	19" 1U Socket Strip 9 x CEE 7/3, RAL7035	9
691686K	19" 1U Socket Strip 8 x CEE 7/3 with Switch, RAL7035	8
691687K	19" 1U Socket Strip 8 x CEE 7/3 with Surge Protection, RAL7035	8
691689K	19" 1U Socket Strip 6 x CEE 7/3 with Full Device Protection, RAL7035	6
691698K	19" Socket Strip 8 x CEE 7/3 Red, Cable C14 for UPS, RAL7035	8

19" 1U Socket Strips

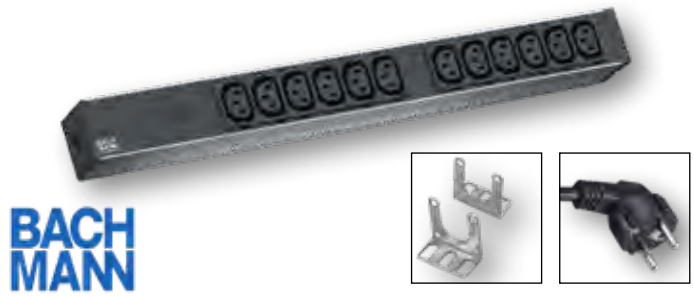
35° turned socket inserts in the aluminium profile
Cable H05VV-F 3G 1.5 mm², black, 2.0 m, 250 V AC / 16 A with angled plug CEE7/7
Supplied mounting brackets allow any fastening position

Art.-No.	Description	Number of CEE7/7 Outlets
691683	19" 1U Socket Strip 9 x CEE7/7 without Switch, RAL9005	9
691684	19" 1U Socket Strip 8 x CEE7/7 with Switch, RAL9005	8
691689SW	19" 1U Socket Strip 6 x CEE7/7 with Surge Protection + Mains Filter, RAL9005	6

19" 1U Socket Strips

2.0 metre supply cable black, H05VV-F 3G 1.0 qmm with IEC60320/C14 plug
Integrated 10 A microfuse
35° turned socket inserts in aluminium profile
Supplied mounting brackets allow any fastening position

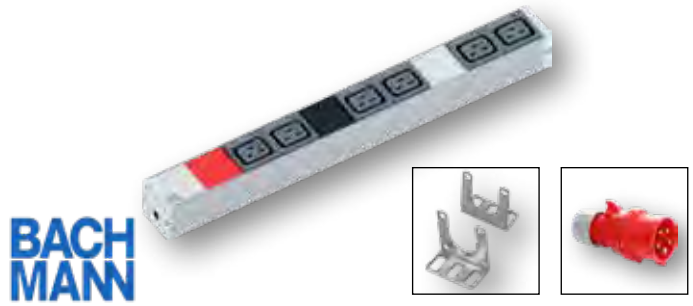
Art.-No.	Description	Number of CEE 7/7 Outlets
691685	19" 1U Socket Strip 9 x CEE7/7 without Switch, RAL7035	9
691686	19" 1U Socket Strip 8 x CEE7/7 with Switch, RAL7035	8
691687	19" 1U Socket Strip 8 x CEE7/7 with Surge Protection, RAL7035	8
691688	19" 1U Socket Strip 7 x CEE7/7 with Surge Protection and Switch, RAL7035	7
691689	19" 1U Socket Strip 6 x CEE7/7 with Surge Protection + Mains Filter, RAL7035	6
691698	19" 1U Socket Strip 8 x CEE7/7 (red) with Cable IEC C14, RAL7035	8



19" 1U Socket Strip with Surge Protection

12 x IEC60320/C13 sockets black in aluminium profile, grey
Integrated 10 A fuse
Cable 2.0 m black, H05VV-F 3G 1.5 mm² with angled CEE7/7 plug
Supplied mounting brackets allow any fastening position

Art.-No.	Description
691697.1	19" 1U Socket Strip 12-Way C13, 10 A Fuse



19" 1U Socket Strip 6 x C19, 3-Phase

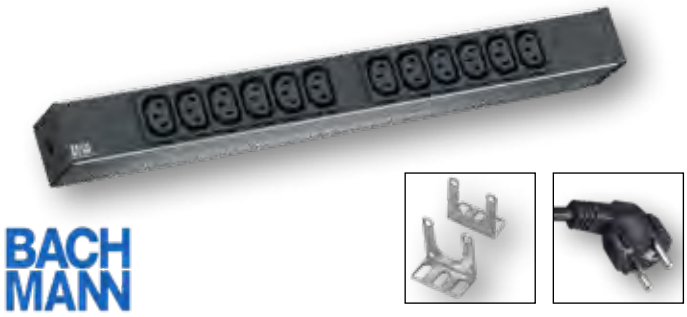
Aluminium profile height 44 mm, depth 47 mm, width ca. 438 mm
Outlets 6 x IEC C19 (2 x C19 per phase)
3-phase feeding with colour marking (red/black/grey)
Cable H05VV-F 5G 2.5 mm² with CEE 16 A plug 5-pole red, length 3.0 m
Supplied 19" mounting brackets allow any fastening position

Art.-No.	Description
691780	19" 1U Socket Strip 6 x C19, 3-Phase, Plug CEE 16 A red

19" 1U Socket Strip 6 x C19, 3-Phase

Surge protection leakage current 6.5 kA
Optical function indication
35° turned socket inserts in plastic profile
2.0 metre supply cable black, H05VV-F 3G 1.5 mm², 250 V AC / 16 A with angled plug CEE7/7
Height 54 mm (1.2U)
Supplied mounting brackets allow any fastening position

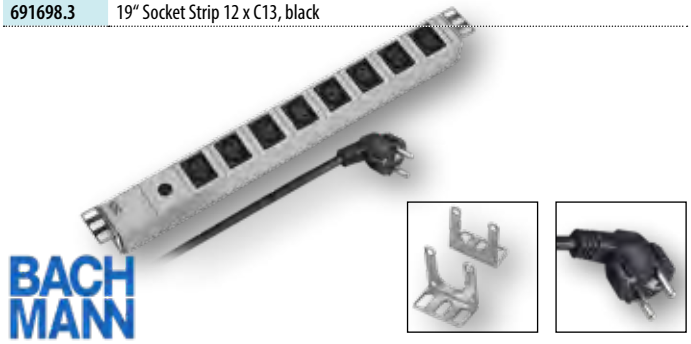
Art.-No.	Description
691693	19" 1.2U Socket Strip 7 x CEE7/7 with Surge Protection, PVC, grey
691694	19" 1.2U Socket Strip 6 x CEE7/7 with Surge Protection and Switch, PVC, grey



19" 1U Socket Strip 9 x CEE7/7 without Switch

12 x IEC60320/C13 sockets black, in aluminium profile
2.0 metre supply cable black, H05VV-F 3G 1.5 mm² with angled CEE7/7 plug
Supplied mounting brackets allow any fastening position

Art.-No.	Description
691698.3	19" Socket Strip 12 x C13, black



19" 1U Socket Strip 8 x IEC C13

8 x IEC60320/C13 socket black, in aluminium profile
Integrated 10 A microfuse
2.0 metre supply cable black, H05VV-F 3G 1.5 mm² with angled CEE7/7 plug
Supplied mounting brackets allow any fastening position

Art.-No.	Description
691697	19" 1U Socket Strip 8 x IEC C13, grey

19" 1U Socket Strip 8 x CEE7/7 (red) with Cable IEC C14

35° turned socket inserts in plastic profile
2.0 metre supply cable black, H05VV-F 3G 1.5 qmm, 250 V AC / 16 A with angled plug CEE7/7
Height 54 mm (1.2U)
Supplied mounting brackets allow any fastening position

Art.-No.	Description
691695	19" 1.2U Socket Strip 8 x CEE7/7 without Switch, grey
691696	19" 1.2U Socket Strip 7 x CEE7/7 with Switch, grey

19“ 1U Socket Strip 9/8/7 x CEE7/7 in Alu Profile, Black

19“ 1U socket strip in aluminium profile
Outlets 9/8/7 x CEE 7/3, turned 45°, with childrens protection
Cable 2 m H03VV-F 3G 1.5 mm² with angled CEE7/7 plug
Colour outlets black, housing aluminium black
Certifications CE, RoHS

Art.-No.	Description
EK631DE.1	19“ 1U Socket Strip 9 x CEE 7/3 without Switch, in Alu Profile, Black
EK631DE.2	19“ 1U Socket Strip 8 x CEE 7/3 with Switch, in Alu Profile, Black
EK631DE.3	19“ 1U Socket Strip 7 x CEE 7/3 with Surge Protection, in Alu Profile, Black

19“ 1U Socket Strip UK

19“ 1U socket strip in aluminium profile
Outlets 8/7/6 x UK, with childrens protection
Cable 1.8 m H03VV-F 3G 1.5 mm² with UK plug (BS1363A)
Colour outlets black, housing aluminium black
Certifications CE, RoHS

Art.-No.	Description
EK631UK.1	19“ 1U Socket Strip 8 x UK without Switch
EK631UK.2	19“ 1U Socket Strip 7 x UK with Switch
EK631UK.3	19“ 1U Socket Strip 6 x UK with Surge Protection

19“ 1U Socket Strip Italy

19“ 1U socket strip in aluminium profile
Outlets 9/8 x Italy-Universal, with childrens protection
Cable 1.8 m H03VV-F 3G 1.5 mm² with Italy plug
Colour outlets black, housing aluminium black
Certifications CE, RoHS

Art.-No.	Description
EK631IT.1	19“ 1U Socket Strip 9 x IT without Switch
EK631IT.2	19“ 1U Socket Strip 8 x IT with Switch

19“ 1U Socket Strip France

19“ 1U socket strip in aluminium profile
Outlets 9/8 x France (UTE), with childrens protection
Cable 1.8 m H03VV-F 3G 1.5 mm² with angled CEE7/7 plug
Colour outlets black, housing aluminium black
Certifications CE, RoHS

Art.-No.	Description
EK631FR.1	19“ 1U Socket Strip 9 x UTE without Switch
EK631FR.2	19“ 1U Socket Strip 8 x UTE with Switch

19“ 1U Socket Strip for UPS

19“ 1U socket strip in aluminium profile
Outlets 12 x IEC C13
With overload protection 10 A
With childrens protection
Cable 1.8 m H03VV-F 3G 1.5 mm² with plug IEC C14
Colour outlets black, housing aluminium black
Certifications CE, RoHS

Art.-No.	Description
EK631CC.1	19“ 1U Socket Strip,12 x C13 without Switch, Cable C14

10“ 1U Socket Strip 4 x CEE7/3 without Switch

Socket strip PROFIversal 4-way
45° turned socket inserts in aluminium profile
Cable 2.0 m grey, H05VV-F 3G 1.5 mm², 250 V AC / 16 A with angled CEE7/7 plug, rewireable
Included metal brackets allow any fastening position
VDE certified

Art.-No.	Description
ESP.72K	10“ 1U Socket Strip 4 x CEE7/7, RAL7035

10“ Socket Strip 3-Way

35° turned socket inserts
2.0 metres supply cable black, H05VV-F 3 x 1.50 mm², 250 V AC / 16 A with angled plug CEE7/7
Supplied mounting brackets allow any fastening position

Art.-No.	Description
ESP.70	10“ 1U Socket Strip 3-Way, w/o Switch, RAL7035

10“ Socket Strip 4-Way

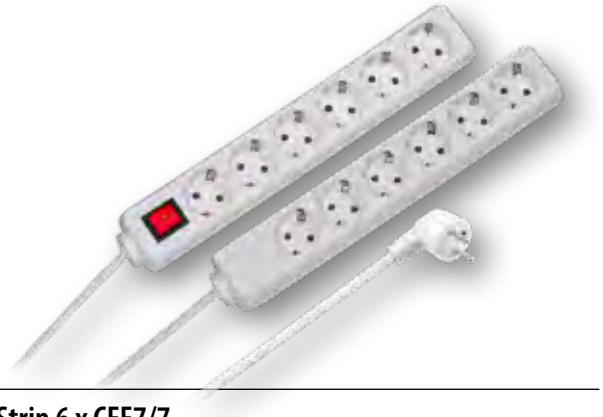
35° turned socket inserts
2.0 metres supply cable black, H05VV-F 3 x 1.50 mm², 250 V AC / 16 A with angled plug CEE7/7
Supplied mounting brackets allow any fastening position

Art.-No.	Description
ESP.72	10“ 1U Socket Strip 4-Way, w/o Switch, RAL7035

Socket Strip 3 x CEE7/7

With child protection
35° turned socket inserts
1.5 metre supply cable white, H05VV-F3 1.50 mm², 250 V AC / 16 A with angled plug CEE7/7

Art.-No.	Description
ESP.25.1	Socket Strip 3 x CEE7/7 with Switch, white
ESP.30.1	Socket Strip 3 x CEE7/7 without Switch, white



Socket Strip 6 x CEE7/7

With child protection
35° turned socket inserts
1.5 metre supply cable white, H05VV-F3 1.50 mm², 250 V AC / 16 A with angled plug CEE7/7

Art.-No.	Description
ESP.2.1	Socket Strip 6 x CEE7/7 with Switch, white
ESP.3.1	Socket Strip 6 x CEE7/7 without Switch, white

Socket Strip 6 x CEE 7/7 with Surge Protection, 2 x USB, 2 x RJ45, 2 x RJ11 and Switch

Surge protection for power supply, network and phone/modem
2 x USB power supply e.g. for smartphone, MP3 player, camera, ...
Lighting ON/OFF switch
Wall mounting possible
45° turned outlets
Connections: 6 x CEE7/7, 2 x RJ45 UTP (IN/OUT), 2 x RJ11 (IN/OUT), 2 x USB
USB power supply 5 V DC, 1000 mA max. totally
Cable ca. 1.5 m H05VV-F 3G 1.00 mm^2, 250 V AC / 16 A with angled CEE7/7 plug
With child protection, GS tested
250 V / 16 A VDE tested

Art.-No.	Description
EK610	Socket Strip 6 x CEE7/7 with Surge Prot., 2 x USB, 2 x RJ45, 2 x RJ11, Switch

Socket Strip 6 x CEE 7/7 with Surge Protection, Mains Filter and Switch

Fully appliance protection, consisting of overvoltage protection (nominal leakage current 6.5kA), 2 x thermal fuse, frequency and mains filter
Optical function indication
Cable H05VV-F 3G 1.5 mm^2, black, 2.0 m, 250 V AC / 16 A with angled plug CEE7/7
35° turned socket inserts
Integrated cable winder, ON/OFF switch, illuminated

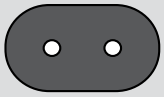
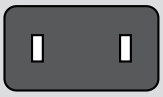
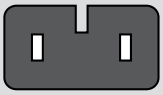
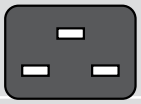
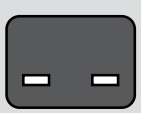
Art.-No.	Description
ESP.41	Socket Strip 6 x CEE7/7 with Surge Protection, Mains Filter and Switch

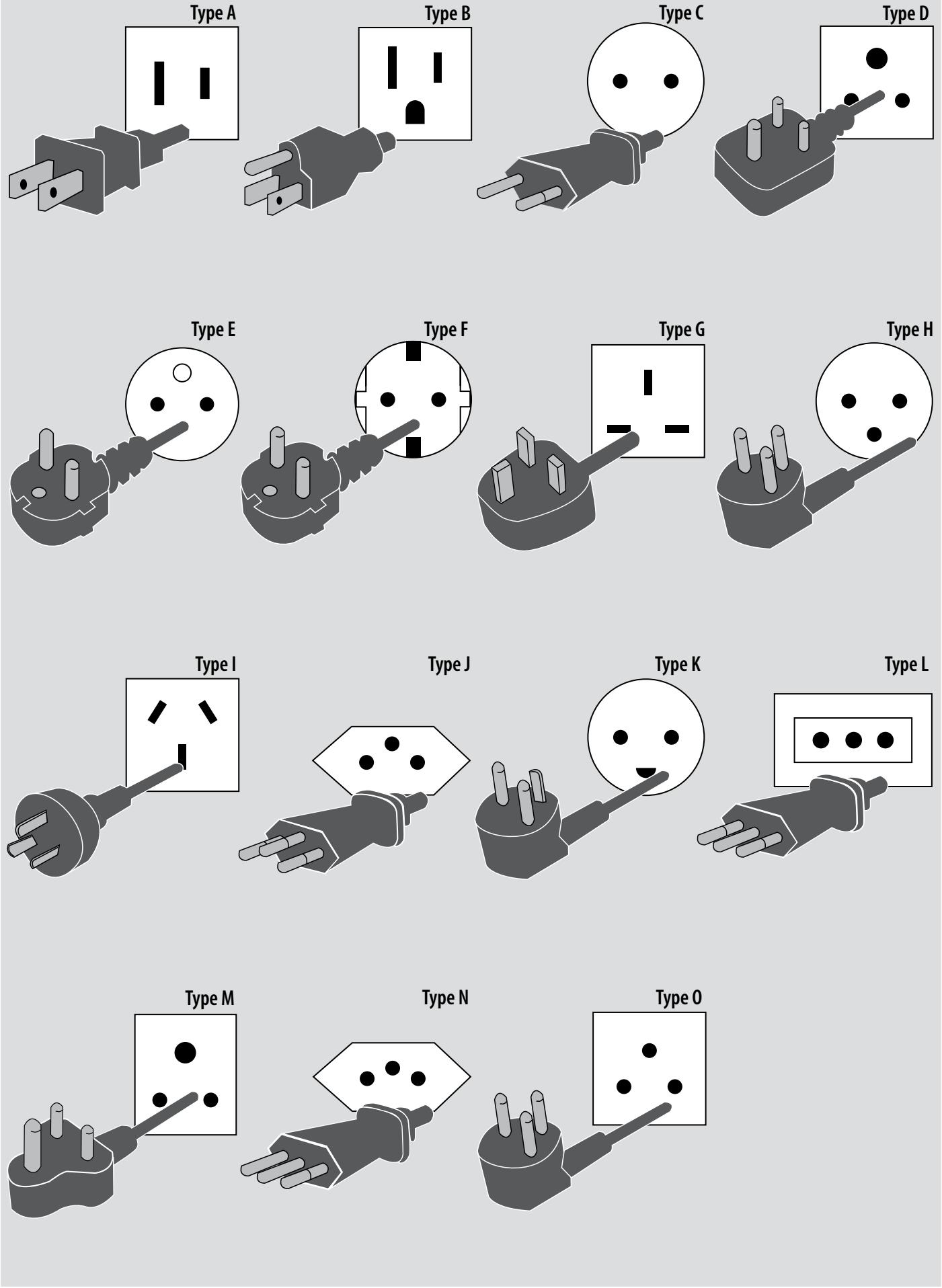
Socket Strip 6 x CEE 7/7 with Surge Protection and Switch

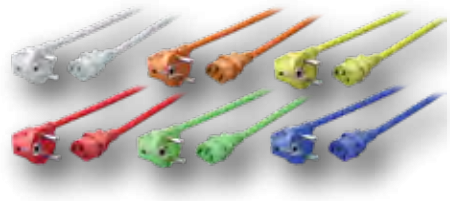
Surge protection leakage current 6.5 kA
With child protection
35° turned socket inserts
Cable H05VV-F3 1.50 mm^3, white, 1.5 m, 250 V AC / 16 A with angled plug CEE7/7

Art.-No.	Description
ESP.29	Socket Strip 6 x CEE7/7 with Surge Protection and Switch

PLUG FACES

Diagram	Description		Earth contact	Pin spacing, centres	max. current	max. pin temp.	Remarks
not to scale	Plug female	Plug male					
	C1	C2	No	6,6 mm	0,2 A		Not polarized.
	C3	C4	No	10 mm	2,5 A		Polarized.
	C5	C6	Yes	H: 10mm V: 41/2 mm			Polarized. Commonly referred to as a „clover-leaf" or „Mickey Mouse" connector due to its shape.
	C7	C8	No	8,6 mm	2,5 A		Not polarized. Commonly referred to as „figure 8" or „infinity" in the UK.
	C7P	C8P	No			70 °C	Polarized.
	C9	C10	No	10 mm	6 A		Not polarized.
	C11	C12	Nein		10 A		Polarized.
	C13	C14	Yes	H:14 mm V: 4 mm	10/15 A	70 °C	Polarized. Commonly but incorrectly referred to as a „kettle cord", but kettles actually require the C15/C16.
	C15	C16	Yes			120 °C	Polarized. For use in high-temperature settings
	C15A	C16A	Yes			155 °C	Polarized. For use in very-high-temperature settings, such as some stage lighting instruments
	C17	C18	No			70 °C	Polarized.
	C19	C20	Yes	H:13 mm V: 8 mm	16/20 A	70 °C	Polarized.
	C21	C22	Yes			155 °C	Polarized.
	C23	C24	No			70 °C	Polarized.


Type A
Type B
Type C
Type D
Type E
Type F
Type G
Type H
Type I
Type J
Type K
Type L
Type M
Type N
Type O



Power Cable CEE7/7 90° - C13 180°, Coloured

Coloured power cords for clearly assignment of device - cable - outlet
No time-intensive search or tracing of cables
Plug CEE7/7 90° - C13 180° (IEC jack)
Cable H05VV-F 3G 0.75 qmm
10 A / 250 V VDE tested
The coloured power cords enable an instant visual assignment of devices and the corresponding power cord.

Art.-No.	Conductor Ø	Colour	Length
EK588BL.1,8	0.75 mm²	Blue	1.8 m
EK588GE.1,8	0.75 mm²	Yellow	1.8 m
EK588GN.1,8	0.75 mm²	Green	1.8 m
EK588OR.1,8	0.75 mm²	Orange	1.8 m
EK588RT.1,8	0.75 mm²	Red	1.8 m
EK588WS.1,8	0.75 mm²	White	1.8 m

Power Cable CEE7/7 180° - C19 180°, Black

16 A / 250 V VDE tested
Colour black
Use: High Class Server, UPS Systems
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK511.1,8	1.50 mm²	Black	1.8 m
EK511.3	1.50 mm²	Black	3.0 m

Power Cable CEE7/7 180° - C13 180°, Black

10 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK508SW.2	0.75 mm²	Black	2.0 m
EK508SW.3	1.00 mm²	Black	3.0 m
EK508SW.5	1.00 mm²	Black	5.0 m

Power Cable CEE7/7 180° - C13 90°, Black

10 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK534.2	0.75 mm²	Black	2.0 m
EK534.3	1.00 mm²	Black	3.0 m
EK534.5	1.00 mm²	Black	5.0 m

Power Cable CEE7/7 90° - C13 180°, Black

10 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK504.1V2	0.75 mm²	Black	1.0 m
EK504.2V2	0.75 mm²	Black	2.0 m
EK504.3V2	1.00 mm²	Black	3.0 m
EK504.5V2	1.00 mm²	Black	5.0 m

Power Cable CEE7/7 90° - C13 90°, Black

10 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK535.2	0.75 mm²	Black	2.0 m
EK535.3	1.00 mm²	Black	3.0 m
EK535.5	1.00 mm²	Black	5.0 m

Power Cable CEE7/7 90° - C5 180°, Black

2.5 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK550.1,8	0.75 mm²	Black	1.8 m
EK550.3	1.00 mm²	Black	3.0 m
EK550.5	1.00 mm²	Black	5.0 m

Power Cable CEE7/7 90° - C5 90°, Black

2.5 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK551.1,8	0.75 mm²	Black	1.8 m
EK551.3	1.00 mm²	Black	3.0 m
EK551.5	1.00 mm²	Black	5.0 m

Power Cable CEE 7/7 90°-C5 180°, Black

2.5 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK552.1,8V2	0.75 mm²	Black	1.8 m
EK552.3V2	0.75 mm²	Black	3.0 m
EK552.5V2	0.75 mm²	Black	5.0 m

Warm Device Cable

Power Cable CEE7/7 90° - C15 180°, Black

Power cable CEE7/7 90° to warm device plug IEC C15
10 A / 250 V VDE tested
Colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK625.0,7	1.00 mm²	Black	0.7 m
EK625.1,8	1.00 mm²	Black	1.8 m

Power Cable CEE7/7 90° - C13 180°, Grey

10 A / 250 V VDE tested
Colour grey
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK501.2V2	0.75 mm²	Grey	2.0 m
EK501.2,5V2	1.00 mm²	Grey	2.5 m
EK501.3V2	1.00 mm²	Grey	3 m
EK501.5V2	1.00 mm²	Grey	5.0 m

Power Cable CEE7/7 180° - C13 180°, Grey

10 A / 250 V VDE tested
Colour grey
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK508.2	0.75 mm²	grey	2.0 m
EK508.3	1.00 mm²	grey	3.0 m
EK508.5	1.00 mm²	grey	5.0 m

Power Cable CEE7/7 90° - Open End WES, Black

16 A / 250 V VDE tested
Open End assembled with wire end sleeves
Wire end sleeves for 1.8 m: L = 6 mm, Ø 1.7 mm, yellow insulator
Wire end sleeves for 3 + 5 m: L = 8 mm, Ø 1.7 mm, red insulator
Cable colour black
Suitable for Germany, Belgium, France and further

Art.-No.	Conductor Ø	Colour	Length
EK504AE.1,8	0.75 mm²	Black	1.8 m
EK504AE.3	1.00 mm²	Black	3.0 m
EK504AE.5	1.00 mm²	Black	5.0 m

‚Unique' Female IEC C13/C19 Connector „IEC-Lock"

Ensures high availability through protection against accidentally disconnection of power supply for computers, servers and other high reliable devices.

Compatible with all common IEC plugs C14/C20
Protects vibration-hazarded devices
Plug can not be removed unintentionally
Use in data systems, medicine, broadcasting, maritime and others
International cables, special colours and special lengths possible
Device plugs C14/C20 with IEC Lock available on request

How it Works:

Push the connector into the standard IEC inlet and it is locked in position

Connector can not accidentally be pulled or released by vibration

Slide back the red latch to release and remove the connector from inlet

Power Cable CEE7/7 90° - C13 180° with IEC Lock, Black

With „IEC Lock": prevents accidentally removing of the C13 jack from devices
After connecting, the C13 jack only can be released after sliding back the red latch
10 A / 250 V VDE tested
Colour Black (optional: orange, blue, grey, white)
Suitable for Germany, Belgium, France and further
Other types on request: UK, USA/NEMA, Switzerland, open end

Art.-No.	Conductor Ø	Colour	Length
EK600SW.1	1.00 mm²	Black	1.0 m
EK600SW.1,5	1.00 mm²	Black	1.5 m
EK600SW.2	1.00 mm²	Black	2.0 m
EK600SW.3	1.00 mm²	Black	3.0 m

Power Cable CEE7/7 90° - C13 180° with IEC Lock+, Black

With „IEC Lock+": prevents accidentally removing of the C13 jack from devices
After connecting, the C13 jack only can be released after sliding back the red latch
10 A / 250 V VDE tested
Colour Black (optional: orange, blue, grey, white)
Suitable for Germany, Belgium, France and further
Other types on request: UK, USA/NEMA, Switzerland, open end

Art.-No.	Conductor Ø	Colour	Length
EK603SW.2	1.00 mm²	Black	2.0 m

Power Cable CEE7/7 90° - C13 180° with IEC Lock+, Black

With „IEC Lock": prevents accidentally removing of the C13 jack from devices
After connecting, the C13 jack only can be released after sliding back the red latch
16 A / 250 V VDE tested
Colour Black (optional: orange, blue, grey, white)
International standardised connectors

Art.-No.	Conductor Ø	Colour	Length
EK606SW.2	1.50 mm²	Black	2.0 m

Extension Cable C14 180° - C13 180°, grey

With „IEC Lock": prevents accidentally removing of the C13 jack from devices
After connecting, the C13 jack only can be released after sliding back the red latch
10 A / 250 V VDE tested
Colour Black (optional: orange, blue, grey, white)
International standardised connectors

Art.-No.	Conductor Ø	Colour	Length
EK601SW.0,5	1.00 mm²	Black	0.5 m
EK601SW.1	1.00 mm²	Black	1.0 m
EK601SW.1,5	1.00 mm²	Black	1.5 m
EK601SW.2	1.00 mm²	Black	2.0 m
EK601SW.3	1.00 mm²	Black	3.0 m

Extension Cable C14 180° - C13 180°, grey

With „IEC Lock": prevents accidentally removing of the C19 jack from devices
After connecting, the C13 jack only can be released after sliding back the red latch
16 A / 250 V VDE geprüft
Colour Black
International standardised connectors

Art.-No.	Conductor Ø	Colour	Length
EK607SW.1	1.50 mm²	Black	1.0 m
EK607SW.2	1.50 mm²	Black	2.0 m
EK607SW.3	1.50 mm²	Black	3.0 m

Extension Cable C14 180° - C13 180°, grey

Connector cannot be accidentally pulled or vibrated out of 'ANY STANDARD' C14 IEC inlet
Requires no other equipment or special inlets to secure it
Rewireable
Offering total flexibility for cable assembly
Can be retrofitted
Halogen free (LSZH)

Art.-No.	Description
60319.1	Locking Connector IEC-Lock+ C13 for Cable Assembly

Extension Cable C20 180° - C19 180°

Plug IEC60320/C20 to jack IEC60320/C19
16 A / 250 V VDE tested
Colour black
International standardised connectors

Art.-No.	Conductor Ø	Colour	Length
EK519.1	1.50 mm²	Black	1.0 m
EK519.1,8	1.50 mm²	Black	1.8 m
EK519.2,5	1.50 mm²	Black	2.5 m
EK519.5	1.50 mm²	Black	5.0 m

Extension Cable C20 180° - C13 180°

Plug IEC60320/C20 to jack IEC60320/C13
10 A / 250 V VDE tested
Colour black
International standardised connectors

Art.-No.	Conductor Ø	Colour	Length
EK531.1,8	1.00 mm²	Black	1.8 m

Warm Device Extension

Extension Cable C14 180° - C13 180°, Grey

Plug IEC60320/C14 to jack IEC60320/C13
10 A / 250 V VDE tested
Colour grey
International standardised connectors

Art.-No.	Conductor Ø	Colour	Length
EK507.1,8	0.75 mm²	Grey	1.8 m
EK507.3	1.00 mm²	Grey	3.0 m
EK507.5	1.00 mm²	Grey	5.0 m

Extension Cable C14 180° - C13 180°, Black

Plug IEC60320/C14 to jack IEC60320/C13
10 A / 250 V VDE tested
Colour black
International standardised connectors

Art.-No.	Conductor Ø	Colour	Length
EK503.0,5	0.75 mm²	Black	0.5 m
EK503.1	0.75 mm²	Black	1.0 m
EK503.2	0.75 mm²	Black	2.0 m
EK503.3	1.00 mm²	Black	3.0 m
EK503.5	1.00 mm²	Black	5.0 m

Extension Cable C14 180° - C15 180°, Black

Plug IEC60320/C14 to jack IEC60320/C15
10 A / 250 V VDE tested
Colour black
International standardised connectors

Art.-No.	Conductor Ø	Colour	Length
EK585.1	0.75 mm²	Black	1.0 m
EK585.2	0.75 mm²	Black	2.0 m
EK585.3	0.75 mm²	Black	3.0 m

Power Cable UK BS1363A - C13 180°, 5 A, Black

2.5 A / 250 V VDE tested
Colour black
Suitable for Europe, except of UK, Ireland, Malta, Cyprus

Art.-No.	Conductor Ø	Colour	Length
EK502.2	0.75 mm²	Black	2.0 m
EK502.3	0.75 mm²	Black	3.0 m
EK502.5	0.75 mm²	Black	5.0 m

Power Cable UK BS1363A - C13 180°, 5 A, Black

2.5 A / 250 V VDE tested
Colour black
Suitable for Europe, except of UK, Ireland, Malta, Cyprus

Art.-No.	Conductor Ø	Colour	Length
EK546.2	0.75 mm²	Black	2.0 m

Power Cable UK BS1363A - C13 180°, 5 A, Black

2.5 A / 250 V VDE tested
Colour black
Suitable for Europe, except of UK, Ireland, Malta, Cyprus

Art.-No.	Conductor Ø	Colour	Length
EK547.2	0.75 mm²	Black	2.0 m

Power Cable UK BS1363A - C13 90°, Black

2.5 A / 250 V VDE tested
Open End with wire end sleeves
Wire end sleeves: L = 6 mm, Ø 1.7 mm, yellow insolator
Colour black
Suitable for Europe, except of UK, Ireland, Malta, Cyprus

Art.-No.	Conductor Ø	Colour	Length
EK502AE.1,8	0.75 mm²	Black	1.8 m
EK502AE.3	0.75 mm²	Black	3.0 m
EK502AE.5	0.75 mm²	Black	5.0 m

Power Cable UK BS1363A - C13 90°, Black

2.5 A / 250 V with fuse 3 A
Colour black
Suitable for UK, Ireland, Singapur, Malaysia

Art.-No.	Conductor Ø	Colour	Length
EK460.1,8	0.75 mm²	Black	1.8 m

Power Cable UK BS1363A - C13 180°, 10 A, Black

10 A / 250 V with fuse 5 A
Colour black
Suitable for UK, Ireland, Singapur, Malaysia

Art.-No.	Conductor Ø	Colour	Length
EK484.2	1.00 mm²	Black	2.0 m

Power Cable UK BS1363A - C13 180°, 5 A, Black

5 A / 250 V with fuse 5 A
Colour black
Suitable for UK, Ireland, Singapur, Malaysia

Art.-No.	Conductor Ø	Colour	Length
EK500.2	0.75 mm²	Black	2.0 m
EK500.3	1.00 mm²	Black	3.0 m
EK500.5	1.00 mm²	Black	5.0 m

Power Cable UK BS1363A - C7 180°, Black

2.5 A / 250 V with fuse 3 A
Colour black
Suitable for UK, Ireland, Singapur, Malaysia

Art.-No.	Conductor Ø	Colour	Length
EK498.1,8	0.75 mm²	Black	1.8 m
EK498.3	0.75 mm²	Black	3.0 m
EK498.5	0.75 mm²	Black	5.0 m

Power Cable UK BS1363A - C5 180°, Black

2.5 A / 250 V with fuse 3 A
Colour black
Suitable for UK, Ireland, Singapur, Malaysia

Art.-No.	Conductor Ø	Colour	Length
EK499.1,8	0.75 mm²	Black	1.8 m
EK499.3	0.75 mm²	Black	3.0 m
EK499.5	0.75 mm²	Black	5.0 m

Power Cable USA/NEMA 5-15P - C13 180°, AWG14, Black

10(15) A / 125 V (15 A only in USA)
Colour black
UL, CSA approved
Suitable for USA, Canada, Mexico, Taiwan, Brasilia

Art.-No.	Conductor Ø	Colour	Length
EK462.1,8	2.08 mm²	Black	1.8 m

Power Cable USA/NEMA 5-15P - C13 180°, AWG18, Black

10 A / 125 V
Colour black
UL, CSA approved
Suitable for USA, Canada, Mexico, Taiwan, Brasilia

Art.-No.	Conductor Ø	Colour	Length
EK518.1,8	0.83 mm²	Black	1.8 m

Power Cable USA/NEMA 5-15P - C5 180°, AWG18, Black

2.5 A / 125 V
Colour black
UL, CSA approved
Suitable for USA, Canada, Mexico, Taiwan, Brasilia

Art.-No.	Conductor Ø	Colour	Length
EK497.1,8	0.83 mm²	Black	1.8 m

Power Cable USA/NEMA 5-15P - C7 180°, Black

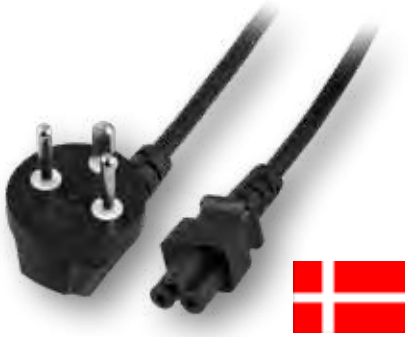
3 A / 125 V
Colour black
UL, CSA approved
Suitable for USA, Canada, Mexico, Taiwan, Brasilia

Art.-No.	Conductor Ø	Colour	Length
EK496.1,8	0.83 mm²	Black	1.8 m

Power Cable Denmark DPin 90° - C7 180°, Black

6 A / 250 V
Colour black
Suitable for Denmark

Art.-No.	Conductor Ø	Colour	Length
EK539.1,8	0.75 mm²	Black	1.8 m
EK539.3	0.75 mm²	Black	3.0 m



Power Cable Denmark DPin 90° - C7 180°, Black

2.5 A / 250 V
Colour black
Suitable for Denmark

Art.-No.	Conductor Ø	Colour	Length
EK540.1,8	0.75 mm²	Black	1.8 m

Power Cable Switzerland Type 12 - C13 180°, Black, Partially Insulated

10 A / 250 V
Colour black
Suitable for Switzerland, Liechtenstein, Ruanda

Art.-No.	Conductor Ø	Colour	Length
EK537.2V3	0.75 mm²	Black	2.0 m

Power Cable Cina Type I - C5 180°, Black

10 A / 250 V
Colour black
Suitable for Switzerland, Liechtenstein, Ruanda

Art.-No.	Conductor Ø	Colour	Length
EK483.1,8	0.75 mm²	Black	1.8 m

Power Cable Switzerland Type 12 - C5 180°, Black

2.5 A / 250 V
Colour black
Suitable for Switzerland, Liechtenstein, Ruanda

Art.-No.	Conductor Ø	Colour	Length
EK495.1,8V2	0.75 mm²	Black	1.8 m

Power Cable Australia AS3112 - C7 180°, Black

10 A / 250 V
Colour black
Suitable for Italy

Art.-No.	Conductor Ø	Colour	Length
EK538.1,8	0.75 mm²	Black	1.8 m

Power Cable Australia AS3112 - C7 180°, Black

2.5 A / 250 V
Colour black
Suitable for Italy

Art.-No.	Conductor Ø	Colour	Length
EK494.1,8	0.75 mm²	Black	1.8 m

Power Cable Australia AS3112 - C7 180°, Black

7 A / 125 V
Colour black
Suitable for Japan

Art.-No.	Conductor Ø	Colour	Length
EK490.1,8	0.75 mm²	Black	1.8 m

Power Cable China Type I - C13 180°, Black

2.5 A / 125 V
Colour black
Suitable for Japan

Art.-No.	Conductor Ø	Colour	Length
EK482.1,8	0.75 mm²	Black	1.8 m

Power Cable China Typ I - C13 180°, Black

10 A / 250 V
Colour black
Suitable for China

Art.-No.	Conductor Ø	Colour	Length
EK492.1,8V2	0.75 mm²	Black	1.8 m

Power Cable Cina Type A - C7 180°, Black

10 A / 250 V
Colour black
Suitable for China

Art.-No.	Conductor Ø	Colour	Length
EK480.1,8	0.75 mm²	Black	1.8 m

Power Cable Cina Type I - C5 180°, Black

10 A / 250 V
Colour black
Suitable for China

Art.-No.	Conductor Ø	Colour	Length
EK481.1,8	0.75 mm²	Black	1.8 m

Power Cable Australia AS3112 - C13 180°, Black

10 A / 250 V
Colour black
Suitable for Australia, New Zealand, Papua New Guinea

Art.-No.	Conductor Ø	Colour	Length
EK493.1,8	0.75 mm²	Black	1.8 m

Power Cable Australia AS3112 - C13 90°, Black

10 A / 250 V
Colour black
Suitable for Australia, New Zealand, Papua New Guinea

Art.-No.	Conductor Ø	Colour	Length
EK469.1,8	0.75 mm²	Black	1.8 m

Power Cable Australia AS3112 - C7 180°, Black

2.5 A / 250 V
Colour black
Suitable for Australia, New Zealand, Papua New Guinea

Art.-No.	Conductor Ø	Colour	Length
EK487.1,8	0.75 mm²	Black	1.8 m

Power Cable Australia AS3112 - C5 180°, Black

2.5 A / 250 V
Colour black
Suitable for Australia, New Zealand, Papua New Guinea

Art.-No.	Conductor Ø	Colour	Length
EK468.1,8	0.75 mm²	Black	1.8 m

Power Cable South Africa/India - C13 180°, Black

10 A / 250 V
Colour black
Suitable for South Africa, India

Art.-No.	Conductor Ø	Colour	Length
EK488.1,8	0.75 mm²	Black	1.8 m

Power Cable South Africa/India - C5 180°, Black

2.5 A / 250 V
Colour black
Suitable for South Africa, India

Art.-No.	Conductor Ø	Colour	Length
EK467.1,8	0.75 mm²	Black	1.8 m

Power Cable South Africa/India - C5 180°, Black

Mains plug angled to IEC60320/C13 socket
Cable assembly H05VV-F 3G 0.75 mm²
10 A / 250 V, colour black
Suitable for Israel, Gaza Strip, Palestine, West Bank

Art.-No.	Conductor Ø	Colour	Length
EK491.1,8	0.75 mm²	Black	1.8 m

POWERFUL

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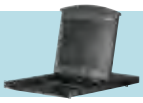
VIDEO CABLING & ADAPTER
S. 270

4
USB
S. 280

5
D-SUB, BNC & COAXIAL CABLE
S. 294

KVM

Whether it is remote maintenance and control of remote IT workstations or the administration of professional server rooms: EFB-Elektronik offers high-performance KVM systems for all requirements and areas of application.

19“ KVM Switches		P. 261
Desktop KVM / Mini KVM		P. 262
KVM Extender		P. 263

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19“ Cabinets	P. 172
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USB	P. 280

19" KVM Switches Cat.5 with 19" LCD Consoles „DUAL RAIL"

KVM-Switch console with 19" LCD display for remote control of up to 256 or 512 PCs
Multiplatform support: PS/2, USB, Win, Mac, Sun and terminal-based systems
Supports up to 40 m cable length between KVM and PC or serial devices
RJ45 ports for Cat.5e/6/7 based cables
Firmware upgrade feature, Auto-scan mode
Compact and slidable
Dual Console - one additional console port for external console
Dual Rail - display is depth adjustable
Separately cascade port (Daisy Chain), cascadable with KH-1508/1516
19"/1U rack mounting with adjustable mounting depth

Art.-No.	Description
KL-1508AN	8-Port KVM Switch Cat.5 + Console 19"/1U with 19" LCD
KL-1516AN	16-Port KVm Switch Cat.5 + Console 19"/1U with 19„LCD

Accessory

Art.-No.	Description
KA-9140	Serial/VT100 Module for KH- and KL-types
KA-7570	VGA-USB KVM Module for KH- and KL-types
KA-7168	HDMI™-USB KVM-Module for KH- and KL-types
KA-7169	DP-USB KVM-Module for KH- and KL-types

Aten 8-/16-Port KVM Switch + 17" LCD Console

KVM-Switch console with 17" LCD display for remote control of up to 256 or 512 PCs
Firmware upgrade feature, Auto-scan mode
Compact and slidable
Dual Console - Additional port for one externalal console USB/PS/2
1 external USB port for a external USB mouse and USB1.1 peripherals
Separately cascade port (Daisy Chain)
19"/1U rack mounting with adjustable depth

Art.-No.	Description
CL-5708M	8-Port KVM Switch PS2 + Console 19"/1U with 17"LCD
CL-5716M	16-Port KVM Switch PS2 + Console 19"/1U with 17"LCD

Accessory

Art.-No.	Description
2L-1701	Daisy Chain Cable for KVM 1,8m
2L-5202P	KVM PS/2 Cable 1,8m
2L-5202UP	KVM USB Cable 1,8m

Aten KVM Switch Cat.5 19"/1U

KVM-Switch console for remote control of up to 256 or 512 PCs
Separately cascade port (Daisy Chain)
K1508AI/1516AI with additional RJ45 port for IP access
Multiplatform support: PS/2, USB, Win, Mac, Sun and terminal-based systems
Supports up to 40 m cable length between KVM and PC or serial devices
RJ45 ports for Cat.5/6/7 based cables
Firmware upgrade feature, auto-scan mode
Daisy Chain port for daisy-chain with KH-1508/1516
19"/1U rack mounting

KVM Switch Cat.5 19"/1U

Art.-No.	Description
KH-1508A	8-Port KVM Switch Cat.5 19"/1U, Adapter ID
KH-1516A	16-Port KVM Switch Cat.5 19"/1U, Adapter ID

KVM IP Switch 19"/1U „KVM over IP"

Art.-No.	Description
KH-1508AI	8-Port KVM IP Switch 19"/1U KVM over IP, Dual Bus
KH-1516AI	16-Port KVM IP Switch 19"/1U KVM over IP, Dual Bus

Accessory

Art.-No.	Description
KA-9140	Serial/VT100 Module for KH- and KL-types
KA-7570	VGA-USB KVM Module for KH- and KL-types
KA-7168	HDMI™-USB KVM-Module for KH- and KL-types
KA-7169	DP-USB KVM-Module for KH- and KL-types

Aten 17" LCD PS/2 Console

KVM console plus 17" LCD display in compact, slideable design
19"/1U rack mounting with adjustable depth
Included : 1 x 2L-5202P (KVM-PS2-Cable), 1 x Standard-Mounting-kit

Art.-No.	Description
CL-1000M-AT-GG	Slideaway Console 17", PS/2 with german keyboard

KVM Switch USB, HDMI

KVM-Switch for remote control of multiple PC's with HDMI (display) and USB (mouse/keyboard) interfaces
Switching between PC's with front button or hotkeys
Supports resolutions of 4K / 30Hz and PC UXGA 1920x1200
Supports Dolby TrueHD and DTS HD Master audio formats
HDMI v1.4 - & HDCP-compatible
Metalhousing for better EMC shielding
Included: 1x HDMI KVM-USB Switch, 1 x power supply, 2x or 4x HDMI A male & USB 2.0 A male to HDMI A male & USB 2.0 B male cable, short manual

Art.-No.	Description
IDATA-KVM-HDMI2U	KVM Switch USB, HDMI, 4K, 2 ways
IDATA-KVM-HDMI4U	KVM Switch USB, HDMI, 4K, 4 ways

Aten Desktop KVM USB-DVI-Audio-USB 2.0 Hub

KVM-Switch for remote control of multiple PC's with DVI (display) and USB (mouse/keyboard) interfaces
With full audio support
Port selection via definable hotkeys, select button, mouse
Separately port switching for KVM, audio and USB
Supports video signals DVI-I digital and DVI-I analog
Multiplatform support HDCP compatible Auto-scan mode
Included in delivery: 2(4) x cable set 1.2 m, 1 x power supply

Art.-No.	Description
CS-1762A	2-Port KVM USB-DVI-Audio-USB 2.0 Hub incl. cable set 2x 1,2m
CS-1764A	4-Port KVM USB-DVI-Audio-USB 2.0 Hub incl. cable set 4x 1,8m

Aten KVMP Switch VGA - USB - Audio

KVM-Switch for remote control of multiple PC's with VGA (display) and USB (mouse/keyboard) interfaces
With full audio support + 2 port USB hub
USB compatible mouse/keyboard support
Buzzer ON/OFF via hotkey
Firmware Upgrade feature
Auto-scan mode
Included in delivery: 2(4) cable sets, 1 x DB9-RJ11 cable 1.8 m, 1 x PS/2-USB adapter

Art.-No.	Description
CS-1732B	2-Port KVM-Switch USB-Audio, 2xUSB2.0 HUB, OSD, cableset
CS-1734B	4-Port KVM-Switch USB-Audio, 2xUSB2.0 HUB, OSD, cableset

2-Port Mini-Cable-KVM Switch different variants

For remote control of 2 PCs with VGA/HDMI/DVI or DisplayPort (depending on choice of type) and USB interface
With full audio support
Connection of an Additional USB2.0 device possible
LEDs for status display
Remote button for port selection, Auto-scan mode

Art.-No.	Video interface
EB973	Displayport
EB977	VGA
EB978	DVI
EB979	HDMI

KVM Extender Set HDMI-USB-Audio, up to 60m

KVM Cat.5e/6 RJ45 Extender Set for remote control of PCs with HDMI (display) and USB(mouse/keyboard) interface.
Max. transmission distance of up to 60m
Transmission of uncompressed 1080p @ 60Hz HDMI-Signal over 1x 5e / 6-Networkcable
With integrated microfon and 3,5 mm audio jack
Power over Cable: Only 1 power supply neccessary, Receiver unit gets power over the network cable.
With additional HDMI out at Transmitter unit.
Included: KVM Extender Set, 1 power supply, quick manual

Art.-No.	Description
IDATA-HDMI-KVM60	HDMI-KVM Extender over CAT5

KVM Extender Set HDMI-USB, up to 120m

KVM Cat.5e/6 RJ45 Extender Set for remote control of PCs with HDMI (display) and USB (mouse/keyboard) interface.
Max. transmission distance of up to 120m
Max. resolution of 1080p @ 60Hz over 1x 5e / 6-network cable
Included: KVM Extender Set, 1 power supply, quick manual

Art.-No.	Description
IDATA-HDMI-KVM2	HDMI KVM Extender over Network Cable, 120m

KVM Extender Set DVI-USB-Audio - USB2.0 Hub, up to 50m

KVM Cat.5/6 RJ45 Extender up to 50 m
1-Port USB2.0 Hub to connect extern USB Devices
Controlling via remote console
Included in delivery: 1 x DVI-D Cable plug/plug 1m, 1 x USB2.0 Cable A-B 1m, 1 x USB A power supply cable 1m, 1 x power supply, 1 x EB963 Transmitter, 1 x EB963 receiver, 1 x User manual

Art.-No.	Description
EB963	KVM Extender Set DVI USB Transmitter + Receiver

KVM Extender Set DVI-USB-Audio - USB2.0 Hub, up to 100m

KVM Cat.5/6 RJ45 extender up to zu 100 m
Direct connection over Cat.5/6/7 cable or with in-between connection of a Gigabit Switch
Connection of an additional USB2.0 device possible
Operation via remote console
Dimensions: 134 x 120 x 26 (mm)
Included: 1 x cable set, 2 x power supply

Art.-No.	Description
EB964V2	KVM Extender Set DVI 4xUSB2.0 Transmitter + Reciever

Aten KVM Extender Set VGA-USB, up to 150m

Extends the VGA-USB console port of a PC or KVM switch
Category 5/6/7 RJ45 cable up to 150 m for the remote console
Operation via local or remote console
Automatic signal compensation
Included in delivery:
1 x cable set USB 1.8 m, 1 x 19“ mounting kit, 2 x power supply

Art.-No.	Description
CE-700A	KVM Extender Set VGA - USB , RJ45, Transmitter + Receiver

ACTIVE VIDEO COMPONENTS

For meetings, conferences or home entertainment, for applications in showrooms and 4K HDMI extender solutions for long transmission distances - EFB-Electronics always has the right digital signage solution in its program.

HDBaseT Extender		P. 266
HDMI Extender		P. 267
DVI / VGA Extender		P. 268
Videoswitch / Splitter		P. 269

YOU MAY ALSO BE INTERESTED IN:

RJ45 Patch Cable	P. 114
Fiber Optic Jumper Cable	P. 14
Video Cabling & Adapter	P. 270

HDBaseT™

Until recently, the cabling of the video network was mainly guaranteed by means of pure video cabling. For solutions to extend the length limits of the current video cables, proprietary systems were used.

Disadvantages of these systems, however, include possible losses in quality, due to a compression of the data or the incompatibility with 3rd party manufacturers. Added to this, the 4k resolution is gradually becoming more and more common in our everyday lives. With the result that higher demands are placed on bandwidth, which also brings this systems to its limits.

The HDBaseT™ Alliance has introduced HDBaseT™ technology to the market in order to provide a connectivity standard to solve those problems and provides many other advantages. HDBaseT™ builds on a so-called 5Play™ system which combines the function of transmitting video, audio, Ethernet, control signals and power over one single network cable.In this process, one network cable of Category 5e or higher is used as the transfer medium which can transmit the data and power to a distance of up to 100m.

5Play™

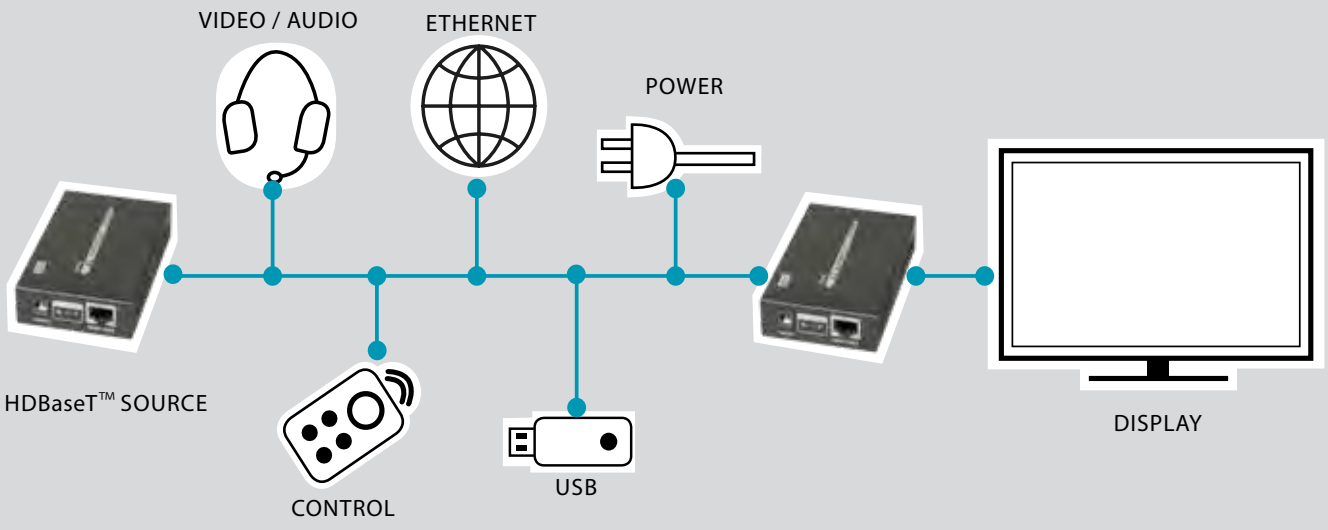
Audio & Video
Transmission of uncompressed audio and video data in Full HD (2K) or Ultra HD (4K) resolutions without any delay.
Support for all features of the HDMI™ standard.

Ethernet
The transmission of the data is ensured via a 100Mbit connection (100Base-T Ethernet), while the connection is bidirectional and allows the devices to communicate with each other.

USB Support
Native USB2.0 support, for input devices, touch screens, mass storage, etc. So it is possible that HDBaseT™ devices would also take over functions that had previously been reserved for KVMs.

Control signals
Support of control signals such as CEC, bidirectional RS232, IR or IP.
For the control and simple installation of terminal devices.

Power over HDBaseT™
HDBaseT™ enables power from connected devices of up to 100W. This builds upon the 4PPoE (4 Pair PoE, IEEE802.bt) standard, which allows to transmit power up to 25W over one twisted pair. In conjunction with HDBaseT™, the technique is called PoH. As a result, devices can be operated over long distances without a power supply.



HDMI HDBaseT Extender 4K30Hz up to 100m

HDMI™ Extender with HDBaseT extender technology
Support for 4K 30Hz resolution over 1 x Cat.5e/6/6a cable up to 100m
PoH capable - 2 devices share 1 power supply! The power supply powers the second device over the network cable.
Support bi-directional IR pass back
Support HDCP, CEC, 24 deep color, uncompressed LPCM audio and compressed DTS-HD, Dolby True HD

Including: HDBaseT Extender Set (Transmitter/Receiver), 2 x IR cable, 1 x power supply, quick manual

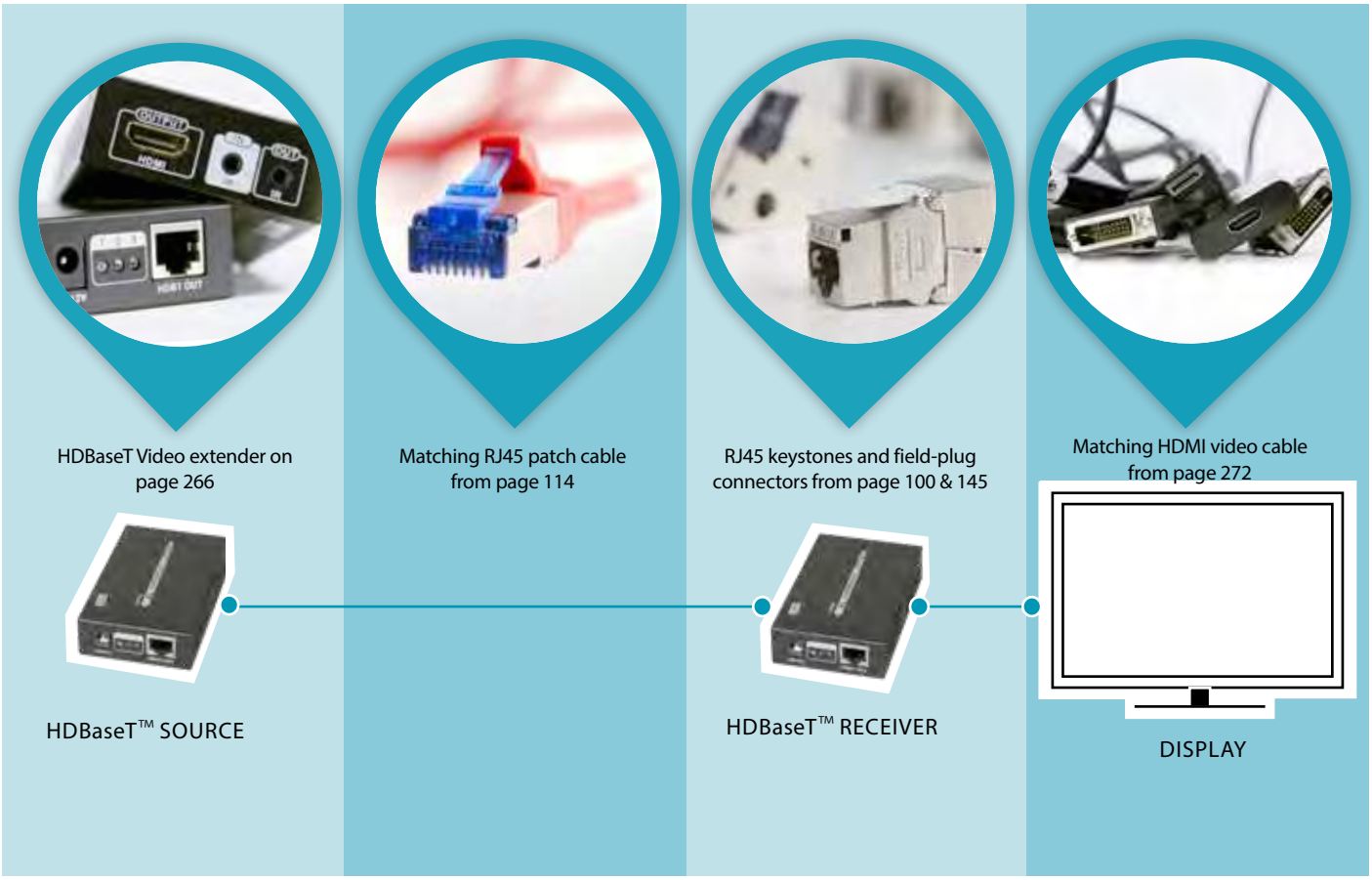
Art.-No.	Description
HDBT-100	HDBaseT™ Extender with PoH up to 100m, HDMI™ over RJ45, 4K

HDMI HDBaseT2.0 Extender 4K 60Hz up to 70/100m

HDMI™ Extender with HDBaseT2.0 extender technology
Support for 4K 60Hz resolution over 1 x Cat.5e/6/6a cable up to 70 or 100m
PoH capable - 2 devices share 1 power supply! The power supply powers the second device over the network cable.
Support bi-directional IR pass back
With RS232 interface
Supports HDMI2.0 HDCP2.2, CEC, 24 deep color, uncompressed LPCM audio and compressed DTS-HD, Dolby True HD

Including: HDBaseT Extender Set (Transmitter/Receiver), 2 x IR cable, 1 x power supply, quick manual

Art.-No.	Description
IDATA-EXT-E951	HDMI HDBaseT2.0 Extender 4K 60Hz 100m
IDATA-EXT-E95	HDMI HDBaseT2.0 Extender Set 4K 60Hz 70m



HDMI Extender Set, Full HD, 2x RJ45 up to 30m

Extends the HDMI signal by using two Cat.5e/-6 patchcables up to a length of 30 m
Max. resolution up to 1080p (1920 x 1080)
Supports HDCP, Dolby True HD, DTS HD Master Audio
Plug & Play
No power supply needed

Art.-No.	Description
ME1005	HDMIT Extender Cat.5e/6 30m, support 3D/1080p, HDCP

HDMI Extender Set, compact, Full HD, 1x RJ45 up to 40m

Extends the HDMI signal by using 1x Cat.5e/-6 patchcable up to a length of 40 m
Max. resolution up to 1080p (1920 x 1080)
Supports HDCP1.2, Dolby True HD, DTS HD Master Audio
Plug & Play

Art.-No.	Description
IDATA-EXT-E70S	HDMI Extender by Cat.6/6A/7, max. 40m

HDMI Extender Set, with IR, Full HD, 1x RJ45 up to 60m

Extends the HDMI and infrared signal by using 1x Cat.5e/-6 patchcable up to a length of 60 m
Max. resolution up to 1080p (1920 x 1080)
Supports HDCP1.3, Dolby True HD, DTS HD Master Audio
Plug & Play

Art.-No.	Description
IDATA-EXT-E70I	HDMI Extender with IR over RJ45, up to 60m

HDMI Extender Set, 4K 60Hz, 1x RJ45 up to 50m

HDMI 4K Extender Set, extends your HDMI signal with at least 1x Cat.6- cable up to 50 m with a resolution of 4K 60Hz
With local HDMI out on transmitter unit
Supports HDCP 2.2, Dolby True HD, DTS HD, IR Passback, EDID Passback

Art.-No.	Description
IDATA-EXT-E70-4K2	HDMI Extender 4K UHD Cat. 6/6A/7, up to 50m

HDMI HDbitT Extender Over IP Set, 4K 60Hz, 1x RJ45 up to 120m

HDMI HDBitT 4K Extender Set, extends your HDMI signal with at least 1x Cat.6- cable up to 120 m with resolution of 4K 60Hz
Supports Point-to-Point and Point-to-Multipoint connections through the use of a Network Switches / Routers
Supports HDCP 2.2, Dolby True HD, DTS HD, L / R-Stereo-Audio
For Multipoint configuration: Extendable through additional receiver (1x included)

Art.-No.	Description
IDATA-EXTIP-393	HDbitT HDMI Extender Set Over IP 4KX2K 60Hz

Aten DVI-D Mini Extender-Set 1xRJ45 up to 15m

DVI Extender over 1x Cat.5e or better cable
Tranmission distance up to 15m (1080p), 20m (1080i)
Supports Hot-Plugging
HDCP 1.1 compatible
Smart Video Display -Smart Video Display - Image quality is optimized based on the available resolution of the output device
Compact housing and no power supply needed

Art.-No.	Description
VE-066	DVI-D Mini Extender-Set 1xRJ45 Cat.5/6/7 up to 15 m

Aten DVI-D Audio Extender-Set 2xRJ45 up to 60m

Extends the distance between DVI source and DVI display device
Long distance transmission – up to 1920x1200 (40 m); 1080p (40 m) ; 1080i (60 m)
With audio and widescreen support
Adjustable EQ compensation control
Included in delivery: VE-600A extender set, 2 x 0AD6-1605-09EG power supply, Rack mounting set, 1 x user manual

Art.-No.	Description
VE-600A	DVI-D+Audio ExtenderSet 2xRJ45 ,upto 40m 1080p/60m 1080i HDTV

Aten VGA Extender-Set, 1x Rj45 up to 150m

VGA Extender over Cat.5e/6 cable up to 150m
Transmission distance: 1920x1200 (30m); 1600x1200 (100m); 1280x1024 (150m)
Simultaneous operation of local and remote monitor
VGA tuning via 16 x coding switch
Included in delivery: 1 x cable set VGA 1.8 m, 2 x power supply

Art.-No.	Description
VE-150L/R	Video/VGA Extender-Set Up to 150m

VGA-/Audio-Extender Set, 1x Rj45 up to 300m

VGA Extender over Cat.5e/6 cable up to 300m
Transmission distance: 1920x1200 (10m); 1600x1200 (100m); 1280x1024 (200m)
VGA tuning via manual switch
Included in delivery: VGA Extender Set, power supply, user manual

Art.-No.	Description
IDATA-EX-DL344	VGA- and Audio-Extender Set over Cat. 5/5e/6 (300m)

VGA-/Audio Extender and Splitter, 4xRJ45 up to 300m

VGA Extender Set wit 4 port Splitter over Cat.5e/6 cable up to 300m
Transmission distance: 1920x1200 (10m); 1600x1200 (100m); 1280x1024 (200m)
VGA tuning via manual switch
Included in delivery: VGA Extender Set, power supply, user manual

Art.-No.	Description
IDATA-EX-DL252	VGA Extender/Audio-/Video-Splitter Cat. 5e/6 - Transm. 4xRJ45, 300m

HDMI Cable-Switch 3-Port, Full HD

HDMI 3-Port Kabel Switch
Max. resolution: 1080P (1920 x 1080)
Support HDCP, DDC, Dolby True HD etc.
No power supply necessary

Art.-No.	Description
ME1008	HDMI Cable-Switch 3-Port support 3D/1080p

HDMI Switch 5-Port, Full HD, incl. remote control

HDMI 5-Port Switch
Max. resolution: 1080P (1920 x 1080)
Support 3D, HDCP, DDC, Dolby True HD etc.
Incl. power supply and remote control

Art.-No.	Description
ME1010	HDMI Switch 5-Port, incl. RC 3D/1080p,incl. PS

HDMI Switch 4K 60Hz HDR

HDMI 3/5-Port Switch
Max. resolution: 4K 60Hz
Support HDCP2.2, HDR, DDC, Dolby True HD etc.
Incl. power supply and remote control

Art.-No.	Description
IDATA-HDMI2-4K31HDR	HDMI Switch 4K 60Hz 3-Port, HDR
IDATA-HDMI2-4K51HDR	HDMI Switch 4K 60Hz 5-Port, HDR

HDMI Splitter 4K 60Hz

HDMI 2/4/8-Port Splitter
Max. resolution: 4K 60Hz
Supports HDCP2.2, HD (HBR) Audio, Dolby True HD etc.
Incl. power supply

Art.-No.	Description
IDATA-HDMI2-4K2	HDMI2.0 Splitter 4K, UHD, 3D, 2 Port
IDATA-HDMI2-4K4	HDMI2.0 Splitter 4K, UHD, 3D, 4 Port
IDATA-HDMI2-4K8	HDMI2.0 Splitter 4K, UHD, 3D, 8 Port

HDMI Splitter 4K 60Hz HDR

HDMI 2/4/8-Port Splitter
Max. resolution: 4K 60Hz
Supports HDCP2.2, HDR, HD (HBR) Audio, Dolby True HD etc.
Incl. power supply

Art.-No.	Description
IDATA-HDMI2-4K2HDR	HDMI2.0 Splitter 4K 2 Port, HDR
IDATA-HDMI2-4K4HDR	HDMI2.0 Splitter 4K 4 Port, HDR
IDATA-HDMI2-4K8HDR	HDMI2.0 Splitter 4K 8 Port, HDR

DVI-I 24+5 Splitter, Full HD

DVI 24+5 2/4/8-Port Splitter
Max. resolution: 1920 x 1200
Cascadable with multiple devices
Incl. power supply

Art.-No.	Description
ICKV102DTY	DVI-I 24+5 Extender / Video Splitter, 2 Port
ICKV104DTY	DVI-I 24+5 Extender / Video Splitter, 4 Port
ICKV108DTY	DVI-I 24+5 Extender / Video Splitter, 8 Port

VIDEO CABLE & ADAPTER

Whether for video cabling in your own home or in a company - at EFB-Elektronik video cables are available in different quality standards for various markets. They reliably connect any device to the screen via digital connections such as HDMI ™, DVI and DisplayPort or analog technologies such as SVGA / VGA.

HDMI		P. 272
DVI		P. 274
Display Port		P. 276
Mini Display Port		P. 278
VGA		P. 279

YOU MAY ALSO BE INTERESTED IN:

Active Video Components	P. 264
KVM	P. 260

Category	Art.No.	Version	Conductor	Jacket	Connector	Type	max. Resolution	EMC characteristics	Catalogue page
HDMI™	K5440HQSW.x	HDMI™ 2.1	Copper	PVC	Aluminium	HDMI A M - A M	8k@60Hz	very good	272
	K5440SW.x	HDMI™ 2.1	Copper	PVC	PVC	HDMI A M - A M	8k@60Hz	good	272
	K5431AOC.xV2	HDMI™ 2.0	Glasfaser	PVC	Aluminium	HDMI A M - A M	4k@60Hz	very good	272
	K5431SW.x	HDMI™ 2.0	Copper	PVC	PVC	HDMI A M - A M	4k@60Hz	standard	272
	K5431PRSW.x	HDMI™ 2.0	Copper	PVC	PVC	HDMI A M - A M, Premium zert.	4k@60Hz	very good	272
	K5430SW.x	HDMI™ 2.0	CCS	PVC	PVC	HDMI A M - A M	4k@30Hz	standard	272
	K7903.x	HDMI™ 1.4	Copper	PVC	PVC	HDMI A M - A Bu.	4K@30Hz	standard	273
	K7904.x	HDMI™ 1.4	Copper	PVC	PVC	HDMI A M - A M, Ferrit	4K@30Hz	good	273
	K7905SW.x	HDMI™ 1.4	Copper	PVC	PVC	HDMI A M - A M ,360°	4K@30Hz	standard	273
	K5432SW.x	HDMI™ 1.4	Copper	PVC	PVC	HDMI A M - DVI 24+1 M	4K@30Hz	standard	273
	K5429.x	HDMI™ 1.4	Copper	PVC	PVC	Mini C M - Mini C M	4K@30Hz	standard	273

Category	Art.No.	Version	Conductor	Jacket	Connector	Type	max. Resolution	EMC characteristics	Catalogue page
DVI	K5435.xV1	DVI 1.0	Copper	PVC	PVC	DVI24+5 M -M	2560x1600	good	274
	K5434.x	DVI 1.0	Copper	PVC	PVC	DVI24+1 M - M	2560x1600	good	274
	K5423.x	DVI 1.0	Copper	PVC	PVC	DVI24+1 M - Bu.	2560x1600	good	275
	K5433.x	DVI 1.0	Copper	PVC	PVC	DVI18+1 M - M	1920x1200	good	275
	K5436.x	DVI 1.0	Copper	PVC	PVC	DVI18+1 M - M	1920x1200	good	275
	K5433IND.x	DVI 1.0	Copper	PVC	PVC	DVI18+1 M - M	1920x1200	very good	275
	K5434IND.x	DVI 1.0	Copper	PVC	PVC	DVI24+1 M - Bu.	1920x1200	very good	275

Category	Art.No.	Version	Conductor	Jacket	Connector	Type	max. Resolution	EMC characteristics	Catalogue page
Displayport & Mini DisplayPort	K5567HQSW.x	DP v1.4	Copper	PVC	Zinc-die-cast	DP M - M	8k@60Hz	very good	276
	K5567SW.x	DP v1.4	Copper	PVC	PVC	DP M - M	8k@60Hz	standard	276
	ICOC-DSP-HY-0xx	DP v1.4	Glasfaser	PVC	Aluminium	DP M - M	8k@60Hz	very good	276
	K5560HQSW.x	DP v1.2	Copper	PVC	Zinc-die-cast	DP M - M	4k@60Hz	very good	276
	K5560SW.x	DP v1.2	Copper	PVC	PVC	DP M - M	4k@60Hz	standard	276
	K5565SW.x	DP v1.2	Copper	PVC	PVC	DP M - MiniDP M	4k@60Hz	standard	276
	K5561HQSW.x	DP v1.2	Copper	PVC	PVC	DP M - HDMI A M	4k@60Hz	standard	277
	K5561SW.x	DP v1.1	Copper	PVC	PVC	DP M - HDMI A M	1920x1080	standard	277
	K5564SW.x	DP v1.1	Copper	PVC	PVC	DP M - DVI24+1 M	1920x1080	standard	277
	K5562.x	DP v1.1	Copper	PVC	PVC	DP M - HDMI A M	1920x1080	standard	277
	K5563.x	DP v1.1	Copper	PVC	PVC	DP M - DVI24+1 M	1920x1200	standard	277

Category	Art.No.	Version	Conductor	Jacket	Connector	Type	max. Resolution	EMC characteristics	Catalogue page
VGA/SVGA	K5326SW.x	-	Copper	PVC	PVC	HD-DSub15 M - M	2560x1600	good	278
	K5327SW.x	-	Copper	PVC	PVC	HD-DSub15 M - F.	2560x1600	good	278
	EK324.x	-	Copper	PVC	PVC	HD-DSub15 M - M	800x600	standard	278
	EK322.x	-	Copper	PVC	PVC	HD-DSub15 M - F.	800x600	standard	278
	EK553SW.x	-	Copper	PVC	PVC	HD-DSub15 - 5 x BNC	1920x1200	standard	278

Premium EFB Aluminium connector

Stock lengths: 1,0 - 2,0 m

Ultra HighSpeed HDMI Kabel with Ethernet 8K 60Hz, with Premium Aluminium Connector

The new generation of HDMI-Cable with a bandwith of up to 48Gbit.
Supports Features as Dynamic HDR, Dolby Vision und eARC.
Compatible to older HDMI standards.

Supports Ultra High Speed HDMI Video up to 8k 60Hz eg. 4K 120Hz Auflösung
Dynamic HDR, HDCP2.2, 3D, Ethernet Channel, eARC
Tripple shielding: Foil + Braid + PIMF
Conductor material: bare copper, Jacket: PVC
Gold plated HDMI™ plugs and contacts, Premium EFB Aluminium housing for excellent EMC shielding

Art.-No.	Description	Colour
K5440HQSW.x	Ultra HighSpeed HDMI™ Cable with Eth., 8K60Hz A-A, AL, M-M	black

Stock lengths: 1,0 - 2,0 m

Ultra High Speed HDMI Cable with Ethernet 8K 60Hz

The new generation of HDMI-Cable with a bandwith of up to 48Gbit.
Supports Features as Dynamic HDR, Dolby Vision und eARC.
Compatible to older HDMI standards.

Supports Ultra High Speed HDMI Video up to 8k 60Hz eg. 4K 120Hz Auflösung
Dynamic HDR, HDCP2.2, 3D, Ethernet Channel, eARC
Tripple shielding: Foil + Braid + PIMF
Conductor material: Bare copper, Jacket: PVC
Gold plated HDMI™ plugs and contacts
Housing shielded and moulded

Art.-No.	Description	Colour
K5440SW.x	Ultra HighSpeed HDMI™ Cable with Ethernet, 8K60Hz A-A, M-M	black

4K HDMI up to 100m

Stock lengths: 10,0 up to 100,0 m

HighSpeed AOC HDMI Cable with Ethernet 4K 60Hz, HDMI over Fiber

Long distance transmission, up to 100 meters
Thinner and lighter than conventional copper cable
No radiation, and highly resistant with EMI
No external power supply needed
Supports resolution up to: 4Kx2K @ 60Hz

Art.-No.	Description	Colour
K5431AOC.xV2	HighSpeed HDMI™ AOC Fiber Optic Cable with Ethernet, 2x HDMI-A, M-M	black

Premium Certificated with re-traceble number

Stock lengths: 1,0 - 2,0 -3,0 - 5,0 - 6,1 m

High Speed HDMI Cable with Ethernet 4K 60Hz, Premium Cerified

Supports High Speed HDMI Video up to Ultra HD 4k 60Hz resolution
Premium Certification with barcode with re-traceble number
Supports HDR, HDCP2.2, 3D, Ethernet Channel, ARC
Tripple shielding: Foil + Braiding + PIMF
Conductor: bare copper, Jacket: PVC
HDMI™ plugs and contacts gold, housing moulded

Art.-No.	Description	Colour
K5431PRSW.x	HighSpeed HDMI™ Cable w. Eth. A-A, Premium cert., M-M	black

Stock lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 10,0 - 15,0 - 20,0 m

High Speed HDMI Cable with Ethernet 4K 60Hz

HDMI Double shielded: Foil + Braid
HDMI™ Plugs and contacts gold plated
Full HD - 3D up to 1080p and 4K2K
HEC: HDMI™ Ethernet Channel, ARC: Audio Return Channel

Art.-No.	Description	Colour
K5431SW.x	HighSpeed HDMI™ Connection Cable with Eth. A-A, M-M	black

Stock lengths: 0,5 - 1,0 - 2,0 - 3,0 - 5,0 - 10,0 - 15,0 m

HighSpeed HDMI Connection cable with Ethernet 4K 30Hz

Supports video resolutions up to 4K 30Hz
Shielding: foil + shielded pairs
Conductor: CCS, Jacket: PVC
HDMI™ plugs and contacts gold plated and moulded
Cable length up to 15m
Supported resolutions: Full HD@60Hz and 4K@30Hz
HEC: HDMI™ Ethernet Channel, ARC: Audio Return Channel

Art.-No.	Description	Colour
K5430SW.x	HighSpeed HDMI Cable with Ethernet 4K30Hz ,A-A M-M	black

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

HighSpeed HDMI Cable with Ethernet 4k 30hz, with pre-assembled Ferrite cores

Supports video resolutions up to 4K 30Hz
HDMI Double shielded: Foil + Braid
HDMI™ Plugs and contacts gold plated
HEC: HDMI™ Ethernet Channel, ARC: Audio Return Channel
Both sides assembled with ferrite core to dejam signals in the cable

Art.-No.	Description	Colour
K7904.x	HighSpeed HDMI™ Cable with Ethernet, Ferrite, A-A, M-M	black

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

HighSpeed HDMI™ Extension-Cable with Ethernet 4K 30Hz

For extending of your HDMI connections
Supports video resolutions up to 4K 30Hz
Shielding: Foil + Braid
Plugs and contacts gold plated
HEC: HDMI™ Ethernet Channel, ARC: Audio Return Channel

Art.-No.	Description	Colour
K7903.x	HighSpeed HDMI™ Extension Cable with Eth. A-A, M-F	black

NEW

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

HighSpeed HDMI Cable with Ethernet to DVI24+1 Full HD

Supports a max. resolution of 1920 x 1080P / Full HD
Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
HDMI™ plugs and contacts gold plated and moulded
<bold>Cable length up to 20m!

Art.-No.	Description	Colour
K5432SW.x	HighSpeed HDMI™ - DVI Cable,HDMI A - DVI 24+1 M-M	black

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

HighSpeed HDMI Cable with Ethernet 4K 30Hz, with 360° swivable plugs

HDMI™ swiveling cable 180°
Plugs are turnable up to 180° both-sided
Double shielded: Foil + Braid
Plugs and contacts gold plated
Full HD - 3D up to 1080p and 4K2K
HEC: HDMI™ Ethernet Channel, ARC: Audio Return Channel

Art.-No.	Description	Colour
K7905SW.x	HighSpeed HDMI™ Connection Cable with Eth., 360°, A-A, M-M	black

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

HighSpeed HDMI Cable with Ethernet, HDMI Type Mini-C - Plug Type Mini-C

Shielding: foil + braiding + PIMF
Conductor: bare copper, Jacket: PVC
HDMI™ plugs and contacts gold plated and moulded
E.g. suitable for smartphones
Full HD - 3D up to 1080p and 4K2K
HEC: HDMI™ Ethernet Channel, ARC: Audio Return Channel

Art.-No.	Description	Colour
K5429.x	HighSpeed HDMI™ Cable with Eth. C-C, M-M	black

Suitable for this:
Keystone Panels on page 108

Keystone Adapter HDMI™ A - A

Snap-In mounting (Keystone)
Connecting adapter for HDMI cables
2x HDMI connectors Type A
Plastic housing
Snap-in spring: plastic
Recommended for distribution panels with keystone breakout
Not recommended for use in frame sets with angled outlet

Art.-No.	Description
EB479V2	Keystone Snap-In Adapter HDMI A - A, white
EB520V2	Keystone Snap-In Adapter HDMI A - A, black

HDMI Adapter

EB470

EB487

EB480

EB475

EB473

MD1016

EB476

EB483

EB478

EB482

EB486

EB472

EB475

Adapter for High Definition Multimedia Interface (HDMI™)
Plugs and contacts gold plated

Art.-No.	Connection 1	Connection 2	Colour
EB470V2	HDMI-A Plug	DVI-D 24+1 Jack	black
EB487V2	HDMI-A Jack	DVI-D 24+1 Plug 180° swivable	black
EB472V2	HDMI-A Jack	HDMI-A Jack	black
EB475	HDMI-A Plug	HDMI-A Jack	black
EB473	HDMI-A Plug	HDMI-A Jack 90°	black
EB474	HDMI-A Jack	HDMI-C Plug	black
EB480V2	HDMI-A Jack	HDMI-D Plug	black
EB476	HDMI-A Jack	HDMI-A Jack 90°	black
EB486	HDMI-A Jack	HDMI-A Plug right angled	black
MD1016	HDMI-A Jack	HDMI-A Plug left angled	black
EB478	HDMI-A Jack 360°	HDMI-A Jack 360°	black
EB482	HDMI-A Jack	HDMI-A Jack 180°	black
EB483	HDMI-A Plug	HDMI-A Jack 180°	black

Stock lengths: 2,0 - 3,0 - 5,0 m

Stock lengths: 2,0 - 3,0 - 5,0 - 10 - 15 - 20 m

DVI 24+5 Dual Link Connection Cable

Shielding: foil + braiding + PIMF
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated and moulded
Both sides assembled with ferrite core to dejam signals in the cable (better EMV characteristics)
Dual Link cable with support of digital and analog signals
Support resolutions up to 2560 x 1600

Art.-No.	Description	Colour
K5435.xV1	DVI-I Dual Link Cable + Analog, 2x DVI-I 24+5, M-M	black

DVI 24+1 Dual Link Connection Cable

3x Shielding: foil + braiding + PIMF
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated and moulded
Both sides assembled with ferrite core to dejam signals in the cable (better EMV characteristics)
Cable length up to 20m!
Dual Link cable
Support resolutions up to 2560 x 1600

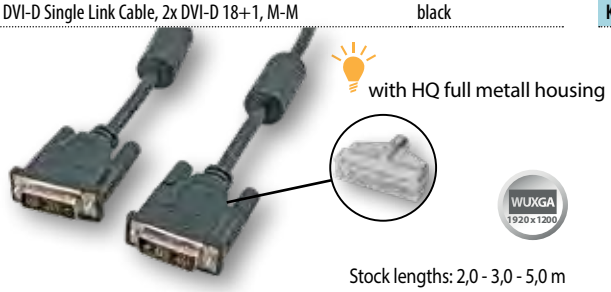
Art.-No.	Description	Colour
K5434.x	DVI-D Dual Link Cable, 2x DVI-D 24+1, M-M	black

Stock lengths: 2,0 - 3,0 - 5,0 - 10 - 15 - 20 m

DVI 18+1 Single Link Connection Cable

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated and moulded
Both sides assembled with ferrite core to dejam signals in the cable (better EMV characteristics)
Cable length up to 20m!
Single Link cable
Support resolutions up to 1920 x 1200

Art.-No.	Description	Colour
K5433.x	DVI-D Single Link Cable, 2x DVI-D 18+1, M-M	black



Stock lengths: 2,0 - 3,0 - 5,0 m

DVI 18+1 Single Link Industrial Connection Cable

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated, **housing with full-metal shielding and moulded, for ideal shielding characteristics in rough industrial environment.**
Both sides assembled with ferrite core to dejam signals in the cable (for better EMC characteristics)
Single link cable
Support for resolution up to 1920 x 1200

Art.-No.	Description	Colour
K5433IND.x	DVI Single Link Industrial Cable, 18+1, M-M	black

Stock lengths: 2,0 - 3,0 - 5,0 m

DVI/VGA 12+5 Connection Cable (analog)

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Contacts gold plated, plugs moulded
Both sides assembled with ferrite core to dejam signals in the cable (for better EMC characteristics)
Adapter cable from DVI-A to VGA

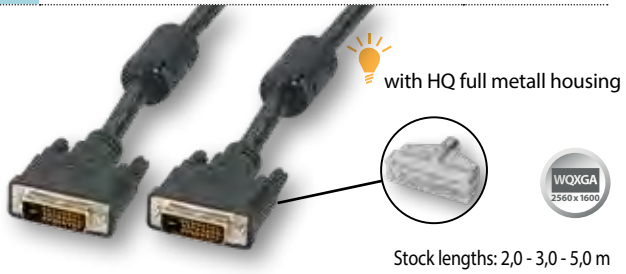
Art.-No.	Description	Colour
K5436.x	DVI-A 12+5 to VGA HD-DSub 15, M-M	black

Stock lengths: 2,0 - 3,0 - 5,0 - 10 m

DVI 24+1 Dual Link Extension Cable

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated and moulded
Both sides assembled with ferrite core to dejam signals in the cable (better EMV characteristics)
Dual Link cable
Support resolutions up to 2560 x 1600

Art.-No.	Description	Colour
K5423.x	DVI-D Dual Link Cable 24+1 to DVI-D 24+5, M-F	black



Stock lengths: 2,0 - 3,0 - 5,0 m

DVI 24+1 Dual Link Industrial Connection Cable

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Tinned plugs and gold plated contacts, **housing with full-metal shielding and moulded, for ideal shielding characteristics in rough industrial environment.**
Both sides assembled with ferrite core to dejam signals in the cable (for better EMC characteristics)
Dual link cable
Support for resolution up to 2560 x 1600

Art.-No.	Description	Colour
K5434IND.x	DVI Dual Link Industrial Cable, 24+1, Plug.-Plug, AWG28	black

DVI Adapter

Adapter for Digital Video Interface (DVI)
Housing: ABS, black
Gold plated contacts

Art.-No.	Connection 1	Connection 2	Colour
EB460	DVI-A 12+5 plug	HD-D-Sub 15 jack	black
EB462	DVI-I 24+5 Jack	HD-D-Sub 15-pole Plug	black
EB464	DVI-D 24+1 jack	DVI-D 24+1 jack	black
EB467	DVI-I 24+5 jack	DVI-I 24+5 jack	black
EB485	DisplayPort plug	DVI-I 24+5 jack	black
EB487	HDMI-A jack	DVI-D 24+1 plug 180°	black

NEW

Fully shielded with Premium EFB Zinc-die-cast housing

8K FULL UHD

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

DisplayPort 1.4 Cable 8K 60Hz, with Premium Zinc-die-cast housing

According to DisplayPort1.4 standard
Resolution up to 8K Ultra HD (7680 x 4320 @ 60Hz)
Conform to HDCP2.2
Premium Zinc-die-cast housing with full EMC shielding and DP lock
DisplayPort plugs and contacts gold plated
Tripple shielding
Conductor: bare copper, Jacket: PVC
Pin 20: DP_PWR not connected

Art.-No.	Description	Colour
K5567HQSW.x	DisplayPort 1.4 Cable 8K 60Hz,A-A M-M, Premium Zinc-die-cast housing	black

NEW

8K FULL UHD

Stock lengths: 0,5 - 1,8 - 3,0 - 5,0 m

DisplayPort 1.4 Cable 8K 60Hz

According to DisplayPort1.4 standard
Resolution up to 8K Ultra HD (7680 x 4320 @ 60Hz)
Conform to HDCP2.2
DisplayPort plugs and contacts gold plated
Tripple shielding
Conductor: bare copper, Jacket: PVC
Pin 20: DP_PWR not connected
Housing with 360° shielding, moulded and DP lock

Art.-No.	Description	Colour
K5567SW.x	DisplayPort 1.4 Cable 8K 60Hz,A-A M-M	black

NEW

8K Displayport up to 50m

8K FULL UHD

Stock lengths: 10,0 bis 50,0 m

DisplayPort 1.4 AOC Hybrid Cable 8K 60Hz

8K Fiber Optic DisplayPort cable for long length applications. Supports length longer than the DP standard lengths, up to 50m.

Assembled with black tinned metal plug and DP laser imprint
Supports resolutions up to 8K @ 60Hz or 4K @ 120Hz
Supports a bandwidth of 32.4 Gbps
Resistant to EMC

Art.-No.	Description	Colour
ICOC-DSP-HY-010	DisplayPort 1.4 AOC Hybrid Cable 8K 60Hz	black

NEW

Fully shielded with Premium EFB Zinc-die-cast housing

4K ULTRA HD

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 - 10,0 m

DisplayPort 1.2 Cable 4K 60Hz, with Premium Zinc-die-cast housing

According to DisplayPort1.4 standard
Resolution up to 4K Ultra HD (4096 x 2160 @ 60Hz)
Premium Zinc-die-cast housing with full EMC shielding and DP lock
DisplayPort plugs and contacts gold plated
Tripple shielding
Conductor: bare copper, Jacket: PVC
Pin 20: DP_PWR not connected

Art.-No.	Description	Colour
K5560HQSW.x	DisplayPort 1.2 Cable, 4K60Hz, M-M	black

NEW

4K ULTRA HD

Stock lengths: 0,5 - 1,8 - 3,0 - 5,0 - 10,0 m

DisplayPort 1.2 Cable 4K 60Hz

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated
Pin 20: DP_PWR not connected
Housing 360° shielded, moulded with locking protection
DisplayPort v1.2 compliant
Supports resolutions up to 4096 x 2160 Pixel (4k2k)
Supports HDCP 1.3 and DPCP

Art.-No.	Description	Colour
K5560SW.x	DisplayPort 1.2 Cable, 4K60Hz, M-M	black

4K ULTRA HD

Stock lengths: 1,0 - 2,0 - 3,0 m

Mini-DisplayPort – DisplayPort Cable 4K 60Hz

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated,
Housing moulded with locking protection on DP side
DisplayPort v1.2 compliant
Supports resolutions up to 4096 x 2160 Pixel (4k2k)
Supports HDCP 1.3 and DPCP

Art.-No.	Description	Colour
K5565SW.x	Mini DisplayPort - DisplayPort Cable, M-M	black

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

DisplayPort - HDMI Cable, 4K 60Hz

DisplayPort to HDMI Adapter cable with one sided signal way
DisplayPort => HDMI output device
Supports 4K @ 60Hz resolution
Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated, HDMI side moulded,
DP mounted with locking protection
Pin 20: DP_PWR not connected

Art.-No.	Description	Colour
K5561HQSW.x	DisplayPort - HDMI Cable 4K60Hz A-A M-M	black

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

DisplayPort - HDMI Cable, Full HD

DisplayPort to HDMI Adapter cable with one sided signal way
DisplayPort => HDMI output device
Supports Full HD - 3D up to 1080p
Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated, HDMI side moulded,
DP mounted with locking protection
Pin 20: DP_PWR not connected

Art.-No.	Description	Colour
K5561SW.xV2	DisplayPort/HDMI Cable Full HD,A-A M-M	black

Stock lengths: 1,0 - 2,0 - 3,0 - 5,0 m

DisplayPort - DVI-I 24+1 Cable, Full HD

DisplayPort to DVI-D 24+1 adapter cable with one sided signal way
DisplayPort => DVI-D 24+1 output device
Supports resolutions up to Full HD Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated, DVI side moulded,
DP mounted with locking protection
Pin 20: DP_PWR not connected

Art.-No.	Description	Colour
K5564SW.xV2	DisplayPort to DVI-D 24+1, M-M	black

DisplayPort Adapter, DP Male to HDMI™ A Female 4K 30/60Hz

Adapter to connect DisplayPort graphic controller to HDMI displays
One sided signal way DisplayPort => HDMI output device
Supports 4k resolution with 30Hz (EB484-4K30) and 60Hz (EB484-4K60)
DisplayPort v1.2 compliant
Supports HDCP 1.3 and DPCP

Art.-No.	Description	Colour
EB484-4K30	DisplayPort Adapter,DP male to HDMI Typ A female 4K 30HZ	black
EB484-4K60	DisplayPort Adapter,DP male to HDMI Typ A female 4K 60HZ	black

DisplayPort Adapter, DP Male to HDMI™ A Female Full HD

Adapter to connect DisplayPort graphic controller to HDMI displays
One sided signal way DisplayPort => HDMI output device
DisplayPort v1.1 compliant
Supports HDCP 1.3 and DPCP

Art.-No.	Description	Colour
EB484	DisplayPort Adapter,DP male to HDMI Typ A female Full HD	black

DisplayPort Adapter, DP Male to DVI-I 24+5 Female Full HD

Adapter to connect DisplayPort graphic controller to HDMI / DVI displays
One sided signal way DisplayPort => DVI output device
DisplayPort v1.2 compliant
Supports HDCP 1.3 and DPCP

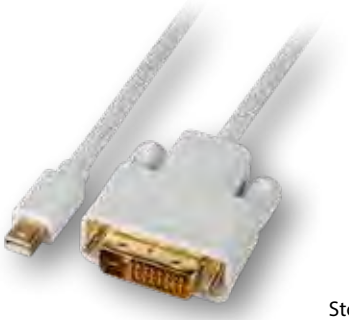
Art.-No.	Description	Colour
EB485V2	DisplayPort Adapter,DP Male to DVI 24+5 Female, Full HD	black

Stock lengths: 1,0 m

Mini DisplayPort - HDMI™ Cable

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated, Plugs moulded
Mini DisplayPort to HDMI Adapter cable with one sided signal way Mini DisplayPort => HDMI output device
Supports Full HD - 3D up to 1080p
For connection of apple device with TV or display

Art.-No.	Description	Colour
K5562.x	Mini DisplayPort - HDMI™ Cable, M-M	white



Stock lengths: 1,0 m

Mini DisplayPort - DVI Cable

Shielding: foil + braiding
Conductor: bare copper, Jacket: PVC
Plugs and contacts gold plated, Plugs moulded
Mini DisplayPort to DVI-D 24+1 Adapter cable with one sided signal way Mini DisplayPort => DVI-D 24+1 output device
Supports resolution up to 1920 x 1200
For connection of apple device with external display

Art.-No.	Description	Colour
K5563.x	Mini DisplayPort - DVI Cable, M-M	white

Converter Mini DisplayPort Plug - HDMI™ Type A Jack

Adapter/converter Mini-DisplayPort 20-pin plug (Thunderbolt) to HDMI 19-pin jack
Supports max resolution of 1080p (IADAP-MDP-HDMIF) or 4K 30Hz (IADAP-MDP-HDMIF12)

Art.-No.	Description	Colour
IADAP-MDP-HDMIF	Mini DisplayPort (Thunderbolt) 1.1 to HDMI	white
IADAP-MDP-HDMIF12	Mini DisplayPort (Thunderbolt) 1.2 to HDMI Adapter	white

Converter Mini DisplayPort Plug - DVI-I Jack

Adapter/converter Mini-DisplayPort 20-pin plug (Thunderbolt) to DVI-I jack
Supports max resolution of 1080p

Art.-No.	Description	Colour
IADAP-MDP-DVIF	Mini DisplayPort (Thunderbolt) to DVI Adapter	white

Converter Mini DisplayPort Plug - VGA Jack

Adapter/Konverter Mini-DisplayPort 20-pin plug (Thunderbolt) to VGA jack
Supports resolutions up to 1920x1200

Art.-No.	Description	Colour
IADAP-MDP-VGAF2	Mini Converter DisplayPort (Thunderbolt) 1.2 to VGA	white

MiniDisplayPort 3-way Converter

Mini DisplayPort Multi Converter, 1 converter for HDMI, DVI, and DisplayPort devices.
Mini DisplayPort to HDMI, DVI-D 24+1 or DisplayPort converter with one sided signal way
Mini DisplayPort => HDMI, DVI-D 24+1, DisplayPort output device
Supports resolution up to 1920 x 1200

Art.-No.	Description	Colour
EB986	Mini DisplayPort 3-way Adapter, MiniDP- HDMI+DVI+Displayport Adapter	white

Stock lengths: 1,8 - 3,0 - 5,0 - 7,0 - 10 - 15 - 20 - 25 - 30 - 40 - 50 m

SVGA/HDTV Connection Cable

Double shielded display cable specially capable against outer interference
75 Ohm, double-shielded, with 2 x ferrite cores
Plugs and contacts golded
With thumb screws, moulded, black
Construction: 3 x coax RGB and 5 x control lines

Art.-No.	Description	Colour
K5326SW.x	SVGA/HDTV Connection Cable, 2x HD-DSub 15, M-M	black

Stock lengths: 2,0 - 3,0 - 5,0 - 10 m

VGA Connection Cable

1:1 wired
Shielded
Moulded
With thumb screws
On request also in black available

Art.-No.	Description	Colour
EK324.x	VGA Connection Cable, 2x HD-DSub 15, M-M	beige

Stock lengths: 2,0 - 3,0 - 5,0 - 10 m

SVGA/HDTV Display Cable, 15p. HD-DSub15 to 5xBNC

Construction: 5 x coax 75 Ohm, 1 ferrite core
Shielded
Moulded

Art.-No.	Description	Colour
EK553SW.x	SVGA/HDTV Connection Cable, 1x HD-Dsub 15 to 5x BNC-S	black

Stock lengths: 1,8 - 3,0 - 5,0 - 7,0 - 10 - 15 - 20 - 25 - 30 - 40 - 50 m

SVGA/HDTV Extension Cable

Double shielded display cable specially capable against outer interference
75 Ohm, double-shielded, with 2 x ferrite cores
With thumb screws, moulded, black
Construction: 3 x coax RGB and 5 x control lines

Art.-No.	Description	Colour
K5327SW.x	SVGA/HDTV Extension Cable, 2x HD-DSub 15, M-F	black

Stock lengths: 2,0 - 3,0 - 5,0 - 10 m

VGA Extension Cable

1:1 wired
Shielded
Moulded
With thumb screws
On request also in black available

Art.-No.	Description	Colour
EK322.x	VGA Extension Cable, 2x HD-DSub 15, M-F	beige

DVI-A 24+5 - HD-15 Adapter

Adapter for DVI and VGA (HD15)
Moulded
Gold plated contacts
Screw 4-40#

Art.-No.	Connection 1	Connection 2	Colour
EB460V2	DVI-I 24+5 Plug	HD-D-Sub 15-pole Jack	black
EB462V2	DVI-I 24+5 Jack	HD-D-Sub 15-pole Plug	black

USB

The EFB product portfolio includes a wide range for the wiring of smartphones, tablets and PCs. The product range covers all facets of the USB standards from USB3.2 to USB1.1 with the appropriate accessories.

USB3.2		P. 284
USB3.0		P. 285
USB2.0		P. 288
Accessories		P. 293

YOU MAY ALSO BE INTERESTED IN:

KVM P. 260

Overview of the current USB Standards

With the USB3.2 standard, a new USB standard came onto the market in 2019. This brings some improvements, such as a higher data transfer, but it also lead to some confusion with the USB descriptions.

To make it easier for you to choose the right USB cable, you will find an overview of the current USB standards and their names.

Old status(up to 2019)

USB STANDARD	MAX. SPEED	MAX. AMPERE	CONNECTOR TYPES
USB3.1 Gen.2	SuperSpeed+ 10Gbit/s	Profile dependent 1500mA – 5000mA	Type A, Type C
USB3.1 Gen.1	SuperSpeed+ 5Gbit/s	Profile dependent 900mA - 3000mA	Type A; Type Micro B; Type C
USB3.0	SuperSpeed 5Gbit/s	900mA	Type A; Type B; Type Micro-B
USB2.0	HighSpeed 480Mbit/s	500mA	Type A; Type B; Type Mini-B; Type Micro-B; Lightning
USB1.1	Low Speed 12Mbit/s	500mA	Type A; Type B

Current status (since mid 2019)

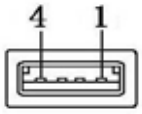
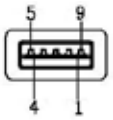
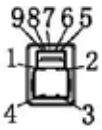
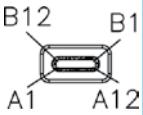
USB STANDARD (new name)	USB STANDARD (old name)	MAX. SPEED	MAX. AMPERE	CONNECTOR TYPES
USB3.2 Gen.2 2x2 NEW	-	SuperSpeed+ 20Gbit/s	Profile dependent 1500mA – 5000mA	Type C
USB3.2 Gen.2 NEW DESCRIPTION	USB3.1 Gen2	SuperSpeed+ 10Gbit/s	Profile dependent 1500mA – 5000mA	Type A, Type C
USB3.2 Gen.1 NEW DESCRIPTION	USB3.1 Gen1	SuperSpeed 5Gbit/s	Profile dependent 900mA - 3000mA	Type A; Type C
USB3.2 Gen.1 NEW DESCRIPTION	USB3.0*	SuperSpeed 5Gbit/s	900mA	Type A; Type B; Type Micro-B
-	USB2.0	HighSpeed 480Mbit/s	500mA	Type A; Type B; Type Mini-B; Type Micro-B; Lightning
-	USB1.1	Low Speed 12Mbit/s	500mA	Type A; Type B

In summary, it can be said that USB3.2 actually only brings one new cable variant (USB3.2 Gen 2x2) into the market and renames existing USB3.1 and USB3.0 variants.

Suitable for this:
USB3.2 Gen 2x2 Variante on page 284

* For the time being we are using the old descriptions with regard to USB3.0.

TYPES OF CONNECTORS

Connector	Usual Types	Features	MAX. Cable length (according to USB STANDARD)
	Type A (USB2.0)	■ 4 Pins ■ white inlet ■ 1500 plug cycles	with USB2.0 cable: 5000 mm
	Type A (USB3.0/3.1/3.2)	■ 9 Pins ■ blue inlet ■ 1500 plug cycles (Standard) ■ 5000 plug cycles (HDC)	with USB3.0 cable: 3000 mm with USB3.1 cable: 1000 mm
	Type B (USB2.0)	■ 4 Pins ■ weißes Inlet ■ 1500 plug cycles	with USB2.0 cable: 5000 mm
	Type B (USB3.0)	■ 9 Pins ■ blaues Inlet ■ 1500 plug cycles	with USB3.0 cable: 3000 mm
	Type Micro-B (USB2.0)	■ 5 Pins ■ 10000 Plug cycles	with USB2.0 cable: 2000 mm
	Type Micro-B (USB3.0/3.1)	■ 10 Pins ■ 10000 plug cycles	with USB3.0 cable: 3000 mm with USB3.1 cable: 1000 mm
	Type Mini-B (USB2.0)	■ 5 Pins ■ 5000 plug cycles	with USB2.0 cable: 5000 mm
	Type C (USB2.0/3.1/3.2)	■ 24 Pins ■ 10000 Plug cycles ■ reversible plug	USB3.2 Gen.2 2x2: 1000 mm USB3.2 Gen.1: 2000 mm other combinations possible

THE WORLD OF EFB-PRODUCTS

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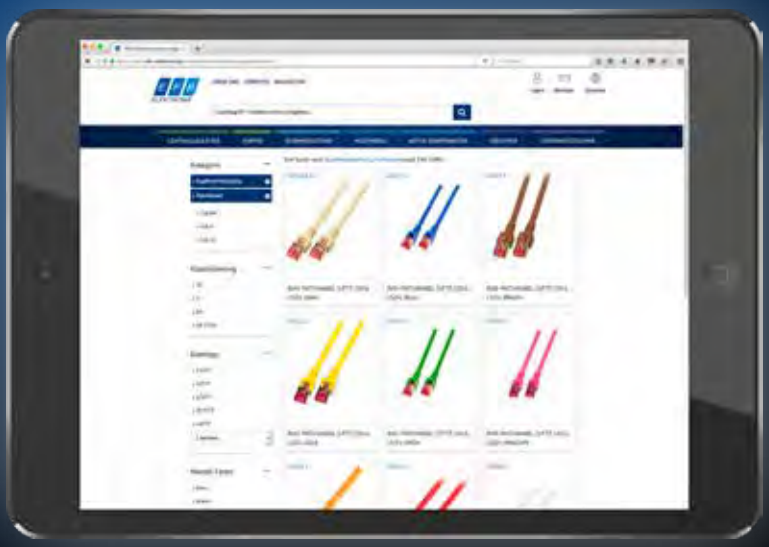

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Category	Art.No.	Version	Conductor	Jacket	Connector	Type	max. Ampere	max. Speed	Catalogue page
USB3.2 / USB3.1	K283-5ASW.x	USB3.2 2x2	Copper	PVC	PVC	Type C M - M	5A	20Gbit	284
	K283-3ASW.x	USB3.2 Gen1/ USB3.1 Gen.1	Copper	PVC	PVC	Type C M - M	3A	5Gbit	284
	K282-3ASW.x	USB3.2 Gen1/ USB3.1 Gen.1	Copper	PVC	PVC	Type C M - Type A M	3A	5Gbit	284
	K5313SW.0,2	USB3.2 Gen1/ USB3.1 Gen.1	Copper	PVC	PVC	Type C M - Type A F	3A	5Gbit	284

Category	Art.No.	Version	Conductor	Jacket	Connector	Type	max. Ampere	max. Speed	Catalogue page
USB3.0	K5236.x	USB3.0	Copper	PVC	PVC	Type A M - Type B M	900mA	5Gbit	285
	K5247SW.x	USB3.0	Copper	PVC	PVC	Type A M - Type B M	900mA	5Gbit	285
	K5210SW.x	USB3.0	Copper	PVC	PVC	Type A M - Type A M	900mA	5Gbit	285
	K5280SW.x	USB3.0	Copper	PVC	PVC	Type A M - Type A M	900mA	5Gbit	285
	K5237.x	USB3.0	Copper	PVC	PVC	Type A M - Type A F	900mA	5Gbit	285
	K5268SW.x	USB3.0	Copper	PVC	PVC	Type A M - Type A F	900mA	5Gbit	285
	K5265SW.x	USB3.0	Copper	PVC	PVC	Type A M - Type A F (Panel jack)	900mA	5Gbit	286
	K5264SW.x	USB3.0	Copper	PVC	PVC	Type B M - Type B M (Panel jack)	900mA	5Gbit	286

Category	Art.No.	Version	Conductor	Jacket	Connector	Type	max. Ampere	max. Speed	Catalogue page
USB2.0	K5256SW.x	USB2.0	Copper	PVC	PVC	Type A M - Type B M	500mA	480Mbit	288
	K5255.x / K5255SW.x	USB2.0	Copper	PVC	PVC	Type A M - Type B M	500mA	480Mbit	288
	K5251SW.x	USB2.0	Copper	PVC	PVC	Type A M - Mini-B M	500mA	480Mbit	288
	K5250.x / K5250SW.x	USB2.0	Copper	PVC	PVC	Type A M - Mini-B M	500mA	480Mbit	288
	K5232SW.x	USB2.0	Copper	PVC	PVC	Type A M - Micro-B M	500mA	480Mbit	288
	K5228SW.x	USB2.0	Copper	PVC	PVC	Type A M - Micro-B M	500mA	480Mbit	288
	K5220SW.x	USB2.0	Copper	PVC	PVC	Type A M - Type A F	500mA	480Mbit	289
	K5248.x / K5248SW.x	USB2.0	Copper	PVC	PVC	Type A M - Type A F	500mA	480Mbit	289
	K5258SW.x	USB2.0	Copper	PVC	PVC	Type A M - Type C M	500mA	480Mbit	289
	K5253SW.x	USB2.0	Copper	PVC	PVC	Type A M - Type A M	500mA	480Mbit	289
	K5293SW.x	USB2.0	Copper	PVC	PVC	Type B M - Type B F (Panel jack)	500mA	480Mbit	289
	K5291SW.x	USB2.0	Copper	PVC	PVC	Type A M - Type A F (Panel jack)	500mA	480Mbit	289
	K5245SW.x	USB2.0	Copper	PVC	PVC	Type A M (90°) - Type B M	500mA	480Mbit	290
	K5246SW.x	USB2.0	Copper	PVC	PVC	Type A M (90°) - Type A F	500mA	480Mbit	290
	K5260SW.x	USB2.0	Copper	PVC	PVC	Type A M - Type B M (90°)	500mA	480Mbit	290
	K5203.x	USB2.0	Copper	LSZH	PVC	Type A M - Type B M	500mA	480Mbit	290
	K5204.x	USB2.0	Copper	LSZH	PVC	Type A M - Type A M	500mA	480Mbit	290
	K5205.x	USB2.0	Copper	LSZH	PVC	Type A M - Type A F	500mA	480Mbit	290
	K5350WS.x	USB2.0	Copper	PVC	PVC	Type A M - Lightning M	500mA	480Mbit	291
	K5351WS.x	USB2.0	Copper	PVC	PVC	Type A M - Lightning / Micro-B M	500mA	480Mbit	291

With integrated E-Mark Chip, for 5A/100W Power

Stock length: 0,5 - 1,0m

USB3.2 Gen.2x2 20Gbit 5A Connection Cable Plug Type-C to Plug Type-C

Type of connector connection 1: USB-C plug moulded
Type of connector connection 2: USB-C plug moulded

Art.-No.	Description	Colour
K5283-5ASW.x	USB3.2 Gen.2x2 20Gbit 5A Connection Cable Plug Type-C to Plug Type-C	black

Stock length: 0,5 - 1,0 m

USB3.2 Gen.1 5Gbit 3A Connection Cable Plug Type-C to Plug Type-C

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-C plug moulded

Art.-No.	Description	Colour
K5282-3ASW.x	USB3.2 Gen.1 5Gbit 3A Connection Cable Plug Type-C to Plug Type-C	black

Stock length: 0,5 - 1,0 m

USB3.2 Gen.1 5Gbit 3A Connection Cable Plug Type-A to Plug Type-C

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-C plug moulded

Art.-No.	Description	Colour
K5283-3ASW.x	USB3.2 Gen.1 5Gbit 3A Connection Cable Plug Type-A to Plug Type-C	black

Stock length: 0,2 m

USB3.2 Gen.1 5Gbit Adapter Cable, Plug Type-C - Jack Type-A

Type of connector connection 1: USB-A jack moulded
Type of connector connection 2: USB-C plug moulded

Art.-No.	Description	Colour
K5313SW.0,2	USB3.2 Gen.1 5Gbit Adapter Cable, Plug Type-C - Jack Type-A	black

USB Type C Adapter

USB Typ-C Adapter for Type C & Type A conversion

Art.-No.	Description
EBUSBCM-MikroBF	USB2.0 Adapter Typ-C Plug - Micro-B Jack
EBUSBCM-AF	USB3.0 Adapter Typ-C Plug auf Typ-A Jack
EB552	Keystone Adapter USB3.2/3.1 black, Typ-C-Jack/C-Jack 10Gbit/s, 60W
EB552WS	Keystone Adapter USB3.2/3.1 white, Typ-C-Plug/C-Plug, 10Gbit/s, 60W

USB3.0 Premium

PREMIUM Cable SERIES USB 3.0 CHARACTERISTICS:

Data wire SuperSpeed: AWG30/7 bare copper tinned, paired in metal foil
Electrical Conductor: AWG20/7 bare copper, tinned,
Micro B: AWG24/7 bare copper, tinned
Shielding: Braiding 65% coverage
Reliability: up to 3000mm with max. load of 900mA assured !

Stock length: 1,0 - 1,8 - 3,0 m

USB3.0 Connection Cable Type A Plug to Type B Plug, Premium

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-B plug moulded

Art.-No.	Description	Colour
K5236.x	USB3.0 Connection Cable Type A Plug to Type B Plug, Premium	black

Stock length: 1,0 - 1,8 - 3,0 m

USB3.0 Connection Cable Type A Plug to Type A Plug, Premium

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A plug moulded

Art.-No.	Description	Colour
K5210SW.x	USB3.0 Connection Cable Type A Plug to Type A Plug, Premium	black

Stock length: 1,8 - 3,0 m

USB3.0 Extension Cable Type A Plug to Type A Jack, Premium

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A jack moulded

Art.-No.	Description	Colour
K5237.x	USB3.0 Extension Cable Type A Plug to Type A Jack, Premium	black

USB3.0 Classic

CLASSIC Cable Series USB 3.0 Characteristics:

The USB3.0 CLASSIC Series stands for an excellent price/quality relation. Proven cable technology for all standard application in SuperSpeed or HighSpeed Modus.

Stock length: 1,0 - 1,8 - 3,0 m

USB3.0 Connection Cable Type A Plug to Type B Plug, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-B plug moulded

Art.-No.	Description	Colour
K5247SW.x	USB3.0 Connection Cable Type A Plug to Type B Plug, Classic	black

Stock length: 1,0 - 1,8 - 3,0 m

USB3.0 Connection Cable Type A Plug to Type A Plug, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A plug moulded

Art.-No.	Description	Colour
K5280SW.x	USB3.0 Connection Cable Type A Plug to Type A Plug, Classic	black

Stock length: 1,0 - 1,8 - 3,0 m

USB3.0 Extension Cable Type A Plug to Type A Jack, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A jack moulded

Art.-No.	Description	Colour
K5268SW.x	USB3.0 Extension Cable Type A Plug to Type A Jack, Classic	black

Stock length: 0,5 - 1,0 - 1,8 m

USB3.0 Connection Cable Type A Plug to Type A Panel Jack, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A jack moulded

Art.-No.	Description	Colour
K5265SW.x	USB3.0 Connection Cable Type A Plug to Type A Panel Jack, Classic	black

Stock length: 0,5 - 1,0 - 1,8 m

USB3.0 Connection Cable Type B Plug to Type B Panel Jack, Classic

Type of connector connection 1: USB-B plug moulded
Type of connector connection 2: USB-B jack moulded

Art.-No.	Description	Colour
K5264SW.x	USB3.0 Connection Cable Type B Plug to Type B Panel Jack, Classic	black

USB 3.2/3.1/3.0 Adapter

EB544

EB549

EB550

EB546

EB547

EB545

EB552WS

EB552

NEW

EB537

Snap-In mounting (Keystone)
Plastic housing
Snap-In spring: plastic

Big multimedia keystone overview on page107

USB3.1 / 3.0 Adapter

Art.-No.	Description
EB544	USB3.0-Adapter, Plug A - Jack B, blue
EB546	USB3.0-Adapter, Jack A - Jack B, blue
EB547	USB3.0-Adapter, Jack A - Plug B, blue
EB549	USB3.0-Adapter, Jack B - Plug Micro-B, blue
EB550	USB3.0-Adapter, Jack A - Plug Micro-B, blue
EB545V2	USB3.0 Adapter Jack A - Jack A, blue

USB3.1 / 3.0 Keystone Snap-In Adapter

Art.-No.	Description
EB537	Keystone Snap-In Adapter USB3.0 A - A, black
EB552	Keystone Snap-In Adapter USB3.1 black, Type-C-jack/C-jack 10Gbit/s, 60W
EB552WS	Keystone Snap-In Adapter USB3.1 white, Type-C-jack/C-jack, 10Gbit/s, 60W

Accessory

Artikel-Nr.	Description
ET-25085	2-Port Frame set for all EFB Keystones
37580.1	Distribution panel 19" 1U, 24-Port, black

USB3.0 Active Repeater Cable

Extend cable up to max 13 m.
Compatible with USB 3.0/2.0/1.1.
Support the following speed data rate as follows: Low-speed (1.5Mbps)/ Full-speed (12Mbps)/High-speed (480Mbps) /Super-speed (5Gbps)
Hot plug capability
Support Win10/8/7/XP/MAC OS

Art.-No.	Description	Length
K5271SW.5	USB3.0 Repeater Cable active 5m	5.0 m

USB3.0 Desktop Extension Cable

USB jack type A moulded in plastic housing
Additional USB jack type A for power supply

Art.-No.	Description	Length
EB458	USB 3.0 Desktop Extension Cable	1.5 m

USB3.0 Gigabit Ethernet Adapter

1 x USB3.0 - plug to 1 x RJ45 - jack
Cable length: 109mm
compatible zu USB 2.0/3.0
Supports 10/100/1000 Mbps
Plug & Play
Plastic housing
Powered by USB Port, no external power supply needed

Art.-No.	Description
EB457	USB3.0 auf RJ45 Gigabit Ethernet 10/100/1000

USB3.0 Gigabit Ethernet Adapter with 3 Port USB Hub

Supports Gigabit Ethernet access for your PC/Notebook/Tablet over your USB port
1x Full Duplex Gigabit Ethernet (RJ45) Port with 3 Port USB3.0 Hub

Art.-No.	Description
IDATA-USB-ETGIGA-3U2	Converter 1x USB A Plug to 1x RJ45 Jack & 3x USB A Jack
IDATA-USB-ETGIGA-3C2	Converter 1x USB C Plug to 1x RJ45 Jack & 3x USB A Jack

USB3.0 Typ-C Gigabit Ethernet Adapter

Allows your PC / notebook / tablet to be connected to your Gigabit Ethernet (RJ45) via your USB Type C connection.
Supports plug & play, no software required
Auto negotiation at 10/100/1000 Mbps
Supports Wake-on-LAN and 'RealWoW!' (Wake-on-LAN) technology
Supports twisted pair detection and auto-correction (HP Auto-MDIX)
Power via USB port

Art.-No.	Description
IADAP-USB31-ETGIGA	Converter Cable Adapter USB 3.1 Type C M to Gigabit Ethernet

USB3.0 Hub 4-Port, Desktop

Supports the connecting up to four devices to one computer
Supported data transfer rates : 1,5/-12/-480 Mbps, 5 Gbit/s
Overload protection (per Port)
Plug-and-Play, no software installation needed
Compact design and incl. power supply

Art.-No.	Description
EB3101	USB3.0 Hub 4-Port incl. 5V4A PS+Connection Cable

USB2.0 Premium

PREMIUM CableSERIES USB 3.0 CHARACTERISTICS:

Data wire SuperSpeed: AWG30/7 bare copper tinned, paired in metal foil
Electrical Conductor: AWG20/7 bare copper, tinned,
Micro B: AWG24/7 bare copper, tinned
Shielding: Braiding 65% coverage
Reliability: up to 3000mm with max. load of 500mA assured !

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Connection Cable Type A Plug to Type-B Plug, Premium

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-B plug moulded

Art.-No.	Description	Colour
K5256SW.x	USB2.0 Connection Cable Type A Plug to Type-B Plug, Premium	black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Connection Cable Type A Plug to Type Mini-B Plug, Premium

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-Mini-B plug moulded

Art.-No.	Description	Colour
K5251SW.x	USB2.0 Connection Cable Type A Plug to Type Mini-B Plug, Premium	black

Stock length: 0,5 - 1,0 - 1,8 m

USB2.0 Connection Cable Type A Plug to Type Micro-B Plug, Premium

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-Micro-B plug moulded

Art.-No.	Description	Colour
K5232SW.x	USB2.0 Connection Cable Type A Plug to Type Micro-B Plug, Premium	black

USB2.0 Classic

CLASSIC Cable Series USB 3.0 Characteristics:

The USB3.0 CLASSIC Series stands for an excellent price/quality relation.
Proven cable technology for all standard application in SuperSpeed or HighSpeed Modus.

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Connection Cable Type A Plug to Type B Plug, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-B plug moulded

Art.-No.	Description	Colour
K5255.x	USB2.0 Connection Cable Type A Plug to Type B Plug, Classic	grey
K5255SW.x	USB2.0 Connection Cable Type A Plug to Type B Plug, Classic	black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Connection Cable Type A Plug to Type Mini-B Plug, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-Mini-B plug moulded

Art.-No.	Description	Colour
K5250.x	USB2.0 Connection Cable Type A Plug to Type Mini-B Plug, Classic	grey
K5250SW.x	USB2.0 Connection Cable Type A Plug to Type Mini-B Plug, Classic	black

Stock length: 0,5 - 1,0 - 1,8 m

USB2.0 Connection Cable Type A Plug to Type Micro-B Plug, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-Micro-B plug moulded

Art.-No.	Description	Colour
K5228SW.x	USB2.0 Connection Cable Type A Plug to Type Micro-B Plug, Classic	black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Extension Cable Plug Type A to Type A Jack, Premium

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A jack moulded

Art.-No.	Description	Colour
K5220SW.x	USB2.0 Extension Cable Plug Type A to Type A Jack, Premium	black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Extension Cable Plug Type A to Type A Jack, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A jack moulded

Art.-No.	Description	Colour
K5248.x	USB2.0 Extension Cable Plug Type A to Type A Jack, Classic	grey
K5248SW.x	USB2.0 Extension Cable Plug Type A to Type A Jack, Classic	black

USB2.0 Connection Cable Plug Type-C to Plug Type-A, Premium

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-C plug moulded

Art.-No.	Description	Colour
K5258SW.x	USB2.0 Connection Cable Plug Type-C to Plug Type-A, Premium	Black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 m

USB2.0 Connection Cable Type A Plug to Type A Plug, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A plug moulded

Art.-No.	Description	Colour
K5253SW.x	USB2.0 Connection Cable Type A Plug to Type A Plug, Classic	black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 m

USB2.0 Connection Cable Type B Plug to Type B Panel jack, Classic

Type of connector connection 1: USB-B plug moulded
Type of connector connection 2: USB-B jack moulded

Art.-No.	Description	Colour
K5293SW.xV2	USB2.0 Connection Cable Type B Plug to Type B Panel jack, Classic	Black

USB2.0 Connection Cable Type A Plug to Panel Jack A, Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A jack moulded

Art.-No.	Description	Colour
K5291SW.xV2	USB2.0 Connection Cable Type A Plug to Panel Jack A, Classic	black

Stock lengths: 0.5 - 1.0 - 1.8 - 3.0 - 5.0 m

USB2.0 Connection Cable Type A(90°) Plug to Type B Plug, Classic

Type of connector connection 1: USB-A 90° plug moulded
Type of connector connection 2: USB-B plug moulded

Art.-No.	Description	Colour
K5245SW.xV2	USB2.0 Connection Cable Type A(90°) Plug to Type B Plug, Classic	black

Stock lengths: 0.5 - 1.0 - 1.8 - 3.0 - 5.0 m

USB2.0 Extension Cable Plug Type A(90°) to Type A Jack, Classic

Type of connector connection 1: USB-A 90° plug moulded
Type of connector connection 2: USB-A jack moulded

Art.-No.	Description	Colour
K5246SW.x	USB2.0 Extension Cable Plug Type A(90°) to Type A Jack, Classic	black

Stock lengths: 0.5 - 1.0 - 1.8 - 3.0 - 5.0 m

USB2.0 Connection Cable Plug Type A Plug to Plug Type B(90°), Classic

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-B 90° plug moulded

Art.-No.	Description	Colour
K5260SW.x	USB2.0 Connection Cable Plug Type A Plug to Plug Type B(90°), Classic	black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Connection Cable Type A Plug to Type B Plug, LSZH

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-B plug moulded

Art.-No.	Description	Colour
K5203.x	USB2.0 Connection Cable Type A Plug to Type B Plug, LSZH	black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Connection Cable Type A Plug to Type A Plug, black, LSZH

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A plug moulded

Art.-No.	Description	Colour
K5204.x	USB2.0 Connection Cable Type A Plug to Type A Plug, black, LSZH	black

Stock length: 0,5 - 1,0 - 1,8 - 3,0 - 5,0 m

USB2.0 Extension Cable Plug Type A to Type A Jack, LSZH

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: USB-A jack moulded

Art.-No.	Description	Colour
K5205.x	USB2.0 Extension Cable Plug Type A to Type A Jack, LSZH	black

Made for iPod iPhone iPad

Stock length: 1,0 - 2,0 - 3,0 m

USB2.0 Connection Cable Plug Type-A to Lightning

USB2.0 to Lightning Cable
Loading- and Sync-Cable for iPhone, iPad and iPod
very flexible PVC jacket with small diameter
with foil and braid shielding

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: Lightning plug moulded

Art.-No.	Description	Colour
K5350WS.x	USB2.0 Connection Cable Plug Type-A to Lightning	white

Made for iPod iPhone iPad

Stock length: 1,0 - 2,0 m

USB2.0 Connection Cable Plug Typ-A to 2 in 1 Plug - Micro B / Lightning

USB2.0 - 2 in 1 Micro-B and Lightning Cable
Loading- and Sync-Cable for every Smartphones
Connection Cable for iPhone, iPad and iPod
very flexible PVC jacket with small diameter
with foil and braid shielding
MFI certified Apple cable

Type of connector connection 1: USB-A plug moulded
Type of connector connection 2: Lightning plug moulded

Art.-No.	Description	Colour
K5351WS.x	USB2.0 Connection Cable Plug Typ-A to 2 in 1 Plug - Micro B / Lightning	white

EB441 EB442

EB443 EB542

EB541 EB543

EB498V2

EB527V2 EB534

Big multimedia keystone overview on page107

USB 2.0 480Mbit

USB2.0 Adapter

USB2.0 Adapter

Art.-No.	Description
EB441	USB2.0-Adapter, Plug A - Plug A, beige
EB442	USB2.0-Adapter, Jack A - Jack A, beige
EB443	USB2.0-Adapter, Jack A - Plug B, black
EB543	USB2.0-Adapter, Jack A - Micro-B Plug, black

USB2.0 Keystone Snap-In Adapter

Art.-No.	Description
EB498V2	Keystone Snap-In Adapter USB2.0 A - A, white
EB527V2	Keystone Snap-In Adapter USB2.0 A - A, black
EB534	KKeystone Snap-In Adapte USB2.0 A - B, black

Accessory

Artikel-Nr.	Description
ET-25085	2-Port Frame set for all EFB Keystones
37580.1	Distribution panel 19" 1U, 24-Port, black

USB2.0 Active Extension Cable 10m / 20m

AActive USB 2.0 extension
USB2.0 HighSpeed due to internal amplifier
Model IUSB.....: cascadable up to 3 times to a total lengths of 30m
Bus powered (no external power supply neccessary)
Plug and Play, compatible with Windows and MacBus-Powered - (no external power supply neccessary)

Art.-No.	Description
IUSB-REP10TY	USB 2.0 Active Extension Cable, 10 m
IUSB-REP220TY2	USB 2.0 Active Extension Cable, 20 m

USB2.0 Repeater Cable Type A Jack to Type A Plug (cascadable)

USB2.0 Extension cable 5m, active 1-port hub with 5 m cable
USB-A receptacle to USB-A plug
Max. 4 x cascadable (= 25 m)
Integrated ASIC Chip as signal repeater/buffer
Power supply via USB-interface

Art.-No.	Description
K5263.5V2	USB2.0 Repeater Cable, A-A, F-M, 5m

USB2.0 Extender via Twisted Pair 100 Meter

Supports the connection up to four devices up to a length of 100 meters by using one Cat.5e/6 patchcable
Supports data transfer rates : 1,5/-12/-480 Mbps
Compact design
Plug & Play
Software installation needed to use all functions
Incl. software and power supply

Art.-No.	Description
EB2104	USB2.0 Extender Cat.5e/6 100m 4-Port, incl. PS

USB2.0 Desktop Extension

USB1.1 2 Port-PS/2 converter
2 x PS/2-jack to 1 x USB A-plug
Connects PS/2-mouse and -keyboard via USB-bus
Supports UHCI/OHCI Controller interface
Low-Level USB-device (Bus-powered)
WIN98SE/ME/2000/XP/HPUNIX/Linux/MAC OS
No additional software required!

Art.-No.	Description
EB438	USB Desktop Extension Cable A-B, M-F, 1.5m, black

USB2.0 Hub 7-Port, Desktop, with Power Supply

USB2.0 Hub for connecting of max. 7 devices to 1 Computer
Compatible to USB2.0 and 1.1 devices.
Runs on Win10/8/7/XP/MAC OS und certain Linux kernels.
With Auto-Speed adjusting for all ports with Super/High/Full/Low Speed (5Gbit/s/480/12/1,5 Mbps).

Incl. USB2.0 cable and power supply 5V/3A DC

Art.-No.	Description
EB2103	USB2.0 Hub 7-Port incl. 5V3A PS+Connection Cable

USB1.1 Extender via Twisted Pair 40 Meter

Supports the connection to one device up to a length of 40 meters by using one Cat.5e/6 patchcable supports data transfer rates : 1,5/-12 Mbps
Compact design
Plug & Play, no software installation needed
Power over USB port

Art.-No.	Description
EB2105	USB1.1 Extender Cat.5e/6 40m

USB2.0 - RS232 Converter

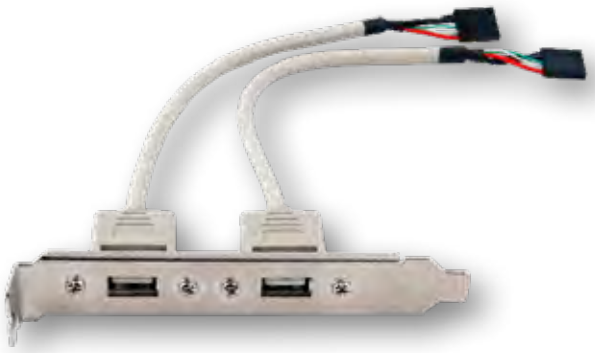
USB A plug to DSub 9-pole plug, 1.8 metres
Supports RS-232, DB9, DB25
Connection of serial devices to USB
Power supply via USB interface
With driver CD for Windows / Linux and Mac Systems
Included in delivery: gender changer DB9 jack/DB25 plug

Art.-No.	Description
EB853A	USB1.1 RS232 Converter, active , USB A - DB9, M-M, Profilic PL2303 Chip, 1.8m
EB853B	USB2.0/RS232 Converter, active, USB A- DB9, M-M, FTDI Chip, 1.8m

USB - Parallel Converter

USB A plug to Centronics 36 plug
USB printer cable for parallel interface, 1.8 metres
Power supply via USB cable
Supports for Microsoft Windows and Mac OS

Art.-No.	Description
K5308P.1,8	USB-Parallel IEEE1284B, active, USB A - C36, M-M, 1.8m



Internal USB-A Adapter Cable

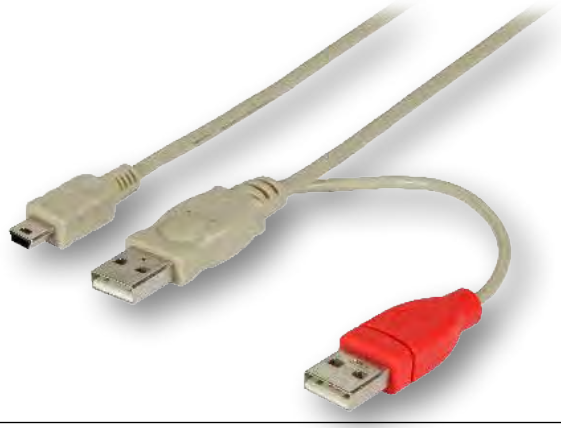
Internal USB cable, length 0.2 m
USB slot bracket with 2 x USB jacks Type A to 2 x 5 pole USB board connector(pitch 2.54)
Interface adapter from USB controller to the housing

Art.-No.	Description
K5305.020V2	USB Slotbracket 2x USB Receptacle Series A to 2x 5pole board connector

USB Adapter Cable USB A Plug - Mini DIN 6pole Jack

USB plug type-A to MiniDIN 6 pole jack
This adapter is only suitable for combination devices that have an integrated USB interface.

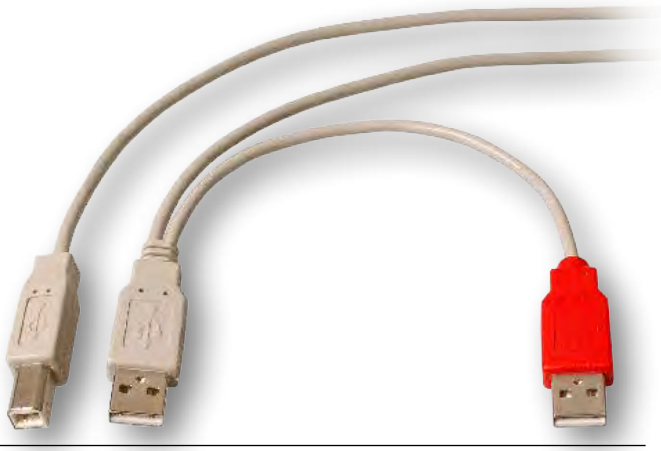
Art.-No.	Description
K5307.020	USB Adapter USB A - Mini DIN (6pole), M-F, beige



USB2.0 Y-cable 1xUSB B MINI Plug / 2x USB A Plug

1 x USB Mini-B plug to 2 x USB-A plug
For additional power supply of USB devices that require up to 1A

Art.-No.	Description
K5303.x	USB2.0 Y-Cabel, 1x USB Mini-B Plug - 2x USB-A Plug, 1 m, beige



USB2.0 Y-cable, 1x USB B Plug / 2x USB A Plug

1 x USB-B plug to 2 x USB-A plug
For additional power supply of USB devices that require up to 1A

Art.-No.	Description
K5304.x	USB2.0 Y-Cabel, 1x USB-B Plug - 2x USB-A Plug, 1m, beige

D-SUB, BNC & COAXIAL CABLE

The serial data interface is extremely popular even in the gigabit age. EFB-Electronics carries a wide range of D-Sub variants with different numbers of poles from 9-pin to 62-pin. The EFB range is completed by our proven coax and BNC products.

D-Sub Cable		P. 295
D-Sub Plugs & Jacks		P. 297
BNC / Coaxial Cable		P. 302

YOU MAY ALSO BE INTERESTED IN:

KVM P. 260

Data Cable D-Sub 9pol., Plug - Plug

Stock lengths: 2.0 - 3.0 - 5.0 - 10 m

Pinning: 1:1.
With long thumb screws. Shielded. Moulded.

Type of connector connection 1: D-Sub 9 plug
Type of connector connection 2: D-Sub 9 plug

Art.-No.	Description
EK129.x	Data Cable D-Sub 9pol., Plug - Plug

Data Cable D-Sub 9pol., Plug - Jack

Stock lengths: 1.0 - 2.0 - 3.0 - 5.0 - 10 m

Pinning: 1:1.
With long thumb screws. Shielded. Moulded.

Type of connector connection 1: D-Sub 9 plug
Type of connector connection 2: D-Sub 9 jack

Art.-No.	Description
EK131.x	Data Cable D-Sub 9pol., Plug - Jack

Data Cable D-Sub 9pol., RS232, Jack - Jack

Stock lengths: 2.0 - 3.0 - 5.0 m

Pinning: 1:1.
With long thumb screws. Shielded. Moulded.

Type of connector connection 1: D-Sub 9 jack
Type of connector connection 2: D-Sub 9 jack

Art.-No.	Description
EK152.x	Data Cable D-Sub 9pol., RS232, Jack - Jack

Laplink Cable Serial 3.0m

Stock lengths: 3.0 m

Pinning: 1-4, 2-3, 3-2, 4-1, 5-5, 7-8, 8-7, 9-9, S-S.
Shielded. Mounted.

Type of connector connection 1: D-Sub 9 jack
Type of connector connection 2: D-Sub 9 jack

Art.-No.	Description
EK143.x	Laplink Cable Serial

Zero Modem Cable

Stock lengths: 2.0 m

Pinning 1-7, 1-8, 2-3, 3-2, 4-6, 5-5, 6-4, 7-1, 8-1, S-S.
Shielded type. Mounted.

Type of connector connection 1: D-Sub 9 jack
Type of connector connection 2: D-Sub 9 jack

Art.-No.	Description
K5166.x	Zero Modem Cable

Data Cable D-Sub 15 pol., X.21, Plug - Jack

Stock lengths: 1.0 - 2.0 - 3.0 - 5.0 - 10 m

Pinning: 1:1.
With long thumb screws. Shielded. Moulded.

Type of connector connection 1: D-Sub 15 plug
Type of connector connection 2: D-Sub 15 jack

Art.-No.	Description
K5129.x	Data Cable D-Sub 15 pol., X.21, Plug - Jack

Data Cable D-Sub 15 pol., X.21, Plug - Plug

Stock lengths: 2.0 - 3.0 - 5.0 - 10 m

Pinning: 1:1.
With long thumb screws. Shielded. Moulded.

Type of connector connection 1: D-Sub 15 plug
Type of connector connection 2: D-Sub 15 plug

Art.-No.	Description
K5139.x	Data Cable D-Sub 15 pol., X.21, Plug - Plug

Data Cable D-Sub 25 pol., RS232 V.24, Plug - Plug

Stock lengths: 1.0 - 2.0 - 3.0 - 5.0 - 10 m

Pinning: 1:1.
With long thumb screws. Shielded. Moulded.

Type of connector connection 1: D-Sub 25 plug
Type of connector connection 2: D-Sub 25 plug

Art.-No.	Description
EK137.x	Data Cable D-Sub 25 pol., RS232 V.24, Plug - Plug

Data Cable D-Sub 25pol., Plug-Jack RS232 V.24

Stock lengths: 1.0 - 2.0 - 3.0 - 5.0 - 10 m

Pinning: 1:1.
With long thumb screws. Shielded. Moulded.

Type of connector connection 1: D-Sub 25 plug
Type of connector connection 2: D-Sub 25 jack

Art.-No.	Description
EK165.x	Data Cable D-Sub 25pol., Plug-Jack RS232 V.24

Stock lengths: 3.0 - 5.0 m

Serial Cable for Laser Printer

Pinning: 1-4, 2-2, 3-3, 4-5, 4-6, 5-7, 6-20, 8-20
Shielded type. Mounted

Type of connector connection 1: D-Sub 25 plug
Type of connector connection 2: D-Sub 9 jack

Art.-No.	Description
EK150.x	Serial Cable for Laser Printer

Stock lengths: 2.0 - 3.0 - 5.0 m

Data Cable D-Sub 37pol., Plug - Jack

Pinning: 1:1.
With long thumb screws. Shielded. Moulded.

Type of connector connection 1: D-Sub 37 plug
Type of connector connection 2: D-Sub 37 jack

Art.-No.	Description
K5186.x	Data Cable D-Sub 37pol., Plug - Jack

Stock lengths: 2.0 - 3.0 m

RS232 Adapter Cable, 9pol. jack - 25pol. plug

Pinning 1-8, 2-3, 3-2, 4-20, 5-7, 6-6, 7-4, 8-5, 9-22, S-S.
Shielded. Mounted.

Type of connector connection 1: D-Sub 9 jack
Type of connector connection 2: D-Sub 25 plug

Art.-No.	Description
EK125.x	RS232 Adapter Cable, 9pol. jack - 25pol. plug

EB914

EB914F

Adapter D-Sub 9pol. Jack - D-Sub 25pol. Plug

Interface adapter 9pole to 25pole.
Furthermore the adapter can also be used to connect two cable.

Art.-No.	Description
EB914	Adapter, D-Sub 9 to D-Sub 25, F-M, beige
EB914F	Adapter, D-Sub 9 to D-Sub 25, M-F, beige

Interface Converter RS232 to RS422/RS485

Ports: RS232. Input: D-Sub 25-pole jack, RS-422/485. Output: RJ11 jack (6P/4C) or 4-pole terminal block. TP cable up to 1200 m between two converters. Data rate: up to 100 kbit/s under 1200 m. **Incl. external power supply.**

Art.-No.	Description
IC-485S	Interface Converter RS232 to RS422/R485

Mini D-Sub/HD-D-Sub Gender Changer

Art.-No.	Type	Contacts	Type
EB410	D-Sub 9,	9	Plug-Plug
EB410MF	D-Sub 9	9	Plug-Jack
EB411	D-Sub 9	9	Jack-Jack
EB412	D-Sub 15	15	Plug-Plug
EB413	D-Sub 15	15	Jack-Jack
EB414	D-Sub 25	25	Plug-Plug
EB414MF	D-Sub 25	25	Plug-Jack
EB415	D-Sub 25	25	Jack-Jack
EB418	HD-D-Sub 25	25	Plug-Plug
EB419	HD-D-Sub 25	25	Plug-Jack
EB420	HD-D-Sub 25	25	Jack-Jack

IBM-PS/2 Mouse/Keyboard Adapter

Art.-No.	Description
EK560.030	Mouse/-Keyboard Adapter, Mini DIN 6 to 2x Mini DIN 6, M-2x F, 0.30m, beige

Stock lengths: 2.0 - 3.0 - 5.0 - 10 m

Mouse/-Keyboard Cable, PS/2

Pinning: 1:1. Shielded. Color beige. Moulded.

Art.-No.	Description
EK318.x	PS2 Connection Cable, 2x PS/2, M-M, beige
EK323.x	PS2 Extension Cable, 2x PS/2, M-F, beige

USB-A-Jack/Mini-DIN6 Plug

Art.-No.	Description
EB439	Adapter, USB-A to Mini Din 6, F-M

D-Sub Solder Plugs/Jacks

Tin-plated housing
Quality level III >= 50 mating cycles

D-Sub Solder Plugs

Art.-No.	Type	Contacts	PU
28653.1	EDS 09 LL /Z	09	50
28656.1	EDS 15 LL /Z	15	50
28661.1	EDS 25 LL /Z	25	50
28664.1	EDS 37 LL /Z	37	40

D-Sub Solder Jack

Art.-No.	Type	Contacts	PU
28603.1	EDF 09 LL /Z	09	50
28606.1	EDF 15 LL /Z	15	50
28611.1	EDF 25 LL /Z	25	50
28614.1	EDF 37 LL /Z	37	40
28617.1	EDF 50 LL /Z	37	40

HD-D-Sub Solder Plugs/Jacks

Tin-plated housing
Quality level III >= 50 mating cycles

HD-D-Sub Solder Plugs

Art.-No.	Type	Contacts	PU
34504.1	E-HDS 15 LL/Z	15	50
34509.1	E-HDS 26 LL/Z	26	50
34505.1	E-HDS 44 LL/Z	44	50
34506.1	E-HDS 62 LL/Z	62	40

HD-D-Sub Solder Jack

Art.-No.	Type	Contacts	PU
34501.1	E-HDF 15 LL/Z	15	50
34510.1	E-HDF 26 LL/Z	26	50
34503.1	E-HDF 62 LL/Z	62	40

D-Sub Plugs/Jacks for Print Mounting

Punched contacts
Quality level III >= 50 mating cycles

D-Sub Plug for Print Mounting

Art.-No.	Type	Contacts	PU
28753.1	EDS 09 PP	09	50
28756.1	EDS 15 PP	15	50
28759.1	EDS 25 PP	25	50
28762.1	EDS 37 PP	37	40

D-Sub Jack for Print Mounting

Art.-No.	Type	Contacts	PU
28703.1	EDF 09 PP	09	50
28706.1	EDF 15 PP	15	50
28709.1	EDF 25 PP	25	50
28712.1	EDF 37 PP	37	40

D-Sub Plugs / Jacks, IDC Contacts, UNC-thread, for Flat Cable

Tin-plated housing
Quality level III >= 50 mating cycles

D-Sub Plugs, IDC-Contacts, flat, UNC-thread

Art.-No.	Type	Contacts	PU
29065.1	EDSF 09 LPIII/Z UNC	09	90
29066.1	EDSF 15 LPIII/Z UNC	15	50
29067.1	EDSF 25 LPIII/Z UNC	25	50
29068.1	EDSF 37 LPIII/Z UNC	37	40

D-Sub Jacks, IDC-Contacts, flat, UNC-thread

Art.-No.	Type	Contacts	PU
29015.1	EDFF 09 LPIII/Z UNC	09	90
29016.1	EDFF 15 LPIII/Z UNC	15	70
29017.1	EDFF 25 LPIII/Z UNC	25	40
29018.1	EDFF 37 LPIII/Z UNC	37	30

D-Sub Plugs / Jacks, IDC-Contacts, Flat version for Flat Cable

D-Sub Plugs, IDC-Contacts, Flat version

Art.-No.	Type	Contacts	PU
29060.1	EDSF 09 LPIII/Z	09	50
29061.1	EDSF 15 LPIII/Z	15	50
29062.1	EDSF 25 LPIII/Z	25	50
29063.1	EDSF 37 LPIII/Z	37	40

D-Sub Jacks, IDC-Contacts, Flat version

Art.-No.	Type	Contacts	PU
29010.1	EDFF 09 LPIII/Z	09	90
29011.1	EDFF 15 LPIII/Z	15	50
29012.1	EDFF 25 LPIII/Z	25	50
29013.1	EDFF 37 LPIII/Z	37	40

D-Sub Crimp Housing

D-Sub Crimp Housing for Plug Strips

Art.-No.	Type	Contacts	PU
34606.1	E-DSCR/09	09	50
34607.1	E-DSCR/15	15	50
34608.1	E-DSCR/25	25	50
34609.1	E-DSCR/37	37	40
34610.1	E-DSCR/50	50	40

D-Sub Crimp Housing for Jack Strips

Art.-No.	Type	Contacts	PU
34601.1	E-DFCR/09	09	50
34602.1	E-DFCR/15	15	50
34603.1	E-DFCR/25	25	50
34604.1	E-DFCR/37	37	40
34605.1	E-DFCR/50	50	40
28617.1	EDF 50 LL /Z	37	40

Accessories

Art.-No.	Description
34612.1	CrimpContacts E-CRIF/28/100/B 100pu-Bag
34616.2	CrimpContacts E-CRIF/28/0 10.000-Coil

D-Sub Tools

Art.-No.	Description
39913.1	D-SUB Crimping tool, for AWG18-22 and AWG24-30
39914.1	D-SUB Releasing tool

D-Sub Plugs / Jacks 90° angled

Quality level III
UNC 4-40 bolts
PushFit snap-in fastening element

D-Sub Plugs 9,4 mm, 90° angled, EURO-Standard

Art.-No.	Type	Contacts	PU
29259.1	E-DS 09A/KG-T1	09	100
34706.1	E-DS 15A/KG-T1	15	70

D-Sub Jacks 9,4 mm, 90° angled, EURO-Standard

Art.-No.	Type	Contacts	PU
34701.1	EDF 09 A/KG-T1	09	100
34702.1	EDF 15 A/KG-T1	15	70
34703.1	EDF 25 A/KG-T1	25	50

D-Sub Jacks 7,2 mm, 90° angled, USA-Standard

Art.-No.	Type	Contacts	PU
29226.2	EDF 09A-KGT2	09	100
34710.2	EDF 15A-KGT2	15	70

UNC 4-40 Bolt and Nut-Sets

UNC 4-40 with nut,
galvanised

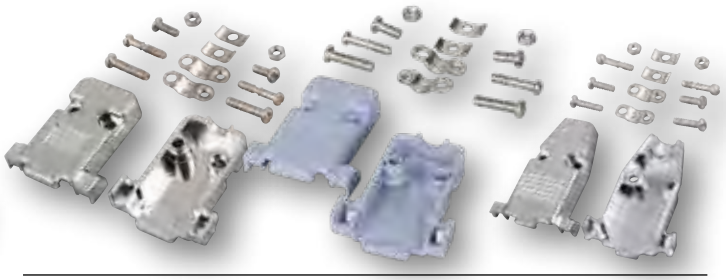
Art.-No.	Description	PU
29311.1	UNC4-40 Bolt Set with nut, nickel plated	100
29313.1	UNC4-40 Nut-Set ESV-U/K (set=2)	100

E-DH Plastic Cover, Cable Outlet 180°

Plastic housing, incl. thumb screws. With snap fastener

Art.-No.	Type	Suitable for	Material	Colour	PU
29417.1	E-DH 09	D-Sub9 / HD-D-Sub15	Plastic	metalized/silver	50
29522.1	E-DH 15	D-Sub15 / HD-D-Sub26	Plastic	metalized/silver	50
29414.1	E-DH 25	D-Sub25 / HD-D-Sub44	Plastic	metalized/silver	50
29416.1	E-DH 09	D-Sub9 / HD-D-Sub15	Plastic	grey	50
29521.1	E-DH 15	D-Sub15 / HD-D-Sub26	Plastic	grey	50
29415.1	E-DH 09	D-Sub9 / HD-D-Sub15	Plastic	black	50
29520.1	E-DH 15	D-Sub15 / HD-D-Sub26	Plastic	black	50
29412.1	E-DH 25	D-Sub25 / HD-D-Sub44	Plastic	black	50

Art.-Nr.	Zubehör
29517.1V2	Rändelschraube 43 mm f. EDH/UNC, mit Schlitz



E-GP Plastic Cover, Cable Outlet 180°

Housing with double screw fitting

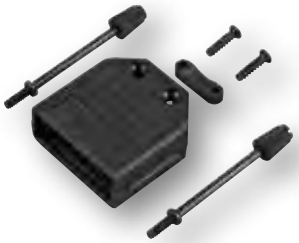
Art.-No.	Type	Suitable for	Material	Colour	PU
29426.1	E-GP 09/ME	D-Sub9 / HD-D-Sub15	Plastic	metalized/silver	50
29427.1	E-GP 15/ME	D-Sub15 / HD-D-Sub26	Plastic	metalized/silver	50
29428.1	E-GP 25/ME	D-Sub25 / HD-D-Sub44	Plastic	metalized/silver	50
29429.1	E-GP 37/ME	D-Sub37 / HD-D-Sub62	Plastic	metalized/silver	50
29445.1	E-GP 50/ME	D-Sub50 / HD-D-Sub78	Plastic	metalized/silver	50
29419.1	E-GP 09/G	D-Sub9 / HD-D-Sub15	Plastic	grey	50
29420.1	E-GP 15/G	D-Sub15 / HD-D-Sub26	Plastic	grey	50
29423.1	E-GP 25/G	D-Sub25 / HD-D-Sub44	Plastic	grey	50
29430.2	E-GP 09G	D-Sub9 / HD-D-Sub15	Zinc die-cast	silver	50
29431.1	E-GP 15G	D-Sub15 / HD-D-Sub26	Zinc die-cast	silver	25
29432.1	E-GP 25G	D-Sub25 / HD-D-Sub44	Zinc die-cast	silver	25

Art.-Nr.	Zubehör
29501.1	EGP - Rändelschraube mit Schlitz, UNC4/40/5,3, 44 mm lang
29502.1	EGP - Rändelschraube ohne Schlitz, UNC4/40/4,0, 44 mm lang

E-DTZK Full Metal Cover, Cable Outlet 180°

With long thumb screws
Incl. boots for cable diameters 4 - 6 mm, 6 - 8 mm, 8 - 10 mm

Art.-No.	Type	Suitable for	Material	Colour	PU
29446.1	E-DTZK 9-K	D-Sub9 / HD-D-Sub15	Zinc die-cast	silver	25
29447.1	E-DTZK 15-K	D-Sub15 / HD-D-Sub26	Zinc die-cast	silver	25
29448.1	E-DTZK 25-K	D-Sub25 / HD-D-Sub44	Zinc die-cast	silver	100
29449.1	E-DTZK 37-K	D-Sub37 / HD-D-Sub62	Zinc die-cast	silver	25



Flip-Top Housing, Cable Outlet 180°

Package with complete accessories. With long thumb screws

Art.-No.	Type	Suitable for	Material	Colour	PU
29475.1	E-FT 09/SCH	D-Sub9 / HD-D-Sub15	Plastic	black	50
29477.1	E-FT 15/SCH	D-Sub15 / HD-D-Sub26	Plastic	black	50
29484.1	E-FT 25/SCH	D-Sub25 / HD-D-Sub44	Plastic	black	50

E-MHDM35 Full Metal Cover, Cable Outlet 35°

Full metal housing, 35° cable outlet, thumb screws UNC 4-40
Incl. HF shielded boots for cable diameters 4 - 6 mm, 6 - 8 mm, 8 - 10 mm

Art.-No.	Type	Suitable for	Material	Colour	PU
29560.1	E-MHDM35 09-K	D-Sub9 / HD-D-Sub15	Zinc die-cast	silver	100
29561.1	E-MHDM35 15-K	D-Sub15 / HD-D-Sub26	Zinc die-cast	silver	100
29562.1	E-MHDM35 25-K	D-Sub25 / HD-D-Sub44	Zinc die-cast	silver	100
29563.1	E-MHDM35 37-K	D-Sub37 / HD-D-Sub62	Zinc die-cast	silver	100

E-MHDM Full Metal Cover, Cable Outlet 180°

Full metal housing 180° cable outlet, thumb screws UNC 4-40
Incl. HF shielded boots for cable diameters 4 - 6 mm, 6 - 8 mm, 8 - 10 mm, 6 - 8 mm, 8 - 10 mm

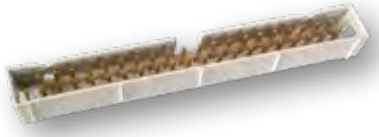
Art.-No.	Type	Suitable for	Material	Colour	PU
29470.1	E-MHDM 09-K	D-Sub9 / HD-D-Sub15	Zinc die-cast	silver	100
29471.1	E-MHDM 15-K	D-Sub15 / HD-D-Sub26	Zinc die-cast	silver	100
29472.1	E-MHDM 25-K	D-Sub25 / HD-D-Sub44	Zinc die-cast	silver	100
29473.1	E-MHDM 37-K	D-Sub37 / HD-D-Sub62	Zinc die-cast	silver	100

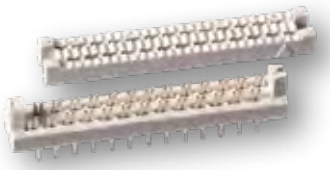
Interface Cover, Empty

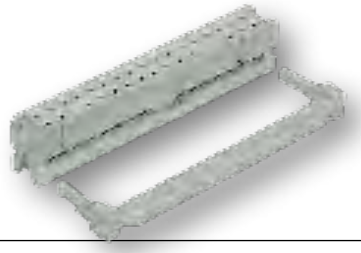
Art.-No.	Type	Material	Colour	PU
EB0909	D-Sub 9pol./D-Sub 9pol.	Plastic	grey	50
EB0909M	D-Sub 9pol./D-Sub 9pol.	Plastic metalized	metalized/silver	50
EB0925	D-Sub 9pol./D-Sub 25pol.	Plastic	grey	50
EB1515M	D-Sub 9pol./D-Sub 25pol.	Plastic metalized	metalized/silver	50
EB2525	D-Sub 25pol./D-Sub 25pol.	Plastic	grey	50
EB2525M	D-Sub 25pol./D-Sub 25pol.	Plastic metalized	metalized/silver	50

Boots, up to 8.5 mm

Art.-No.	Cable-diameter	Colour	PU
29509.1	6,0 mm	black	100
29511.1	6,0 mm	grey	100
29508.1	8,5 mm	black	100
29510.1	8,5 mm	grey	100







IDC Connector RM2.54

with strain relief

Art.-No.	Type	PU
20006.3	E-WP 06pol.	264
20008.3	E-WP 08pol.	216
20010.3	E-WP 10pol.	192
20014.3	E-WP 14pol.	144
20016.3	E-WP 16pol.	132
20020.3	E-WP 20pol.	108
20026.3	E-WP 26pol.	84
20034.3	E-WP 34pol.	60
20040.3	E-WP 40pol.	60
20050.3	E-WP 50pol.	48
20064.3	E-WP 64pol.	36

IDC Plug Connectors, pitch 2.54

Art.-No.	Type	PU
20410.1	E-WH 10pol.	270
20414.1	E-WH 14pol.	250
20416.1	E-WH 16pol.	230
20420.1	E-WH 20pol.	180
20426.1	E-WH 26pol.	140
20434.1	E-WH 34pol.	130
20440.1	E-WH 40pol.	120

IDC Circuit Board Connectors, pitch 2.54

Art.-No.	Type	PU
22010.1	E-WLP 10pol.	900
22014.1	E-WLP 14pol.	600
22016.1	E-WLP 16pol.	600
22020.1	E-WLP 20pol.	420
22026.1	E-WLP 26pol.	360
22034.1	E-WLP 34pol.	300
22040.1	E-WLP 40pol.	300

33904.1 33907.1

Flat Cables, pitch 1.00

AWG28/7, **30.5 m rolls**
Grey with identifier core (red)
Individual wires, tin plated

Art.-No.	Number of conductor
92944.30R	44

Art.-No.	Accessories	PU
30044.1	Pfostenverbinder RM 2,00mm 44pol	60

Flat Cables, pitch 1.27

AWG28/7, **30.5 m rolls**
Grey with identifier core (red)
Individual wires, tin plated

Art.-No.	Number of conductor
22310B.30R	10
22314B.30R	14
22316B.30R	16
22320B.30R	20
22326B.30R	26
22334B.30R	34
22340B.30R	40
22350B.30R	50

Jumper, pitch 2.54

Art.-No.	Type
33904.1	EKSP/G black, closed
33907.1	EKS/G black, open

Ring Core Ferrite, square

For round cable
With plastic housing for fold-up

Art.-No.	Max. Cable-diameter
71503.1	6,5 mm
71506.1	10,0 mm
71508.1	13,0 mm

Flat Core Ferrite

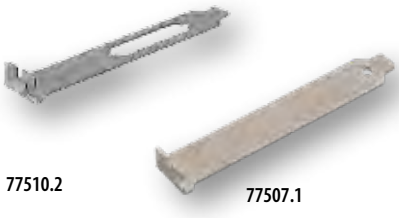
For ribbon cable

Art.-No.	Width	Depth	Höhe
71512.1	18,9 mm	12 mm	6,5 mm
71516.1	33,5 mm	12 mm	6,5 mm
71510.1-36	40 mm	12 mm	6,5 mm

Ring Core Ferrite, round

For round cable
With plastic housing for fold-up

Art.-No.	Max. Cable-diameter
71501.1	3,5 mm
71502.1	5,0 mm
71503.2	7,0 mm
71504.1	7,5 mm
71505.1	9,5 mm
71506.2	10,0 mm



77510.2

77507.1

Bracket

Art.-No.	Description
77507.1	Slot bracket without cut out
77510.2	Slot bracket 1xDB9

Centronics Plugs 90°

Centronics connector and hood, full metal.
Manual solder type. Matching cable 99500.1.

Art.-No.	Description	PU
34231.1	Centronics plug E-57/50 M0 f. Octopuse cable 90° 50pole	50

Mini-DIN plug, black

Mini-DIN-plug with strain relief for direct assembling. Matching LYCY cable. (90004.1, 90006.1, 90008.1)

Art.-No.	Description	PU
34816.1	ED-DIO-M/08	100

Hook & Loop Cable Tie

Perfect for binding of cable bundles
Reusable

Art.-No.	Length	Width	Colour
KB12-130B	130 mm	12 mm	black
KB12-160B	160 mm	12 mm	black
KB12-230B	230 mm	12 mm	black

Hook & Loop Cable Tie, 25m roll, 20mm

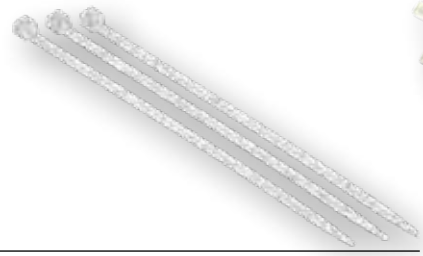
Robust construction and extra strong adhesion
Reusable
Hook and strip material: Polyamide
25 m on rolls

Art.-No.	Length	Width	Colour
81150.25	25000 mm	20 mm	black

Hook & Loop Tie, 25m roll, 20mm, ultra-slim

Ultra slim construction
Reusable
Hook and strip material: Polyamide
25 m on rolls

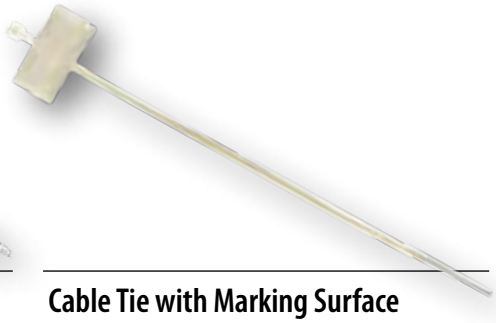
Art.-No.	Length	Width	Colour
KB20-2500B	25000 mm	20 mm	black



Cable Ties

100 pcs. per bag

Art.-No.	Length	Width	Colour
81022.100	100 mm	2,5 mm	transparent
81041.100	160 mm	2,6 mm	transparent
81043.100	140 mm	3,5 mm	transparent
81044.100	200 mm	3,6 mm	transparent



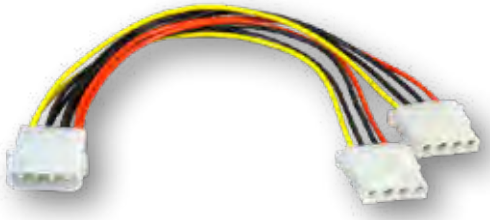
Cable Tie with Marking Surface

Marking surface 25 x 8 mm tensile force: 8 kg,
Material: PA 6.6 natural Content: 100 pcs. per bag.

Art.-No.	Length	Width	Colour
81132.100	100 mm	2,5 mm	transparent

Cutting tool for cable ties

Art.-No.	Description
39916.1	Cable Cutting Tool



HDD Y-Power Cable

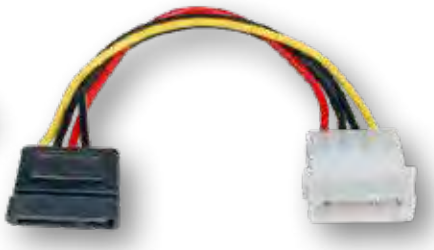
Internal power adapter cable for ATA drives.
1 x 5.25“ plug to 2 x 5.25“ socket.

Art.-No.	Description
EK319	HDD Power Cable, 5.25“ to 2x 5.25“, M-2x F, 0.2m

SATA Y-Power Cables with Latch

Internal Y-power adapter cable for SATA drives.
1 x 5.25“ (4-pole) plug to 2 x 15-pole SATA plug.

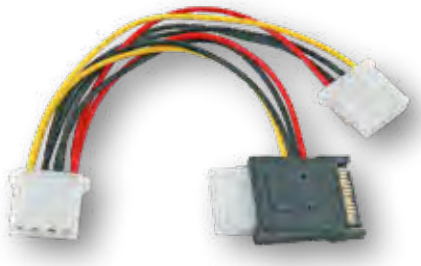
Art.-No.	Description
K5345.015	SATA Y-Power Cable, 1x5.25“ to 2xSATA150 (w.clip), M-2x M, 0.15m



SATA Power Cables with Latch

Internal power adapter cable for SATA drives.
1 x 5.25“ (4-pole) plug to 1 x 15-pole SATA plug.

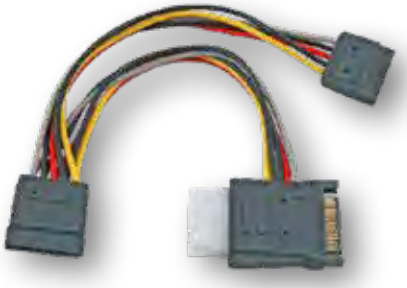
Art.-No.	Description
K5385.015	SATA Power Cable, 5.25“ to SATA 15, M-M, 0.15m



SATA Y-Power Cable, 15pole SATA PCB plug conn.+ 5.25“ socket to 2 x 5.25“ socket

Internal power adapter cable for up to three IDE drives.

Art.-No.	Description
K5346.015	SATA Power Cable, SATA+5.25“ to 2x 5.25“, M+F-2x F, 0.15m



15pole SATA PCB plug conn. + 5.25“ (4pole) socket to 2 x 15pole SATA plug

Internal power adapter cable for up to two Serial ATA drives and one IDE-drive.

Art.-No.	Description
K5347.015	SATA Power Cable, SATA+5.25“ to 2x SATA, M+F-2x M, 0.15m

SATA Combination Cables

Internal combination cable for SATA hard drives (data+ power). 22-pole SATA plug to 1 x 7-pole SATA plug (0.50 m) + 1 x 5.25“ 4-pole plug (0.15 m).

Art.-No.	Description
K5349.050	SATA Power Cable, SATA 22 to SATA 7 + 5.25“, M-M+F, 0.5m

Drum sizes: 100 - 1000 m

Coaxial Cable Thin Wire RG58 C/U, 50 Ohm, double shielded

Coaxial Thin Wire RG58 cable for high frequent measured data and signals defined characteristic impedance and tight production tolerances in 75 Ohm.
Shielding: Tinned copper braiding & aluminum foil

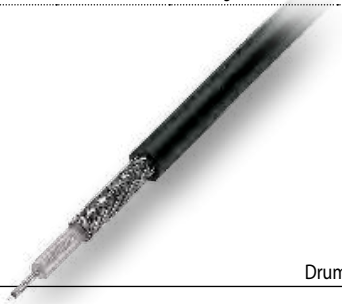
Art.-No.	Inner conductor material	Dielectric	Outer conductor material	Material outer sheath
91258.x	Cu, tinned	Cellurar-PE	braiding CU, tinned	PVC grey, Ø 4,65mm

Drum sizes: 100 - 1000 m

Coaxial Cable RG58 C/U, 50 Ohm

Coaxial cable for high frequent measured data and signals defined characteristic impedance and tight production tolerances in 50 Ohm.
Also available as UL type. (91058.xUL)

Art.-No.	Inner conductor material	Dielectric	Outer conductor material	Material outer sheath
91058.x	Cu, tinned	Full-PE	braiding CU, tinned	PVC black, Ø 5,1 mm

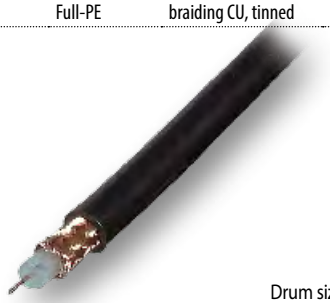


Drum sizes: 100 - 1000 m

Coaxial Cable RG174, 50 Ohm

Flexible Coaxial cable with small diameter for high frequent measured data and signals defined characteristic impedance and tight production tolerances in 50 Ohm.

Art.-No.	Inner conductor material	Dielectric	Outer conductor material	Material outer sheath
91074.x	CCS	Full-PE	braiding CU, tinned	PVC black, Ø 2,6 mm



Drum sizes: 100 - 500 - 1000 m

Coaxial Cable RG59 B/U, 75 Ohm

Coaxial cable for high frequent measured data and signals defined characteristic impedance and tight production tolerances in 75 Ohm.

Art.-No.	Inner conductor material	Dielectric	Outer conductor material	Material outer sheath
91059.x	CCS	Full-PE	braiding CU, tinned	PVC black, Ø 6,2 mm

Drum sizes: 100 - 500 -1000 m

Video Cable RG59, 75 Ohm

Coax Cable RG59, 75 Ohm, PVC Green

Art.-No.	Inner conductor material	Dielectric	Outer conductor material	Material outer sheath
91259.x	Cu, bare	Full-PE	braiding CU, tinned	PVC green, Ø 6,2 mm

Stripping Tool RG58/59/62

Stripping tool for stripping of RG58/59/62 coaxial cable

Art.-No.	Description
52536.2	Stripping Tool for BNC RG58/RG59/RG62

BNC Crimping Tool for RG58/59/62

Crimping tool for RG58/59/62 coaxial connector

Art.-No.	Description
52535.2	BNC Crimping Tool for RG58/59/62

BNC Boots

Strain relief boots for BNC crimp plugs
Colours: .1=black .3=blue .4=green

Art.-No.	Type	Min. inner diameter	PU
52527.x	RG58	5,0 mm	50
52529.x	RG59/62	6,5 mm	50
52537.x	RG174	2,8 mm	50

BNC Patch Cable

Pre-assembled RG58 coaxial cable for high frequent measured data and signals

Art.-No.	Description
K8300.x	Koaxialkabel RG58 C/U 50 Ohm 2 x Stecker gerade
K8360.x	Koaxialkabel RG59 C/U 75 Ohm 2 x Stecker gerade

52522.1 52518.1 52524.1

BNC Adapter

Art.-No.	Description	PU
52522.1V2	Adapter 50 Ohm Jack-Jack	100
52523.1V2	Adapter 75 Ohm Jack-Jack	100
52518.1	T-Adapter 1 Plug/2 Jacks RG58 50 Ohm	100
52519.1	T-Adapter 2 Jacks/1 Plug RG59/62 75/93 Ohm	100
52524.1	Terminator 50 Ohm Plug	100

BNC Crimp Plugs, straight

Art.-No.	Description	PU
52500.1	RG 58, 50 Ohm	50
52500.2	RG 58 PTFE Dielectrikum, 50 Ohm	50
52502.1	RG 59/62, 75 Ohm	50
52576.1	RG 174, 50 Ohm	50
52583.1	RG 179B/U, 75 Ohm	100
52497.1	BNC Plug for Video Cable 0.6/2.8, 75 Ohm	100

BNC Crimp Plugs, angled, crimp-solder type

The Core will be soldered.
The braiding together with a sleeve crimped.

Art.-No.	Description	PU
52506.1	RG 58 50 Ohm	50

BNC Crimp Jacks, straight

Art.-No.	Description	PU
52509.1	RG 58, 50 Ohm	50
52511.1	RG 59/62, 75 Ohm	50
52501.1	RG 174, 50 Ohm	50
52533.1	RG 179, 75 Ohm	50

BNC Panel Jacks, Crimp variant

Art.-No.	Description	PU
52514.1	RG 58, without ground insulation, 50 Ohm	50
52515.1	RG 59/62, without ground insulation, 75 Ohm	50
52554.1	RG 58, ground insulation, 50 Ohm	50
52581.1	RG 59/62, ground insulation, 75 Ohm	50

BNC Panel Jacks, Solder/Print variants

Art.-No.	Description	PU
52574.1	BNC Panel jack Solder type 50 Ohm, without ground insulation	100
52594.1	BNC Panel jack Print mounting 50 Ohm, 90°	50

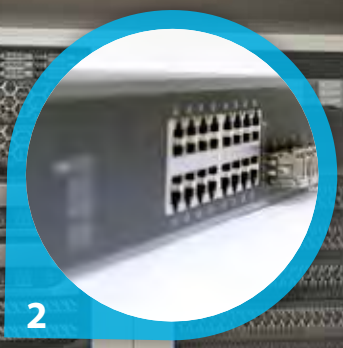
BNC Single-Hole Adapter Jack/Jack

With ground insulation
For panel mounting

Art.-No.	Description	PU
52553.1	RG 58, 50 Ohm	50
52580.1	RG 59/62, 75/93 Ohm	50

ACTIVE COMPONENTS

FOR A POWERFUL NETWORK

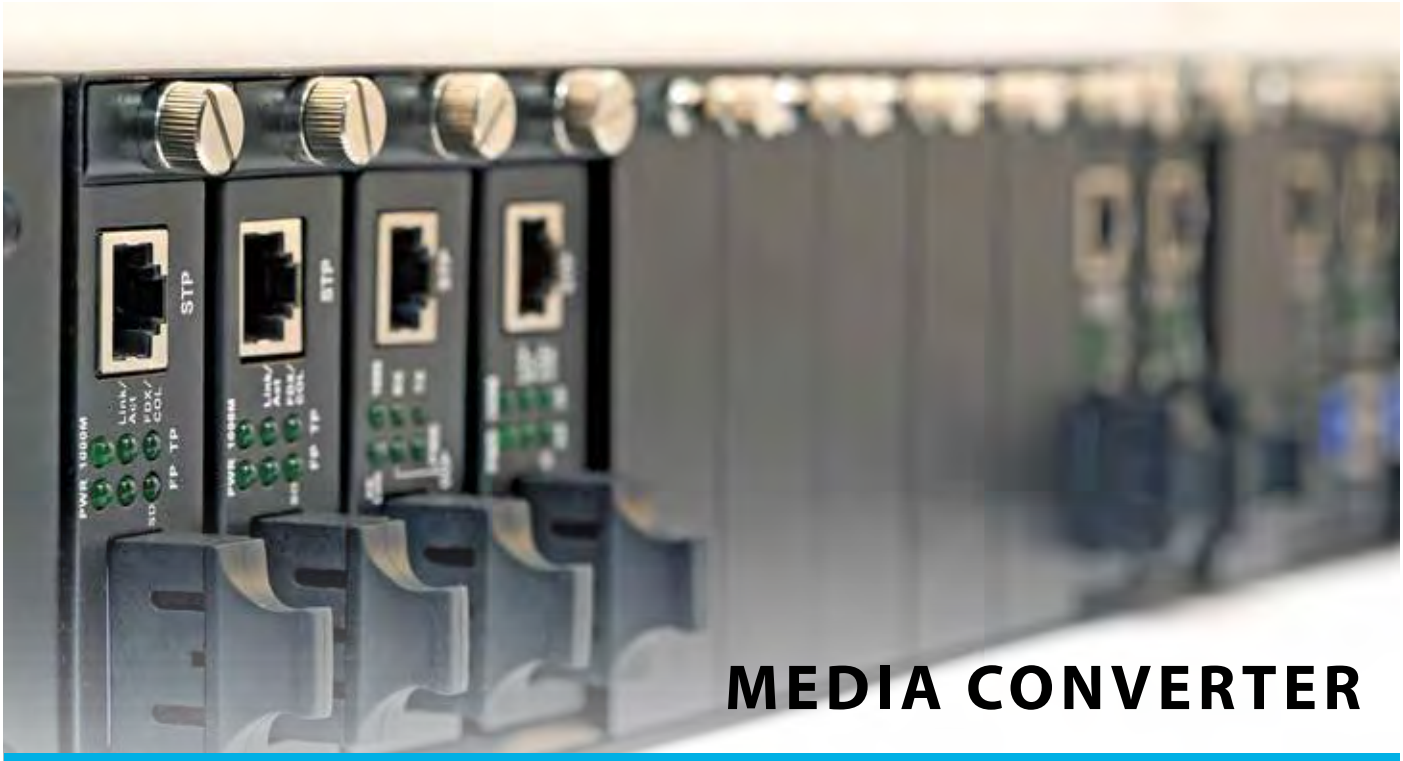


1 MEDIA CONVERTER S. 306

2 NETWORK SWITCHES S. 312

3
INDUSTRIAL ETHERNET
S. 322

4
TRANSCEIVER
& TRANSCEIVER CABLES
S. 326



MEDIA CONVERTER

When it comes to bridging long ranges and reliably connecting networks with different transmission media, fiber optic media converters are the first choice. EFB-Electronics specializes in this and, in addition to classic media converters, also offers space-saving ultra-compact versions.

Network Media Converter		P. 307
CTS Media Converter		P. 308
PoE Media Converter		P. 310

YOU MAY ALSO BE INTERESTED IN:

Fiber Jumper Cable	P. 14
RJ45 Patch Cable	P. 114
RJ45 Field-Plug	P. 144
Transceiver & Tranceiver Cable	P. 326

Network Media Converter

Single use or in chassis (EL0CH1)
Autonegotiation and Auto MDI/MDI-X
Diagnostic LEDs
External power supply included
Metal housing (D x W x H): 94 x 71 x 26 mm

EL027V2

EL022V2

Fast Ethernet Media Converter

Art.-No.	RJ45-Port	Fiber-Port	Medium	Distance
EL022V2	10/100TX	ST 100FX	MM	2000 m
EL023V2	10/100TX	SC 100FX	MM	2000 m
EL025V2	10/100TX	SC 100FX	SM	10000 m

Gigabit Ethernet Media Converter

Art.-No.	RJ45-Port	Fiber-Port	Medium	Distance
EL027V2	10/100/1000T	SC 1000SX	MM	550 m
EL028V2	10/100/1000T	SC 1000LX	SM	10000 m

Suitable for this:
Jumper cable on page 14

Gigabit Ethernet Media Converter with SFP

Single use or in Chassis (EL0CH1)
Media converter for RJ45 to fiber optic (EL029)
Or mode change from SM to MM, MM to SM (EL031)
Autonegotiation and Auto MDI/MDI-X
Diagnostic LEDs
External power supply included
Metal housing (D x W x H): 94 x 71 x 26 mm

EL029

EL031

Art.-No.	RJ45-Port	Fiber-Port	Distance
EL029	10/100/1000T	1 x MGBIC 1000Mbit/s	-
EL031	-	2 x MGBIC 1000Mbit/s	-

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

19" Rack Chassis for Media Converter

Up to 14 converter can be inserted or replaced in running operation (hot-swappable)
Supports Ethernet, Fast Ethernet, Gigabit, Singlemode and Multimode converter
Dual power supply for power redundancy
2U housing with 19" mounting brackets included
(D x W x H): 485 x 231 x 90 mm

Art.-No.	Description
EL0CH1	19" Rack-mount chassis 2U 14 Slots

CTS Compact Media Converter

Very compact design, space- and cost-saving solution
For single device use or in MCT-RACK-Chassis series to mix installation with MCT series converter
Autonegotiation and Auto MDI/MDIX
Link Alarm for port monitoring
With diagnostic LEDs
Target Application:
Point-to-point fiber connection for long distance
External power supply inclusive
Metal housing (D x W x H): 74 x 51 x 20 mm

Fast Ethernet Compact Media Converter

Art.-No.	RJ45-Port	Fiber-Port	Medium	Distance
MCT-100BTFT	10/100TX	ST 100FX	MM	2000 m
MCT-100BTFC	10/100TX	SC 100FX	MM	2000 m
MCT-100BTFC-SM30	10/100TX	SC 100FX	SM	30000 m

Gigabit Ethernet Compact Media Converter

Art.-No.	RJ45-Port	Fiber-Port	Medium	Distance
MCT-3002BTFC	10/100/1000T	SC 1000SX	MM	550 m
MCT-3002BTFC-SM10	10/100/1000T	SC 1000LX	SM	10000 m

TOPSELLER

CTS Gigabit Ethernet Compact Media Converter, RJ45 - SFP

Very compact design, space- and cost-saving solution
For single device use or in MCT-RACK-Chassis series to mix installation with MCT series converter

SFP Fiber Port for 100FX (Fast Ethernet) and 1000BaseX (Gigabit Ethernet)
Autonegotiation, Auto MDI/MDIX, Link Alarm
With integrated DIP switch for more adjustments
With diagnostic LEDs
Target Application:
Point-to-point fiber connection for long distance
External power supply inclusive
Metal housing (D x W x H): 74 x 51 x 20 mm

Art.-No.	RJ45-Port	Fiber-Port	Distance
MCT-3002SFP-DR	10/100/1000T	1 x MGBIC 100/1000Mbit/s	-

Accessory

Art.-No.	Description
FTLF1217P2BTL	SFP Fast Ethernet 100FX, MM 2km, 1310nm
FTLF1323P1BTL	SFP Fast Ethernet 100FX, SM 40km, 1310nm
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

NEW

CTS Gigabit Ethernet Compact Managed Media Converter

Managed Media Converter for 100/1000Mbit applications
Features: QOS, OAM, VLAN, Link Pass Through eg.
Fully compatible with MCT-RACK-18-2A / MCT-RACK-18-MGM-2A
For full management features: Use MCT-RACK-MGM-2A
Gigabit Ethernet via RJ45 and Dual Speed SFP
With diagnostic LEDs
With integrated frame checking and error filtering
External power supply inclusive
Metal housing (D x W x H): 74 x 51 x 20 mm

Art.-No.	RJ45-Port	Fiber-Port	Medium	Distance
MCT-3512BTFC-SM20	10/100/1000T	1 x SC 1000LX	SM	20000 m
MCT-3512SFP-DR	10/100/1000T	1 x MGBIC 100/1000Mbit/s	-	-

CTS 10G N-Base-T, Compact Media Converter

10G Media Converter with N-Base-T technology
Supports data rates up to: 100M/1G/2,5G/5G/10G Ethernet
Very compact design, space- and cost-saving solution
For single device use or in MCT-RACK-Chassis series to mix installation
Autonegotiation and Auto MDI/MDIX
Link Alarm for port monitoring
With integrated DIP switch for more adjustments
With diagnostic LEDs
High quality metal housing with cooling fins
Target Application:
Point-to-point fiber connection for long distance, 10G data rates
External power supply inclusive
Metal housing (D x W x H): 74 x 51 x 20 mm

Art.-No.	RJ45-Port	Fiber-Port
MCT-5002SFP+	1 x 100M/1G/2,5G/5G/10G	1 x SFP+ 10GBase-R

Accessory

Art.-No.	Description
FTLX8574D3BCL	SFP+ 10Gigabit Ethernet 10GBase, MM 300m, 850nm
FTLX1471D3BCL	SFP+ 10Gigabit Ethernet 10GBase, SM 10km, 1310nm

CTS Rack Chassis for 2- to 18- MCT Compact Media Converter

MCT Media Converter can be changed by running system
Hot - swappable - Plug & Play installation
Supports 10 Gigabit Ethernet, Fast Ethernet, Gigabit Ethernet,
Singlemode and Multimode MCT Media Converter
Supports managed and unmanaged MCT Media Converter
Diagnostic LEDs for „Power“ aand „Fan“

MCT-RACK-2:
1U 10“ 2-Slot housing for MCT Media Converter for 10“ + 19“ mounting
MCT-RACK-18-2A:
1,5U 19“ 18-Slot housing for MCT Media Converter
2x power supply included for redundancy
MCT-RACK-18-MGM-2A:
1,5U 19“ 18-Slot housing for MCT Media Converter
With Web-Management function, SNMP, SSHv2 e.g.
2x power supply included for redundancy

Art.-No.	Unit	Assembly	Max. Modules	Management	Power supply
MCT-RACK-2	1 U	10“ + 19“	2 Slots	Unmanaged	1x Power supply (incl.)
MCT-RACK-18-2A	1,5 U	19“	18 Slots	Unmanaged	2x Power supply (incl.)
MCT-RACK-18-MGM-2A	1,5 U	19“	18 Slots	Managed	2x Power supply (incl.)

CTS 10G Media Konverter Fiber, 2 x SFP+ Slots

Supports 10 Gigabit SFP+ to SFP+ full duplex fiber optic connection
Comply with IEEE 802.3ae 10GBASE-R
LED Indicators for link and power status
Support 3R* Signal regeneration (Re-amplifying, Re-shaping, Re-timing)
Metal housing (D x W x H): 91 x 74 x 26 mm
External power supply included

***3R**
Re-Amplifying: Signal amplifying
Re-Shaping: Signal polishing/reshaping
Re-Timing: adjusting the Signal-time

Field of Application:
10G point-to-point fiber optic connection, mode-conversion (MM <-> SM),
fiber optic distance extending

Art.-No.	Fiber-Port
CVT-5002SFP+	2 x SFP+ 10GBase-R

Accessory

Art.-No.	Description
FTLX8574D3BCL	SFP+ 10Gigabit Ethernet 10GBase, MM 300m, 850nm
FTLX1471D3BCL	SFP+ 10Gigabit Ethernet 10GBase, SM 10km, 1310nm

Fast Ethernet PoE Media Converter, RJ45-SC-Duplex, 100FX

Ports: 1x 10/100TX PoE port and 1x SC duplex 100FX fiber optic port
Diagnostic LEDs

PoE: IEEE-802.3af PoE compatible, PoE up to 15.4 W

PSE: With integreated power supply unit
PD: No power supply needed, device is powered by PoE
(Power supply not included)

Metal housing fanless

Art.-No.	Description	Medium	Distance	Type	PoE Budget
FVT-0203TXFC	Fast Ethernet PoE Media Converter	MM	2 km	PSE	15 W
FVT-0204TXFC	Fast Ethernet PoE Media Converter	SM	20 km	PSE	15 W
FVT-0103TXFC	Fast Ethernet PoE Media Converter	MM	2 km	PD	-
FVT-0104TXFC	Fast Ethernet PoE Media Converter	SM	20 km	PD	-

Gigabit Ethernet PoE Media Converter with SFP

Ports: 1x 10/100/1000 TX PoE Port and 1x 1000SFP slot
SFP slot supports MiniGBICs for 1000BaseX
Diagnostic LEDs
With DIP switch for advanced configuration

PoE: EEE-802.3af / at PoE+ compatible, PoE+ up to 30 W

PSE: With integreated power supply unit
PD: No power supply needed, device is powered by PoE
(Power supply not included)

Metal housing fanless (D x W x H): 94 x 71 x 26 mm

Art.-No.	Description	Type	PoE Budget
GVT-2012	Gigabit Ethernet PoE Media Converter	PSE	30 W
GVT-2010	Gigabit Ethernet PoE Media Converter	PD	-

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm
CVH-2000	19" Housing Chassis, for 14 x GVT-2010

Ethernet to VDSL2 PoE Media Converter

Transfer of data 100Mbit via RJ11 up to 300 m, ADSL up to 2000 m
Compatible with IEEE802.3, IEEE802.3u and VDSL/VDSL2
Low latency for video, voice and data applications
With DIP-switch for advanced configurations

PoE: EEE-802.3af / at PoE+ compatible, PoE+ up to 30 W

PSE: With integreated power supply unit
PD: No power supply needed, device is powered by PoE
(Power supply not included)

Metal housing (L x W x H): 120 x 90 x 26 mm

Art.-No.	Description	Type	PoE Budget
VDS-0120	Ethernet over VDSL2, PoE Converter	PSE	30 W
VDS-0130	Ethernet over VDSL2, PoE Converter	PD	-

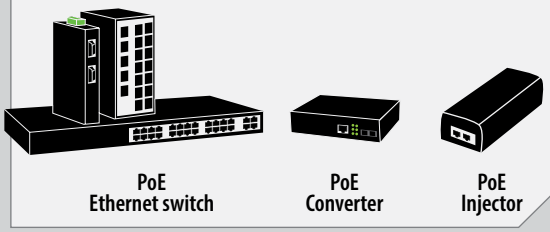
Ethernet to VDSL2 Converter

Two devices necessary for transmitting Ethernet data
Only 1 twisted pair needed AWG 22/1
100Mbit/s downstream und 60Mbit/s upstream up to 300 m
Maximum 2000 m at ca. 10Mbit/s data rate possible with 1 twisted pair
2 x RJ45 LAN ports, 1 x RJ11 phone, 1 x RJ11 VDSL
Annex A and Annex B model
With DIP-switch for advanced configurations

Metal housing (L x W x H): 120 x 90 x 28 mm

Art.-No.	Description	Type
VDS-1201	Ethernet over VDSL2-Converter	Annex A
VDS-1202	Ethernet over VDSL2-Converter	Annex B

PSE (Power Sourcing Equipment)
Provide power to connected devices



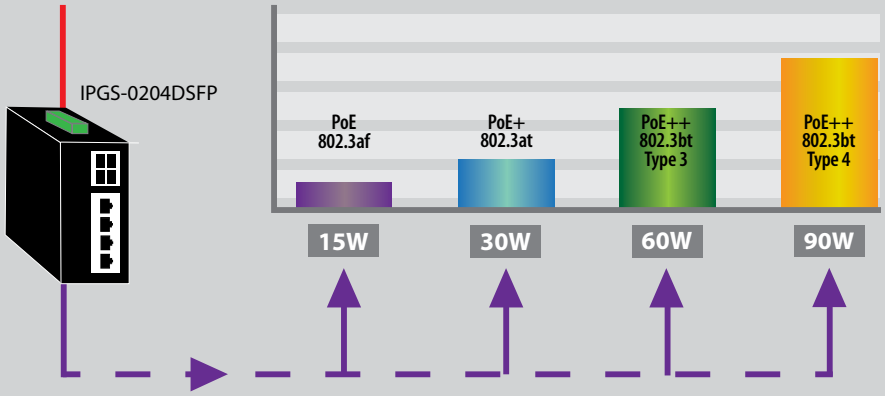
PD (Powered Device)
Receive power via Ethernet cable

PoE: Power over Ethernet
The PoE standard describes a system for power supply of end devices via structured cabling Cat.5/6/6A/7/7A.

The PoE standards IEEE 802.3af, IEEE802.3at and IEEE802.3bt are worldwide valid standards and provide different maximum electrical power per end device.

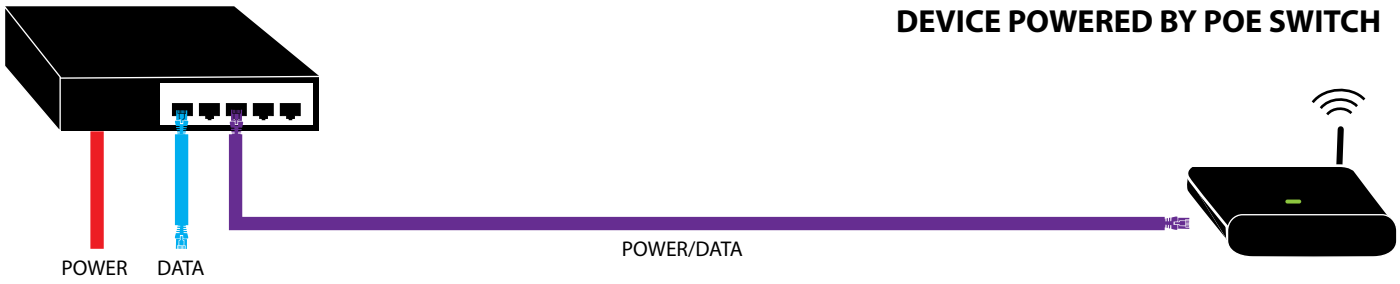
Basic distinction is made between:

Power Suppliers	End Device
PSE	**PD**
Power **S**ourcing **E**quipment	**P**owered **D**evice

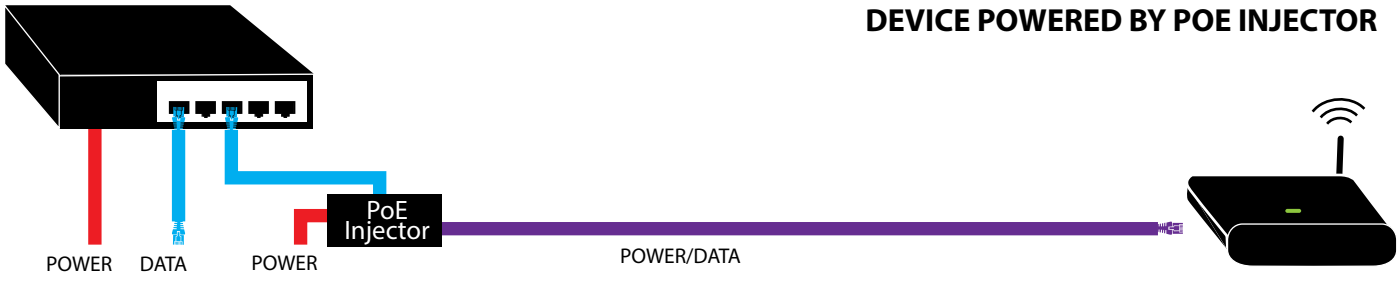


Look up standard terms in the glossary.
Brief and straightforward explanations can be found starting on page 328

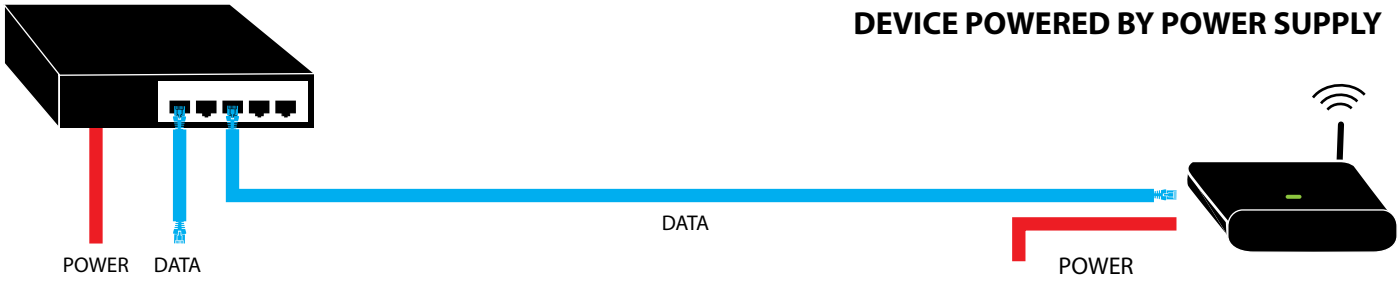
DEVICE POWERED BY POE SWITCH



DEVICE POWERED BY POE INJECTOR

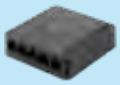


DEVICE POWERED BY POWER SUPPLY



NETWORK SWITCHES

The EFB product portfolio includes a large selection of switches for data centers, offices and the home area. These are available as Gigabit or Fast Ethernet versions with 19" format or as desktop models. They offer professional equipment features such as Power over Ethernet (PoE), SFP slots for fiber optic connections or web management and SNMP support.

Managed 10G Switches		P. 313
Managed Gigabit Ethernet Switches		P. 314
19" Unmanaged Gigabit Switches		P. 316
Gigabit Ethernet Desktop Switches		P. 317
19" Unmanaged Fast Ethernet Switches		P. 318
Fast Ethernet Desktop Switches		P. 319
PoE Accessory		P. 320

YOU MAY ALSO BE INTERESTED IN:

Fiber Jumper Cable	P. 14
RJ45 Patch Cable	P. 114
19" Cabinets	P. 170
Transceiver & Tranceiver Cable	P. 326

L3 Managed-Gigabit-Switch, 12x 10GE SFP+, 8x GE RJ45

8x Gigabit Ethernet ports with 12x additional 10 Gigabit SFP+ slots
SFP+ slots supports MiniGBICs for 1Gigabit and 10Gigabit Ethernet
Management: SNMP, WEB, RMON, Telnet
Features: IPv6, Multicast, VLAN, Virtual Stacking, OAM, ERPS and much more
L3 features: Multi-netting (CIDR), IPv4/v6 Static Routes, RIP v1/v2 and more
Redundant power supply via two power supply units, allowing further operation independent of a single power source failure
19" mounting brackets included
Metal housing (W x D x H): 440 x 315 x 44 mm

NEW

Redundant power supply

Art.-No.	Management	10G SFP+ Ports	RJ45-Ports
GTL-2091	L3	12x 1G/10G	8x 10/100/1000T

Accessory

Art.-No.	Description
FTLX8574D3BCL	SFP+ 10Gigabit Ethernet 10GBase, MM 300m, 850nm
FTLX1471D3BCL	SFP+ 10Gigabit Ethernet 10GBase, SM 10km, 1310nm

L3 Lite Managed Gigabit PoE Switch, 4x 10G SFP+, 24x GE PoE+

24x Gigabit Ethernet PoE+ ports + 4x 10-Gigabit SFP+ slots
SFP+ slots support MiniGBICs for 1G and 10Gigabit Ethernet
PoE: IEEE-802.3af / at PoE compliance with PoE detection
Management: SNMP, WEB, RMON, Telnet and TFTP management
Features: IPv4/IPv6, port-based VLAN, IEEE 802.1Q VLAN-tagging and GVRP
IEEE-802.1d/w/s Spanning Tree Protocol (STP) and Port mirroring
IP Multicast Filtering with IGMP Snooping V1 / V2 / V3
TURING-Package
Integrated diagnostic software with graphical network display
Automated troubleshooting for connected PoE devices
Switch2Go app: iOS / Android for convenient remote access and notes
L3 Features: Static Route, DHCP Server, ARP
Port-based IEEE-802.1X-authentification over access list (ACL)
IEEE 802.3ad LACP for automatic port-aggregation
19" mounting brackets included
Metal housing (W x D x H): 442 x 221 x 44 mm

PoE

Art.-No.	Management	10G SFP+ Ports	RJ45-Ports	PoE Budget
GTP-2881	L3 Lite	4x 1G/10G	24x 10/100/1000T	185 W

Accessory

Art.-No.	Description
FTLX8574D3BCL	SFP+ 10Gigabit Ethernet 10GBase, MM 300m, 850nm
FTLX1471D3BCL	SFP+ 10Gigabit Ethernet 10GBase, SM 10km, 1310nm

L3 Lite Managed Gigabit PoE Switch, 4x 10G SFP+, 48x GE PoE+

48x Gigabit Ethernet PoE+ ports + 4x 10GE SFP+ slots + 1x RJ45 console port
SFP+ slots supports MiniGBICs for 10 Gigabit Ethernet
PoE: IEEE-802.3af / at PoE compliance with PoE detection
Management: SNMP, WEB, RMON, CoS, Telnet and TFTP management
Features: IPv4/IPv6, port-based VLAN, IEEE 802.1Q VLAN-tagging and GVRP
IEEE-802.1d/w/s Spanning Tree Protocol (STP) and Port mirroring
IP Multicast Filtering with IGMP Snooping V1 / V2 / V3
L3 Features: Static Route, Traceroute, DHCP Server, ARP
Port-based IEEE-802.1X-authentification over access list (ACL)
IEEE 802.3ad LACP for automatic port-aggregation
19" mounting brackets included
Metal housing (W x D x H):: 440 x 330 x 44.5 mm

NEW

PoE

Art.-No.	Management	10G SFP+ Ports	RJ45-Ports	PoE Budget
GTP-5271	L3 Lite	4x 1G/10G	48x 10/100/1000T	400 W

Accessory

Art.-No.	Description
FTLX8574D3BCL	SFP+ 10Gigabit Ethernet 10GBase, MM 300m, 850nm
FTLX1471D3BCL	SFP+ 10Gigabit Ethernet 10GBase, SM 10km, 1310nm

GEL-2681
GEP-2681
GEP-2682

GEP-5271

19“ Gigabit Ethernet L3 Lite Managed Switches

Gigabit Ethernet Ports (with PoE+ for PoE version)
Gigabit Ethernet SFP / Combo Slots
SFP slots support MiniGBICs for 1000BaseX
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Management: SNMP, WEB, RMON, CoS, Telnet and TFTP management
Features: IPv4/IPv6, port-based VLAN, IEEE 802.1Q VLAN-tagging and GVRP
Autonegotiation, Auto MDI/MDIX, and much more
IEEE-802.1d/w/s Spanning Tree Protocol (STP) and Port mirroring
IP Multicast Filtering with IGMP Snooping V1 / V2 / V3
TURING-Package for GEL-2681 / GEP-2681 / GEP-2682:
Integrated diagnostic software with graphical network display
Automated troubleshooting for connected PoE devices
Switch2Go app: iOS / Android for convenient remote access and notes
L3 Features: Static Route, Traceroute, DHCP Server, ARP
Port-based IEEE-802.1X-authentification over access list (ACL)
IEEE 802.3ad LACP for automatic port-aggregation
19“ Mounting brackets included
Metal housing (W x D x H): 440 x 330 x 44 mm

19“ Gigabit Ethernet L3 Lite Managed Switch

Art.-No.	Management	RJ45-Ports	Combo-Ports	PoE Budget
GEL-2681	L3 Lite	24 x 10/100/1000T	2x 1000Base-T	-

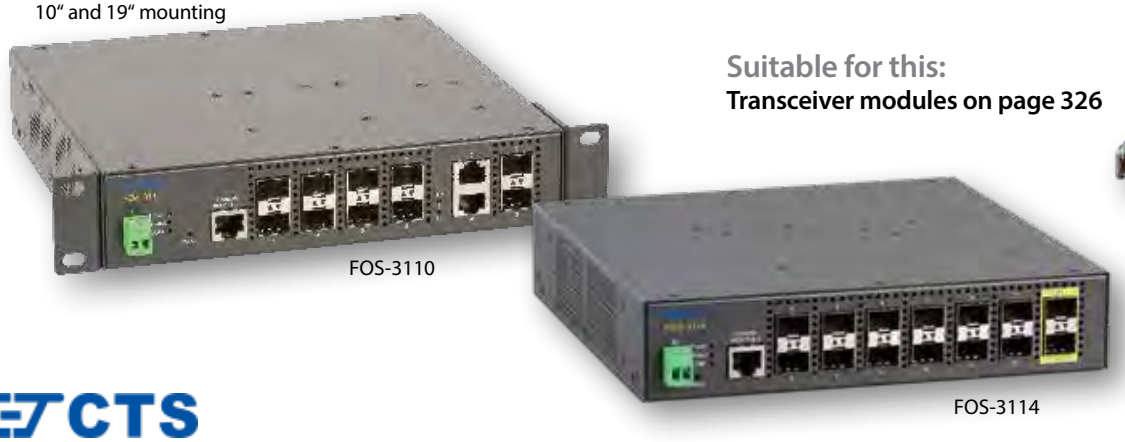
19“ Gigabit Ethernet L3 Lite Managed PoE Switch

Art.-No.	Management	RJ45-Ports	Fiber-Ports	Combo-Ports	PoE Budget
GEP-2681	L3 Lite	24x 10/100/1000T	-	2x 1000Base-T	185 W
GEP-2682	L3 Lite	24x 10/100/1000T	-	2x 1000Base-T	370 W
GEP-5271	L3 Lite	48x 10/100/1000T	4x 100/1000FX	-	370 W

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

Fiber Switch for
10“ and 19“ mounting



FOS-3110

FOS-3114

Suitable for this:
Transceiver modules on page 326

CTS 10“ / 19“ L2 Managed Gigabit Ethernet Fiber Switch

8x/14x Gigabit Ethernet Fiber ports (100/1000Mbps SFP slots)
SFP slots support for MiniGBICs 100FX, 1000BaseX
Management: SNMP, WEB, RMON, Telnet and TFTP management
Features: IPv6, IGMPv3, Multicast, VLAN, QOS,
Autonegotiation, Auto MDI/MDIX and more.
1x RS232 RJ45 Port, 1 x digital input (terminal block)
Diagnostic LEDs
10“ and 19“ mounting brackets included
Metal housing fanless (W x D x H): 210 x 235 x 44 mm

CTS Gigabit Ethernet L2 Managed Fiber Switch

Art.-No.	Management	Fiber-Ports	Combo-Ports	PoE Budget
FOS-3110	L2	8x 100/1000T	2x 100/1000Base-T	-
FOS-3114	L2	14x 100/1000T	-	-

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

GEL-1061

GEL-5261

GEL-2861

GEP-1061

19“ Gigabit Ethernet L2 Managed Switches

19“ Gigabit Ethernet L2 Managed Switch

Art.-No.	Management	RJ45-Ports	Fiber-Ports	PoE Budget
GEL-1061	L2	8x 10/100/1000T	2x 100/1000FX	-
GEL-2861	L2	24x 10/100/1000T	4x 100/1000FX	-
GEL-5261	L2	48x 10/100/1000T	4x 100/1000FX	-

19“ Gigabit Ethernet L2 Managed PoE Switch

Art.-No.	Management	RJ45-Ports	Fiber-Ports	PoE Budget
GEP-1061	L2	8x 10/100/1000T	2x 100/1000FX	125 W

Gigabit Ethernet ports (with PoE+ version)
SFP Slots supports MiniGBICs for 100BaseX and 1000Base-X
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Management: SNMP, WEB, RMON
Features: QoS, VLAN, Port mirroring
Autonegotiation and Auto MDI/MDIX and much more
19“ Mounting brackets included

Accessory

Art.-No.	Description
FTLF1217P2BTL	SFP Fast Ethernet 100FX, MM 2km, 1310nm
FTLF1323P1BTL	SFP Fast Ethernet 100FX, SM 40km, 1310nm
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

GEP-2651

GES-2451

GEP-2851

19“ Gigabit Ethernet Web Managed Switches

19“ Gigabit Ethernet Web Managed Switch

Art.-No.	Management	RJ45-Ports	Combo-Ports	PoE Budget
GES-2451	Web Smart	24x 10/100/1000T	4x 1000Base-T	-

19“ Gigabit Ethernet Web Managed PoE Switch

Art.-No.	Management	RJ45-Ports	Fiber-Ports	Combo-Ports	PoE Budget
GEP-2651	Web Smart	24x 10/100/1000T	-	2x 1000Base-T	185 W
GEP-2851	Web Smart	24x 10/100/1000T	4x 100/1000FX	-	370 W

Gigabit Ethernet ports (with PoE+ version)
Gigabit Ethernet SFP / Combo slots
SFP slots support MiniGBICs for 1000BaseX
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Management: SNMP, WEB, RMON
Features: IPv4/IPv6, VLAN, Port mirroring, QoS
Autonegotiation and Auto MDI/MDIX and much more
19“ Mounting brackets included
Metal housing with fan

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

GSW-1657

GSW-2457

19“ Gigabit Ethernet Switch

16x/24x Gigabit Ethernet ports
Features: Autonegotiation, Auto MDI/MDIX and much more
Diagnostic LEDs
19“ Mounting brackets included
Metal housing fanless
(W x D x H): 440 x 180 x 44 mm

Art.-No.	RJ45-Ports
GSW-1657	16x 10/100/1000T
GSW-2457	24x 10/100/1000T

19“ 16-Port Gigabit Ethernet PoE+ Switch

16x PoE+ Gigabit Ethernet ports
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Features: Autonegotiation, Auto MDI/MDIX and much more
Diagnostic LEDs
19“ Metal housing (W x D x H): 480 x 200 x 44 mm

Art.-No.	RJ45-Ports	PoE Budget
GEP-1621	16x 10/100/1000T	240 W
GEP-1621W380	16x 10/100/1000T	380 W
GEP-1622	16x 10/100/1000T	480 W

19“ 8-Port Gigabit Ethernet PoE+ Switch

8x PoE+ Gigabit Ethernet ports
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Features: Autonegotiation, Auto MDI/MDIX and much more
19“ Mounting brackets included
Metal housing with fan
(W x D x H): 280 x 185 x 44 mm

Art.-No.	RJ45-Ports	PoE Budget
GEP-0821	8x 10/100/1000T	120 W
GEP-0822	8x 10/100/1000T	240 W

19“ 10-Port Gigabit Ethernet PoE+ Switch, 2x GE SFP

8x PoE+ Gigabit Ethernet ports +
2x Gigabit Ethernet SFP slots
SFP Slots supports MiniGBICs for 1000Base-X
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Features: Autonegotiation, Auto MDI/MDIX and much more
19“ Mounting brackets included
Metal housing (W x D x H): 280 x 215 x 44 mm

Art.-No.	RJ45-Ports	Fiber-Ports	PoE Budget
GEP-1020	8x 10/100/1000T	2x 1000FX	150 W
GEP-1021	8x 10/100/1000T	2x 1000FX	250 W

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

TOPSELLER

Gigabit Ethernet Desktop Switch „Black Edition“

5x/8x Gigabit Ethernet ports
Features: Autonegotiation, Auto MDI/MDIX and much more
Desktop- or wall mounting
External power supply inclusive
Plastic housing fanless
(W x D x H): 160 x 90 x 29 mm

Art.-No.	RJ45-Ports
GSW-0507	5x 10/100/1000T
GSW-0807	8x 10/100/1000T

NEW

5-Port Gigabit Ethernet Switch, ultracompakt

5x Gigabit Ethernet ports
Features: Autonegotiation, Auto MDI/MDIX and much more
Ultracompact design
External power supply inclusive
Plastic housing fanless
(W x D x H): 89 x 86 x 23 mm

Art.-No.	RJ45-Ports
GEU-0522	5x 10/100/1000T

5-Port Gigabit Ethernet Desktop Switch + 1x GE SFP

4x Gigabit Ethernet ports +
1x Gigabit Ethernet SFP slots
SFP Slots supports MiniGBICs for 1000Base-X
Features: Autonegotiation, Auto MDI/MDIX and much more
External power supply inclusive
Metal housing fanless
(W x D x H): 130 x 77 x 24 mm

Art.-No.	RJ45-Ports	Fiber-Ports
GEU-0521	4x 10/100/1000T	1x 1000FX

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

8-Port Gigabit Ethernet Desktop Switch

8x Gigabit Ethernet ports
Features: Autonegotiation, Auto MDI/MDIX and much more
Desktop- or wall mounting
External power supply inclusive
Metal housing fanless
(W x D x H): 137 x 75 x 25 mm

Art.-No.	RJ45-Ports
GEU-0822	8x 10/100/1000T

PoE

5-Port Gigabit Ethernet Switch with 4x GE PoE+

5-Port Gigabit Ethernet switch
4x Gigabit Ethernet PoE+ ports
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Features: Autonegotiation, Auto MDI/MDIX and much more
Metal housing with fan
(W x D x H): 160 x 122 x 44 mm

Art.-No.	RJ45-Ports	PoE Budget
GEP-0522	5x 10/100/1000T	65 W

FSW-1650

FSW-2450

19" Fast Ethernet Switch

16x/24x Fast Ethernet ports
Full/Half-Duplex
Features: Autonegotiation, Auto MDI/MDIX and much more
19" Mounting brackets included
Metal housing (W x H): 440 x 44 mm

Art.-No.	RJ45-Ports
FSW-1650	16x 10/100TX
FSW-2450	24x 10/100TX

FGU-5021

19" 50-Port Fast Ethernet Switch

48x Fast Ethernet ports
2x Gigabit Ethernet Combo ports (RJ45/SFP)
SFP Slots supports MiniGBICs for 100 Base-X and 1000Base-X
Full/Half-Duplex
Features: Autonegotiation, Auto MDI/MDIX and much more
19" Mounting brackets included
Metal housing (W x D x H): 440 x 230 x 44 mm

Art.-No.	RJ45-Ports	Combo-Ports
FGU-5021	48x 10/100TX	2x 100/1000Base-T

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm

19" 16-Port Fast Ethernet PoE+ Switch

16-Port Fast Ethernet PoE+ switch
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Features: Autonegotiation, Auto MDI/MDIX and much more
19" Metal housing with fan
(W x D x H): 480 x 200 x 44 mm

Art.-No.	RJ45-Ports	PoE Budget
FEP-1612W120	16x 10/100TX	120 W
FEP-1611	16x 10/100TX	240 W

19" 8-Port Fast Ethernet PoE+ Switch

8-Port Fast Ethernet PoE+ switch
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Features: Autonegotiation, Auto MDI/MDIX and much more
Power supply included
19" Mounting brackets included
Metal housing (W x D x H): 280 x 185 x 44 mm

Art.-No.	RJ45-Ports	PoE Budget
FEP-0811	8x 10/100TX	120 W
FEP-0811W250	8x 10/100TX	250 W

TOPSELLER

Fast Ethernet Desktop Switch, magnetic

5x/8x Fast Ethernet ports
Features: Autonegotiation, Auto MDI/MDIX and much more
Campact design with magnetic base
External power supply inclusive
Plastic housing fanless
(W x D x H): 127 x 70 x 28 mm

Art.-No.	RJ45-Ports
FSW-0508TX	5x 10/100TX
FSW-0808TX	8x 10/100TX

NEW

FEU-0512

FEU-0812

5-Port Fast Ethernet Desktop Switch, ultracompact

5x/8x Fast Ethernet ports
Features: Autonegotiation, Auto MDI/MDIX and much more
Ultracompact design
External power supply inclusive
Plastic housing fanless
(W x D x H): 89 x 86 x 23 mm

Art.-No.	RJ45-Ports
FEU-0512	5x 10/100TX
FEU-0812	8x 10/100TX

Suitable for this:
Jumper cable on page 14

Fast Ethernet Switch, 1x SC Duplex MM Port

4x Fast Ethernet ports +
1x SC-Port Duplex 100BaseFX Multimode
Up to 2 km via 50µ or 62,5µ Multimode fiber optic cable
Features: Autonegotiation, Auto MDI/MDIX and much more
External power supply inclusive
Metal housing fanless
(W x D x H): 164 x 100 x 26 mm

Art.-No.	RJ45-Ports	Fiber-Ports	Medium	Distance
FEU-0511	4x 10/100TX	1x SC Duplex 100SX	MM	2000 m

PoE

5-Port Fast Ethernet PoE+ Switch, 4x FE PoE+

5-Port Fast Ethernet PoE+ switch
4x PoE+ Fast Ethernet ports
PoE: IEEE-802.3af / at PoE compliance
PoE+ up to 30W per port, with auto PoE detection
Features: Autonegotiation, Auto MDI/MDIX and much more
Power supply included
Compact desktop model
Metal housing fanless
(W x D x H): 160 x 122 x 44 mm

Art.-No.	RJ45-Ports	PoE Budget
FEP-0511	5x 10/100TX	65 W
FEP-0511W120	5x 10/100TX	120 W

Fast Ethernet PoE Injector, 15.4W

1x Fast Ethernet Port DATA IN and
1x Fast Ethernet Port DATA + PoE OUT up to 15.4 W
IEEE-802.3af PoE compatible
MidSpan devices can be integrated in every network
Independent which switch type is used
Diagnostic LEDs
Plastic housing fanless (L x W x H): 166 x 51.3 x 87.9 mm

Art.-No.	Description	PoE Budget
POI-2002	Fast Ethernet PoE Injector	15.4 W

Gigabit Ethernet PoE+ Injector, 30W

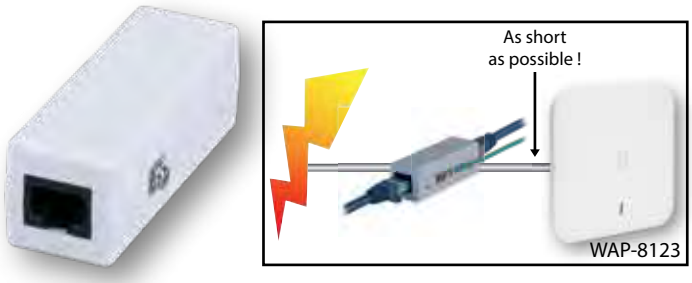
1x Gigabit Ethernet Port DATA IN and
1x Gigabit Ethernet Port DATA + PoE+ OUT up to 30 W
IEEE-802.3af / at PoE compatible
MidSpan devices can be integrated in every network
Independent which switch type is used
Diagnostic LEDs
Plastic housing fanless (L x W x H): 166 x 51.3 x 87.9 mm

Art.-No.	Description	PoE Budget
POA-1000A	Gigabit Ethernet PoE+ Injector	30 W

Gigabit and Fast Ethernet PoE+ Splitter up to 30W

Compact splitter supports 10/100/1000Mbit/s speed
Automatically detects PoE terminals and supplies inline power
Easily install non-PoE devices where a power outlet is not available
Reduce installation and network equipment costs
Safeguards network device with short circuit protection
Adjustable DIP switch for 5V, 9V, or 12V output
Auto-sensing power drawn 802.3af/at from
Power Source Equipment(PSE) devices
Supplies power up to 25 watts
Provides Interchangeable adapters
Metal housing (L x W x H): 60 x 92 x 27 mm

Art.-No.	Description	PoE Budget
POS-3000	Gigabit and Fast Ethernet PoE+ Splitter	30 W



RJ45 Cat.6 Overvoltage Protection with sep. Ground Connection

Features
1-Line Fast / Gigabit Ethernet overvoltage protector
Protects the equipment from overvoltage and lightning strikes
Direct lightning strikes through a grounding line into the ground
Easy connection for cables with RJ45 plug
Placement under a desk or on the wall possible
Fully compatible with industry standard Power over Ethernet (PoE) devices and Ethernet networks

Specifications
Ports: 1-Line 10/100/1000Mbps (RJ45)
Complies with 10 / 700us 6KV common mode lightning surge test
Ground wire must be properly installed
Supports Fast/Gigabit Ethernet connection
Recording capacity: 1000A @ 8/20µsek
Ignition voltage: 68VDC

Dimensions and weigth
Dimension: 70 x 25 x 25 mm (L x W x H)
Weight: 0,03 kg

Art.-No.	Description
LPB-101G-P	Overvoltage protection Cat.6 RJ45, with separate ground connection

Suitable for this:
PoE Patch cable on page 114

WAP-8123

Managed PoE WLAN-Decken/Wand-Access-Point

WAP-6017

Desktop Wireless Access Point

WRE-8011E

Wireless Range Extender

EVEN MORE PRODUCTS. EVEN MORE CHOICES.

FURTHER ACTIVE COMPONENTS NOW IN OUR ONLINE SHOP: FROM WLAN PRODUCTS TO ACCESSORIES

shop.efb-elektronik.de/en

INDUSTRIAL ETHERNET

In industrial network technology, reliability and high electrical immunity are of paramount importance. EFB-Elektronik provides a wide selection of switches, media converters and power supplies for industrial use. These devices safely withstand environmental influences such as dust, temperature fluctuations and vibrations.

Media Converter		P. 323
Unmanaged Switches		P. 324
Managed Switches		P. 325
Accessory		P. 325

YOU MAY ALSO BE INTERESTED IN:

Keystone frame for DIN RAIL	P. 110
RJ45 Patch Cable	P. 114
IP67/ 68 Components	P. 154
19" Wall Housings	P. 208

Lantech™

PoE

IPGC-0101DSFP-48V

DIN Rail Converter Gigabit Ethernet to SFP Dual Speed

Connection:
Input voltage range 12 .. 72 V DC
Input voltage range 44 .. 56 V DC (PoE version)
Redundant power supply input
Dual Rate SFP Slot (via DIP switch) for 100Mbit and 1000Mbit
PoE: PoE Injector IEEE802.3at/af up to 30 W per port
Hardware: Temperature range -20°C .. +60°C *
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply:
HDR-15-24 and NDR-75-48 (for PoE version)
* Models with extended temperature range (-40°C .. +75°C) available on request

Art.-No.	RJ45-Port	Fiber-Port	Type
IGC-0101DSFP	1x 10/100/1000T	1x 100/1000FX	-
IPGC-0101DSFP-48V	1x 10/100/1000T	1x 100/1000FX	PoE+

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm
HDR-15-24	DIN rail power supply 24 V DC, 0.63 A, 15.2 Watt
NDR-75-48	DIN rail power supply 48 V DC, 1.6 A, 75 Watt (for PoE version)

CTS

PoE

IPC-3012

DIN Rail Converter Gigabit Ethernet to SFP Dual Speed

Connection:
Input voltage range 12 .. 48 V DC
Input voltage range 48 .. 57 V DC (PoE version)
Redundant power supply input
Dual Rate SFP Slot for 100Mbit and 1000Mbit
PoE: PoE Injector IEEE802.3at/af up to 30 W per port
Hardware: Temperature range -40°C .. +75°C
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply:
HDR-15-24 and NDR-75-48 (for PoE version)

Art.-No.	RJ45-Port	Fiber-Port	Type
IAC-3012	1x 100/1000T	1x 100/1000FX	-
IPC-3012	1x 100/1000T	1x 100/1000FX	PoE+

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm
HDR-15-24	DIN rail power supply 24 V DC, 0.63 A, 15.2 Watt
NDR-75-48	DIN rail power supply 48 V DC, 1.6 A, 75 Watt (for PoE version)

Several modes selectable:
Switch / Converter / Fiber Backup Mode

PoE

IPC-3014

CTS

DIN Rail Converter, 2x Gigabit to 2x SFP Dual Speed

Connection:
Input voltage range 12 .. 48 V DC
Input voltage range 48 .. 56 V DC (PoE version)
Redundant power supply input
Dual Rate SFP Slot for 100Mbit and 1000Mbit
PoE: 2x PoE Injector IEEE802.3at/af up to 30 W per port
Supports 3 different modes: (via DIP switch)
Switch, Dual Media Converter and Fiber Backup Mode
Hardware: Temperature range -40°C .. +75°C
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply:
HDR-15-24 and NDR-75-48 (for PoE version)

Art.-No.	RJ45-Port	Fiber-Port	Type
IAC-3014	2x 10/100/1000T	2x 100/1000FX	-
IPC-3014	2x 10/100/1000T	2x 100/1000FX	PoE+

Accessory

Art.-No.	Description
FTLF1217P2BTL	SFP Fast Ethernet 100FX, MM 2km, 1310nm
FTLF1323P1BTL	SFP Fast Ethernet 100FX, SM 40km, 1310nm
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm
HDR-15-24	DIN rail power supply 24 V DC, 0.63 A, 15.2 Watt
NDR-75-48	DIN rail power supply 48 V DC, 1.6 A, 75 Watt (for PoE version)

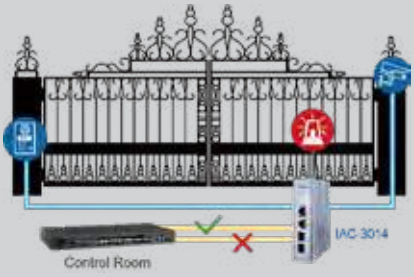
Switch Mode

Bridges and Tunnels
A long-distant area in need of a surveillance system can sometimes cause extra costs during the deployment. CTS' brand-new industrial converter, IAC-3014, supports switch mode, which enables the converters to build a chain network easily and solves the problem.

Dual Media Konverter Mode

Public Venues
With the uprising trend of mobile devices, more and more public venues provide free Wi-Fi broadband to satisfy their customers. At the same time, the security of surveillance systems cannot be compromised. CTS IAC-3014supports dual media converter mode, which separates the traffic for different purposes (e.g. Public Wi-Fi and Surveillance).

Fiber Backup Mode



Highly Secured Places
At highly secured checkpoints, malfunction of the surveillance systems might cause severe damage beyond imagination. CTS IAC-3014 supports fiber backup mode, which enables the system to work smoothly if a fiber cable link is down.

IES-0005T

IES-0008T

IES-0016

NEW

Suitable for this:
Jumper cable on page 14

Lantech™

Fast Ethernet DIN Rail Switch

Connection: Input voltage range 12 ... 48 V DC
Redundant power supply input
Alarm contact for emergency events such as power failure
Ports: 5x / 8x / 16x Fast Ethernet 10/100 RJ45 Ports
Hardware: Temperature range -20°C .. +60°C *
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply: HDR-15-24
* Models with extended temperature range (-40°C .. +75°C) available on request

Art.-No.	RJ45-Ports
IES-0005T	5x 10/100TX
IES-0008T	8x 10/100TX
IES-0016	16x 10/100TX

Accessory

Art.-No.	Description
HDR-15-24	DIN rail power supply 24 V DC, 0.63 A, 15.2 Watt

Lantech™

DIN Rail Switch, Unmanaged, 4x Fast Ethernet, 2x Fast Ethernet SC MM 2km

Connection: Input voltage range 9 ... 56 V DC
Redundant power supply input
Alarm contact for emergency events such as power failure
Ports: 4x 10/100 RJ45 Ports + 2x 100FX SC Duplex
Hardware: Temperature range -20°C .. +60°C *
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply: HDR-15-24
* Models with extended temperature range (-40°C .. +75°C) available on request

Art.-No.	RJ45-Ports	Fiber-Ports	Medium
IES-0204FT-SC/MM	4x 10/100	2x SC Duplex 100SX	MM

Accessory

Art.-No.	Description
HDR-15-24	DIN rail power supply 24 V DC, 0.63 A, 15.2 Watt

IES-3005-F1

IES-3008-F2

IES-3008

CTS

Gigabit Ethernet Unmanaged DIN Rail Switch

Connection: Input voltage range 12 ... 58 V DC
Redundant power supply input
Ports: 10/100/1000 RJ45 + 100/1000 SFP Slots
Dual Speed SFP supports MiniGBICs for 100FX or 1000BaseX
Hardware: Temperature range -40°C ... +75°C
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply: HDR-15-24

Art.-No.	RJ45-Ports	Fiber-Ports
IES-3005-F1	4x 10/100/1000T	1x 100/1000FX
IES-3008-F2	6x 10/100/1000T	2x 100/1000FX
IES-3008	8x 10/100/1000T	-

Accessory

Art.-No.	Description
FTLF1217P2BTL	SFP Fast Ethernet 100FX, MM 2km, 1310nm
FTLF1323P1BTL	SFP Fast Ethernet 100FX, SM 40km, 1310nm
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm
HDR-15-24	DIN rail power supply 24 V DC, 0.63 A, 15.2 Watt

PoE

IPGS-0204DSFP

Lantech™

DIN Rail Switch, Unmanaged 4x Gigabit Ethernet, 2x Dual Speed SFP

Connection: Input voltage range 12 ... 48 V DC
Redundant power supply input
Alarm contact for emergency events such as power failure
Ports: 4x 10/100/1000 RJ45 + 2x 100/1000 SFP Slots
Dual Speed SFP supports MiniGBICs for 100FX or 1000BaseX
PoE: 4x PoE Injector IEEE802.3at/af up to 30 W per port
Hardware: Temperature range -40°C ... +75°C
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply:
HDR-15-24 and NDR-240-48 (for PoE version)

Art.-No.	RJ45-Ports	Fiber-Ports	Type
IGS-0204DSFP	4x 10/100/1000T	2x 100/1000FX	-
IPGS-0204DSFP	4x 10/100/1000T	2x 100/1000FX	PoE+

Accessory

Art.-No.	Description
FTLF1217P2BTL	SFP Fast Ethernet 100FX, MM 2km, 1310nm
FTLF1323P1BTL	SFP Fast Ethernet 100FX, SM 40km, 1310nm
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm
HDR-15-24	DIN rail power supply 24 V DC, 0.63 A, 15.2 Watt
NDR-240-48	DIN rail power supply 48 V DC, 5.0 A, 240 Watt (for PoE version)

Lantech™

IPES-2208CB

DIN Rail Switch, SNMP, Web Managed
8x Fast Ethernet, 2x Gigabit Ethernet Combo Ports

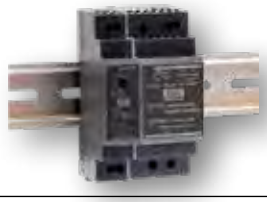
Connection: Input voltage range 12 ... 56 V DC
Redundant power supply input
Alarm contact for emergency events such as power failure
Ports: 8x 10/100 RJ45 + 2x 100/1000 RJ45/SFP Combo Port
Dual Rate SFP Slots for 100Mbit and 1000Mbit
PoE: 8x PoE Injector IEEE802.3at/af up to 30 W per port
Management: SNMP, WEB, RMON
Support of Ethernet Pro-Ring II und ITU G.8032 Std. Ring-Protection
Conform to IEC-61850-3 and IEC-1613
Hardware: Temperature range -20°C .. +60°C *
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply:
HDR-15-24 and NDR-480-48 (for PoE version)
* Models with extended temperature range (-40°C .. +75°C) available on request

Art.-No.	Management	RJ45-Ports	Combo-Ports	Type
IES-2208CA	Web	8x 10/100TX	2x 100/1000Base-T	-
IPES-2208CB	Web	8x 10/100TX	2x 100/1000Base-T	PoE+

Accessory

Art.-No.	Description
FTLF1217P2BTL	SFP Fast Ethernet 100FX, MM 2km, 1310nm
FTLF1323P1BTL	SFP Fast Ethernet 100FX, SM 40km, 1310nm
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm
HDR-15-24	DIN rail power supply 24 V DC, 0.63 A, 15.2 Watt
NDR-480-48	DIN rail power supply 48 V DC, 10.0 A, 480 Watt (for PoE version)

HDR-xx-xx



NDR-xx-xx

Mean Well DIN Rail Power Supply

DIN rail power supplies for industrial components
Universal 230 V AC input / Full Range
Protection from: Short circuit / overload / overvoltage
For installation on top hat rails TS-35/7.5 or 15
Insulation class II
LED Power Display
100% full load test

Art.-No.	Voltage	Power	Current
HDR-15-24	24 V	15.2 Watt	0.63 A
HDR-30-24	24 V	30 Watt	1.5 A
NDR-75-24	24 V	75 Watt	3.2 A
NDR-120-24	24 V	120 Watt	5.0 A
NDR-75-48	48 V	75 Watt	1.6 A
NDR-120-48	48 V	120 Watt	2.5 A
NDR-240-48	48 V	240 Watt	5.0 A
NDR-480-48	48 V	480 Watt	10.0 A

Lantech™

IPES-3408GSFP

DIN Rail Switch, L2 Managed
8x Fast Ethernet, 4x Gigabit Ethernet SFP

Connection: Input voltage range 48 ... 56 V DC
Redundant power supply input
Alarm contact for emergency events such as power failure
Ports: 8x 10/100 RJ45 + 2x 100/1000 SFP Slots
Dual Rate SFP Slots for 100Mbit and 1000Mbit
PoE: 8x PoE Injector IEEE802.3at/af up to 30 W per port
Management: L2 Management functions
Support of Ethernet Pro-Ring II und ITU G.8032 Std. Ring-Protection
Conform to IEC-61850-3 and IEC-1613
Hardware: Temperature range -20°C .. +60°C *
Robust metal housing, EMC-proof, protection class IP30
DIN rail mounting or wall mounting possible
Suitable DIN rail power supply:
NDR-75-48 and NDR-480-48 (for PoE version)
* Models with extended temperature range (-40°C .. +75°C) available on request

Art.-No.	Management	RJ45-Ports	Fiber-Ports	Type
IES-3408GSFP	L2	8x 10/100TX	4x 1000FX	-
IPES-3408GSFP	L2	8x 10/100TX	4x 1000FX	PoE+

Accessory

Art.-No.	Description
FTLF8519P3BNL	SFP Gigabit Ethernet 1000SX, MM 550m, 850nm
FTLF1318P3BTL	SFP Gigabit Ethernet 1000LX, SM 10km, 1310nm
NDR-75-48	DIN rail power supply 48 V DC, 1.6 A, 75 Watt
NDR-480-48	DIN rail power supply 48 V DC, 10.0 A, 480 Watt (for PoE version)

19“ 4U Universal DIN Rail Holder

For mounting of DIN rail components
DIN rail width: 435 mm
DIN rail stageless depth-adjustable, from ca. 55 .. 165 mm
Rearsided C-Rail for cable fixing, height-adjustable
DIN rail also horizontaly mountable
Through rearsided mounting of the brackets also wall-mounting possible

Artikel-Nr.	Description
53719.1V2	19“ Universal DIN Rail Holder incl. 4U Bracket Set

TRANSCEIVER & TRANSCEIVER CABLE

Fast Ethernet, Gigabit, 10G and higher: The EFB range is geared towards a wide range of transmission speeds. If you want to expand your network, you can connect active switches to transceiver modules. EFB-Elektronik also provides ready-made AOC cables. They consist of two transceiver modules with pre-assembled fiber optic cables.

Transceiver		P. 327
Transceiver Cable		P. 327

YOU MAY ALSO BE INTERESTED IN:

Fiber Optic Jumper Cable	P. 14
Fiber Optic Cleaner	P. 64
Media Converter	P. 306
Networkswitches	P. 312

FINISAR

CBO connecting technology

BlueOptics

BlueLAN

- Top 3 manufacturers worldwide
- Reliable partner
- Large selection in the transceiver area
- Made in Germany
- Very good stockpiling in Germany
- Compatibility with over 200 manufacturers (on request)

SFP Transceiver by Finisar

FINISAR

Art.-No.	Connector	Medium	Speed	Wavelength	Link Distance	Temperature
			Fast Ethernet			
FTLF1217P2BTL	LC Duplex	MM	100 Mbit/s	1310 nm	2 km	-40 – 85 °C
FTLF1323P1BTL	LC Duplex	SM	100 Mbit/s	1310 nm	40 km	-40 – 85 °C
			Gigabit Ethernet			
FCLF8521P2BTL	RJ45	Kupfer	1000 Mbit/s	-	100 m	-40 – 85 °C
FTLF8519P3BNL	LC Duplex	MM	1000 Mbit/s	850 nm	550 m	-20 – 85 °C
FTLF1318P3BTL	LC Duplex	SM	1000 Mbit/s	1310 nm	10 km	-40 – 85 °C
			10Gigabit Ethernet			
FTLX8574D3BCL	LC Duplex	MM	10 Gbit/s	850 nm	300 m	-5 – 70 °C
FTLX1471D3BCL	LC Duplex	SM	10 Gbit/s	1310 nm	10 km	-5 – 70 °C

FTLF1318P3BTL

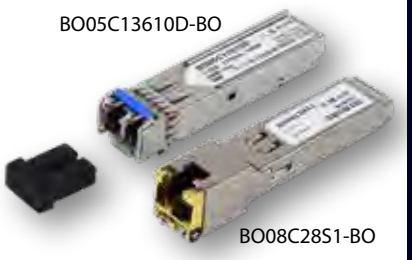
FCLF8521P2BTL

BlueOptics SFP Transceiver by CBO

NEW BlueOptics

Art.-No.	Connector	Medium	Speed	Wavelength	Link Distance	Temperature
			Fast Ethernet			
B005A13602D-BO	LC Duplex	MM	100 Mbit/s	1310 nm	2 km	0 – 70 °C
B005A13610D-BO	LC Duplex	SM	100 Mbit/s	1310 nm	40 km	0 – 70 °C
			Gigabit Ethernet			
B008C28S1-BO	RJ45	Copper	1000 Mbit/s	-	100 m	0 – 70 °C
B005C856S5D-BO	LC Duplex	MM	1000 Mbit/s	850 nm	550 m	0 – 70 °C
B005C13610D-BO	LC Duplex	SM	1000 Mbit/s	1310 nm	10 km	0 – 70 °C
			10Gigabit Ethernet			
B008J78S6-BO	RJ45	Copper	10 Gbit/s	-	100 m	0 – 70 °C
B035J856S3D-BO	LC Duplex	MM	10 Gbit/s	850 nm	300 m	0 – 70 °C
B035J13610D-BO	LC Duplex	SM	10 Gbit/s	1310 nm	10 km	0 – 70 °C

BO05C13610D-BO



BO08C28S1-BO

BlueLAN

BlueLAN DAC SFP+ Cable - 10Gigabit Ethernet

For 10G Ethernet internal rack and rack to rack applications
Hot-pluggable SFP+ assembly
Stable pull tab for easier high-density installations

Art.-No.	Lenght	AWG	Speed	Type	Temperature
SC353501J1M30-BL	1m	30	10 Gbit/s	2x SFP+ assembled	0 – 70 °C
SC353501J2M30-BL	2m	30	10 Gbit/s	2x SFP+ assembled	0 – 70 °C
SC353501J3M30-BL	3m	30	10 Gbit/s	2x SFP+ assembled	0 – 70 °C
SC353501J5M24-BL	5m	24	10 Gbit/s	2x SFP+ assembled	0 – 70 °C
SC353501J7M24-BL	7m	24	10 Gbit/s	2x SFP+ assembled	0 – 70 °C

BlueOptics

BlueOptics AOC SFP+ Cable - 10Gigabit Ethernet

For 10G Ethernet internal rack and rack to rack applications
Hot-pluggable SFP+ assembly
Stable pull tab for easier high-density installations

Art.-No.	Lenght	Fiber	Speed	Type	Temperature
B0353503J1M-BO	1m	OM3	10 Gbit/s	2x SFP+ assembled	0 – 70 °C
B0353503J3M-BO	3m	OM3	10 Gbit/s	2x SFP+ assembled	0 – 70 °C
B0353503J5M-BO	5m	OM3	10 Gbit/s	2x SFP+ assembled	0 – 70 °C
B0353503J10M-BO	10m	OM3	10 Gbit/s	2x SFP+ assembled	0 – 70 °C
B0353503J20M-BO	20m	OM3	10 Gbit/s	2x SFP+ assembled	0 – 70 °C

5Play™
Commonly used term coming from Multimedia HDBaseT™ concerning this 5 embedded benefits: Audio/Video – Ethernet – USB – Control – Power.
► Chapter Multimedia

10 Gigabit Ethernet
Datatransmission speed of 10 billion bit per second, 10Gbit/s. Cabling concepts could be found in
► Chapter Fiber Optic and Copper Cabling

10 inch
Developed from standardized 19 inch system with nearly halved value of 10 inch = 254 mm, 1 unit 1,75 inch = 44,45 mm.
► Chapter Cabinet Systems

1000BaseX
Gigabit Ethernet, regarding SFP ports for Gigabit Transceiver only. (1000Base-SX,1000Base-LX, 1000Base-T).
► Chapter Active Components

1000BaseLX
Gigabit Ethernet, regarding Fiber Optic Singlemode, Long Wave 1310nm.
► Chapter Active Components

1000BaseSX
Gigabit Ethernet, regarding Fiber Optic Multimode, Short Wave 850nm.
► Chapter Active Components

1000BaseT
Gigabit Ethernet, regarding Copper Cabling, Twisted Pair.
► Chapter Active Components

100BaseFX
Fast Ethernet 100Mbps based on Fiber Optic.
► Chapter Active Components

19 inch
System of structural components, chassis and subracks, originally slopped from USA to Europe and standardized in Germany in the late seventies as DIN 41494. 19"-technology utilize specified measurements, e.g. rack units and horizontal pitch to avoid time-consuming calculations from inch to centimetre. Rack units (U) are used for vertical dimensions, horizontal pitch (HP) are used for horizontal sizes e.g. for 19" subracks. Pitch 0,1 inch = 2,54 mm, 1 HP 0,2 inch = 5,08 mm, 1 U 1,75 inch = 44,45 mm, frontplate 19 inch = 482,60 mm, 1 subrack = 84 HP.
► Chapter Cabinet Systems

AC/DC
Shortcut for AC – Alternate Current and DC – Direct Current. For any small device running with direct current, mains voltage must be transformated. See also power supply.
► Chapter Active Components

Access Point
Active device to transceive wired signals and wireless signals. APs for WLAN IEEE802.11 mostly are responsible for internet connection acting like so called Hot spots.
► Chapter Active Components

AOC
Shortcut for Active Optical Cable, constructed of glassfiber with assembled transceivers on both ends. Compared to solutions based on standard transceivers, it could be a good value, but first of all extremely energie-efficient. Glassfiber is a good featured and EMC safe medium, high packing density, biterrorfree transmission even for long distances and without any electromagnetical interferences. Application areas are digital Audio/Video, like HDMI, High Speed Ethernet - Infiniband - Fiberchannel - Storage Area Networks - Local Area Networks – Datacenter.
►Chapter Active Components

FCBG110SD1Cxx

S. 327

K5431AOC

S. 272

APC - Angled Physical Contact
Typical angles of end surface of fiberplugs are 8° to the centerline or 9° for DTAG (Telecom). As a result of the combination with angled ferrules, extremely high return loss (HRL) values are possible. Reflections are generated at the end surface of fiberplugs. APC do not avoid these reflections, but APC changes the direction of reflections with an angle of 8° to the centerline, out of fibercore of singlemode glassfiber. Hence light transmission gets more secure and stable without reflections to the lasertransmitter. APC connectors are indicated with green colour and it is not allowed to mix it up with other coloured connectors.

Attenuator
Term for a special component to consciously cause attenuation (=energy loss) of the signal amplitude sent. Too high transmission power, e.g. due to missing link loss because of significantly shorter transmission distance than expected, can be adapted to the optimal receiver sensitivity.
► Chapter Fiber Optics

Auto MDI/MDIX
Physical connection in Ethernet applications of twisted pairs transmitting pairs and receiving pairs, are detected and assigned automatically, e.g. switch to workstation or switch to media converter.
► Chapter Active Components

Autonegotiation
Connections in Ethernet applications will be negotiated for the best common protocol and transmission speed, e.g. switch to workstation or switch to media converter.
► Chapter Active Components

53360.x

S. 41

Bidirectional
Full Duplex point to point communication channel, to send or to receive signals is simultaneously possible, e.g. the classic phone call.

Bendinsensitive
Special type of glassfiber: a very small bending radius without higher loss is possible.
See also ITU G.657A/B
►Chapter Fiber Optics

BNC
Bayonet Nut Connector, probably most often used description. Connector for coaxial cable, extremely suitable for high frequency.
Metal shell and Bayonet fixing are further points for the great popularity since almost 70 years in different application fields like radio technology, video engineering, network systems and measurement technique.
► Chapter Multimedia

52500.1

S. 303

Breakoutcable

Designation for a divisible cable consisting of at most 2 simplex cables of different thickness in a common outer sheath. Excellent protection of multimode or singlemode fiberglass and predestined for plug assembly.
► Chapter Fiber Optics

O6721

S. 31

Buspowered

Term for the simultaneous power supply of active components via the common data/address BUS, formerly also called remote power. The most well-known variant is the USB interface, followed by Power over Ethernet, see also USB or PoE.
► Chapter Multimedia and Active Components

Cage nut

A square nut usually in M6, which is enclosed in a metal cage. The cage nut is used to mount 19 inch devices in 19 inch housings or racks.
► Chapter Cabinet Systems

691099

S. 233

Category 5/6/6A/7/7A/8

Structured cabling system with different grades (categories) classified by bandwidth in MHz, standardized by ISO/IEC11801 worldwide.
► Chapter Copper Cabling

Certifier

Term for a high-quality and necessary measuring instrument for local area networks. In accordance with the limits of structured cabling according to ISO/IEC11801, the permanent installed links are legally certified after measuring.
See also Qualifier.

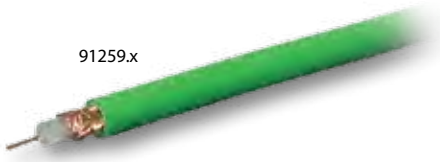
Closures

Fiber optic closures can be branching or connection closures for outdoor use. They include for example splice cassettes as well as other passive elements for fiber management and protect the optical fibers against external influences. The cable entries of the FO closures can vary in diameter. For this purpose, different types of closures are offered which optionally have several oval entries for uncut pipe loops as well as several exits for distribution feeder (inputs/outputs) and access cables. Depending on the type of cable and installation, suitable sealing sets are also available.
► Chapter Fiber Optic

83184.1

S. 96

91259.x



S. 302

Coaxial cable

Term for a two-conductor cable with concentric structure. The inner conductor (core) is fixed at a constant distance from the outer conductor (shielding). This asymmetrical medium is particularly low-loss in high-frequency transmissions. See also BNC.
► Chapter Multimedia

Combo / Shared RJ45/SFP

Combined ports, usable either 1 x SFP or 1 x RJ45 port, virtually share one port.
► Chapter Active Components

37597.1

S. 113

Connection module

These connection modules are used to reconnect damaged twisted pair cables or to extend an installed permanent link.
► Chapter Copper Cabling

Connection wire

A term from telecommunications. An insulated, solid copper conductor for connecting and wiring LSA connectors. Usual in market are the diameters of 0.5mm and 0.6mm, which are already twisted pairs.
► Chapter Copper Cabling

Consolidation Point

Concentration point. A Consolidation Point is a stationary point in the horizontal structured cabling system. It is often used in open office cabling and is a core element of stationary cable systems that connect to the data oulet at the workplace. A Consolidation Point is an additional connector between the floor distributor (EV) and the data outlet (TA) and it provides more flexible management of structured cabling. One Consolidation Point can supply multiple data ports.
► Chapter Copper Cabling

Converter

A converter converts an analog video signal VGA to a digital video signal HDMI, for example. Another example would be the conversion of a digital USB2.0 protocol into a digital RS232 protocol format.
► Chapter Multimedia

CPR Construction Products Regulation

The Construction Products Regulation is a regulation of the European Union. Its main aim is to create harmonised products and test standards for construction products across Europe. The regulation is the legal basis for CE-marking construction products and for issuing declarations of performance. Construction products are products that are permanently installed in a building and whose performance has an effect on the performance of the building. Power, control and communications cables in buildings are covered by this regulation. Up until mid-2017, these cables have to be tested according to European test standards in terms of their fire characteristics and assigned to the new Euroclasses. The EU Construction Products Regulation defines the conditions for CE-marking and requires manufacturers to make a declaration of performance on the following key product characteristics, derived from the protective objectives: fire safety (flame propagation, heat development, smoke development, acid formation and burning droplets).
► www.efb-elektronik.de/en/construction-products-regulation

52535.2

S. 302

Crimp plier

Hand crimping tool for the production of crimp connections of various connectors. Crimping allows solder-free electrical connections for stripped solid wire conductors or stranded conductors. The connection area of the crimp contact is deformed and thus establishes a solid, gas-tight connection with the conductor.

►Chapter Copper Cabling and Multimedia

CWDM

These so-called„Wave Division Multiplex" techniques are suitable for, not only one wavelength per fiber, but a variety of
different wavelengths coupling or decoupling into only one singlemode fibercore. For the medium-haul sector, e.g. MAN city networks, a technology called CWDM can be used, Coarse Wave Division Multiplex. Wavelength windows are predefined across the full spectrum. There are 18 wavelengths with a„channel spacing" of 20nm, 1270nm to 1610nm.

► Chapter Fiber Optics

K5300V2.x

S. 327

DAC Direct Attached Copper

DAC is a construct consisting of a twinaxial copper cable with transceiver modules fixed on both sides, thus bridging up to a maximum of 10 m. DAC cable assemblies, in contrast to standard SFP transceivers solutions, are very attractive in terms of price and energy efficient. Applications include High Speed Ethernet - Infiniband - Fiberchannel - Storage Area Networks - Local Area Networks - Datacenter.

►Chapter Active Components

ET-25130.1V1

Data outlet

A defined component in the structured cabling according to ISO/IEC11801. Data sockets allow the connection of the terminal devices as a permanent link termination point. The quality is determined by categories 5/6/6A/7/7A/8.

► Chapter Copper Cabling

S. 137

Design capable

A property related to switch programs for UAE Universal connection unit and TAE telecommunications connection unit. Design capable data outlets or termination components are compatible with all switch program manufacturers.

► Chapter Copper Cabling

691274.1V2

S. 223

DIN rail

TH35, DIN RAIL. A metal mounting rail with a hat-like profile in the dimensions 35mm x 7.5mm. Used in electrical engineering for mounting various components in switch cabinets, wall housings or distribution boxes.

► Chapter Cabinet Systems

DIP Switch Dual Inline Package

Another term is DIL Switch Dual In Line. In the same DIP design regarding TTL or CMOS ICs, individual connections can be switched on and off. The component, known as„mousepiano", is used for the manual configuration of digital interfaces.

► Chapter Active Components

IES-3005-F1

S. 324

Dual-Speed

Fast Ethernet or Gigabit Ethernet transceivers that can be plugged into SFP Fiber Slots. In contrast to a standard SFP slot, two Ethernet speeds are possible here.

► Chapter Active Components

Dual-Rail

A dual-rail system that allows LCD consoles to pull out the monitor and keyboard unit separately.

► Chapter Multimedia

Dual-View / Dual-Display

A KVM switch or KVM extender provides the ability to view video output on 2 displays.

► Kapitel Multimedia

DVI Dual-Link

With the dual-link interface, the data lines in the cable have been doubled, allowing a maximum resolution of 2560 x1600 pixels. DVI dual-link cables require at least 25 pins (24+1) plugs. DVI sockets are compatible with single-link and dual-link connectors.

► Chapter Multimedia

DVI Single-Link

DVI interface for a maximum resolution of 1920x1200 pixels.
DVI single-link cables require at least 19 pins (18+1).

► Chapter Multimedia

DWDM - Dense Wave Division Multiplex, see also CWDM

These so-called„Wave Division Multiplex" techniques are suitable for, not only one wavelength per fiber, but a variety of different wavelengths coupling or decoupling into only one singlemode fibercore. For long-distance traffic, e.g. intercontinental, a technology called DWDM can be used, which of course requires exquisite equipment. With "channel spacing" of 2nm, only one singlemode fibercore is able to transmit hundreds of wavelengths and that means hundreds of services.

► Chapter Fiber Optics

E2000^{R}

Patented connector by the company Diamond®. With extraordinary mechanical properties. Very popular for passive infrastructure, wide area networks, DWDM, datacenter and FTTx. In the LAN sector for active components practically insignificant.

► Chapter Fiber Optic

Ethernet
The uniform language, the transmission protocol, in the LAN is called Ethernet, a service for data transmission based on application-neutral structured cabling according to ISO/IEC11801. Developed in the late 1970s, Ethernet was a collective term for a whole series of baseband networks with different topologies. The original Ethernet standards were pure BUS topologies whose BUS segments were connected via repeaters or bridges. The stations were connected to the BUS cable via transceivers. The gross transmission rate was 10Mbps. Meanwhile the development and standardization process is extremely advanced by the technology of Ethernet switching. As a result, better net transfer rates have become possible, from 100Mbps Fast Ethernet to Gigabit, 10Gigabit, 25Gigabit, 40Gigabit, 50Gigabit, 100Gigabit, 200Gigabit up to the gigantic 400Gigabit. There are also plans to further increase the transmission rates in the future.

ETL - Electrical Testing Laboratories
Belongs to the Intertek Group as an international certification company. The ETL mark of approval, originally for the North American market area, is today an internationally recognised quality seal.

HDBT-100

S. 266

Extender
Extenders make it possible to extend the transmission distance for audio/video signals via Cat.5/6/7 network cables or optical fibres. These are 1:1 connections that are established using a transmitter and a receiver.
► Chapter Multimedia

Fast Ethernet
Fast Ethernet 100Mbps for the medium LWL (fiber) and Twisted Pair (copper)
► Chapter Active Components

FC connector
Fiber Connector, an extremely high quality connector for optical fibers with 2.5mm ferrule. Particularly stable thanks to metal housing and extremely secure thanks to screw cap. No importance in the LAN area, but very popular in the WAN, e.g. as interface for high-quality measuring instruments.
►Chapter Fiber Optic

71504.1

S. 300

Ferrite core
A special component to keep electromagnetic interference of a current-carrying cable as low as possible, effectively an interference filter. Two-part folding ferrites in different designs qualify as subsequent interference suppression filters for pre-assembled cables. These are available for various cable diameter and frequency ranges.
► Chapter Multimedia

Fiber stripper
Precision tool for stripping jacket, primary coating and secondary coating of glassfiber cables in wished lengths.
► Chapter Fiber Optic

39956.1

S. 70

691706FGR.1

S. 209

Flat Pack
Term for a flat, space-saving packaging of a 19 inch housing for self-assembly with logistical advantages.
► Chapter Cabinet Systems

Flat Twin
Flat twin cable with common outer sheath. A breakout cable consisting of two simplex cables which are particularly well protected by a common outer sheath. In cross-section, the structure results in an oval, which explains the legendary name „Figure O cable“.
► Chapter Fiber Optic

O0360FT.x

S. 17

Flexible cable
EFB term for unassembled raw cable from different manufacturers, consisting of stranded wire AWG26/7 or AWG27/7.
► Chapter Copper Cabling

FRNC
Flame Retardent Non Corrosive, inner cable with flame-retardant and halogen-free cable sheath according to the fire protection standards IEC60332 and IEC60754. See also LSZH.
► Chapter Copper Cabling and Fiber Optic

FTTH
FTTH (Fiber to the Home) is the fiber optic cabling to the building where the installation ends at the subscriber terminal. For this purpose, for example, the EN 50700 serves as the basis for implementing the network expansion.
► Chapter Fiber Optic

Full HD
Full High Definition („completely high resolution“).
Standard video resolution of 1920 x 1080 pixels for HDTV-capable output devices such as TVs and beamers - sometimes referred to as 1080p.
► Chapter Multimedia

G.652D
The ITU-T defines a full spectrum singlemode fiber, the Zero Water Peak fiber, under the reference number G.652D. This development from the standard SMF enables CWDM over the full spectral range.
► Chapter Fiber Optic

G.657A-B
The ITU-T defines bending-optimized SM fibers under the reference number G.657. Especially for FTTH, smaller bending radii of less than 10mm are required without the loss of transmission quality due to the associated increase in attenuation. The category G.657A fulfils the compatibility to the SM fiber G.652D, which does not fulfil the G.657B category. However, the G.657B allows the smallest low-loss bending radius.
► Chapter Fiber Optic

GBIC
Gigabit Interface Converter, based on SC Duplex connector system.
► Chapter Active Components

GE
Abbreviation for Gigabit Ethernet.
► Chapter Active Components

GHMT - Gesellschaft für Hochfrequenz und Messtechnik
Society for high frequency and measurement technology.
An accredited, internationally recognised test laboratory based in Bexbach, Germany. Particularly appreciated in the entire DACH market area.
► Chapter Fiber Optic and Copper Cabling

HDBaseT™
With the connection standard HDBaseT™ it is possible to transmit high-resolution multimedia signals up to 4K without loss of quality. HDBaseT™ is based on a so-called 5Play™, which combines the transmission of audio/video, Ethernet, USB, control signals and power up to 100m and 100W via one network cable.
► Chapter Multimedia

S. 272

HDMI - High Density Multimedia Interface
Introduced in 2002 and now in version 2.1. Enables the transmission of video content with a resolution of up to 8K (7680x4320) and a data transfer rate of 48Gbps.
A purely digital connection through which video and audio signals can be transmitted. Mainly for home entertainment and PC market.
► Chapter Multimedia

HDTV - High Definition Television
A high-resolution image format, see also Full HD.
► Chapter Multimedia

Horizontal pitch
1 HP = 5,08mm, see also 19 inch.
► Chapter Cabinet Systems

Hub
Used in the USB field as a synonym for an interface multiplier.
► Chapter Multimedia

IEC60320
Defines worldwide the connectors for electrical end devices for power supply with an operating voltage of up to 250VAC.
► Chapter Power Supply

S. 320

Injector
Term from the Power over Ethernet category. An injector supplies exactly one end device with data and power, depending on the PoE standard and the Ethernet standard: IEEE802.3af/at/bt for Fast Ethernet 100Mbit/s or Gigabit Ethernet 1000Mbit/s. See also PoE.
► Chapter Active Components

S. 150

Insertion tool
Special tool for LSA terminals for applying insulated wires of communication cables to LSA connection technology.
► Chapter Copper Cabling

Interferometer
Precision measuring instrument for the measurement and evaluation of ferrule end faces of assembled connectors in the field of optical fibers.
► Chapter Fiber Optic

IP - International Protection
IP degrees of protection are standardized according to IEC 60529 (EN 60529). Connectors suitable for industrial use are subdivided according to an IP coding in terms of their suitability for different environmental conditions, in the form of a two-digit number. The first digit stands for the scope of protection with regard to contact or foreign bodies, the second digit classifies the protection against moisture.
► Chapter Copper Cabling

ISDN - Integrated Services Digital Network
A digital network for voice and data services. Today almost completely replaced by IP services such as Voice over IP for digital telephony.
► Chapter Copper Cabling

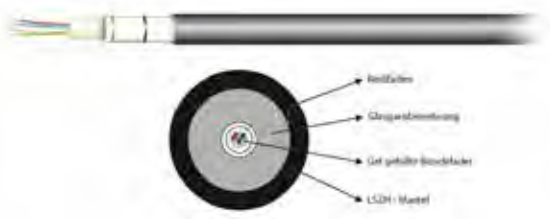
Keystone
Term for a mounting opening in frames or front panels with the dimensions 15mm x 19.25mm - 20mm. The mounting of various connectors for this snap-in technology is extremely simplified. Although not standardized, this mounting method is very popular on the market.
► Chapter Copper Cabling, Fiber Optic and Multimedia

KVM switch
KVM stands for Keyboard, Video and Mouse. With a KVM switch it is possible to control a large number of PCs from one console.
► Chapter Multimedia

Locking system 1/3-point
Network/server cabinet locking systems.
A 1-point closure locks centrally at the position of the locking cylinder or the closing point, while a 3-point closure secures the corresponding door at the top/bottom end and at the central locking point. This so-called rod or bar locking is much more complex and qualitative.
► Chapter Cabinet Systems

S. 37

LC connectors
The Lucent connector, also known as LC connector, has a high packing density due to its small dimensions and a ferrule diameter of 1.25mm. The plastic LC connector faces are used in LAN and switch systems, CATV, SONET/SDH, ATM, WDM communication systems as well as in measuring and test equipment. The typical insertion loss of the LC connectors is 0.2dB. The LC connectors are standardized according to IEC 61754-20. The locking mechanism is provided by a springed clip lock.
► Chapter Fiber Optic



Loose tube
Plastic tubes with different number of glass fibers as part of a fiber optic cable. The glass fibers are bundled in the tube.
► Chapter Fiber Optics

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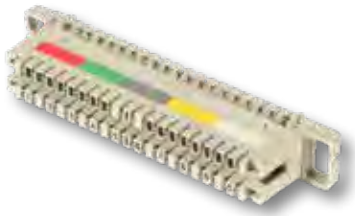


S. 160

LSA terminal

Solderless - screwless - stripping free, a connection technique used in telecommunications, special tools required - see also application tool. This type of contact is also used today for data sockets and patch panels according to the structured cabling standard acc. to ISO/IEC11801.

► Chapter Copper Cabling

LSZH - Low Smoke Zero Halogen

Indoor cables with flame-retardant and halogen-free cable sheathing in accordance with fire protection standards IEC60332 and IEC60754. See also FRNC.

► Chapter Copper Cabling and Fiber Optic

Matrix switch

A matrix switch provides the function of switching the inputs and outputs of the switch to each other in different ways. Multiple video input signals can be distributed to several video outputs simultaneously, for example.

► Chapter Multimedia

EL023V2

S. 307

Media converter

Term for a medium signal converter in the LAN area, which works protocol-dependent and, for example, connects the medium twisted pair and the medium optical fiber physically and logically. Example: Media converter Fast Ethernet RJ45 100BaseT to SC Duplex 100BaseFX MM.

► Active Components

Midspan

A midspan is used to connect power supply according to IEEE802.3af/at/bt PoE for structured cabling lines. The midspan is installed between Ethernet Switch and Permanent Link, see also Injector and PoE.

► Chapter Active Components

Mini DIN

Circular connectors with different numbers of poles. Mini Din 6 was used as serial Interface PS/2 for a long time. Today largely displaced from the market by alternative serial interfaces such as USB.

► Chapter Multimedia

MiniGBIC

Mini Gigabit Interface Converter, another name for SFP, based on LC duplex connector system.

► Chapter Active Components

FTLF8519P3BNL

S. 327

EB410

S. 296

Mini Gender Changer

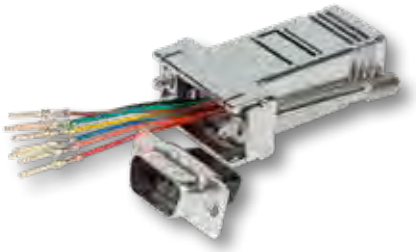
Common term for an adapter of a connector family, e.g. DSUB miniature connector, which acts as a feedthrough adapter. The two pluggable „faces", male/male or male/female or female/female are the main pillars of the name: gender converter.

► Chapter Multimedia

Mode Conditioning Kabel

In these specially manufactured duplex jumpers, the singlemode fiber is spliced to one of the two multimode fibers with a defined core offset. This means that the spot of the laser diode is not fed into the DMD susceptible core center, but into the DMD insensitive core edge region of the multimode fiber. Mode Conditioning Jumpers are used on both sides of the transmission path, whereby the singlemode fiber must be connected to the transmitter of the transceivers at each end of the communication port. Application area is the optimization of multimode data connections and the extension of the length restriction for Gigabit Ethernet 1000BaseLX (1300nm). In the transmission window „850nm" a singlemode fiber is not defined, so mode conditioning is not possible for the Ethernet protocol 1000BaseSX.

► Chapter Fiber Optic

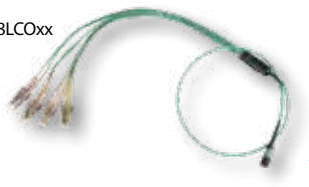


Modular Adapter

Adapter with two mating faces, e.g. the modular connectors RJ10/11/12/45 connected to the DSUB miniature connector family 9-pin or 25-pin.

► Chapter Copper Cabling

MTPF08LCOxx



S. 61

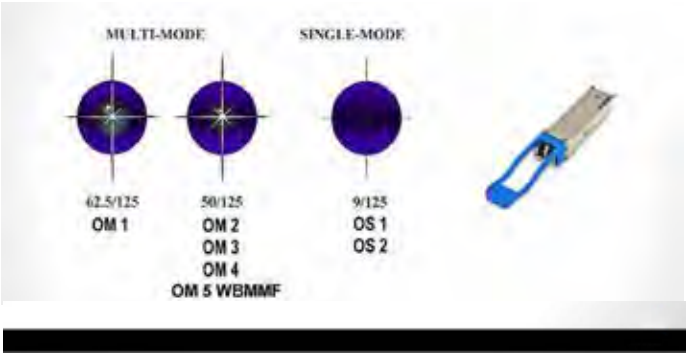
MTP™/MPO

The MTP™/MPO cabling system impresses with its high scalability and packing density and is standardized according to IEC61754-7 and TIA604-5A. An MTP™/MPO connector has the size of an SC simplex or LC duplex connector, but with the theoretical maximum fiber density of 72 fibers, whereas today's applications are based on an 8 or 12 fiber matrix.
The parallel optical Ethernet services 40G (4 x 10G) and 100G (4 x 25G) use 8 fibers, 4 fibers for transmission and 4 fibers for reception, which is only available in this size in the MTP™/MPO. An MTP™/MPO connector must necessarily consist of a male and a female connector to ensure fiber centering. The couplings therefore only have the function of a mechanical holder and pin assignment. MTP™ is fully compatible with MPO. MPO means Multi Fiber Push On. MTP™ means Multi Termination Plug and is a registered trademark of US-CONEC Ltd.

► Chapter Fiber Optic

Network cabinet
Active and passive LAN components are manufactured for the 19 inch mounting option and are mounted in a 19 inch rack system. Network cabinets are designed for 19 inch assemblies and can be configured in a variety of dimensions and special requirements, such as ventilation and exhaust. See also 19 inch.
► Chapter Cabinet Systems

Null modem cable
Term from the RS232 serial interface. A DSUB9B cable with crossed transmit and receive lines (TX/RX), for direct connection of two equivalent end devices like PCs. In LAN area for Fast Ethernet this crossing of TX/RX is called „crossover cable".
► Chapter Multimedia



OM1/2/3/4/5
Optical Multimode Class. Multimode gradient index fibers. 62.5µm core diameter OM1, 50µm core diameter OM2/3/4/5 with increasing bandwidth/length product. These fibers are optimized for transmission in the 850nm wavelength range. The new optical cabling class OM5 offers/specifies a broadband multimode fiber, which allows a higher range and transmission speed by SWDM technology (Short Wave Division Multiplexing).
► Chapter Fiber Optic

OS1/2
Optical Singlemode Class. OS1 as standard singlemode fiber for structured cabling and city networks. Following the recommendation of ITU-T G.652D, the full spectrum singlemode fiber has been standardized as OS2 according to ISO/IEC11801. See also G.652D.
► Chapter Fiber Optic

Outdoor cable
Fibercable or coppercable with special plastic for jacket material, like PE. Other different features depending on application are direct burial, longitudinal water tight, UV resistant, rodent resistant or steel ruggated armour etc.
► Chapter Fiber Optic and Copper Cabling

Patchcable industry level
RJ45 patchcables with special requirement profile for industrial quality, such as UV-resistant, oil-resistant, abrasion-resistant, suitable for drag chains, EMC-safe etc., no standard office patchcable has such special properties.
► Chapter Copper Cabling

Patchcable office
RJ45 patchcable for standard office environments, LAN networks or small data centers.
► Chapter Copper Cabling

Patchpanel
Also known as a patch bay, a defined component in structured cabling according to ISO/IEC11801. Used to connect installation cables for permanent links. The interfaces thus formed with the standardized RJ45 mating faces accept patchcables as a further standardized component for connecting or „patching". A patchpanel or patch field is a reconnection panel that serves to connect, distribute and patch connections and can thus be used for the orderly construction of complex cable structures in buildings. Patchpanels are housed in distribution cabinets and are among the passive components of a network; active components are, for example, switches or routers. By simply replugging patchcables, they allow communication services to be easily switched on at a workstation without having to change structured cabling.
► Chapter Copper Cabling

PD
Powered Device, a term from the field of Power over Ethernet. A PoE IEEE802.3af/at/bt end device with a standardized RJ45 interface to receive data and power.
►Chapter Active Components

Pigtail
Core pigtail, made up on one side with a fiber plug to open end.
Cable pigtail, assembled cable with a fiber plug on one side to open end. Serves to provide interfaces through detachable connections.
► Chapter Fiber Optic

➤ S. 25

PoE Power over Ethernet
The PoE standard IEEE 802.3af, IEEE 802.3at and IEEE802.3bt describes a system for the power supply of end devices based on the Ethernet network protocol via structured cabling Cat.5/6/6A/7/7A. The PoE standards IEEE 802.3af (15W), IEEE802.3at (30W) and IEEE802.3bt (100W) are worldwide standards and provide different maximum electrical power per terminal device. A basic distinction is made between power utilities, PSE Power Sourcing Equipment and end users, the PD Powered Device. The diverse range of end devices extends from VOIP telephones, IP cameras, WLAN access points, print servers, media converters to digital access controls, fire alarms and digital display panels. IEEE 802.3af/at/bt are intelligent interfaces with a defined transmission protocol, so that a PSE energy supplier can independently detect and activate or deactivate a PD device in the network. If the above-mentioned standards are not supported for installed network devices, the failed communication between PSE and PD also prevents unintentional power supply. Furthermore, a DC voltage supply of nominally 48VDC is defined for a transmission channel of up to 100m. The group of energy suppliers (PSE) is divided into EndSpan and MidSpan. Endspan means that the power is supplied with the same device as the data. This task is performed by a PoE network switch. Within the midspan operation, user can decide to provide a larger number of remote powered ports with a Midspan Hub. Individual consumers can be supplied with power more cost-effectively by using a PoE injector. A PoE splitter enables NoN-PoE devices to be supplied with power, provided that they have a socket or comparable connection for power supply, in which data and power are separated again and can be supplied separately to the non-PoE-capable consumer. In this way, all end users (PD) can be very profitably protected against power failure with an uninterruptible power supply (UPS).
► Chapter Active Components

Port doubler
Also called port splitter or Y-adapter, a passive component. The shared medium TP twisted pair is made up with 4 twisted pairs. One network service that use only two pairs for data transmission is for example Fast Ethernet. An existing Permanent Link could thus transmit 2 x Fast Ethernet, provided a port doubler is used at both ends of the Permanent Link.
► Chapter Copper Cabling

➤ S. 167

Profile half cylinder DIN18252
A standardised locking cylinder for network cabinets, garage doors, server cabinets or distribution boxes. In accordance with DIN18252, these half cylinders can be exchanged or used regardless of the manufacturer.
► Chapter Cabinet Systems

➤ S. 232

PS/2
Standardized interface for input devices like mouse and keyboard with the Mini DIN connector face.

PSE - Power Source Equipment
A term from the field of Power over Ethernet. A PoE IEEE802.3af/at/bt power supply unit with a standardized RJ45 interface and in the different specified power classes to send data and power. See also PoE.
► Chapter Active Components

PUR - Polyurethane
A plastic material e.g. for a cable outer sheath with extraordinary properties: flexibility, abrasion resistance, oil resistance.

PVC
Polyvinyl chloride, plastic material used for power supply cables, control cables or data cables. No halogen-free, low smoke and flame retardant material.

QSFP+
Parallel optical transceiver modules for 40Gbit Ethernet, multimode based on the MTP™/MPO plug-in system
► Chapter Active Components

QSFP28
Parallel optical transceiver modules for 100Gbit Ethernet, multimode based on the MTP™/MPO plug-in system
► Chapter Active Components

Qualifier
High-quality and very useful measuring device for cabling professionals. According to the limits of the structured cabling according to ISO/IEC11801, the installed transmission lines are qualified, i.e. assessed due to pass/fail. See also certifiers.
► Chapter Copper Cabling

Rack unit U
1 U = 44.45mm, see also 19 inch.
► Chapter Cabinet Systems

Redundant
In this context, a technically and functionally identical system, which is not necessary for normal operation, but increases or guarantees the resilience in the event of a failure. For example, a TV system for the home, which consists of two TVs, whereonly only one TV is required, but in the event of an error the second device would take over the operation without interruption.

Repeater
Repeaters are devices that reprocess or amplify the incoming signal to increase signal range.
► Chapter Multimedia

RJ45 data plug
Or: telephone plug, modular plug, data plug, network plug or Ethernet plug.
Today's RJ45 connector is internationally standardized according to IEC60603-7-x and thus categorized according to the well-known grades such as Cat.5e, Cat.6 and Cat.6A.
►Chapter Copper Cabling

H7641.x

S. 145

RS232
The standard EIA-232, RS232, CCITT V.24 describes the serial connection between a data terminal equipment (DTE) and a data communication equipment (DCE) transmission device with its electrical and mechanical properties. Although the standard only defines this type of connection, the RS232 interface has long established itself as a general standard for serial data transmission over short distances. The RS232 standard usually defines DSUB miniature plugs 9-pin or 25-pin as the standard plug-in connection. As with all serial transmission methods, the achievable distance between two RS232 devices depends on the cable used and the baud rate. As a guideline, a distance of 15m to 30 meters should not be exceeded.

Safety glass
A glass pane breaks into very small shards, which minimizes the risk of injury in the event of damage. The certification of ESG glass is always marked with an imprint.
► Chapter Cabinet Systems

SATA
Serial Advanced Technology Attachment, a standardized serial PC interface for hard drives.

ST plug
53202.x

This AT&T-specified fiber optic connector is suitable for both singlemode and multimode fibers, as well as versions for plastic optical fibers. The term BFOC/2.5 according to IEC-874-10 was often used: Bayonet Fiber Optic Connector with 2.5mm ferrule diameter. ST connector (Straight Tip) is widely used in Local Area Networks (LAN) or Metropolitan Area Networks (MAN). The bayonet lock and a sturdy metal body characterize the connector. In active components, increasingly displaced from the market by the LC plug.
► Chapter Fiber Optics

Server cabinet
Network cabinet with optimized dimensions for network devices such as High Class Server or Blade Server. See also network cabinet.
► Chapter Cabinet Systems

SFP - Small Form Pluggable
FTLF8519P3BNL

Formerly called MiniGBIC, optical transceiver modules are plugged into SFP slots. Modules are available for fiber optics with LC duplex port and copper TP with RJ45 port for the Ethernet standards Fast Ethernet and Gigabit, SFP+ for 10Gigabit and 25Gigabit.
► Chapter Active Components

SFP+
Optical transceiver modules for 10Gbit Ethernet and 25Gigabit, based on LC duplex connector system.
► Chapter Active Components

Shielding
Metallic shell to reduce electromagnetical interferences for errorfree data transmission, otherwise electromagnetic radiation of datacables would be minimized. Depending on quality and application area cable manufacturer include different conductive metal materials.
► Chapter Copper Cabling and Multimedia

Surge protection
Term for the protection of sensitive electronic circuits against excessive supply voltages, which can have destructive effects, e.g. in the event of lightning.

SNMP - Simple Network Management Protocol
A network protocol that can be used for remote maintenance and error monitoring of network components used. SNMP allows you to use management programs to monitor and control switches from different manufacturers.
► Chapter Active Components

Splice box
Term from the field of fiber optics, also called splice distributors. A housing, usually for 19 inch racks, for mounting and fastening external fiber cables, trunk cables, splice cassettes, pigtails and fiber optic adapter. This splice distributor is a defined component of ISO/IEC11801 structured cabling.
► Chapter Fiber Optics

B71901.24OM4

S. 44

Splicing device
Splicing is the term for fusion two glass fibers. Splicing equipment is very high quality and expensive. The necessary melting temperature of the glass fiber is generated in the splice device by a high electrical voltage, therefore also called arc splicing or fusion splicing. Splicing has the highest quality of non-removable connections.
►Chapter Fiber Optics

VIEW8+

S. 74

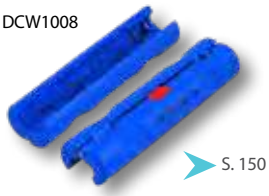
ST plug
This AT&T-specified fiber optic connector is suitable for both singlemode and multimode fibers, as well as versions for plastic optical fibers. The term BFOC/2.5 according to IEC-874-10 was often used: Bayonet Fiber Optic Connector with 2.5mm ferrule diameter. ST connector (Straight Tip) is widely used in Local Area Networks (LAN) or Metropolitan Area Networks (MAN). The bayonet lock and a sturdy metal body characterize the connector. In active components, increasingly displaced from the market by the LC plug.
► Chapter Fiber Optics

53202.x

S. 37

Stripping tool
Special tool for stripping plastic jacket of cables in a defined length, doesn´t matter if coppercable or fibercable.
►Chapter Fiber Optic, Copper Cabling and Multimedia

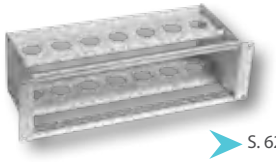
DCW1008



S. 150

Subrack
Term for a standardized 19“-rack acc. to DIN41494 19“-system with 84 HP. See also 19 inch.
►Chapter Cabinet Systems and Fiber Optic

53733.1



S. 62

SVGA
Super Video Graphics Array, analog video standard, see also VGA.
► Chapter Multimedia

SWDM - Short Wave Division Multiplex
WDM is known as a transmission technology for long-distance traffic, but with singlemode fibers. A few years ago, ISO/IEC adopted a new multimode class OM5, which was defined for the transmission windows 850nm, 880nm, 910nm and 940nm with the corresponding modal bandwidth. Furthermore, OM5 is backwards compatible with OM4/3/2/1. The Team SWDM Transceiver plus OM5 multimode fiber allows transmission rates of up to 100Gbps with only two fibers (LC connection) and distances of up to 150m in the LAN range.
► Chapter Fiber Optics

Switch
Switching hub, operator, distributor. A central and essential device for communication in Ethernet Local Area Networks. Each workstation on the LAN must be physically connected to the switch. The Twisted Pair medium is contacted with the RJ45 plug-in face. Various Ethernet transmission speeds coupled with Power over Ethernet are usually standard in 19 inch format.
► Chapter Active Components

FOS-3110

S. 314

TAE
Standardized measure for switch program manufacturers for plastic covers, see also design capable.
► Chapter Copper Cabling

52524.1

S. 303

Terminator
Terminators are made of same impedance value as copper transmission cable to avoid spectral reflections at the end of a buscable. Das Ethernet in the nineties, also called 10Base5, 10Base2 or Cheapernet genannt, was realized with a special kind of coaxial cable as a bussystem and 50 Ohm impedance. Both ends of this bussystem had to be terminated with 50 Ohm. If not, spectral reflections occur at both ends with the result of big jamming for transmitted signals.
► Chapter Multimedia

H7640.x H7641.x H7642.x

S. 146

TM11/21/31
Series of shielded RJ45 connectors for structured cabling according to ISO/IEC11801. Highest manufacturing precision and impressive electrical and mechanical properties characterize this family of connectors from the Japanese global company Hirose.
► Chapter Copper Cabling

TPE - Thermoplastic elastomer
A very flexible plastic material for e.g. extremely smooth patch cables.
► Chapter Copper Cabling

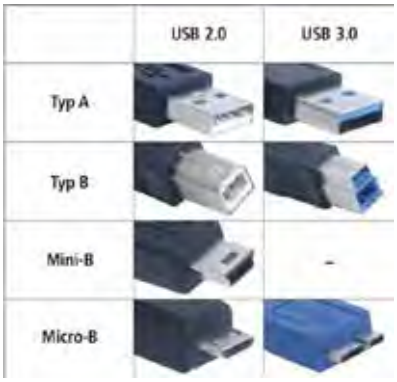
Transceiver
Compound word of transmitter and receiver. Today, these modules are used e.g. in Ethernet switches. The SFP, Small Form pluggable, is in high demand regarding LAN sector and allows easy adaptation to the medium multimode, singlemode or twisted pair. See also MiniGBIC or SFP.
► Chapter Active Components

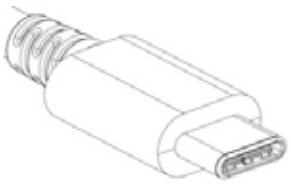
Twisted Pair
Term for a cable structure with roped pairs. A standardized installation cable of category 5/6/6A/7/7A/8 has 4 sealed pairs with different twist pitches. Twisting minimizes the electromagnetic interference between the pairs in this symmetrical signalling technology.
► Chapter Copper Cabling

S. 140

Ultra HD - Ultra High Density
UHD defines a digital video format with a pixel resolution of 3840 x 2160, double the size of Full HD.
In the area of monitoring, a guarantee for razor-sharp images or films.
► Chapter Multimedia

UNC - Unified Coarse Thread
A thread standard commonly used in America and Canada based on inch dimensions. UNC and the European metric thread standard are not compatible.
► Chapter Multimedia





USB - Universal Serial Bus
A serial interface for the consumer mass market. Fast data transfer and power supply are provided by USB. On the market since 1996, really popular since 1998 with the USB1.1 version and support in Windows operating systems. Has been used since the Market launch regularly renewed with new plugs and functions. That's why USB has supplanted almost every other variant in the multimedia sector. Standards: USB1.0 12Mbps , power supply 500mA max, USB2.0 480Mbps, power supply 500mA max, USB3.0 5000Mbps, power supply 900mA max. Since 2014 there is the USB3.1/3.2 version, twist-proof plug by Type-C connectors. With 10Gbps (3.2) and a power supply of up to 100W, this significantly increases performance compared to USB3.0. See also Type C.
► Chapter Multimedia

Type C
In 2014, the new Type C connector was released at the same time as the USB3.1 standard. The Type C connection is very versatile, which can meet the high performance requirements of the USB3.1/3.2 and can be used for other applications at the same time.
The USB3.x standard is divided into two generations:
Cable assemblies for up to 5Gbps, which also applies to the older USB3.0 standard, can now also be named USB3.1 Generation1.
Cable assemblies designed for 10Gbps will be renamed to USB3.1 Generation2. Other Type C cable variants are: Alternate Mode, cable assemblies with type C connectors switched to alternative operating mode. This allows you to create cables that support DisplayPort, HDMI or MHL. This interface can simultaneously transport video/audio, data, USB and power.

S. 284

Thunderbolt 3
The well-known Thunderbolt 2 connector based on the Mini DisplayPort interface, which is mainly found on Apple devices, will be replaced by a Thunderbolt 3 interface with type C connector in the future. This is an interface that can simultaneously transport video/audio, data, USB and power.
► Chapter Multimedia

UAE
Standardized measure for switch program manufacturers for plastic covers, see also design capable.

VGA - Video Graphics Array
Analog video standard introduced by IBM into the PC market in 1987. Connector of this interface is a D-Sub miniature connector in high density format with 15 pins, HDSUB15. Predominant use of VGA/SVGA cables when using older devices (projectors, displays)
► Chapter Multimedia

Video Splitter
Video splitter multiplies the video input signal to multiple output signals. This makes it possible to display one image signal on several displays at the same time.
► Chapter Multimedia

Video Switch
A video switch provides the possibility between multiple video inputs in relation to one video output.
► Chapter Multimedia

VLAN - Virtual Local Area Network
A port-based virtual network is distinguished from manageable switches or a dynamic VLAN of multiple switches of an entire network structure, the standardized tagged VLAN according to IEEE 802.1Q.
► Chapter Active Components

WDM
Wave Division Multiplex, see CWDM and DWDM.
► Chapter Fiber optics

Web Smart, Web managed
Label for Ethernet switches with web interface for internal management functions. ► Active Components

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