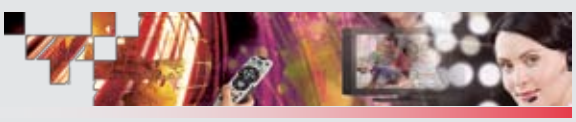
Aerials | Dishes | Receivers | Headends | Multi switches | Amplifiers | Outlets | Home accessories | Camera | Link | Cabinets

TRIAX Multimedia Main Catalogue



TRIAX - your ultimate connection

Let us guide you…

- picking the right solution of Triax products for your job

Sharp and powerful TV signals – that's what we want

Yet, just think about what happens when you turn on your TV. Signals rush from your antenna through a coax cable and into your TV set – feeding live pictures to your screen. But that's not all.
Every time a signal travels through your cable – and through all the other components of your network – disturbing background noise runs along with it.
The main component and the coax cable will always generate interference in your system. The longer the cable, the more significant the noise – and the weaker the signal. But don't worry about it.
Triax can easily help you find the optimal amplifier to compensate for that and power up your signals.
And that's not all.

One-stop-shopping solutions for all your job needs

In fact, no matter which particular job you need to do – delivering efficient direct-to-home and SMATV solutions, Triax offers you easy access to all relevant products.
For a closer look at the wide range of products, we can supply you with, please browse through this catalogue – which includes data on all Triax Multimedia products.

Triax is about you saving time and trouble

In our experience, every individual Triax customer has a different need. We bear this in mind when we develop new products – and this approach has made Triax a leading European supplier of products for the distribution of satellite, cable and terrestrial signals.
Whether you're an installer, operator or distributor, we want you to save time and trouble, every time you choose one of our products.
Our market scope today is worldwide.

Benefit your own business – make Triax your preferred supplier

Whether you're looking for physical cable connections or personal business relations – Triax offers you everything from specialised products to quality support and in-time delivery.
Complex, cutting-edge technology gives users access to an ever-growing number of programs and services offered by today's TV broadcasters.
All Triax products share this: They make complex technology available to more people
– through simplicity in design, installation and use.

Find more information on….

www.triax.com

Enjoy these general benefits – no matter which Triax product you choose:

- One-stop-shopping. You get access to the widest range of product solutions on the world market
- All Triax products combine advanced technology with ease of use
- From the very small to the REALLY BIG and complex projects, we have the right products for you. Your project and business determines the choice of product – not vice versa
- Think of Triax as a strong, personal partner who can help you turn practically any project into a success. We'll be happy to make our more than sixty years of experience work for you
- Expect the highest level of service, from specific advice on how to make the most of your particular Triax product – to upgrades, spare parts, maintenance and repair work
- Install. Adjust. Plug in. It's that simple
- Best quality products at a fair price

In-time delivery from your local or international Triax warehouse

Please contact your nearest Triax dealer for prices and in-depth information on the products they keep in stock. Or else, you can have all Triax products sent to you from one of our international storehouses as quickly as possible.

Plug into your ultimate connection…

Get started now by visiting www.triax.com. Here you'll find useful information on all products and applications.

Thank you for choosing Triax.

TRIAX - your ultimate connection

Table of contents

Terrestrial reception

Aerials	6-7
- BI (VHF)	8-9
- BII - DAB (FM)	10-11
- BIII (VHF)	12-15
- BIV/V (UHF)	16-24
- Combi	25-26
- UFO	27-28
- NMTand GSM	29
- Indoor	30
Terrestrial electronics	
- mast amplifiers	32-48
- mast combiners	49-54
- single channel filters	55-57
- notch filters	58
- stacking combiners	59

Mounting accessories

Masts	62-63
Window and wall brackets	64-66
Mounting pipes	67
Mounting clamps	68
Wires and accessories	69
Chimney brackets	70
Roof covers	71
Cable guards and duct	72
Screw, bolts, clips and strips	73-74

Satellite reception

Dishes	
- TDE series	77
- TD series	78-83
- Basic series	84
- DAP series	85
- Elliptical perforated	86
- Unique	87
LNB brackets and spare parts	88-89
Universal LNB units	
- single, twin, quad, quattro	90-92
DiSEqC switches	93-94
Polarmount and LNB covers	95
Mounting accessories	96-97

Headends

- TDH 700 headends	100-111
- TCH 600 headends	112-114
- TNH 600 single ch. headend	115
- TCM 08 modulator	116
- CM 01 modulator	117
- TMB programmable ampl.	118
- AS single ch. amplifiers	119
- ARM multiband amplifiers	120
- IFM multiband amplifiers	121-122
- SCT IF/IF converter	123
Headend mounting accessories	
- TCC compact cabinet	124
- TMF frame system	125
- MDU/11S cabinets	126-127

TMS multiswitches

TMS series	
- 17C and 17T series	130-131
- 9C and 9P series	132-135
- 5 and 5P series	136-138
- 2C series	139
- IF taps/splitters	140
- IF amplifiers	141-142
- IF power supplies	143
TMM cascadable series	144-146

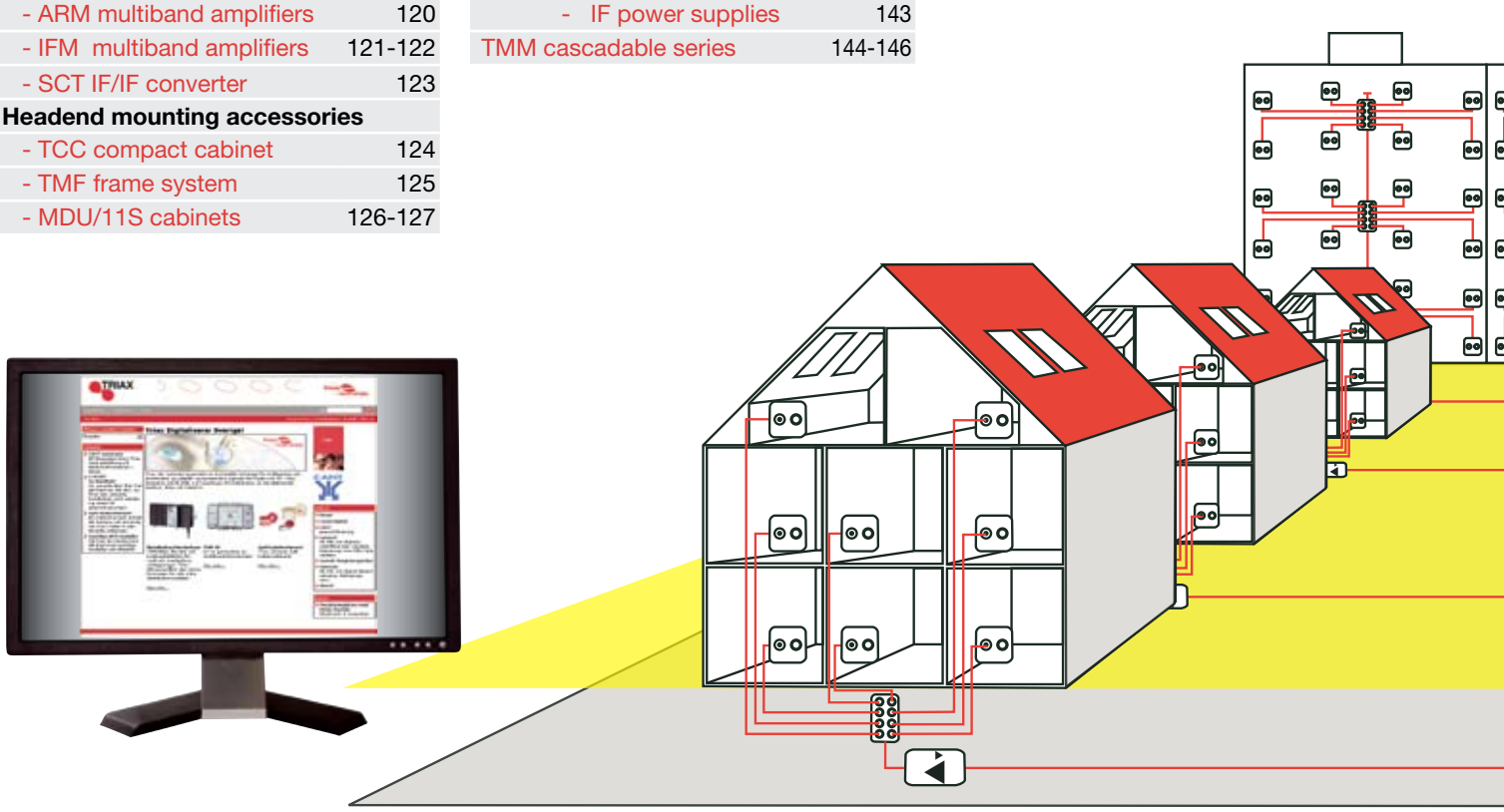


Table of contents

Amplifiers

Outdoor/indoor
- HNA series 148
- HTA series 149
- HDA series 150
- HEA series 151
- accessories 152-154
- HFA series 155
- accessories 156
- HEF series 157

Indoor
- IFE series 158-159
- IFA series 160-161
- IFB series 162
- IIB series 163
- TA, Type 02, 2TV+ 164

Passives

Splitters, taps
- A-TECH 5-1000 MHz 166-171
- H-TECH 5-1000 MHz 172-178
- S-TECH 5-2400 MHz 179-183

TDP delivery points 184
TLS range of outdoor splitters 185
TLT range of outdoor taps 186-191
Triax indoor splitters 192-193
Attenuators 194
Power inserters 195
Power supplies 196-197
Cables - Indoor, outdoor 198-203
- Multi and fly leads 204-205
- HDMI cables 206
- Tools and connectors 207-209

Adaptors - terminators - isolators - electrical articles 210-212

Outlets

TOU-series
- standard, multimedia, sat 214-218

TD-series
- standard, multimedia, sat 219-222
- HT loudspeaker, FV f-con 223

OPUS-series
- standard, multimedia, sat 224

Triax UK series 225
Triax GAD series 226-227
Triax GRID series 228-229

Accessories
- TOU covers, frames, terminators 230
- FUGA covers, frames, terminators 231

Home accessories

Camera systems 234-235
DDU series 236-237
Wireless A/V system 238
Digital links 239
Remote extender 240

Technical appendix

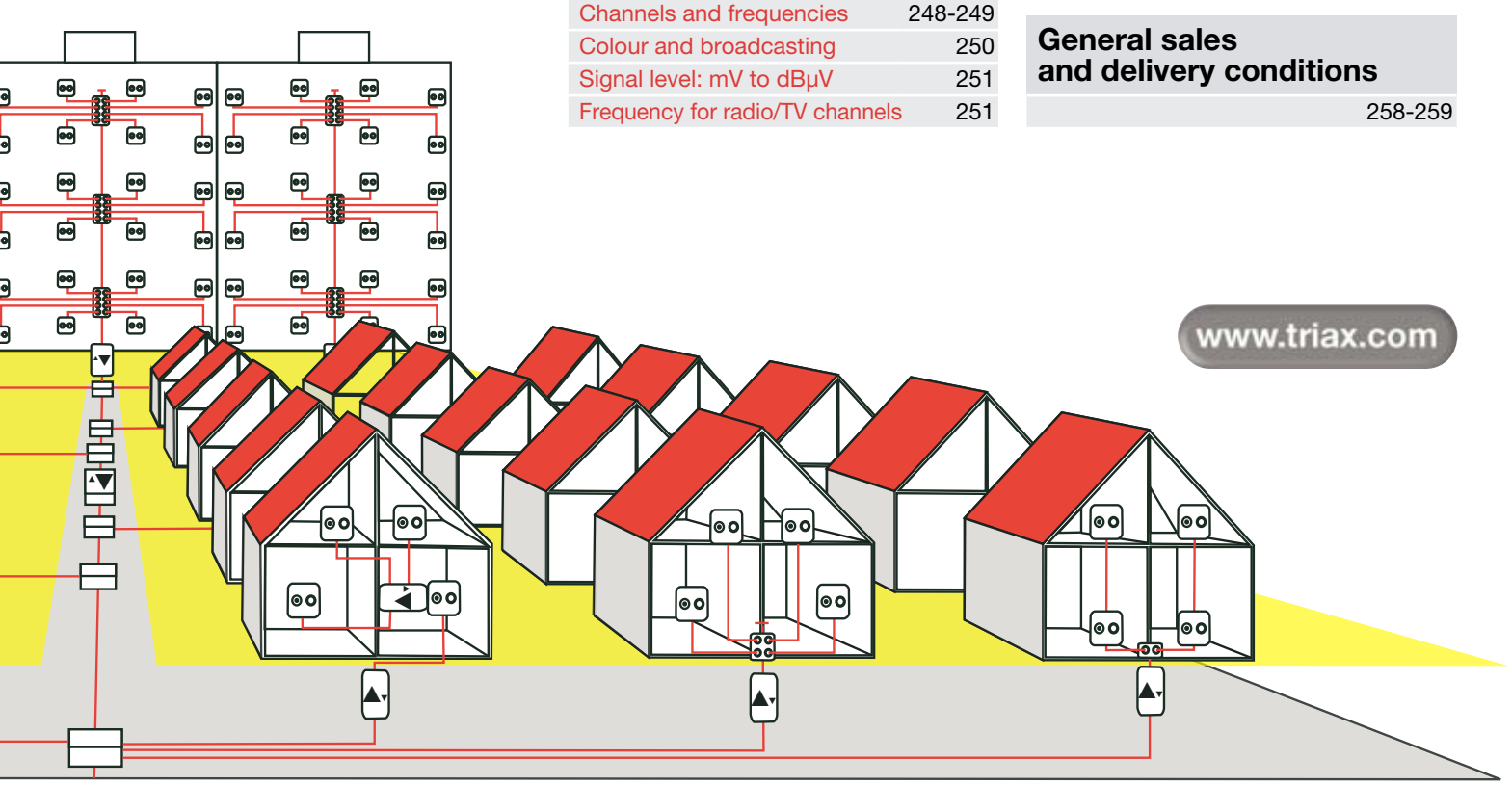
Terrestrial antennas 242
Basic technical requirements 243
Technical data in the catalogue 244
Planning and installation 245-246
Earthing and equipotential 247
Frequency range of waves 247
TV standards 247
Channels and frequencies 248-249
Colour and broadcasting 250
Signal level: mV to dBµV 251
Frequency for radio/TV channels 251

Contents from A to Z

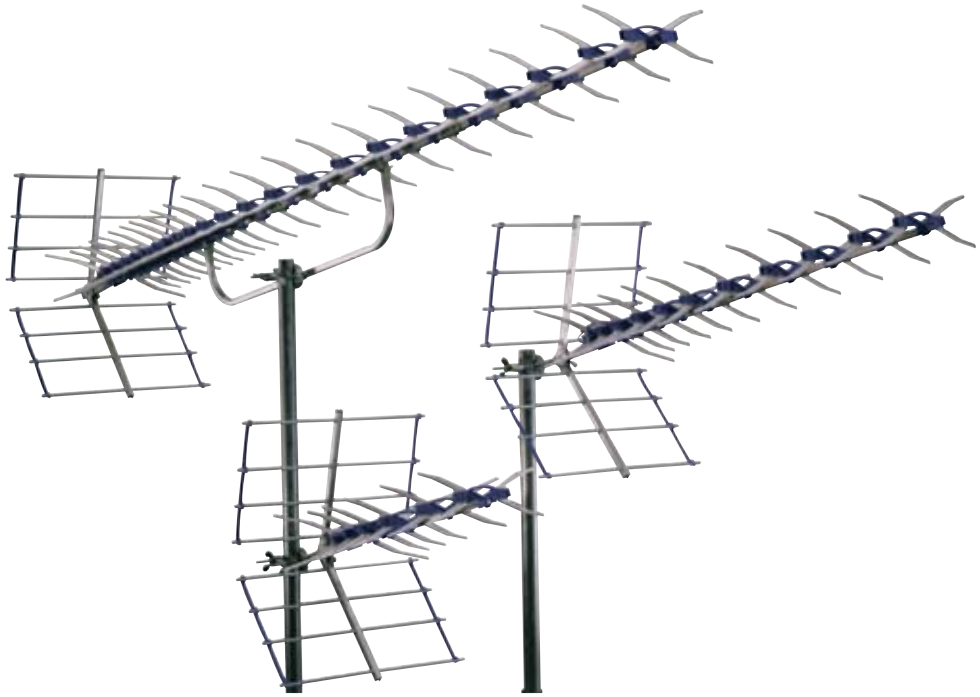
Contents 252-257

General sales and delivery conditions

258-259



Construction and type overview



Aerials

Continuous development is taking place in the field of terrestrial aerials requiring us always to stay one step ahead. Our development and design expertise enables us to develop new products quickly for changing markets.

TRIAX develops and produces a wide range of aerials covering the VHF and UHF frequency bands. In our development work we utilise the latest technology of computer simulation and testing.

TRIAX aerials are manufactured with the utmost accuracy to ensure maximum gain.

TRIAX aerials comply with the DS/EN 50083-1 standard and are fatigue tested by exposure to more than 100,000 vibrations at the physical resonant frequency and to salt mist in order to ensure long life even under the most hostile weather conditions.

Construction and type overview

For the mechanical construction of all TRIAX aerials a strong and stable aluminium boom is used.The dipole and elements are mounted with a strong bracket made of metal or plastic.
The dipole is mounted with a cable housing made of polyehtylene which is resistant to thermal fluctuations and sunlight (UV-radiation)
The cable housing contains an impedance transformer 300/75 Ohm. Furthermore the boom is provided with a strong mast bracket to enable mounting on the mast without using any tools.

Types of aerials

Triax range of BIII aerials is manufactured in many different types as the following:

MT = Standard, horizontal mounting, mast bracket
MTD = Standard with dual reflector, horizontal mounting, mast bracket
MTL = Standard, vertical mounting, mast bracket
MTH = Lightweight, horizontal or vertical mounting, mast bracket
MTHD = Lightweight with dual reflector, horizontal mounting, mast bracket
MTHV = 3 and 4 elements, lightweight, window bracket, horizontal or vertical mounting
MTHV = 5 elements or FM omni, lightweight, window bracket, horizontal mounting

Application

Triax standard range of aerials covers the following VHF and UHF frequency bands:

Frequency Range	Band	Frequency (MHz)	Reception	Channel
VHF	BI	47-68	TV	2-4
VHF	BII	87-108	Radio	FM
VHF	BIII	174-230	TV	5-12
UHF	BIV	470-622	TV	21-39
UHF	BV	622-862	TV	40-69

- more information in „Technical Appendix“ - page 250.

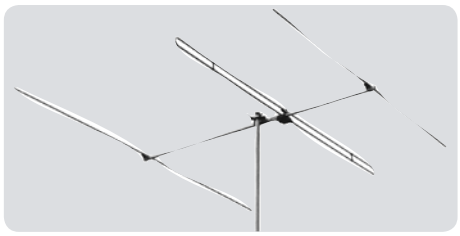
Terrestrial reception

Terrestrial reception >> **Aerials**	
- BI (VHF)	8-9
- BII - DAB (FM)	10-11
- BIII (VHF)	12-15
- BIV/V (UHF)	16-24
- Combi	25-26
- UFO	27-28
- NMT and GSM	29
- Indoor	30

Triax band I aerial (VHF)

All TRIAX band I aerials are provided with a light-alloy metal boom made of 18 x 18 mm square tubes.
The dipole and the elements are made of Ø12 mm tube provided with strings to dampen vibrations and to prevent element resonance.
All band I aerials are provided with brackets for aerial masts up to Ø60 mm.

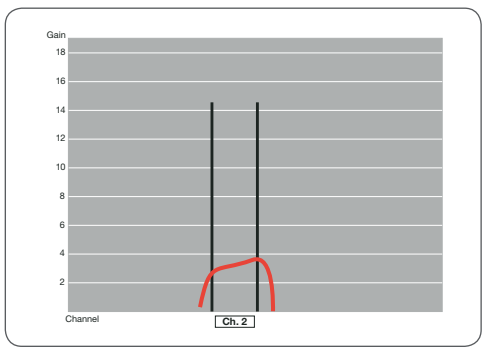
Channel 2 - 2 elem.



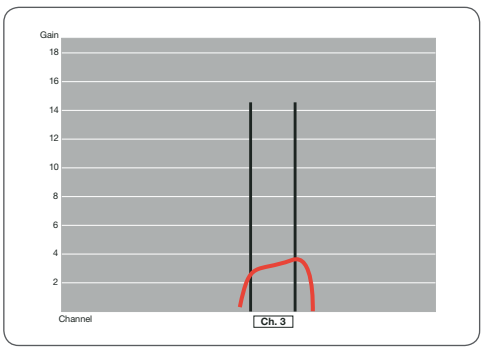
Channel 3 - 3 elem.

Technical data

Type Art. No.		Channel 2 100022	Channel 2-4 100013	Channel 2-4 100014	Channel 3 100012	Channel 3 100033	Channel 3 100032
Channel		2	2-4	2-4	3	3	3
Band		BI	BI	BI	BI	BI	BI
Elements	pcs.	2	3	3	2	3	2
Gain	dBi	3.5	4.5	4.5	3.5	4.5	3.5
Front to back ratio	dB	10	16	16	10	16	10
Beamwidth hor.	deg. (°)	± 36	± 34	± 34	± 36	± 34	± 36
Windload	N	78	88	88	72	96	72
Weight	kg	2.0	1.9	1.9	1.7	2.2	1.7
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Dimensions length width	 mm mm	 1360 3175	 2180 3180	 2180 3180	 1260 2730	 1980 2730	 1260 2730
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MT	MT	MT	MT
Remarks		2-part reflector	1	2-part reflector	1	1	2-part reflector



Channel 2 - 2 elem.

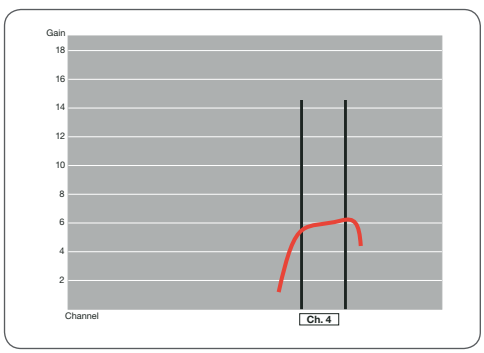


Channel 3 - 2 elem.

Channel 4 - 2 elem.

Technical data

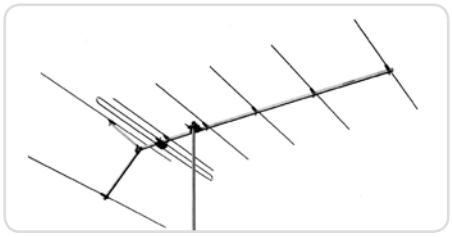
Type		Channel 4
Art. No.		**100016**
Channel		4
Band		BI
Elements	pcs.	2
Gain	dBi	3.5
Front to back ratio	dB	10
Beamwidth hor.	deg. (°)	± 36
Windload	N	64
Weight	kg	1.4
Material		Aluminium
Dimensions		
length	mm	1160
width	mm	2410
Connector		SC-type
Type		MT
Remarks		



Channel 4 - 3 elem.

Triax band II aerial (FM)

TRIAX band II aerials are wide band aerials covering the entire frequency range from 87 to 108 MHz.
Band II aerials are provided with a light-alloy metal boom made of 18 x 18 mm square tubes. The dipole and the elements are made of Ø12 mm tube provided with strings to damp vibrations and to prevent element resonance.
All aerials are provided with brackets for aerial masts up to Ø60 mm.
The MT-D types feature dual reflectors.



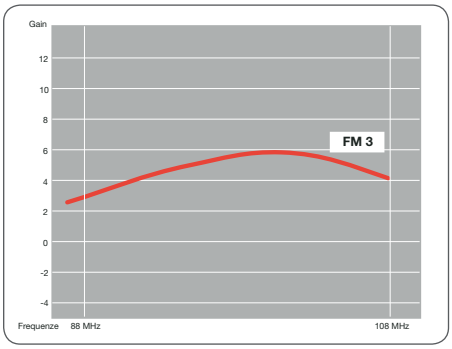
FM 8S - 8 elem.

FM 2 - 2 elem.

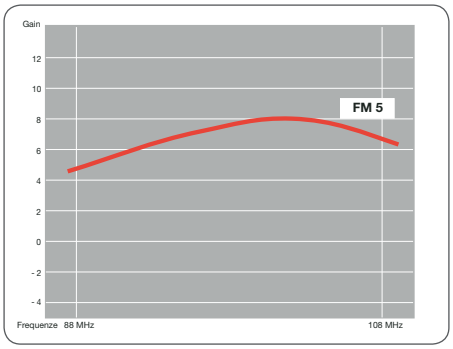
FM 4 - 4 elem.

Technical data

Type		FM 1	FM 2	FM 3	FM 4	FM 5	FM 5
Art. No.		**100160**	**100161**	**100162**	**100163**	**100164**	**100184**
Channel							
Band		BII	BII	BII	BII	BII	BII
Elements	pcs.	1	2	3	4	5	5
Gain	dBi	2.1	4.0	6.0	7.0	8.0	8.0
Front to back ratio	dB	0	10	16	18	20	20
Beamwidth hor.	deg. (°)	± 90	± 37	± 35	± 32	± 27	± 27
Windload	N	28	40	56	64	80	80
Weight	kg	0.3	1.1	1.3	1.5	1.7	1.7
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Dimensions							
length	mm	100	820	1188	1572	1932	1932
width	mm	1500	1577	1577	1577	1577	1577
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MTH	MT	MT	MT	MT	MTD
Remarks							Split beam



FM 3 elem.

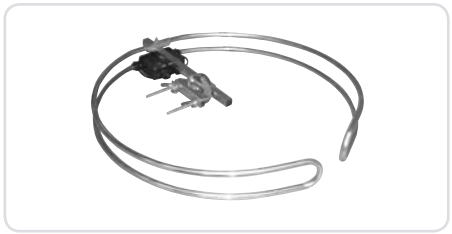


FM 5 elem.

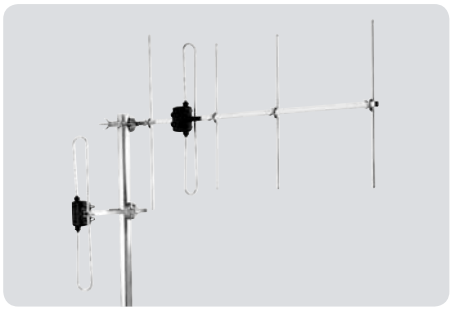
Triax band II (FM) and DAB aerial

FM Zigma

The FM omni-directional aerial is specially designed for areas with many powerful stations transmitting from many directions.
FM omni-directional is available with mast brackets or window brackets.
The Zigma aerial is a dual-polarisation 1 element aerial.
The DAB aerial covers the frequency range 200-240 MHz (VHF Ch. 9-13)



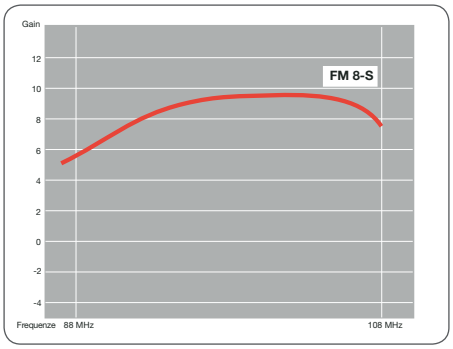
FM Omni



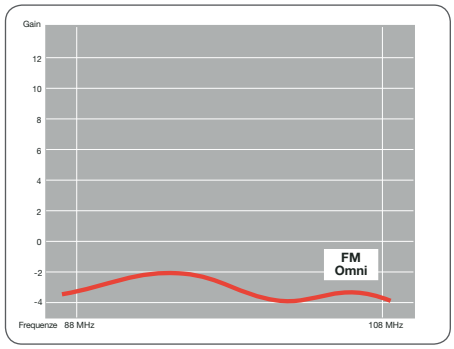
DAB 1 - DAB 5

Technical data

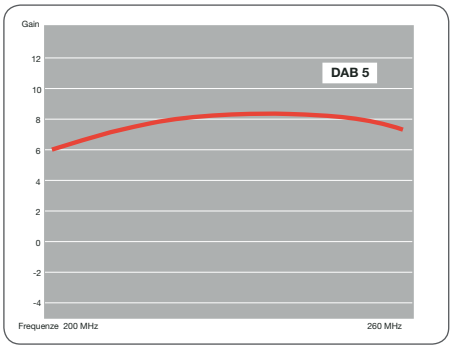
Type		FM 8	FM Omni Mast	FM Omni Window	FM Zigma	DAB 1	DAB 5
Art. No.		100197	100189	100192	100193	100170	100171
Channel						9-13	9-13
Band		BII	BII	BII	BII	BIII	BIII
Elements	pcs.	8	1	1	1	1	5
Gain	dBi	9.5	- 2.0	- 2.0	- 1.0	2.2	8.0
Front to back ratio	dB	24	0	0	0		> 12
Beamwidth hor.	deg. (°)	± 21	± 180	± 180	± 45H/± 180V	± 180	± 33-43
Windload	N	128	16	16	31	20	43
Weight	kg	3.2	0.6	0.6	0.7	0.45	0.75
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Dimensions							
length	mm	2383	Ø 505	Ø 505	550	400	1095
width	mm	1699			1140	625	705
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MTD	MT	MTHV	MT	MTH	MTH
Remarks		Split beam				200-240 MHz	200-240 MHz



FM 8S elem.



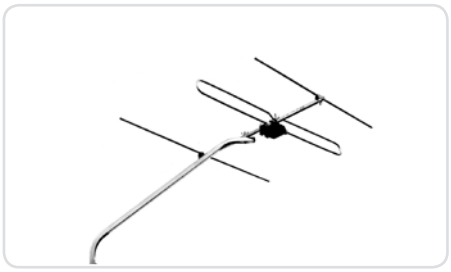
FM Omni-directional



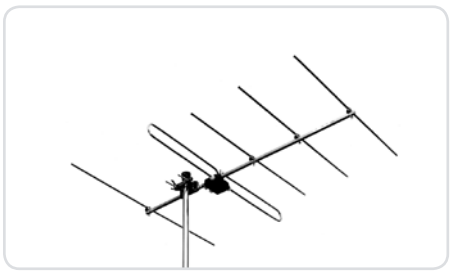
DAB 5

Triax band III wideband aerial (VHF)

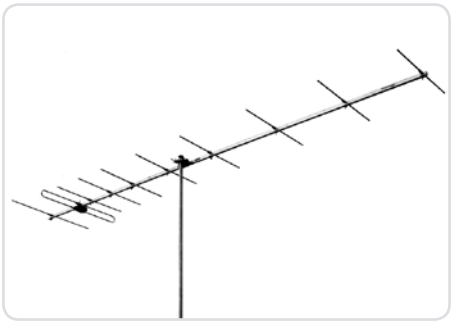
Band III aerials are wideband, channel or channel group types for horizontal or vertical mounting. The aerials are provided with brackets for masts up to Ø60 mm or with window brackets.



Channel 5-12 - 4 elem. window



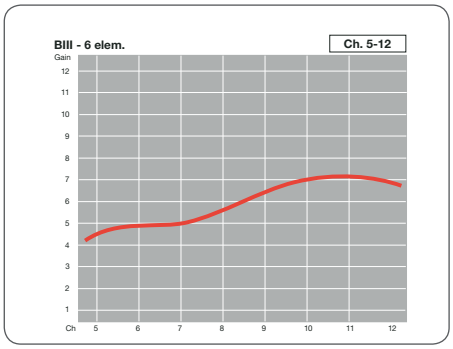
Channel 5-12 - 6 elem.



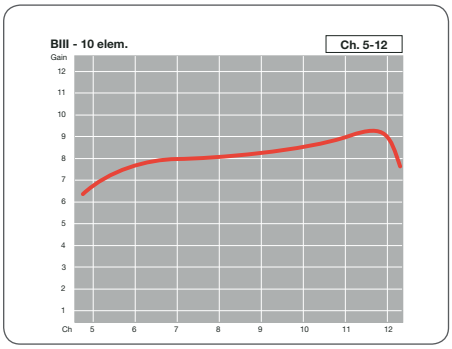
Channel 5-12 - 10 elem.

Technical data

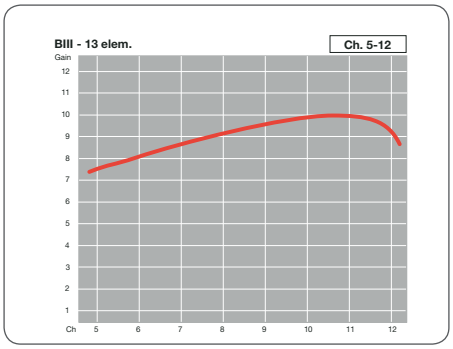
Type Art. No.		Channel 5-12 104663	Channel 5-12 106663	Channel 5-12 103861	Channel 5-12 103862	Channel 5-12 104665	Channel 5-12 104579	Channel 5-11 100582
Channel		5-12	5-12	5-12	5-12	5-12	5-12	5-11
Band		BIII	BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	4	4	4	6	6	10	13
Gain	dBi	5.0	5.0	5.0	7.5	7.5	9.5	11.5
Front to back ratio	dB	14	14	14	16	16	22	25
Beamwidth hor.	deg. (°)	± 34	± 34	± 34	± 26	± 26	± 23	± 18
Windload	N	34	34	34	48	48	78	120
Weight	kg	0.7	0.7	0.7	0.9	0.9	1.3	3.0
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
length	mm	852	852	852	1410	1410	1735	3580
width	mm	800	800	800	800	800	880	810
Connector		SC-type	SC-type	F-con	F-con	SC-type	SC-type	SC-type
Type		MTH	MTHV	MTHV	MTH	MTH	MTHD	MTD
Remarks								Split beam



Ch. 5-12 6 elem.



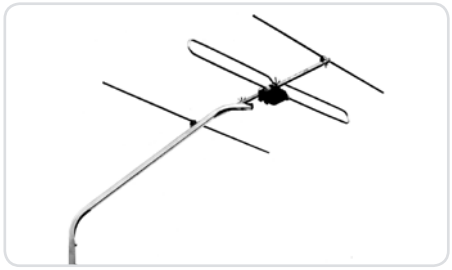
Ch. 5-12 10 elem.



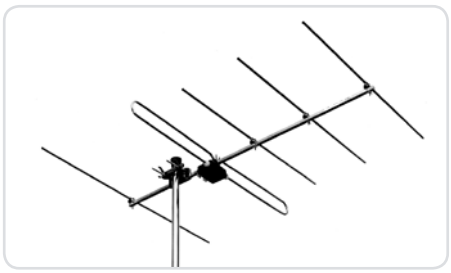
Ch. 5-12 13 elem.

Triax band III group channel aerial (VHF)

Channel 5-6 - 4 elem.



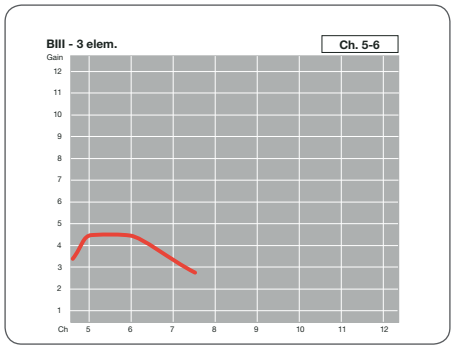
Channel 7-8 - 3 elem.



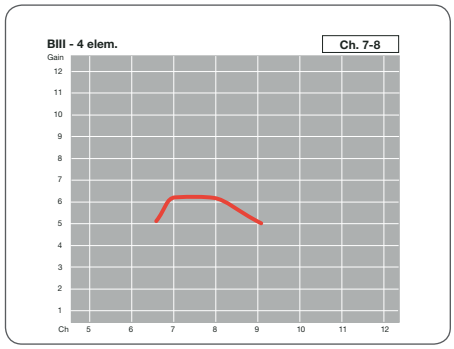
Channel 9-11 - 5 elem.

Technical data

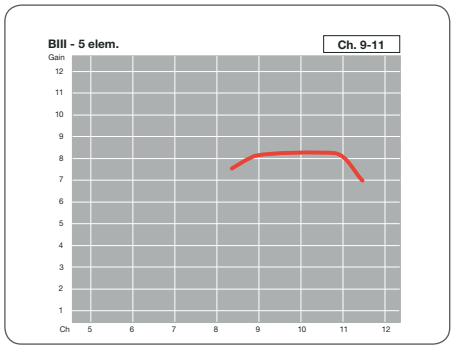
Type		Channel 5-6	Channel 5-6	Channel 5-6	Channel 7-8	Channel 7-8	Channel 7-8	Channel 9-11	Channel 9-11
Art. No.		**104602**	**104603**	**100604**	**104622**	**104623**	**100624**	**104643**	**100644**
Channel		5-6	5-6	5-6	7-8	7-8	7-8	9-11	9-11
Band		BIII	BIII	BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	3	4	5	3	4	5	4	5
Gain	dBi	4.5	6.0	8.0	4.5	6.0	8.0	6.0	8.0
Front to back ratio	dB	16	13	15	16	13	15	13	15
Beamwidth hor.	deg. (°)	± 35	± 32	± 28	± 35	± 32	± 28	± 32	± 28
Windload	N	29	34	38	29	34	38	34	38
Weight	kg	0.65	0.75	0.85	0.65	0.75	0.85	0.75	0.85
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions									
length	mm	610	852	988	610	852	988	852	988
width	mm	845	845	845	845	845	845	845	845
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MTH	MTH	MT	MTH	MTH	MT	MTH	MT
Remarks									



Ch. 5-6 3 elem.



Ch. 7-8 4 elem.

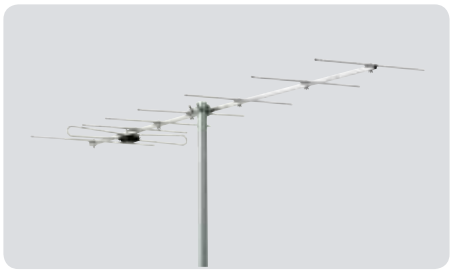


Ch. 9-11 5 elem.

Triax band III single channel aerial (VHF)

Technical data

Type Art. No.		Channel 5 100205	Channel 5 100207	Channel 5 100229	Channel 5 100232
Channel		5	5	5	5
Band		BIII	BIII	BIII	BIII
Elements	pcs.	6	8	10	13
Gain	dBi	8.5	9.5	11.0	13.5
Front to back ratio	dB	19	21	24	26
Beamwidth hor.	deg. (°)	± 23	± 21	± 18	± 17
Windload	N	48	56	96	104
Weight	kg	1.3	1.8	2.8	3.3
Material		Alu.	Alu.	Alu.	Alu.
Dimensions					
length	mm	1790	2750	2973	3675
width	mm	870	875	880	880
Connector		SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MTD	MTD
Remarks				Split beam	Split beam

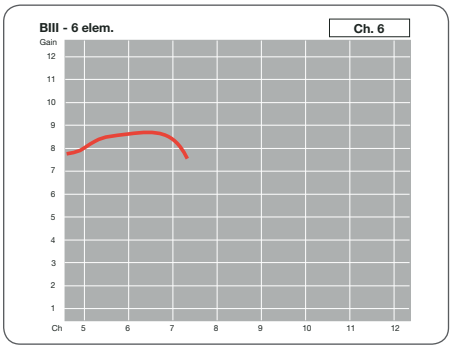


Ch. 6 - 8 elem.

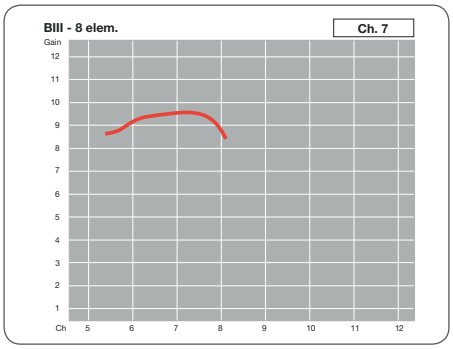
Ch. 8 - 10 elem.

Technical data

Type Art. No.		Channel 6 100255	Channel 6 100257	Channel 6 100279	Channel 6 100282	Channel 7 100305	Channel 7 100307	Channel 7 100329	Channel 7 100332
Channel		6	6	6	6	7	7	7	7
Band		BIII	BIII	BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	6	8	10	13	6	8	10	13
Gain	dBi	8.5	9.5	11.0	13.5	8.5	9.5	11.0	13.5
Front to back ratio	dB	19	21	24	26	19	21	24	26
Beamwidth hor.	deg. (°)	± 23	± 21	± 18	± 17	± 23	± 21	± 18	± 17
Windload	N	48	56	88	96	48	56	88	96
Weight	kg	1.3	1.8	2.8	3.3	1.3	1.8	2.8	3.3
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions									
length	mm	1730	2612	2883	3675	1689	2487	2817	3675
width	mm	840	850	850	8500	810	815	810	840
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MTD	MTD	MT	MT	MTD	MTD
Remarks				Split beam	Split beam			Split beam	Split beam



Ch. 6 - 6 elem.



Ch. 7 - 8 elem.

Triax band III single channel aerial (VHF)

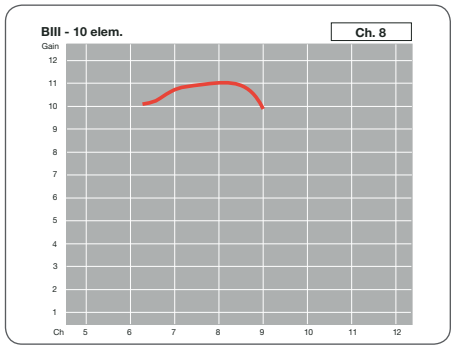
Technical data

Type Art. No.		Channel 8 100355	Channel 8 100357	Channel 8 100379	Channel 8 100382	Channel 9 100405	Channel 9 100407	Channel 9 100429	Channel 9 100432
Channel		8	8	8	8	9	9	9	9
Band		BIII	BIII	BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	6	8	10	13	6	8	10	13
Gain	dBi	8.5	9.5	11.0	13.5	8.5	9.5	11.0	13.5
Front to back ratio	dB	19	21	24	26	19	21	24	26
Beamwidth hor.	deg. (°)	± 23	± 21	± 18	± 17	± 23	± 21	± 18	± 17
Windload	N	48	56	84	98	48	56	84	98
Weight	kg	1.2	1.7	2.8	3.2	1.1	1.6	2.7	3.1
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions									
length	mm	1607	2424	2662	3675	1556	2358	2553	3675
width	mm	775	790	780	810	750	770	760	785
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MTD	MTD	MT	MT	MTD	MTD
Remarks				Split beam	Split beam			Split beam	Split beam

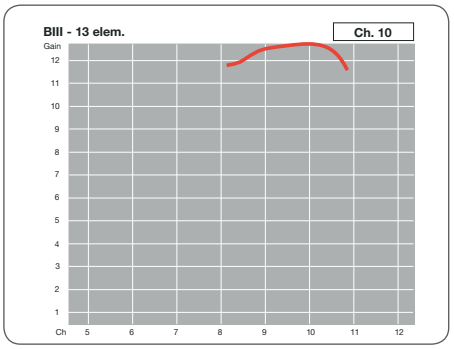
Technical data

Type Art. No.		Channel 10 100455	Channel 10 100457	Channel 10 100479	Channel 10 100482	Channel 11 100529	Channel 11 100532
Channel		10	10	10	10	11	11
Band		BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	6	8	10	13	10	13
Gain	dBi	8.5	9.5	11.0	13.5	11.0	13.0
Front to back ratio	dB	19	21	24	26	24	26
Beamwidth hor.	deg. (°)	± 23	± 21	± 18	± 17	± 18	± 17
Windload	N	48	56	82	88	64	80
Weight	kg	1.1	1.6	2.7	3.0	2.7	3.0
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions							
length	mm	1505	2280	2543	3675	852	1410
width	mm	725	740	740	765	800	800
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MTD	MTD	MTD	MTD
Remarks				Split beam	Split beam	Split beam	Split beam

Ch. 11 - 13 elem.



Ch. 8 - 10 elem.



Ch. 10 - 13 elem.

Triax Digi - band IV/V aerial (UHF)

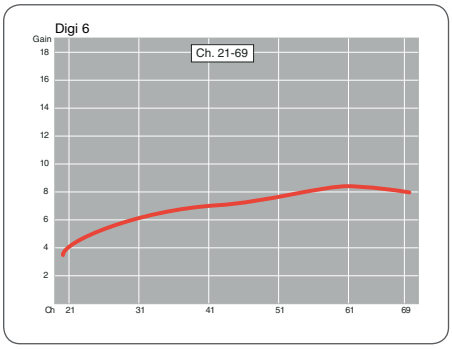
TRIAX Digi aerials have been designed for UHF-reception and are available in band IV (ch 21-37) and band IV/V (ch 21-69) versions, featuring high gain and channel selectivity. With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception. The Digi 6 aerial is only available in channel 21-69 versions. The aerials are made of an aluminium, magnesium and manganese alloy which is extremely resistant to sea fog and acid rain.

Digi 6W

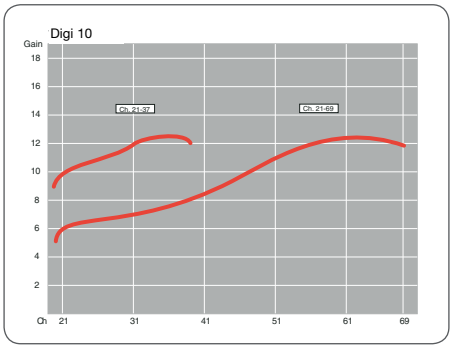
Digi 10

Technical data

Type **Art. No.**		**Digi 6W** *UHF* **108200**	**Digi 6W** *UHF* **108800**	**Digi 6W** *UHF* **108201**	**Digi 10A** *UHF* **108310**	**Digi 10W** *UHF* **108311**	**Digi 10W** *UHF* **108808**	**Digi 10W** *UHF* **108319**
Channel		21-69	21-69	21-69	21-37	21-69	21-69	21-69
Band		BIV/V	BIV/V	BIV/V	BIV	BIV/V	BIV/V	BIV/V
Elements	pcs.	6	6	6	10	10	10	10
Gain	dBi	8.5	8.5	8.5	12.5	12.5	12.5	12.5
Front to back ratio	dB	17	17	17	21	21	21	21
Beamwidth hor.	deg. (°)	± 25	± 25	± 25	± 23	± 23	± 23	± 23
Windload	N	14	14	14	26	22	22	22
Weight	kg	0.45	0.45	0.45	0.70	0.65	0.65	0.65
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions length width	 mm mm	 718 260	 718 260	 718 260	 1182 350	 975 350	 975 350	 975 350
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Remarks			w. filter	window bracket			w. filter	window bracket



Digi 6 - 6 elem. wideband



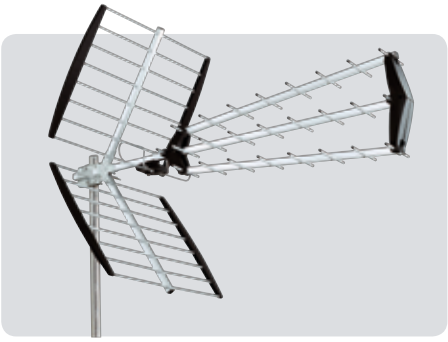
Digi 10 - 10 elem.

Triax Digi - band IV/V aerial (UHF)

All of the Digi aerials are provided with the snap lock dipole house, made from UV-resistant plastic, which protects the balun with capacitive signal transfer against corrosion.
The aerials are provided with adjustable elevation mast brackets designed for masts up to Ø60 mm.

Digi 14

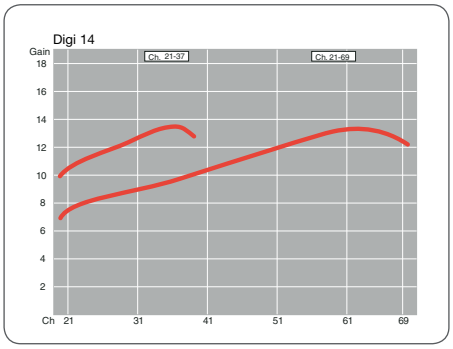
Digi 18 w. support boom



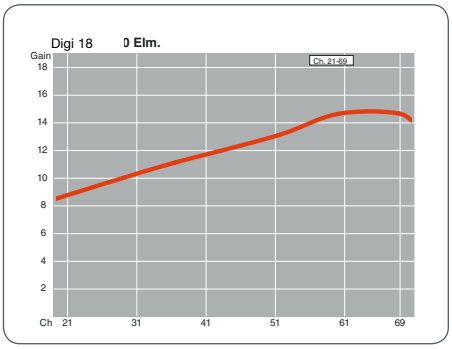
Digi 343

Technical data

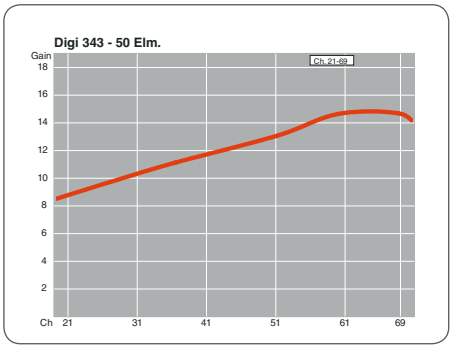
Type		Digi 14A *UHF*	Digi 14W *UHF*	Digi 14W *UHF*	Digi 18A *UHF*	Digi 18W *UHF*	Digi 343 *UHF*
Art. No.		**108340**	**108341**	**108612**	**108360**	**108361**	**108970**
Channel		21-37	21-69	21-69	21-37	21-69	21-69
Band		BIV	BIV/V	BIV/V	BIV	BIV/V	BIV/V
Elements	pcs.	14	14	14	18	18	43
Gain	dBi	13.5	13.5	13.5	14.5	14.5	15.5
Front to back ratio	dB	25	25	25	25	25	27
Beamwidth hor.	deg. (°)	± 21	± 21	± 21	± 18	± 18	± 15
Windload	N	58	54	54	65	59	150
Weight	kg	0.80	0.77	0.77	1.05	1.05	1.6
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions							
length	mm	1182	967	967	1836	1446	1056
width	mm	420	420	420	420	420	540
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	F-type
Remarks				w. filter	w. support boom		



Digi 14 elem.



Digi 18 elem.



Digi 343 - 50 elem.

Triax Yagi - band IV/V aerial (UHF)

TRIAX Yagi aerials have been designed for UHF-reception and are available in band IV (ch 21-37) and band IV/V (ch 21-69) versions, featuring high gain and channel selectivity. With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception. The Yagi 6 aerial is only available in channel 21-69 versions. The aerials are made of an aluminium, magnesium and manganese alloy which is extremely resistant to sea fog and acid rain.

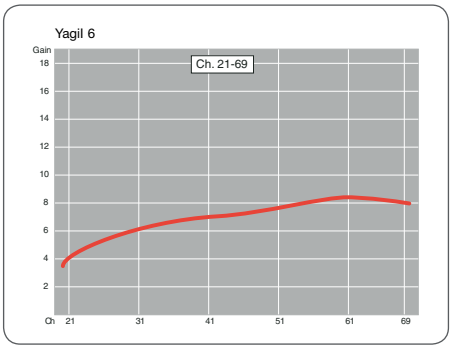
Yagi 6W

Yagi 10

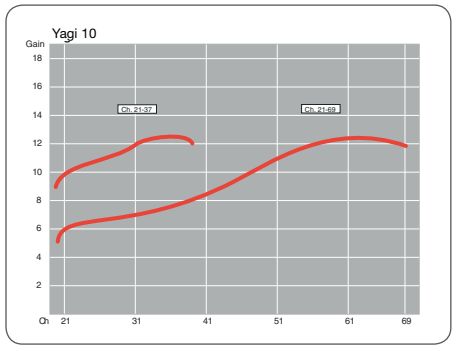
Yagi 15

Technical data

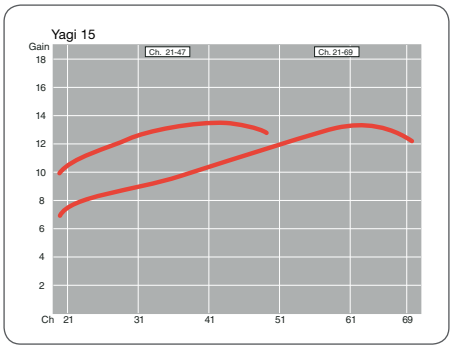
Type		Yagi 6	Yagi 10	Yagi 10	Yagi 15	Yagi 15	Yagi 15	Yagi 15
Art. No.		**107205**	**107310**	**107317**	**107347**	**107348**	**107349**	**107350**
Channel		21-69	21-37	21-69	21-47	28-56	36-69	21-69
Band		BIV/V	BIV	BIV/V	BIV/V	BIV/V	BIV/V	BIV/V
Elements	pcs.	6	10	10	15	15	15	15
Gain	dBi	8.5	12.5	12.5	13.5	13.5	13.5	13.5
Front to back ratio	dB	17	21	21	25	25	25	25
Beamwidth hor.	deg. (°)	± 25	± 23	± 23	± 21	± 21	± 21	± 21
Windload	N	14	26	22	58	54	54	54
Weight	kg	0.45	0.70	0.65	0.80	0.77	0.77	0.77
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
length	mm	718	1182	975				
width	mm	260	350	350				
Connector		**F-con**	**F-con**	**F-con**	**F-con**	**F-con**	**F-con**	**F-con**
Remarks								



Yagi 6 - 6 elem. wideband



Yagi 10 - 10 elem.



Yagi 15 - 15 elem.

Triax Yagi - band IV/V aerial (UHF)

All of the YAGI aerials are provided with the snap lock dipole house, made from UV-resistant plastic, which protects the new and improved balun with capacitive signal transfer against corrosion. The Yagi 18 channelized aerial is designed for the highest gain and F/B ratio within a narrow frequency range. Yagi 18 channelized covers 3 to 7 channels. It simultaneously enhances the wanted and rejects the unwanted signals giving superior reception quality. The aerials are provided with adjustable elevation mast brackets designed for masts up to Ø60 mm.

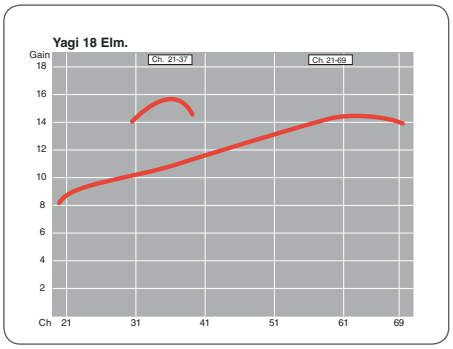
Yagi 18 single pack channelized aerials appear from the below table.

Yagi 18 types:	**Art. No.**	**Yagi 18 types:**	**Art. No.**
Ch. 21 - 23 w. support boom	108269	Ch. 39 - 43 w. support boom	108264
Ch. 24 - 26 w. support boom	108268	Ch. 44 - 49 w. support boom	108262
Ch. 27 - 30 w. support boom	108265	Ch. 50 - 55 w. support boom	108267
Ch. 31 - 34 w. support boom	108266	Ch. 56 - 62 w. support boom	108263
Ch. 35 - 38 w. support boom	108257	Ch. 63 - 69 w. support boom	108259

Yagi 18 w. support boom

Technical data

Type		**Yagi 18** *Ch. 21-23*	**Yagi 18**	**Yagi 18** *Ch. 21-23*	**Yagi 18** *Ch. 35-38*	**Yagi 18** *Ch. 50-55*
Art. No.		**107269**	**107368**	**108269**	**108257**	**108267**
Channel		21-23	21-69	21-23	35-38	50-55
Band		BIV/V	BIV/V	BIV/V	BIV/V	BIV/V
Elements	pcs.	18	18	18	18	18
Gain	dBi	15.5	14.5	15.5	15.5	15.5
Front to back ratio	dB	25	25	25	25	25
Beamwidth hor.	deg. (°)	± 17	± 18	± 17	± 17	± 17
Windload	N	64	59	64	64	64
Weight	kg	0.95	1.05	0.95	0.95	0.95
Material		Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions						
length	mm	1800	1446	1800	1800	1800
width	mm	350	420	350	350	350
Connector		**F-con**	**F-con**	SC-type	SC-type	SC-type
Remarks						



Yagi 18 elem.

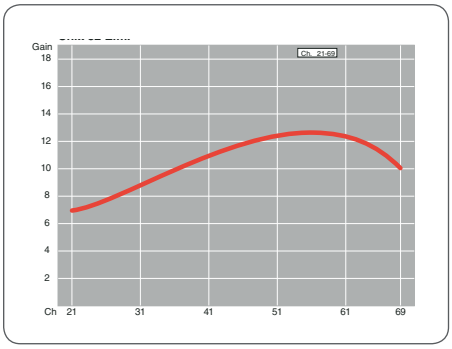
Triax UNIX 32 - band IV/V aerial (UHF)

TRIAX UNIX aerials have been designed for UHF-reception.
With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception. The aerials have been designed to ensure optimum reception even under difficult conditions. Easy and uncomplicated mounting is ensured by the snap-lock dipole house made of UV-resistant plastic. The balun with capacitive signal transfer from the dipole ensures matching adjustment with lower insertion loss. At the same time galvanic corrosion between the different materials in contact with each other is avoided. The aerials are made of salt water resistant aluminium, ensuring long service life.

UNIX 32

Technical data

Type **Art. No.**		**UNIX 32** *digital* **108750**	**UNIX 32** *digital* **107750**
Channel		21-69	21-69
Band		BIV/V	BIV/V
Elements	pcs.	32	32
Gain	dBi	12.5	12.5
Front to back ratio	dB	24	24
Beamwidth hor.	deg. (°)	± 20	± 20
Windload	N	58	58
Weight	kg	1.45	1.45
Material		Alu.	Alu.
Dimensions length width	 mm mm	 791 500	 791 500
Connector		SC-type	**F-con**
Remarks			



UNIX 32 elem.

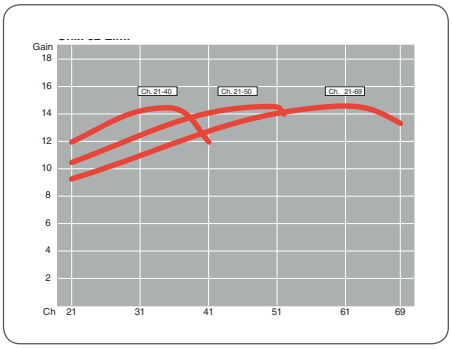
Triax UNIX 52 - band IV/V aerial (UHF)

UNIX 52

TRIAX UNIX aerials have been designed for UHF-reception and are available in a 52 element version for channel groups as well as wideband.
With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception. The aerials have been designed to ensure optimum reception even under difficult conditions.
Easy and uncomplicated mounting is ensured by the snap-lock dipole house made of UV-resistant plastic. The balun with capacitive signal transfer from the dipole ensures matching adjustment with lower insertion loss. At the same time galvanic corrosion between the different materials in contact with each other is avoided. The aerials are made of salt water resistant aluminium, ensuring long service life.

Technical data

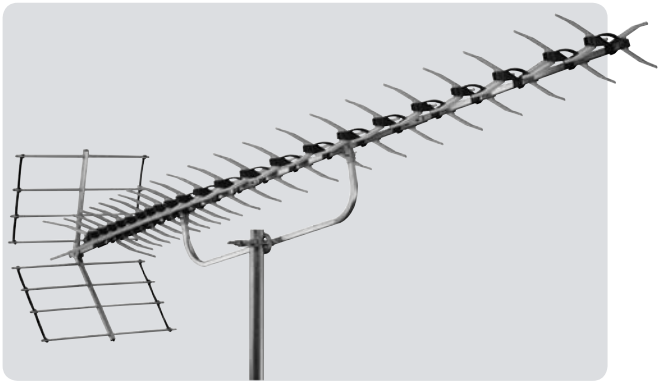
Type		**UNIX 52**	**UNIX 52**	**UNIX 52** *digital*	**UNIX 52**	**UNIX 52**	**UNIX 52** *digital*	**UNIX 52** *digital*
Art. No.		**108751**	**108752**	**108753**	**107770**	**107766**	**107767**	**107776**
Channel		21-40	21-50	21-69	21-40	21-50	21-69	21-69
Band		Group	Group	BIV/V	Group	Group	BIV/V	BIV/V
Elements	pcs.	52	52	52	52	52	52	52
Gain	dBi	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Front to back ratio	dB	25	25	25	25	25	25	25
Beamwidth hor.	deg. (°)	± 15	± 15	± 15	± 15	± 15	± 15	± 15
Windload	N	96	96	96	96	96	96	96
Weight	kg	1.72	1.68	1.63	1.72	1.68	1.63	1.63
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
length	mm	1512	1410	1297	1512	1410	1297	1297
width	mm	500	500	500	500	500	500	500
Connector		SC-type	SC-type	SC-type	**F-con**	**F-con**	**F-con**	**F-con**
Remarks								



UNIX 52 elem.

Triax UNIX 100 - band IV/V aerial (UHF)

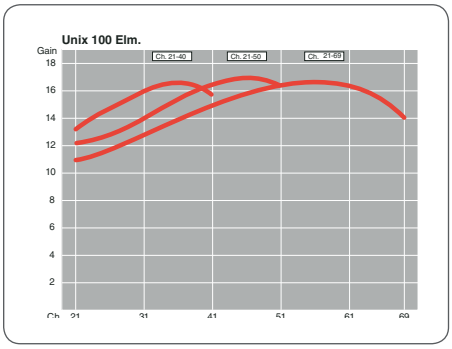
TRIAX UNIX aerials have been designed for UHF-reception and are available in a 100 element version for channel groups as well as wideband. With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception. The aerials have been designed to ensure optimum reception even under difficult conditions. Easy and uncomplicated mounting is ensured by the snap-lock dipole house made of UV-resistant plastic. The newly developed balun with capacitive signal transfer from the dipole ensures matching adjustment with lower insertion loss. At the same time galvanic corrosion between the different materials in contact with each other is avoided. The aerials are made of salt water resistant aluminium, ensuring long service life. UNIX 100 is provided with a support boom, and all types are provided with elevation type mast brackets.



UNIX 100

Technical data

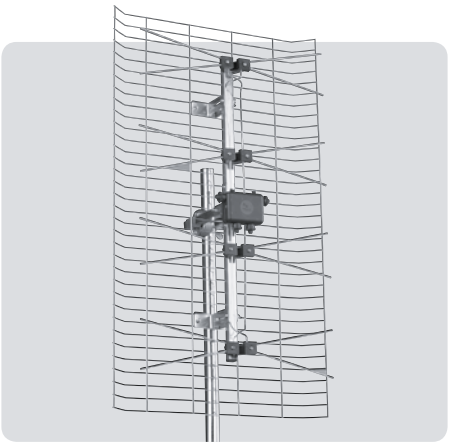
Type		**UNIX 100**	**UNIX 100**	**UNIX 100**	**UNIX 100**	**UNIX 100**	**UNIX 100**
				digital		*digital*	*digital*
Art. No.		**108754**	**108755**	**108756**	**107768**	**107769**	**107756**
Channel		21-40	21-50	21-69	21-50	21-69	21-69
Band		Group	Group	BIV/V	Group	Group	BIV/V
Elements	pcs.	100	100	100	100	100	100
Gain	dBi	17.0	17.0	17.0	17.0	17.0	17.0
Front to back ratio	dB	27	27	27	27	27	27
Beamwidth hor.	deg. (°)	± 11	± 11	± 11	± 11	± 11	± 11
Windload	N	176	152	152	176	152	152
Weight	kg	3.19	2.50	2.46	2.50	2.46	2.46
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions							
length	mm	2887	2332	2257	2332	2257	2257
width	mm	500	500	500	500	500	500
Connector		SC-type	SC-type	SC-type	**F-con**	**F-con**	**F-con**
Remarks							



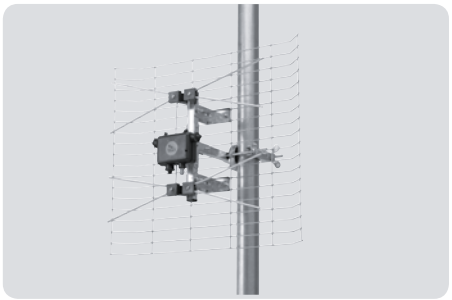
UNIX 100 elem.

Triax BB Grid - band IV/V aerial (UHF)

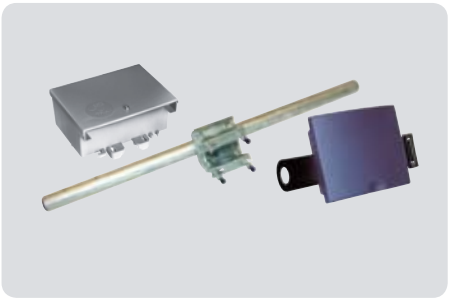
With high gain and an excellent front to back ratio this aerial ensures perfect TV reception. The reflector grid is galvanised ensuring long service life.
The aerial has a very even gain curve and is suitable for stacking, e.g. on a special tube for 2 or a double tube for 4 aerials.
The UHF grid aerials are packed in cartons of two.



UHF BB Grid



UHF BB Mini-Grid



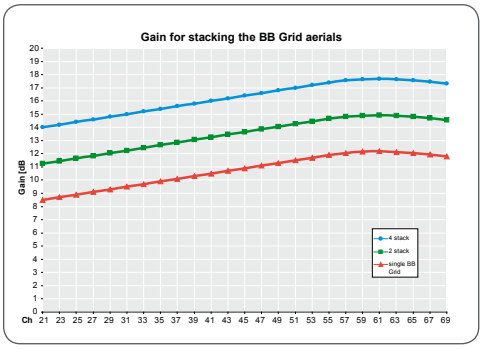
Accessories for stacking BB Grid
- Stackingfilter - see page 59
- Mounting pipe - see page 67
- Mastamplifier - see page 32-48

Technical data

Type Art. No.		BB Mini-Grid 108010	BB Grid *digital* 108011	2 x BB Grid 108013	4 x BB Grid 2 x 108013
Channel		21-69	21-69	21-69	21-69
Band		BIV/V	BIV/V	BIV/V	BIV/V
Elements	pcs.	8	16	2 x 16	2 x 16
Gain	dBi	6.0	12.0	15.0	17.5
Front to back ratio	dB	28	20	25	28
Beamwidth hor. ver.	deg. (°) deg. (°)	± 34 ± 20	± 34 ± 20	± 17 ± 20	± 17 ± 10
Windload	N	38	71	196	392
Weight	kg	1.25	2.20	7.60	15.2
Material		Alu.	Alu.	Alu.	Alu.
Dimensions length width	 mm mm	 480 480	 840 480	 840 970	 1690 970
Connector		SC-type	SC-type	SC-type	SC-type
Remarks					

BB Grid - 2 stacking

BB Grid - 4 stacking

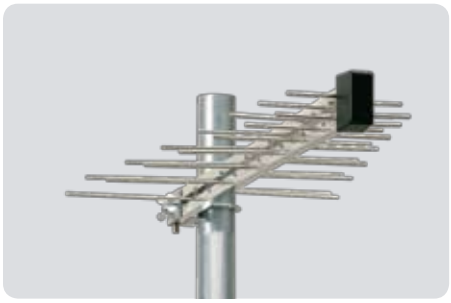


Gain for single and stacked BB Grid aerial

Triax Log-periodic aerial (VHF/UHF - UHF)

A log-periodic aerial is especially suitable for poor reception conditions, with reflection (shadows), but where the signal level is OK.

Log-periodic VHF/UHF

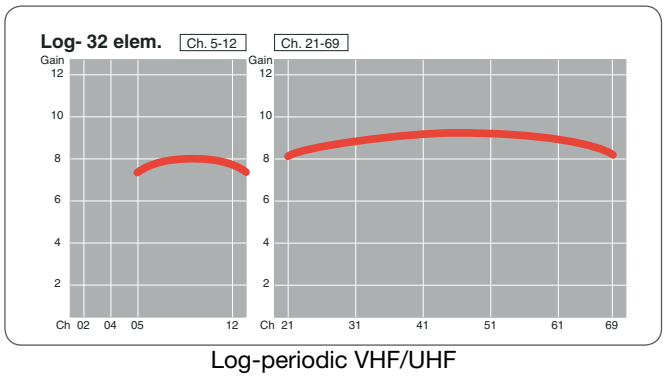


Log-periodic UHF (108678)

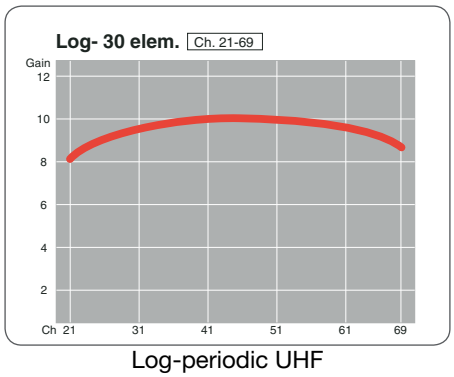
Log-periodic UHF (108680)

Technical data

Type		Log-periodic VHF/UHF	Log-periodic UHF	Log-periodic UHF
Art. No.		**108679**	**108678**	**108680**
Channel		5-12/21-69	21-69	21-69
Band		BIII/BIV/V	BIV/V	BIV/V
Elements	pcs.	32	28	30
Gain	dBi	8.0/9.0	8.0	10.0
Front to back ratio	dB	> 25	> 22	> 30
Beamwidth hor.	deg. (°)	± 25	± 28	± 25
ver.	deg. (°)	± 20		
Windload	N	39	25	30
Weight	kg	0.70	0.54	0.60
Material		Alu.	Alu.	Alu.
Dimensions				
length	mm	1230	770	1210
width	mm	850	320	320
Connector		SC-type	**F-con**	**F-con**
Remarks				



Log-periodic VHF/UHF

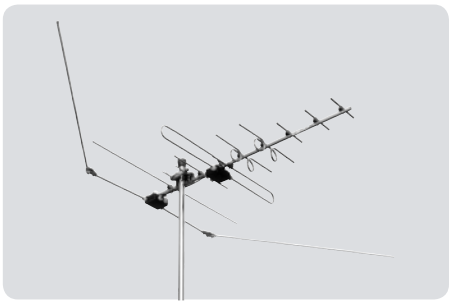


Log-periodic UHF

Triax Combi aerial (VHF/UHF)

The combined aerials are designed for VHF/UHF reception and ensure perfect reception of the signals. All types are made of high-quality material and are extremely resistant to sea fog and hostile weather conditions.
The aerials are provided with mast brackets designed for masts up to Ø60 mm.

Combi 2/10

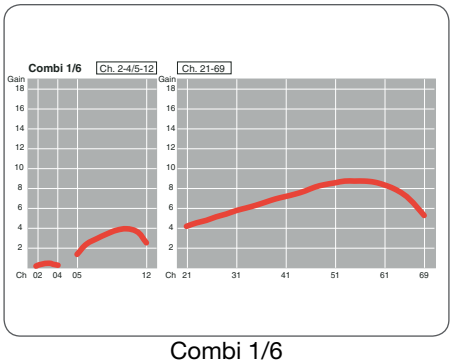


Combi 13

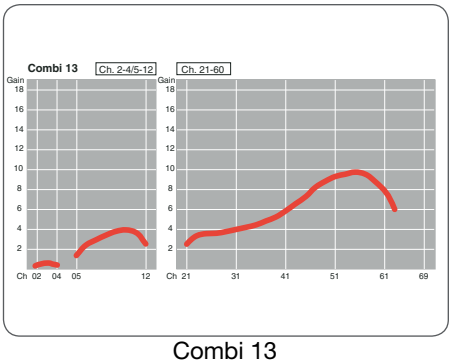
Combi 12 Window

Technical data

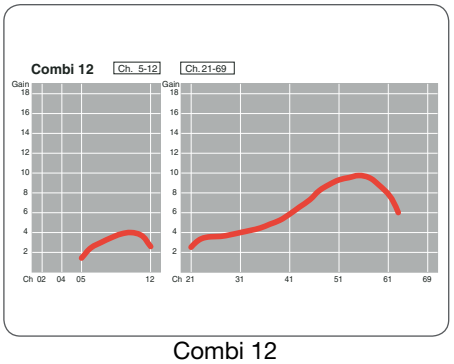
Type Art. No.			Combi 1/6 108681	Combi 13 108692	Combi 2/10 108682	Combi 2/10 108684	Combi 12 Mast 108936	Combi 12 Window 108937
Channel			2-4/21-69	2-12/21-69	2/21-60	3-4/21-60	5-12/21-60	5-12/21-60
Band			BIII/BIV-V	VHF/BIV-V	BI/BIV-V	BI/BIV-V	BIII/BIV-V	BIII/BIV-V
Elements		pcs.	1/6	1/4/8	2/10	2/10	4/8	4/8
Gain	VHF UHF	dBi dBi	0.0 8.5	0.0/4.0 8.5	2.0 8.0/12.0	2.0 8.0/12.0	4.0 4.0/9.0	4.0 4.0/9.0
Front to back ratio	- hor. - ver.	dB dB	0.0 15.0	0.0/12.0 15.0	9.0 12.0	9.0 12.0	12.0 15.0	12.0 15.0
Beamwidth	- hor. - ver.	deg. (°) deg. (°)	± 40 ± 25	± 35 ± 15	± 35 ± 23	± 35 ± 23	± 32 ± 15	± 32 ± 15
Windload		N	43	50	80	80	34	34
Weight		kg	1.70	1.20	2.50	2.50	0.75	0.75
Material			Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
	length	mm	805	966	2117	2117	866	866
	width	mm	1240	1950	2730	2730	855	855
Connector			SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type			MTH	MTH	MTH	MTH	MTH	MTH



Combi 1/6



Combi 13



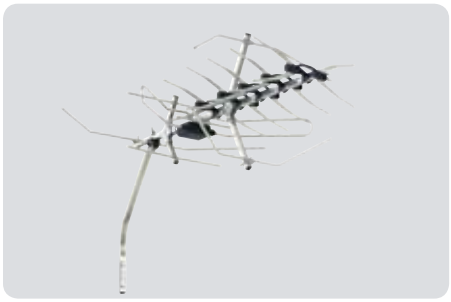
Combi 12

Triax Combi aerial (VHF/UHF)

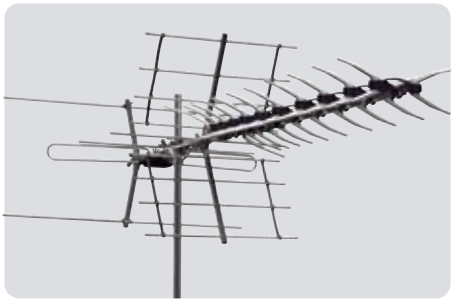
The combined aerials are different from previous aerials in many respects such as

- Improved UHF/VHF gain
- Increased number of elements to provide the aerials with even more gain
- New balun which ensures improved matching
- Easy to install
- Elevation type mast brackets included

Combi 20



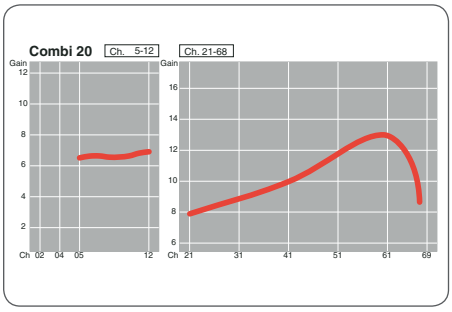
Combi 27 Window



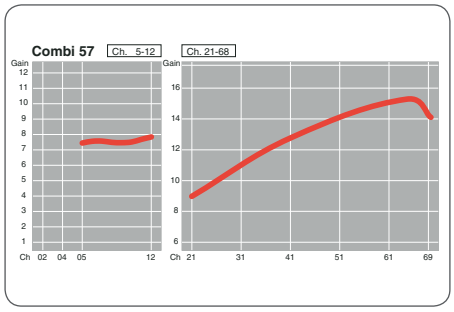
Combi 57

Technical data

Type			Combi 20	Combi 27 *Window*	Combi 27 *Mast*	Combi 57
Art. No.			**108694**	**108687**	**108688**	**108696**
Channel			5-12/21-69	5-12/21-69	5-12/21-69	5-12/21-69
Band			BIII/BIV-V	BIII/BIV-V	BIII/BIV-V	BIII/BIV-V
Elements		pcs.	5/15	4/23	4/23	5/52
Gain	VHF	dBi	6.0	7.0	7.0	8.0
	UHF	dBi	11.5	13.0	13.0	14.5
Front to back ratio - hor.		dB	12.0	17.0	17.0	17.0
- ver.		dB	17.0	25.0	25.0	25.0
Beamwidth - hor.		deg. (°)	± 35	± 31	± 31	± 31
- ver.		deg. (°)	± 25	± 22	± 22	± 15
Windload		N	56	72	72	146
Weight		kg	1.00	1.80	1.80	2.90
Material			Alu.	Alu.	Alu.	Alu.
Dimensions						
length		mm	815	490	490	1725
width		mm	760	880	880	880
Connector			SC-type	SC-type	SC-type	SC-type
Packing size			1	1	1	1
Type			MTH	MTH	MTH	MTH



Combi 20



Combi 57

Triax UFO aerial (VHF/UHF - digital)

UFO Marine digital

The antenna has been surface-treated to resist corrosion from salt water for many years. Available with special bracketry for easy mounting on sailing boats and power boats.

UFO Marine digital

UFO Home digital

A small and discreet antenna which can be placed almost everywhere on the house, roof or balcony. Can be placed horizontally or vertically.

UFO Home digital

Technical data

Type Art. No.			UFO Marine *Digital* 109680	UFO Marine *Digital* 109683	UFO Home *Digital* 109690	UFO Home *Digital* 109694	UFO Home *Digital* 109695
Frequency range	FM VHF UHF	MHz MHz MHz	87.5-108 174-230 470-862	87.5-108 174-230 470-862	 470-862	 470-862	47-108 174-230 470-862
Channels			FM/5-12/21-69	FM/5-12/21-69	21-69	21-69	5-12/21-69
Elements		pcs.	1	1	1	1	1
Opening angle	ver./hor.	deg.	90/360	90/360	90/360	90/360	90/360
Windload		N	5.5	5.5	5.5	5.5	5.5
Gain		dB	28	28	16	16	28
Noise figure		dB	2.5	2.5	2.5	2.5	2.5
Max. output voltage		dBµV	108	108	100	108	100
Supply voltage		V	12-24	12-24	12	5	5
Power consumption		mA	50	50	20	20	20
Dimensions	length width height	mm mm mm	325 255 65	325 255 65	325 255 65	325 255 65	325 255 65
Connector			F-connectors	F-connectors	F-connectors	F-connectors	F-connectors
Power supply			IFP 529 (battery)	IFP 529 (battery)	230V		
Packing size			1	1	1	1	1
Bracketry			Universal	Centre mount	Mast bracket Ø38-60 Plastic base	Mast bracket Ø38-60 Plastic base	Mast bracket Ø38-60 Plastic base

Railing mount
Art. No. 133221

Plastic base
Art. No. 133220

Centre mount
Art. No. 133225

Triax UFO aerial (VHF/UHF - digital)

UFO Mobile digital

Available with bracketry which can sustain the heavy wind loads to which the antenna is exposed during travel. Can be mounted on mast or directly on the caravan with a small, discreet bracket.

UFO Mobile digital

Technical data

Type Art. No.			UFO Mobile *Digital* 109696	UFO Mobile *Digital* 109697	UFO Mobile *Digital* 109698	UFO Mobile *Digital* 109699	UFO Mobile *Digital* 109681
Frequency range	FM VHF UHF	MHz MHz MHz	 470-862	 470-862	 470-862	 470-862	 470-862
Channels			21-69	21-69	21-69	21-69	21-69
Elements		pcs.	1	1	1	1	1
Opening angle	ver./hor.	deg.	90/360	90 ver./360 hor.	90 ver./360 hor.	90 ver./360 hor.	90 ver./360 hor.
Windload		N	5.5	5.5	5.5	5.5	5.5
Gain		dB	16	16	16	16	16
Noise figure		dB	2.5	2.5	2.5	2.5	2.5
Max. output voltage		dBµV	108	108	100	100	100
Supply voltage		V	5	5	12	12	12
Power consumption		mA	20	20	20	20	20
Dimensions	length width height	mm mm mm	325 255 65	325 255 65	325 255 65	325 255 65	325 255 65
Connector			F-connectors	F-connectors	F-connectors	F-connectors	F-connectors
Power supply					IFP 529 (battery)	IFP 529 (battery)	IFP 502 (230V)
Packing size			1	1	1	1	1
Bracketry			Mast bracket Ø25-38	Centre mount	Mast bracket Ø25-38	Centre mount	Mast bracket Ø25-38

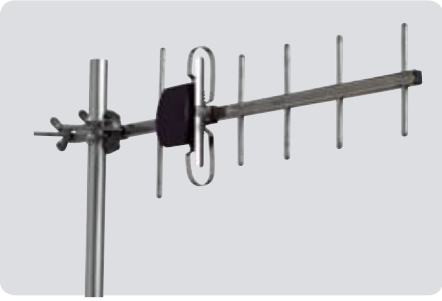
Plastic base
Art. No. 133220

Universal mount
Art. No. 133222

Mast bracket
Ø25-38 Art. No. 133224
Ø38-60 Art. No. 133223

Triax NMT and GSM aerial

TRIAX Yagi aerials for NMT and GSM reception have been designed for reception of the 2 mobile-phone band, featuring high gain and band selectivity. With their high gain and excellent front to back ratios, these aerials ensure superior reception where there is a weak signal from the mobile-transmitters.



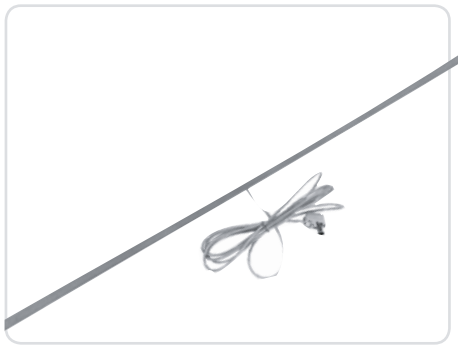
GSM aerial - 50 Ohm

Technical data

Type **Art. No.**		**GSM 900** *872-960* **109807**	**GSM 900** *872-960* **109812**
Channel	MHz	872-960	872-960
Band		GSM	GSM
Elements	pcs.	6	6
Gain	dBi	9.0	9.0
Front to back ratio	dB	15	15
Beamwidth hor.	deg. (°)	± 25	± 25
Windload	N	14	14
Weight	kg	0.50	0.50
Material		Alu.	Alu.
Dimensions length width	 mm mm	 710 260	 710 260
Connector		SC-type	SC-type
Type		Mastbracket	Window bracket
Packing size		1	1

Triax indoor aerial (DVB-T, VHF/UHF)

Small and very elegant passive and active indoor antenna, some especially designed for reception of DVB-T signals.
The DVB-T 300i antenna comes in an elegant blister pack and the indoor FM/TV aerial in a giftbox, ready for display in the shop.



Technical data

TYPE Art. No.			FM indoor aerial 88-108 MHz 108951	Indoor aerial Ch. 2-69 111000	DVB-T 300i - active aerial 111010
Channel		Ch. Ch.	BII	2-12 21-69	5-12 21-69
Frequency range		MHz MHz	88-108	47-862	174-230 470-862
Elements		Pcs.	1	1	1
Gain		dB			15.0
Noise figure (VHF/UHF)		dB			3.4/3.5
Max. output voltage (IMA3)		dBµV			93.0
Front to back ratio		dB			> 25.0
Beamwidth hor.		degrees	± 90	± 180	± 180
Windload		N			
Weight		kg	0.300		0.120
Material			Aluminium	Aluminium	Aluminium
Colour					Matt black
Dimensions	length width depth	mm mm mm	1500 10 10	1439 420	145 60 7.5
Connector			IEC - type	IEC - type	IEC - type
Voltage		V/DC			+ 4.5 via coax cable
Remarks				Also suitable for DVB-T	Suitable for DVB-T deliveres in a 1 pcs. blister pack

Terrestrial reception

Terrestrial reception >> **Terrestrial electronics**	
- mast amplifiers	32-48
- combiners	49-54
- single channel filters	55-57
- notch filters	58
- stacking combiners	59

Triax MFA mast amplifier series

High-performance range of mast amplifiers with F-connector

- F-connectors on all in- and outputs
- Simple and easy installation
- Unique mounting system
- Attractive design in a 4-terminal waterproof masthousing
- Wide range with 1, 2 or 3 inputs and 1 output
- High gain and output voltage
- Fixed or adjustable gain
- Low noise figures
- Unique power stabiliser enables use of any power unit from 12 V to 24 V
- FM notch-version
- High output level
- RF shielded and CE compliant (EN 50083)

MFA= Mast F-connector Amplifiers

Technical data on MFA mast amplifiers with F-connectors

Type			MFA 302	MFA 304	MFA 307	MFA 308	MFA 309	MFA 310
Art. No.			**340302**	**340304**	**340307**	**340308**	**340309**	**340310**
Input 1								
	Channel	Band	UHF+BIII	UHF	UHF	UHF 2	UHF	UHF
	Gain	dB	20	20-30	23-33	22-28	12-22	12-22
Input 2								
	Channel	Band		VHF	BIII	UHF 1	BIII	VHF
	Gain	dB		12-22	13-24	12-22	12-22	12-22
Input 3								
	Channel	Band				VHF	BI+FM	
	Gain	dB				10-20	2-12	
Noise figure						IN1/IN2		
	UHF	dB	3.0	3.0	2.5	5.0/14.0	4.0	4.0
	VHF	dB	3.0	5.0	3.0	3.0	4.0	4.0
Max. output voltage @ -60 dB IMA		dBµV	103	103	105	110	105	103
Numbers of in-/output			1/1	2/1	2/1	3/1	3/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	30	45	45	45	45	45
DC throughpower							UHF	UHF
Connector			F-con	F-con	F-con	F-con	F-con	F-con
Weight		kg	0.230	0.230	0.230	0.230	0.230	0.230
Dimensions	Height	mm	108	108	108	108	108	108
	Depth	mm	50	50	50	50	50	50
	Width	mm	120	120	120	120	120	120
Remarks								

Technical data on MFA mast amplifiers with F-connectors

Type			MFA 311	MFA 312	MFA 313	MFA 314	MFA 320	MFA 321
Art. No.			**340311**	**340312**	**340313**	**340314**	**340320**	**340321**
Input 1								
	Channel	Band	UHF	UHF/BI+III	UHF 1	UHF	UHF	TV
	Gain	dB	12-22	25-35/15-25	20-30	22-33	25-35	22-32
Input 2								
	Channel	Band	VHF		UHF 2	BI+BIII	BIII	FM
	Gain	dB	-2		20-30	15-25	15-25	10-20
Input 3								
	Channel	Band			BI+BIII		BI+FM	
	Gain	dB			15-25		15-25	
Noise figure					IN1 - IN2			
	UHF	dB	3.0	4.5	8.8/8.5-7.0/7.0	4.5	4.0	3.5
	VHF	dB			4.0	4.0	4.0	5.0
Max. output voltage @ -60 dB IMA		dBµV	103	103	103	103	103	103
Numbers of in-/output			2/1	1/1	3/1	2/1	3/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	30	30	30	30	25	25
DC throughpower								
Connector			F-con	F-con	F-con	F-con	F-con	F-con
Weight		kg	0.230	0.230	0.230	0.230	0.230	0.230
Dimensions	Height	mm	108	108	108	108	108	108
	Depth	mm	50	50	50	50	50	50
	Width	mm	120	120	120	120	120	120
Remarks				FM notch 2 input with 2 attenuators	FM notch	FM notch		TV: BI+BIII+UHF

Triax MFA mast amplifier series

High-performance range of mast amplifiers with F-connector

- F-connectors on all in- and outputs
- Simple and easy installation
- Unique mounting system
- Attractive design in a 4-terminal waterproof masthousing
- Wide range with 1, 2 or 3 inputs and 1 output
- High gain and output voltage
- Fixed or adjustable gain
- Low noise figures
- Unique power stabiliser enables use of any power unit from 12 V to 24 V
- FM notch-version
- High output level
- RF shielded and CE compliant (EN 50083)

MFA= Mast F-connector Amplifiers

Technical data on MFA mast amplifiers with F-connectors

Type			MFA 322	MFA 323	MFA 324	MFA 325	MFA 327	MFA 331
Art. No.			**340322**	**340323**	**340324**	**340325**	**340327**	**340331**
Input 1							Ch. 36-69	
	Channel	Band	UHF	UHF	UHF	UHF/VHF	UHF	BI
	Gain	dB	15	12	25	25	25	12-22
Input 2								
	Channel	Band						FM
	Gain	dB						12-22
Input 3								
	Channel	Band						BIII
	Gain	dB						12-22
Input 4								
	Channel	Band						UHF
	Gain	dB						12-22
Noise figure								
	UHF	dB	**1.8**	**1.8**	**1.8**	**2.2**	**1.8**	3.5
	VHF	dB				**2.2**		4.0
Max. output voltage @ -60 dB IMA		dBµV	4 x 85	105	105	105	105	105
Numbers of in-/output			1/4	1/1	1/1	1/1	1/1	4/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	30	30	30	25	40	25
DC throughpower								
Connector			F-con	F-con	F-con	F-con	F-con	F-con
Weight		kg	0.230	0.230	0.230	0.230	0.230	0.230
Dimensions	Height	mm	108	108	108	108	108	108
	Depth	mm	50	50	50	50	50	50
	Width	mm	120	120	120	120	120	120
Remarks			Low noise	Low noise	Low noise	Low noise	Low noise	

Triax MFA mast amplifier series

High-performance range of mast amplifiers with F-connector

- F-connectors on all in- and outputs
- Simple and easy installation
- Unique mounting system
- Attractive design in a new 6-terminal improved waterproof masthousing
- Wide range with 1, 2, 3 or 4 inputs and 1 output
- High gain and output voltage
- Fixed gain
- Low noise figures
- Unique power stabiliser enables use of any power unit from 12 V
- High output level
- RF shielded and CE compliant (EN 50083)

UHF wide band amplifier - MFA 651

- 1 UHF input
- 5 V power supply from DVB-T receiver via output or from LNB power via i.e. Triax MFC 151 combiner

Technical data on MFA mast amplifiers with F-connectors

Type			MFA 606	MFA 608	MFA 615	MFA 625	MFA 651 *DVB-T*
Art. No.			**340606**	**340608**	**340615**	**340625**	**340651**
Input 1	Frequency	MHz	470-862	470-862	470-862	470-862	470-862
	Channel	Band	UHF	UHF	UHF	UHF	UHF
	Gain	dB	6	8	15	25	12
Input 2							
	Channel	Band					
	Gain	dB					
Input 3							
	Channel	Band					
	Gain	dB					
Input 4							
	Channel	Band					
	Gain	dB					
Noise figure							
	UHF	dB	**2.5**	**2.5**	**2.5**	**2.5**	**1.8**
	VHF	dB					
Max. output voltage @ -60 dB IMA		dBµV	4 x 95	103	105	105	105
Numbers of in-/output			1/4	1/1	1/1	1/1	1/1
Voltage		VDC	12	12	12	12	5-12
Power		mA	30	30	30	65	65
Switchable diode DC pass			Yes	Yes	Yes	Yes	
Connector			F-con	F-con	F-con	F-con	F-con
Weight		kg				0.230	0.230
Dimensions	Height	mm	124	124	124	124	108
	Depth	mm	55	55	55	55	50
	Width	mm	138	138	138	138	120
Remarks							

Triax MFA kit (amplifier + power supply)

High-performance range of MFA mast amplifiers combined with the excellent IFP power supply in a attractive modern housing design - both equipped with F-connector

Available complete kit of MFA amplifier incl. power supply

Type Art. No.			MFA 402 340402	MFA 404 340404	MFA 407 340407	MFA 409 340409	MFA 410 340410	MFA 411 340411
Set consists of:								
	- amplifier		MFA 302	MFA 304	MFA 307	MFA 309	MFA 310	MFA 311
	- power supply		+ IFP 501	+ IFP 502	+ IFP 502	+ IFP 502	+ IFP 502	+ IFP 502
See specification on page								
	- amplifier		36	36	36	36	36	37
	- power supply		200	200	200	200	200	200
Weight		kg	0.645	0.645	0.645	0.645	0.645	0.645
Dimensions	Height	mm	170	170	170	170	170	170
	Depth	mm	78	78	78	78	78	78
	Width	mm	242	242	242	242	242	242

Type Art. No.			MFA 412 340412	MFA 413 340413	MFA 414 340414	MFA 420 340420
Set consists of:						
	- amplifier		MFA 312	MFA 313	MFA 314	MFA 320
	- power supply		+ IFP 502	+ IFP 502	+ IFP 502	+ IFP 502
See specification on page						
	- amplifier		37	37	37	37
	- power supply		200	200	200	200
Weight		kg	0.645	0.645	0.645	0.645
Dimensions	Height	mm	170	170	170	170
	Depth	mm	78	78	78	78
	Width	mm	242	242	242	242

Type Art. No.			MFA 507 340507	MFA 511 340511	MFA 513 340513	MFA 514 340514
Set consists of:						
	- amplifier		MFA 307	MFA 311	MFA 313	MFA 314
	- power supply		+ IFP 503	+ IFP 503	+ IFP 503	+ IFP 503
See specification on page						
	- amplifier		36	37	37	37
	- power supply		200	200	200	200
Weight		kg	0.645	0.645	0.645	0.645
Dimensions	Height	mm	170	170	170	170
	Depth	mm	78	78	78	78
	Width	mm	242	242	242	242
Remarks			**24 V**	**24 V**	**24 V**	**24 V**

Triax TA mast amplifier series

TRIAX's TA 4000 amplifier

The series of masthead amplifiers includes a wide range of amplifiers to substitute and supplement many of the well-known types included in our product range so far.

- Saddle and clamp cable connection on all in- and outputs
- Unique mounting system
- Wide range
- Low noise figures
- Unique power stabilizer
- RF shielded and CE marked (EN 50083)
- Easy wall mounting

Technical data on TA mast amplifiers with saddle and clamp-connectors

Type Art. No.			TA 4013 -322R 330487	TA 4013 -30R 330502	TA 4213 -3R 330521	TA 4312 -3R 330541	TA 4312 -2R 330542
Input 1							
	Band		UHF	UHF	UHF	UHF	UHF
	Gain	dB	20-30	24-34	22-32	22-32	13-23
Input 2							
	Band		VHF	VHF	FM	BIII	BIII
	Gain	dB	10-20	- 1	0-10	14-24	13-23
Input 3							
	Band				BI+BIII	BI+FM	BI+FM
	Gain	dB			14-24	14-24	13-23
Noise figure							
	UHF	dB	2.5	1.8	2.5	2.5	3.5
	VHF	dB	2.5		2.5	2.5	3.5
Max. output voltage @ -60 dB IMA		dBµV	105	105	105	105	105
Numbers of in-/output			2/1	2/1	3/1	3/1	3/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24
Power		mA	40	40	40	40	30
DC throughpower			No	Switchable	Switchable	Switchable	Switchable
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.230	0.230	0.230	0.230	0.230
Dimensions	Height	mm	108	108	108	108	108
	Depth	mm	50	50	50	50	50
	Width	mm	120	120	120	120	120
Remarks							

Triax TA mast amplifier series

TRIAX's TA masthead amplifier

- Masthead amplifiers with saddle and clamp connections
- Weatherproof housing
- Fully screened enclosure
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise

TA 13 amplifier

Technical data on TA mast amplifiers with saddle and clamp-connectors

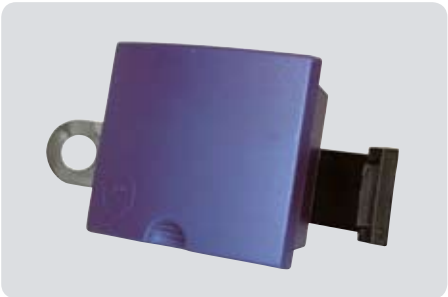
Type			TA 13W	TA 13A	TA 13B	TA 13C/D	TA 13E	TA 13W-1W
				band A	*band B*	*band C/D*	*band E*	
Art. No.			**333400**	**333430**	**333433**	**333436**	**333439**	**333500**
Input 1	Channel	Band	21-69	21-34	39-53	48-69	35-69	21-69
	Gain	dB	13	13	13	13	13	13
	Noise figure	dB	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Input 2	Channel	Band						BI/BII/BIII
	Gain	dB						- 1.0
	Noise figure	dB						
Max. output voltage @ -60 dB IMA		dBµV	105	105	105	105	105	105
Numbers of in-/output			1/1	1/1	1/1	1/1	1/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	15	15	15	15	15	15
DC throughpower			No	No	No	No	No	Switchable
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79	79	79
	Depth	mm	62	62	62	62	62	62
	Width	mm	118	118	118	118	118	118
Remarks			***Wideband***	***Groupband***	***Groupband***	***Groupband***	***Groupband***	***Multiband***

Triax TA mast amplifier series

TA 25 amplifier

TRIAX's TA masthead amplifier

- Masthead amplifiers with saddle and clamp connections
- Weatherproof housing
- Fully screened enclosure
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise



Technical data on TA mast amplifiers with saddle and clamp-connectors

Type			**TA 25W**	**TA 25A**	**TA 25B**	**TA 25C/D**	**TA 25W-1W**
				band A	***band B***	***band C/D***	
Art. No.			**333401**	**333431**	**333434**	**333437**	**333501**
Input 1	Channel	Band	21-69	21-37	35-53	48-69	21-69
	Gain	dB	25	25	25	25	25
	Noise figure	dB	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Input 2	Channel	Band					BI/BII/BIII
	Gain	dB					- 1.0
	Noise figure	dB					
Max. output voltage @ -60 dB IMA		dBµV	105	105	105	105	105
Numbers of in-/output			1/1	1/1	1/1	1/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24
Power		mA	30	30	30	30	30
DC throughpower			No	No	No	No	Switchable
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79	79
	Depth	mm	62	62	62	62	62
	Width	mm	118	118	118	118	118
Remarks			***Wideband***	***Groupband***	***Groupband***	***Groupband***	***Multiband***

Triax TA mast amplifier series

TRIAX's TA mast amplifier

- Masthead amplifiers with saddle and clamp connections
- Weatherproof housing
- Fully screened enclosure
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise

TA 34 amplifier

Technical data on TA mast amplifiers with saddle and clamp-connectors

Type			TA 34W	TA 34A	TA 34B	TA 34C/D
				band A	*band B*	*band C/D*
Art. No.			**333402**	**333432**	**333435**	**333438**
Input 1	Channel	Band	21-69	21-37	35-53	48-69
	Gain	dB	24-34	24-34	24-34	24-34
	Noise figure	dB	< 1.8	< 1.8	< 1.8	< 1.8
Input 2	Channel	Band				
	Gain	dB				
	Noise figure	dB				
Max. output voltage @ -60 dB IMA		dBµV	105	105	105	105
Numbers of in-/output			1/1	1/1	1/1	1/1
Voltage		VDC	12-24	12-24	12-24	12-24
Power		mA	40	40	40	40
DC throughpower			No	No	No	No
Connector			S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79
	Depth	mm	62	62	62	62
	Width	mm	118	118	118	118
Remarks			***Wideband***	***Groupband***	***Groupband***	***Groupband***

Triax TA-masthead amplifier series

TA - amplifier

TRIAX's TA masthead amplifier

- Masthead amplifiers with saddle and clamp connections
- Weatherproof housing
- Fully screened enclosure
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise

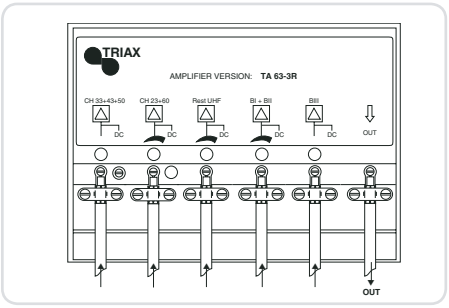
Technical data on TA mast amplifiers with saddle and clamp-connectors

Type Art. No.			TA 9W/ 3 way 333416	TA 21W/ 3 way 333417	TA 24W/24W var. 333466	TA 25W/1W 333501	TA 24BB cascade 333450	TA 30BB cas./2 way 333451
Input 1	Channel	Band	21-69	21-69	21-69	21-69	VHF/UHF	VHF/UHF
	Gain	dB	1 x 9	1 x 21	24	25	24	10-20/20-30
	Noise figure	dB	< 2.4	< 1.8	< 2.5	< 1.8	< 2.5	< 2.5
Input 2	Channel	Band	21-69	21-69	BI/BII/BIII	BI/BII/BIII		
	Gain	dB	2 x 5	2 x 17	14-24	- 1		
	Noise figure	dB	< 2.4	< 1.8	< 2.5			
Max. output voltage @ -60 dB IMA		dBµV	101/ 2 x 97	101/ 2 x 97	105	105	105	2 x 101
Numbers of in-/output			2/3	2/3	2/1	2/1	1/1	1/2
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	15	30	30	30	30	40
DC throughpower			Switchable	Switchable	Switchable	Switchable	Switchable	Switchable
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79	79	79
	Depth	mm	62	62	62	62	62	62
	Width	mm	118	118	118	118	118	118
Remarks			***Wideband***	***Wideband***	***Multiband***	***Multiband***	***Wideband***	***Wideband***

Triax TA-multichannel amplifier series

TRIAX's TA multichannel amplifier

TRIAX multichannel amplifiers are HF-tight, CE-marked and available in a splashproof plastic box type HFT6 with mast mounting.
In one unit you can connect many different signals from e.g. channels from neighbouring countries with the regional and some local TV channels.
BI/II and BIII signals can be connected through the VHF-input.



TA 65 - 3R amplifier

Technical data on TA-multichannel amplifiers with saddle and clamp-connectors

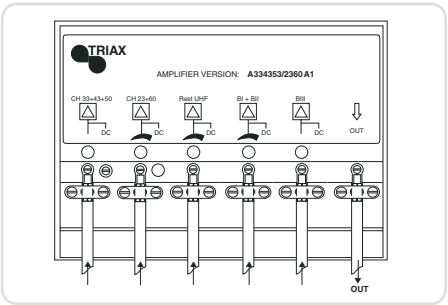
Type			TA 65-3R	TA 65-3R	TA 65-3R	TA 65-3R	TA 65-3R	TA 65-3R
			DK - SE 1	*DK - DE 1*	*DK - SE 3*	*DK - SE 4*	*DK 1*	
Art. No.			330601	330603	330604	330605	330606	330610
Input 1	Channel/Band		23+60	58	30+46	33+43+50	31+53	XX+YY
	Gain	dB	8-28	0-20	28	28	28	6-26
	Noise figure	dB	< 3.0	< 7.0	< 4.0	< 4.5	< 3.5	< 3.0
Input 2	Channel/Band		33+43+50	52	Rest UHF	Rest UHF	Rest UHF	WW+XX+YY
	Gain	dB	8-28	0-20	0-20	0-20	0-20	6-26
	Noise figure	dB	< 3.0	< 7.0	< 4.5	< 5.5	< 5.5	< 3.0
Input 3	Channel/Band		Rest UHF	Rest UHF	9	BIII	BIII	Rest UHF
	Gain	dB	0-20	5-25	25	0-20	0-20	0-20
	Noise figure	dB	< 5.0	< 4.0	< 4.0	< 4.0	< 4.0	< 5.0
Input 4	Channel/Band		BI+BIII	6	Rest BIII	BII (FM)	BII (FM)	BI+BIII
	Gain	dB	0-20	5-25	0-20	-10...+10	-10...+10	0-20
	Noise figure	dB	< 4.0	< 4.0	< 6.5	< 4.0	< 4.0	< 4.0
Input 5	Channel/Band		BII (FM)	BII	BII			BII (FM)
	Gain	dB	-10...+10	5-15	5-15			-10...+10
	Noise figure	dB	< 4.0	< 4.0	< 4.0			< 4.0
Max. output voltage @ -60 dB IMA		dBµV	110	110	110	110	110	110
Numbers of in-/output			5/1	5/1	5/1	4/1	4/1	5/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	65	65	65	65	65	65
DC throughpower			Switchable on all inputs	Switchable on all inputs	Switchable on all inputs	Switchable on all inputs	Switchable on all inputs	Switchable on all inputs
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.5	0.5	0.5	0.5	0.5	0.5
Dimensions	Height	mm	122	122	122	122	122	122
	Depth	mm	55	55	55	55	55	55
	Width	mm	168	168	168	168	168	168
Remarks			***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***

A334350/2360 A1 amplifier

TRIAX's TA multichannel amplifier

Besides the standard types, multichannel amplifiers are available on request in versions with special XX and YY channels (where XX is the first UHF-channel and YY the second UHF channel) within the channel range 21-60, and in a type with a "Z" channel within VHF BIII in the channel range 5-12.
326858 Type AXX/Z A13 • 326859 Type AXXYY/Z A1

Note: There will always be 2 locked channels on each side of the selected channels.



Technical data on TA-multichannel amplifiers with saddle and clamp-connectors

Type			A334350/ 2360 A1	AXXYY/ 00 A1	AXXYY/ Z A1	A5053/7 A1	A45/3153	A45/XX
Art. No.			**326850**	**326840**	**326859**	**326861**	**326878**	**326880**
Input 1	Channel/Band		33+43+50	XX+YY	XX+YY	Ch. 50+53	Ch. 31+53	Ch. XX
	Gain	dB	28	28	28		- 3	- 3
	Noise figure	dB	< 2.0	< 2.0	< 2.0			
Input 2	Channel/Band		23+60	Rest UHF	Rest UHF	Rest UHF	Rest UHF	Rest UHF
	Gain	dB	28	-10...+10	-10...+10		24	24
	Noise figure	dB	< 2.0	< 4.5	< 4.5		< 2.5	< 2.5
Input 3	Channel/Band		Rest UHF	BI+BII	BI+BII	VHF	VHF	VHF
	Gain	dB	-10...+10	-10...+10	-10...+10		- 0.5	- 0.5
	Noise figure	dB	< 4.5	< 4.0	< 4.0			
Input 4	Channel/Band		VHF	BIII	Ch. X			
	Gain	dB	-10...+10	-10...+10	-10...+10			
	Noise figure	dB	< 4.0	< 4.0	< 4.0			
Input 5	Channel/Band				Rest BIII			
	Gain	dB			-10...+10			
	Noise figure	dB			< 4.0			
Max. output voltage @ -60 dB IMA		dBµV	113	113	113	106	106	106
Numbers of in-/output			4/1	4/1	5/1	3/1	3/1	3/1
Voltage		VDC	24	24	24	24	24	24
Power		mA	80	75	75	35	35	35
DC throughpower			Switchable on all inputs	Switchable on all inputs	Switchable on all inputs	Rest UHF	Rest UHF	Rest UHF
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.5	0.5	0.5	0.5	0.5	0.5
Dimensions	Height	mm	122	122	122	122	122	122
	Depth	mm	55	55	55	55	55	55
	Width	mm	168	168	168	168	168	168
Remarks			***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***

Triax TMA mast amplifier series

TRIAX's TMA mast amplifier

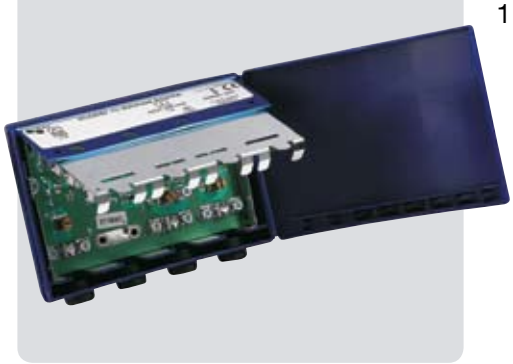
- Mast amplifiers with saddle and clamp connections
- Weatherproof housing
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise
- Screened with saddle and clamp connections.

TMA - UHF wideband amplifier

Technical data on TMA-mast amplifiers with saddle and clamp-connectors

Type			TMA 18W-U	TMA 28W-U	TMA 12/2-U	TMA 24W-2W-U	TMA 24W-20W-U
Art. No.			**333324**	**333325**	**333326**	**333570**	**333571**
Input 1	Channel		21-69	21-69	21-69	21-69	21-69
	Gain	dB	18	28	2 x 12	25	14-24
	Noise figure	dB	< 3.0	< 3.0	< 4.5	< 3.0	< 4.0
Input 2	Channel					BI/BII/BIII	BI/BII/BIII
	Gain	dB				- 2.0	10-20
	Noise figure	dB					< 3.0
Input 3	Channel						
	Gain	dB					
	Noise figure	dB					
Max. output voltage @ -60 dB IMA		dBµV	105	105	2 x 98	105	105
Numbers of in-/output			1/1	1/2	1/2	2/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24
Power		mA	20	30	25	30	30
DC throughpower			No	No	No	No/No	No/No
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.125	0.125	0.125	0.125	0.125
Dimensions	Height	mm	69	69	69	69	69
	Depth	mm	55	55	55	55	55
	Width	mm	94	94	94	94	94
Remarks			***Wideband***	***Wideband***	***Wideband***	***Multiband***	***Multiband***

Triax UHF single channel amplifiers



SCA - amplifier

TRIAX's SCA masthead amplifier

TRIAX's UHF single channel amplifier series includes a range of amplifiers with 1 input of 20 dB gain, 1 passive rest VHF/UHF input and 1 output.

- New attractive design in blue amplifier housing
- Snap lock closure system and rubber grommets ensure a high degree of waterproofing
- Input channel selectivity
- Single channel with 20 dB gain
- Rest VHF/UHF input with -1 dB
- Switchable DC on rest UHF
- 12-24 V
- Unique mounting system for secure fixing
- RF shielded and CE marked (EN 50083)
- On each side of the chosen channel there will be 2 barred neighbouring channels in rest VHF/UHF input

Technical data on SCA single channel amplifier with saddle and clamp-connectors

Type			SCA 439-443	SCA 2021-1	SCA 2032-1	SCA 2045-1	SCA 2056-1	SCA 2069-1
Art. No.			333220	333221	333232	333245	333256	333269
Input 1	Channel		S38	21	32	45	56	69
	Gain	dB	20	20	20	20	20	20
	Noise figure	dB	4.0	4.0	4.0	4.0	4.0	4.0
Input 2	Channel	Band	Rest VHF/UHF - 1	Rest VHF/UHF - 1	Rest VHF/UHF - 1	Rest VHF/UHF - 1	Rest VHF/UHF - 1	Rest VHF/UHF - 1
	Gain	dB						
	Noise figure	dB						
Max. output voltage @ -60 dB IMA		dBµV	116	116	116	116	116	116
Numbers of in-/output			2/1	2/1	2/1	2/1	2/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	30	30	30	30	30	30
DC throughpower			Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79	79	79
	Depth	mm	62	62	62	62	62	62
	Width	mm	118	118	118	118	118	118

SCA 20xx-1 range in 1 channel amplifier

Type	- Art. No.	Type	- Art. No.	Type	- Art. No.	Type	- Art. No.	Type	- Art. No.
SCA 20**21**-1	333**21**	SCA 20**31**-1	333**31**	SCA 20**41**-1	333**41**	SCA 20**51**-1	333**51**	SCA 20**63**-1	333**63**
SCA 20**22**-1	333**22**	SCA 20**32**-1	333**32**	SCA 20**42**-1	333**42**	SCA 20**52**-1	333**52**	SCA 20**64**-1	333**64**
SCA 20**23**-1	333**23**	SCA 20**33**-1	333**33**	SCA 20**43**-1	333**43**	SCA 20**53**-1	333**53**	SCA 20**65**-1	333**65**
SCA 20**24**-1	333**24**	SCA 20**34**-1	333**34**	SCA 20**44**-1	333**44**	SCA 20**54**-1	333**54**	SCA 20**66**-1	333**66**
SCA 20**25**-1	333**25**	SCA 20**35**-1	333**35**	SCA 20**45**-1	333**45**	SCA 20**55**-1	333**55**	SCA 20**67**-1	333**67**
								SCA 20**68**-1	333**68**
SCA 20**26**-1	333**26**	SCA 20**36**-1	333**36**	SCA 20**46**-1	333**46**	SCA 20**56**-1	333**56**	SCA 20**69**-1	333**69**
SCA 20**27**-1	333**27**	SCA 20**37**-1	333**37**	SCA 20**47**-1	333**47**	SCA 20**57**-1	333**57**		
SCA 20**28**-1	333**28**	SCA 20**38**-1	333**38**	SCA 20**48**-1	333**48**	SCA 20**58**-1	333**58**		
SCA 20**29**-1	333**29**	SCA 20**39**-1	333**39**	SCA 20**49**-1	333**49**	SCA 20**59**-1	333**59**		
SCA 20**30**-1	333**30**	SCA 20**40**-1	333**40**	SCA 20**50**-1	333**50**	SCA 20**60**-1	333**60**		

Triax FM and VHF single channel amplifiers

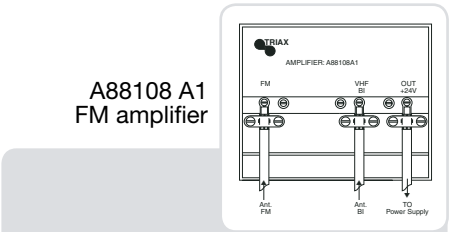
TRIAX's FM amplifier

The TRIAX FM amplifier model A88108A1 is RF-shielded and is in a grey waterproof box for wall or mast installation. This amplifier is designed for the reception of very weak FM radio stations and it incorporates a built-in combiner for band I.

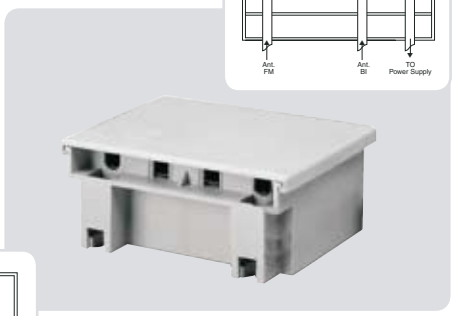
TRIAX's VHF 1 channel amplifier

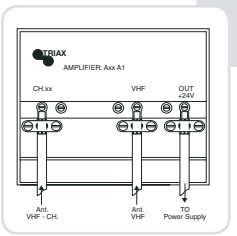
Triax single channel VHF amplifier model AXX A1 is RF-shielded and in a grey waterproof box for wall or mast installation. Due to its high selectivity and immunity to interference this amplifier is designed for long distance reception of weak TV stations in areas where there are strong signals from local stations.

The amplifier is available for each channel from 4 to 12, by exchanging **XX** with the specific TV channel number.



A88108 A1
FM amplifier





A05 A1
1 channel amplifier

Technical data on Axx single channel amplifiers with saddle and clamp-connectors

Type			A88108 A1	AXX A1 Ch. 5-6	AXX A1 Ch. 7-8	AXX A1 Ch. 9-11	AXX A1 Ch. 12	AXXYY A2 multichannel
Art. No.			**326976**	**326905**	**326907**	**326909**	**326911**	**326980**
Input 1	Channel		FM	5 or 6	7 or 8	9 or 11	12	XXYY
	Frequency	MHz	88-108	BIII	BIII	BIII	BIII	
	Gain	dB	15	25	25	25	25	25
	Noise figure	dB	< 3.0	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
Input 1	Channel		BI	Rest	Rest	Rest	Rest	Rest
	Frequency	MHz		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
	Gain	dB	- 1	- 1	- 1	- 1	- 1	- 1
	Noise figure	dB						
Max. output voltage @ -60 dB IMA		dBµV	112	116	116	116	116	116
Numbers of in-/output			2/1	2/1	2/1	2/1	2/1	2/1
Voltage		VDC	24	24	24	24	24	24
Power		mA	35	35	35	35	35	35
DC throughpower			BI	Switchable VHF/UHF	Switchable VHF/UHF	Switchable VHF/UHF	Switchable VHF/UHF	Switchable VHF/UHF
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.250	0.250	0.250	0.250	0.250	0.250
Dimensions	Height	mm	90	90	90	90	90	90
	Depth	mm	48	48	48	48	48	48
	Width	mm	115	115	115	115	115	115
Remarks								

Triax pre-amplifiers series 8000/80000

TRIAX's range of series 8000 HF-tight amplifiers in metal housings includes channel amplifiers for BIII and UHF, as well as band amplifiers for FM, BIII and broadband amplifiers for UHF. Besides, the 8003K, 81065 and 81065K types are available with built-in overload protection.

Technical data on series 8000 low noise pre-amplifiers with PG11 connectors

Type **Art. No.**		**8000/1** *Band I* **325830**	**8000/1K** *Band I* **325857**	**8000/2A** *Band II* **325835**	**8000/3** *Band III* **325838**	**8000/3K** *Band III* **325856**	**8000/3** *Band III* **325808**
Input frequency range	MHz	47-68	1 channel in BI 47-68	87.5-108	174-230	1 channel in BIII 174-230	174-230 with limiter
Gain	dB	20	20	19.5	25	25	25
Noise figure VHF	dB	**1.6**	**3.0**	**1.8**	**1.5**	**3.0**	**1.5**
Output level @ -60 dB IMD	dBµV	122	115	122	110	115	110
Max. input level	dBµV						100
Numbers of in-/output		1/1	1/1	1/1	1/1	1/1	1/1
Voltage	VDC	24	24	24	24	24	24
Power	mA	100	40	100	30	40	30
DC throughpower		No	No	No	No	No	No
Connector		PG 11	PG 11	PG 11	PG 11	PG 11	PG 11
Weight	kg	1.322	1.322	1.322	1.322	1.322	1.322
Dimensions Height Depth Width	mm mm mm	146 80 194	146 80 194	146 80 194	146 80 194	146 80 194	146 80 194
Remarks		Low noise	Low noise	Low noise	Low noise	Low noise	Low noise

PG11 adaptor
for connection of 7 mm cable.

Art. No. 342601

Triax pre-amplifiers series 8000/80000

Series 8000 is available in HF-tight painted aluminium housing in splash-proof design with cable entry by means of RG11 connectors. The series 8000 amplifiers feature low noise figures, high gain and high output voltage.

Technical data on series 8000 low noise pre-amplifiers with PG11 connectors

Type		**80065** *UHF*	**81065** *UHF*	**81065K** *Ch. 21-46*	**81065K** *Ch. 47-68*	**80065K** *Ch. 21-46*	**80065K** *Ch. 47-68*
Art. No.		**325800**	**325804**	**325824**	**325825**	**325820**	**325821**
Input frequency range	MHz	470-862	470-862 - with limiter	1 UHF channel with limiter	1 UHF channel - with limiter	1 UHF channel	1 UHF channel
Gain	dB	24	24	24	24	24	24
Noise figure VHF	dB	**1.8**	**1.4 - 1.8**	**1.4 - 1.8**	**1.4 - 1.8**	**1.4 - 1.8**	**1.4 - 1.8**
Output level @ -60 dB IMD	dBµV	109	109	115	115	115	115
Max. input level	dBµV		100	100	100		
Numbers of in-/output		1/1	1/1	1/1	1/1	1/1	1/1
Voltage	VDC	24	24	24	24	24	24
Power	mA	30	30	30	30	30	30
DC throughpower		No	No	No	No	No	No
Connector		PG 11	PG 11	PG 11	PG 11	PG 11	PG 11
Weight	kg	1.322	1.322	1.322	1.322	1.322	1.322
Dimensions Height	mm	146	146	146	146	146	146
Depth	mm	80	80	80	80	80	80
Width	mm	194	194	194	194	194	194
Remarks		Low noise	Low noise	Low noise	Low noise	Low noise	Low noise

PG11 adaptor
for connection of 7 mm cable.

Art. No. 342601

Triax MFC multi band mast combiners

Easy installation of MFC combiner filter

MFC range of mast combiners with F-connector

- Improved attractive housing
- Unique mounting system
- Mast or wall mounting
- F-connector
- Wide range with 2 or 3 inputs and 1 output
- Switchable DC-through power
- RF shielded and CE marked (EN 50083)

The series includes a range of filters developed to replace some of the earlier types in our product range.

MFC= Mast F-connector Combiner

Technical data on MFC mast combiners with F-connectors

Type			MFC 101	MFC 102	MFC 103	MFC 104	MFC 105	MFC 106
Art. No.			**340101**	**340102**	**340103**	**340104**	**340105**	**340106**
Input 1	Band		SAT	SAT	UHF	UHF	UHF+VHF	VHF/UHF
	Channel		IF	IF	IF	IF	21-69	2-69
	Through loss	dB	3.0	3.0	2.0	2.0	4.0	1.0
Input 2	Band		VHF/UHF	UHF	VHF	BIII	UHF+VHF	FM
	Channel		2-12	21-69	2-12	5-12	21-69	
	Through loss	dB	2.0	2.0	1.0	1.5	4.0	1.0
Input 3	Band			VHF		AM+BI+FM		
	Channel			2-12				
	Through loss	dB		1.5		1.0		
Input 4	Band							
	Channel							
	Through loss	dB						
Stop band attenuation								
	VHF/BI	dB	> 20	> 20	> 20	> 20	> 20	> 20
	FM	dB	> 20	> 20	> 20	> 20	> 20	> 20
	BIII	dB	> 20	> 20	> 20	> 20	> 20	> 20
	UHF	dB	> 20	> 20	> 20	> 20	> 20	> 20
	SAT	dB	> 50	> 50				
Numbers of in-/output			2/1	2/1	2/1	3/1	2/1	2/1
DC throughpower			SAT	SAT	Switchable both inputs	UHF	Both inputs	VHF/UHF
Connector			F-con	F-con	F-con	F-con	F-con	F-con
Weight		kg	0.175	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	117	117	117	117	117	117
	Depth	mm	50	50	50	50	50	50
	Width	mm	120	120	120	120	120	120
Remarks								

Triax MFC multi band mast combiners

Triax MFC range of mast combiners with F-connector

- Improved attractive housing
- Unique mounting system
- Mast or wall mounting
- F-connector
- Wide range with 2 or 3 inputs and 1 output
- Switchable DC-through power
- RF shielded and CE marked (EN 50083)

Example: MFC 151 features:

- 2 inputs: VHF/UHF and SAT
- 5 V power feed for active antenna or pre-amplifier
- DC power pass for LNB supply
- Fully shielded
- F-connectors
- Waterproof housing
- Easy mounting on mast or wall

MFC combiner filter

Technical data on MFC mast combiners with F-connectors

Type			**MFC 120**	**MFC 121**	**MFC 151**	**TV/SAT Diecast**
Art. No.			**340120**	**340121**	**340151**	**340110**
Input 1	Band		FM/TV	FM/TV	SAT	SAT
	Channel		2-9/21-69	2-10/21-69	IF	IF / 950-2400
	Through loss	dB	1.5	1.5	2.0	2.0/3.0
Input 2	Band		DAB	DAB	VHF/UHF	VHF/UHF
	Channel		11-13	12-13	2-69	2-69
	Through loss	dB	1.5	1.5	1.0	2.0
Input 3	Band					
	Channel					
	Through loss	dB				
Input 4	Band					
	Channel					
	Through loss	dB				
Stop band attenuation						
	VHF/BI	dB	> 20	> 20	> 20	> 20
	FM	dB	> 20	> 20	> 20	> 20
	BIII/DAB	dB	> 20	> 20	> 20	> 20
	UHF	dB	> 20	> 20	> 20	> 20
	SAT	dB			> 35	> 22/25
Numbers of in-/output			2/1	2/1	2/1	2/1
DC throughpower			FM/TV	FM/TV	SAT and 5V Ter.	SAT
Connector			F-con	F-con	F-con	F-con
Weight		kg	0.175	0.175	0.200	
Dimensions	Height	mm	117	117	117	
	Depth	mm	50	50	50	
	Width	mm	120	120	120	
Remarks					5 V-DC throughpower from sat receiver	Diecast housing

Triax multi band mast combiners

TMC combiner filter

Triax TMC range includes a wide range of combiners in plastic housing for mast mounting

- Attractive design in a blue housing
- Saddle and clamp cable mounting
- Easy mast or wall mounting
- Unique mounting system for secure fixing

TMC = **T**riax **M**ast **C**ombiner
STP = **S**witchable **T**hrough **P**ower

Technical data on TMC multi band mast combiners with saddle and clamp-connectors

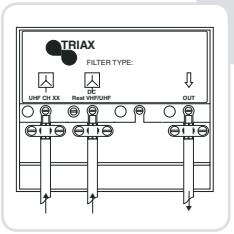
Type			TMC 2831 STP	TMC 4648 STP	TMC 5355 STP
Art. No.			311167	311154	311155
Input 1	Band		VHF/UHF	VHF/UHF	VHF/UHF
	Channel		2-28	2-46	2-53
	Through loss	dB	1.0	1.0	1.0
Input 2	Band		UHF	UHF	UHF
	Channel		31-69	48-69	53-69
	Through loss	dB	1.0	1.0	1.0
Input 3	Band				
	Channel				
	Through loss	dB			
Input 4	Band				
	Channel				
	Through loss	dB			
Stop band attenuation					
	VHF/BI	dB	> 20	> 20	> 20
	FM	dB	> 20	> 20	> 20
	BIII	dB	> 20	> 20	> 20
	UHF	dB	> 20	> 20	
	SAT	dB			
Numbers of in-/output			2/1	2/1	2/1
DC throughpower			Switchable both inputs	Switchable both inputs	Switchable both inputs
Connector			S&C	S&C	S&C
Weight		kg			
Dimensions	Height	mm			
	Depth	mm			
	Width	mm			
Remarks					

TMC multi band combiners - STP

Art. No.	Type
311153	TMC 3739 group combiner ch.2-37, ch.39-69
311154	TMC 4648 group combiner ch.2-46, ch.48-69
311155	TMC 5355 group combiner ch.2-53, ch.55-69
311157	TMC 5153 group combiner ch.2-51, ch.53-69
311162	TMC 3537 group combiner ch.2-35, ch.37-69
311164	TMC 3335 group combiner ch.2-33, ch.35-69
311166	TMC 3941 group combiner ch.2-39, ch.41-69
311167	TMC 2831 group combiner ch.2-28, ch.31-69
311168	TMC 5052 group combiner ch.2-50, ch.52-69
311169	TMC 2528 group combiner ch.2-25, ch.28-69

Triax multi channel mast combiners

TRIAX range of filters/combiners
When you are using the UHF series with the **XX** and **YY** channels you must remember that there must be 2 unused channels between your specified **XX** and **YY** UHF channels.



7000 mast combiner filter with clamp

Technical data on multi channel mast combiners with saddle and clamp-connectors

Type			75XY	7000 FXX 4 x UHF	70XX FYY BIII/21-40	70XX FYY BIII/41-60	DCF 3153/15A2 *)
Art. No.			**312150**	**312250**	**312264**	**312263**	**317570**
Input 1	Band		BIII	UHF	BIII	BIII	UHF
	Channel		1 ch. X	1 ch. X	1 ch. X	1 ch. X	CH. 31+53
	Through loss	dB	2.0	3.0	2.0	2.0	3.0
Input 2	Band		BIII	UHF	UHF	UHF	rest
	Channel		1 ch. Y	1 ch. XX	1 ch. XX	1 ch. XX	VHF/UHF
	Through loss	dB	2.0	3.0	3.0	3.0	1.0
Input 3	Band		UHF	UHF	rest UHF	rest UHF	
	Channel		21-69	1 ch. Y			
	Through loss	dB	2.0	3.0	2.0	2.0	
Input 4	Band			UHF			
	Channel			1 ch. YY			
	Through loss	dB		3.0			
Stop band attenuation							
	VHF/BI	dB			> 22	> 22	> 20
	FM	dB					
	BIII	dB	> 20				
	UHF	dB		> 10	> 15	> 15	> 20
	SAT	dB					
Numbers of in-/output			2/1	4/1	3/1	3/1	2/1
DC throughpower				1 of the inputs			rest VHF/UHF
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90	90	90
	Depth	mm	48	48	48	48	48
	Width	mm	115	115	115	115	115
Remarks				UHF channel combiner	UHF channel combiner	UHF channel combiner	- please see next page

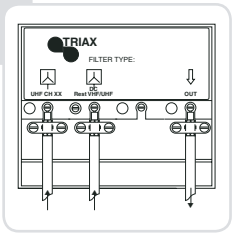
Triax multi channel mast combiners

DCF double channel filter housing

TRIAX DCF range of filters/combiners

When you are using the DCF UHF series with the **XX** and **YY** channels you must remember that there must be 2 unused channels between your specified **XX** and **YY** UHF channels.

DCF= Double Channel Filter



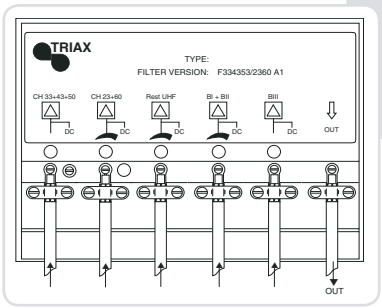
F XXYY/00A1

Technical data on DCF multi channel mast combiners with saddle and clamp-connectors

Type Art. No.			DCF XXYY/ 15A2 *) 317400	DCF XXYY/ 15A3 *) 317401	DCF XXYY/ 15A4 *) 317402	F XXYY/ 00A1 *) 317240	F XXYY/ 00A2 *) 317241	F XXYY/ 00A3 *) 317242
Input 1	Band		UHF	UHF	UHF	UHF	UHF	UHF
	Channel		Ch. 21-69	Ch. 21-69	Ch. 21-69	Ch. XXYY	Ch. XXYY	Ch. XXYY
	Through loss	dB	3.0	3.0	3.0	4.0	4.0	4.0
Input 2	Band		rest	rest	rest	rest UHF	rest UHF	rest UHF
	Channel		VHF/UHF	VHF/UHF	VHF/UHF	21-60	21-60	21-60
	Through loss	dB	1.0	1.0	1.0	1.5	1.0	1.0
Input 3	Band					BIII	VHF	VHF
	Channel					5-12	2-12	2-12
	Through loss	dB				1.0	1.0	1.0
Input 4	Band					BI+FM		
	Channel							
	Through loss	dB				1.0		
Stop band attenuation								
	VHF/BI	dB	> 20	> 20	> 20	> 20	> 20	> 20
	FM	dB				> 20		
	BIII	dB				> 20		
	UHF	dB	> 20	> 20	> 20	> 20	> 20	> 20
	SAT	dB						
Numbers of in-/output			2/1	2/1	2/1	4/1	3/1	3/1
DC throughpower			Ch. XXYY	rest VHF/UHF	Ch. XXYY rest VHF/UHF	Switchable all inputs	Ch. XXYY	Ch. XXYY + rest UHF
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90	90	90	90
	Depth	mm	48	48	48	48	48	48
	Width	mm	115	115	115	115	115	115
Remarks				*) There must be 2 unused channels between your specified **XX** and **YY** UHF channels.				

Triax multi channel mast combiners

TRIAX range of filters/combiners
When you are using e.g. the F 3153/00 A1 filter you must remember that on the rest UHF input, there must be 2 unused channels on each side of channel 31 and channel 53.



F 3153/00Ax multi channel combiner

Technical data on multi channel mast combiners with saddle and clamp-connectors

Type Art. No.			F 3153/00 A2 317229	F 3153/00 A3 317228	F 334350/00 A2 317236	F 334350/00 A3 317237	F 334350/ 2360 A1 317233
Input 1	Band		UHF	UHF	UHF	UHF	UHF
	Channel		31+53	31+53	33+43+50	33+43+50	31+53
	Through loss	dB	4.0	4.0	4.0	4.0	4.0
Input 2	Band		rest UHF	rest UHF	rest UHF	rest UHF	UHF
	Channel						23+60
	Through loss	dB	1.0	1.0	1.0	1.0	1.5
Input 3	Band		VHF	VHF	VHF	VHF	UHF
	Channel		2-12	2-12	2-12	2-12	33+43+50
	Through loss	dB	1.0	1.0	1.0	1.0	3.0/1.5
Input 4	Band						BIII
	Channel						5-12
	Through loss	dB					1.0
Input 5	Band						BI/FM
	Channel						
	Through loss	dB					1.0
Stop band attenuation							
	VHF/BI	dB	> 20	> 20	> 20	> 20	> 20
	FM	dB	> 20	> 20	> 20	> 20	> 20
	BIII	dB	> 20	> 20	> 20	> 20	> 20
	UHF	dB	> 20	> 20	> 20	> 20	> 20
	SAT	dB					
Numbers of in-/output			3/1	3/1	3/1	3/1	5/1
DC throughpower			Ch. 31+53 input	rest UHF	Ch. 33+43+50 input	rest UHF	Switchable all inputs
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.5	0.5	0.5	0.5	0.5
Dimensions	Height	mm	122	122	122	122	122
	Depth	mm	55	55	55	55	55
	Width	mm	168	168	168	168	168
Remarks							

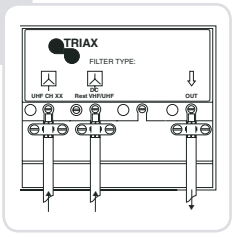
Triax single channel mast filters

SCF XX/15 filter

TRIAX SCF range of filters/combiners are based on state-of-the-art technology

- Attractive blue mast housing
- High out of band rejection
- Excellent isolation
- Switchable through power
- Mast or wall mounting
- Releasable maststrap
- CE approved

SCF= Single Channel Filter



TMC combiner

Technical data on single channel mast filters with saddle and clamp-connectors

Type			SCFXX/15 A2	SCFXX/15 A4	750X BI	750X BIII	7508 BIII Channel 8	TMC 69 SAT	TC 1221
Art. No.			317403	317405	311301	311303	311304	333383	333582
Input 1	Band		UHF	UHF	BI	BIIII	BIIII	SAT	UHF
	Channel		1 ch. X	1 ch. X	1 ch. X	1 ch. X	ch. 8	IF	21-69
	Through loss	dB	3.0	3.0	1.5	2.0	2.0	3.0	1.0
Input 2	Band		rest	rest	rest	rest	rest	VHF/UHF	VHF
	Channel		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF		2-12
	Through loss	dB	1.0	1.0	1.0/2.0	0.5	0.5	2.0	1.0
Input 3	Band								
	Channel								
	Through loss	dB							
Input 4	Band								
	Channel								
	Through loss	dB							
Stop band attenuation									
	Channel XX	dB	> 20	> 20	> 15	> 20	> 20		
	VHF/rest	dB	> 20	> 20	> 15	> 20	> 20	> 15	> 20
	SAT	dB						> 35	
Numbers of in-/output			2/1	2/1	2/1	2/1	2/1	2/1	2/1
DC throughpower			Ch. XX	Ch. XX + rest VHF/UHF	Ch. XX + rest VHF/UHF	Ch. XX + rest VHF/UHF	rest VHF/UHF	Switchable VHF/UHF	Switchable all inputs
Connector			S&C	S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90	90	90	69	69
	Depth	mm	48	48	48	48	48	55	55
	Width	mm	115	115	115	115	115	94	94
Remarks									

Triax single channel mast filters

TRIAX range of filters
When you are using the UHF series with the **XX** and **YY** channels you must remember that there must be 2 unused channels between your specified **XX** and **YY** UHF channels.

70000 mast filter

Technical data on single channel mast filters with saddle and clamp-connectors

Type			**71234**	**7132 G**	**75132**	**TC 335 DC VHF**	**TC 335 DC both**	**TC 356 DC SAT**
Art. No.			**311122**	**311125**	**311140**	**331381**	**331382**	**331383**
Input 1	Band		UHF	TV	UHF	UHF	UHF	TV
	Channel		21-69	2-69	21-69	21-69	21-69	2-69
	Through loss	dB	0.5	1.0	2.0	1.0	1.0	2.0
Input 2	Band		BIII	FM	FM	VHF	VHF	SAT
	Channel		5-12			2-12	2-12	IF
	Through loss	dB	0.5	1.0	0.5	1.0	1.0	3.0
Input 3	Band		FM		BI/BIII			
	Channel				2-12			
	Through loss	dB	0.5		1.0			
Input 4	Band		BI					
	Channel		2-4					
	Through loss	dB	0.5					
Stop band attenuation								
	VHF/BI	dB	> 20					
	FM	dB	> 12	> 20	> 20			
	BIII	dB	> 25			> 20	> 20	> 15
	UHF	dB	> 30	> 20	> 40			
	SAT	dB						> 35
Numbers of in-/output			4/1	2/1	3/1	2/1	2/1	2/1
DC throughpower			Switchable	1 of the inputs	UHF	VHF	Switchable VHF/UHF	SAT
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90	69	69	69
	Depth	mm	48	48	48	55	55	55
	Width	mm	115	115	115	94	94	94
Remarks								

Triax single channel mast filters

SCF - single channel filter

TRIAX SCF range of filters/combiners are based on state-of-the-art technology

- Attractive blue mast housing
- High out of band rejection
- Excellent isolation
- Switchable through power
- Mast or wall mounting
- Releasable maststrap
- CE approved

Technical data on SCF single channel filter with saddle & clamp-connectors

Type Art. No.			SCF 21/15 A3 331421	SCF 38/15 A3 331438	SCF 59/15 A3 331459
Input 1	Band		UHF	UHF	UHF
	Channel		**21**	**38**	**59**
	Through loss	dB	3.0	3.0	3.0
Input 2	Band		VHF/rest UHF	VHF/rest UHF	VHF/rest UHF
	Channel				
	Through loss	dB	1.0	1.0	1.0
Stop band attenuation	VHF/ rest UHF	dB	> 20	> 20	> 20
Numbers of in-/output			2/1	2/1	2/1
DC throughpower			Switchable VHF/rest UHF	Switchable VHF/rest UHF	Switchable VHF/rest UHF
Connector			S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175
Dimensions	Height	mm	117	117	117
	Depth	mm	50	50	50
	Width	mm	120	120	120

All SCF XX715 A3 single channel combiners

Type	- Art. No.	Type	- Art. No.	Type	- Art. No.	Type	- Art. No.
SCF **21**/15A3	331**21**	SCF **33**/15A3	331**33**	SCF **45**/15A3	331**45**	SCF **57**/15A3	331**57**
SCF **22**/15A3	331**22**	SCF **34**/15A3	331**34**	SCF **46**/15A3	331**46**	SCF **58**/15A3	331**58**
SCF **23**/15A3	331**23**	SCF **35**/15A3	331**35**	SCF **47**/15A3	331**47**	SCF **59**/15A3	331**59**
SCF **24**/15A3	331**24**	SCF **36**/15A3	331**36**	SCF **48**/15A3	331**48**	SCF **60**/15A3	331**60**
SCF **25**/15A3	331**25**	SCF **37**/15A3	331**37**	SCF **49**/15A3	331**49**		
SCF **26**/15A3	331**26**	SCF **38**/15A3	331**38**	SCF **50**/15A3	331**50**	SCF **62**/15A3	331**62**
SCF **27**/15A3	331**27**	SCF **39**/15A3	331**39**	SCF **51**/15A3	331**51**	SCF **63**/15A3	331**63**
SCF **28**/15A3	331**28**	SCF **40**/15A3	331**40**	SCF **52**/15A3	331**52**	SCF **64**/15A3	331**64**
SCF **29**/15A3	331**29**	SCF **41**/15A3	331**41**	SCF **53**/15A3	331**53**	SCF **65**/15A3	331**65**
SCF **30**/15A3	331**30**	SCF **42**/15A3	331**42**	SCF **54**/15A3	331**54**	SCF **66**/15A3	331**66**
SCF **31**/15A3	331**31**	SCF **43**/15A3	331**43**	SCF **55**/15A3	331**55**		
SCF **32**/15A3	331**32**	SCF **44**/15A3	331**44**	SCF **56**/15A3	331**56**		

Triax single notch stop filters

SCS standard rejection/notch filters are 1 channel UHF notch filters intended for rejection of the signal from a strong local transmitter

- New attractive housing
- Unique mounting system
- Mast or wall mounting
- RF shielded

SCS= Single Channel Stopfilter

SCS - single channel notch stop filter

Technical data on SCS single channel stop filter with saddle and clamp-connectors

Type			SCS 7000/21	SCS 7000/39	SCS 7000/58
Art. No.			**314021**	**314039**	**314058**
Input 1	Band		VHF/UHF	VHF/UHF	VHF/UHF
	Stop channel		**21**	**39**	**58**
	Through loss	dB	0.5/1.0	0.5/1.0	0.5/1.0
Input 2	Band				
	Stop channel				
	Through loss	dB			
Rejection					
	Channel	dB	> 20	> 20	> 20
Numbers of in-/output			2/1	2/1	2/1
DC throughpower			VHF/UHF	VHF/UHF	VHF/UHF
Connector			S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90
	Depth	mm	48	48	48
	Width	mm	115	115	115

All SCS 7000/XX single channel notch stop filters

Type	- Art. No.	Type	- Art. No.	Type	- Art. No.	Type	- Art. No.
SCS 7000/**21**	314**021**	SCS 7000/**33**	314**033**	SCS 7000/**45**	314**045**	SCS 7000/**57**	314**057**
SCS 7000/**22**	314**022**	SCS 7000/**34**	314**034**	SCS 7000/**46**	314**046**	SCS 7000/**58**	314**058**
SCS 7000/**23**	314**023**	SCS 7000/**35**	314**035**	SCS 7000/**47**	314**047**	SCS 7000/**59**	314**059**
SCS 7000/**24**	314**024**	SCS 7000/**36**	314**036**	SCS 7000/**48**	314**048**	SCS 7000/**60**	314**060**
SCS 7000/**25**	314**025**	SCS 7000/**37**	314**037**	SCS 7000/**49**	314**049**	SCS 7000/**62**	314**062**
SCS 7000/**26**	314**026**	SCS 7000/**38**	314**038**	SCS 7000/**50**	314**050**	SCS 7000/**63**	314**063**
SCS 7000/**27**	314**027**	SCS 7000/**39**	314**039**	SCS 7000/**51**	314**051**	SCS 7000/**64**	314**054**
SCS 7000/**28**	314**028**	SCS 7000/**40**	314**040**	SCS 7000/**52**	314**052**	SCS 7000/**65**	314**065**
SCS 7000/**29**	314**029**	SCS 7000/**41**	314**041**	SCS 7000/**53**	314**053**	SCS 7000/**66**	314**066**
SCS 7000/**30**	314**030**	SCS 7000/**42**	314**042**	SCS 7000/**54**	314**054**	SCS 7000/**67**	314**067**
SCS 7000/**31**	314**031**	SCS 7000/**43**	314**043**	SCS 7000/**55**	314**055**	SCS 7000/**68**	314**068**
SCS 7000/**32**	314**032**	SCS 7000/**44**	314**044**	SCS 7000/**56**	314**056**	SCS 7000/**69**	314**069**

Triax stacking combiners

Series 800 stacking combiner

TRIAX range 80000 stacking combiner
TRIAX has HF-tight stacking filters for combining 2 or 4 UHF aerials (ch. 21-69). The filters are mounted close to the aerial on the mast mounting delivered with the combiner. The filters are available in a HF-tight diecast aluminium housing with splashproof design (IP55), and cable entry takes place by means of PG11 connections.

TRIAX
Series 700 stacking combiners
TRIAX has also stacking filters in plastic box for combining 2 BIII aerials, 2 UHF or 4 UHF aerials (ch. 21-69).

Series 700 stacking combiner

Technical data on stacking combiners with PG11 and saddle and clamp-connectors

Type			821/UHF	841/UHF	720/BIII	721/UHF	741/UHF
Art. No.			**315122**	**315123**	**315103**	**315114**	**315115**
Input 1	Band		2 x UHF	4 x UHF	2 x BIII	2 x UHF	4 x UHF
	Channel		21-69	21-69	5-12	21-69	21-69
	Through loss	dB	0.2	0.2	0.3	0.2	0.3
Attenuation					3.0	3.0	6.0
Stacking gain		dB	3.0	6.0	2.7	2.8	5.7
Shielding factor		dB	> 75	> 75			
Numbers of in-/output			2/1	4/1	2/1	2/1	2/1
DC throughpower			Yes	Yes	Yes	Yes	Yes
Connector			PG11	PG11	S&C	S&C	S&C
Weight		kg	1.1	1.1	0.2	0.2	0.2
Dimensions	Height	mm	146	146	90	90	90
	Depth	mm	80	80	48	48	48
	Width	mm	194	194	115	115	115
Remarks							

PG11 adaptor
for connection of 7 mm cable.
Art. No. 342601

Mast calculation

The conditions detailed in the EN 50083-1 must be observed when mounting antennas on a mast. The sum of the moments resulting from the intrinsic moment of the mast and the bending moments caused by the mounted antennas must not exceed the maximum permitted bending moments of the mast itself.
The bending moment caused by an antenna is calculated by the following formula:

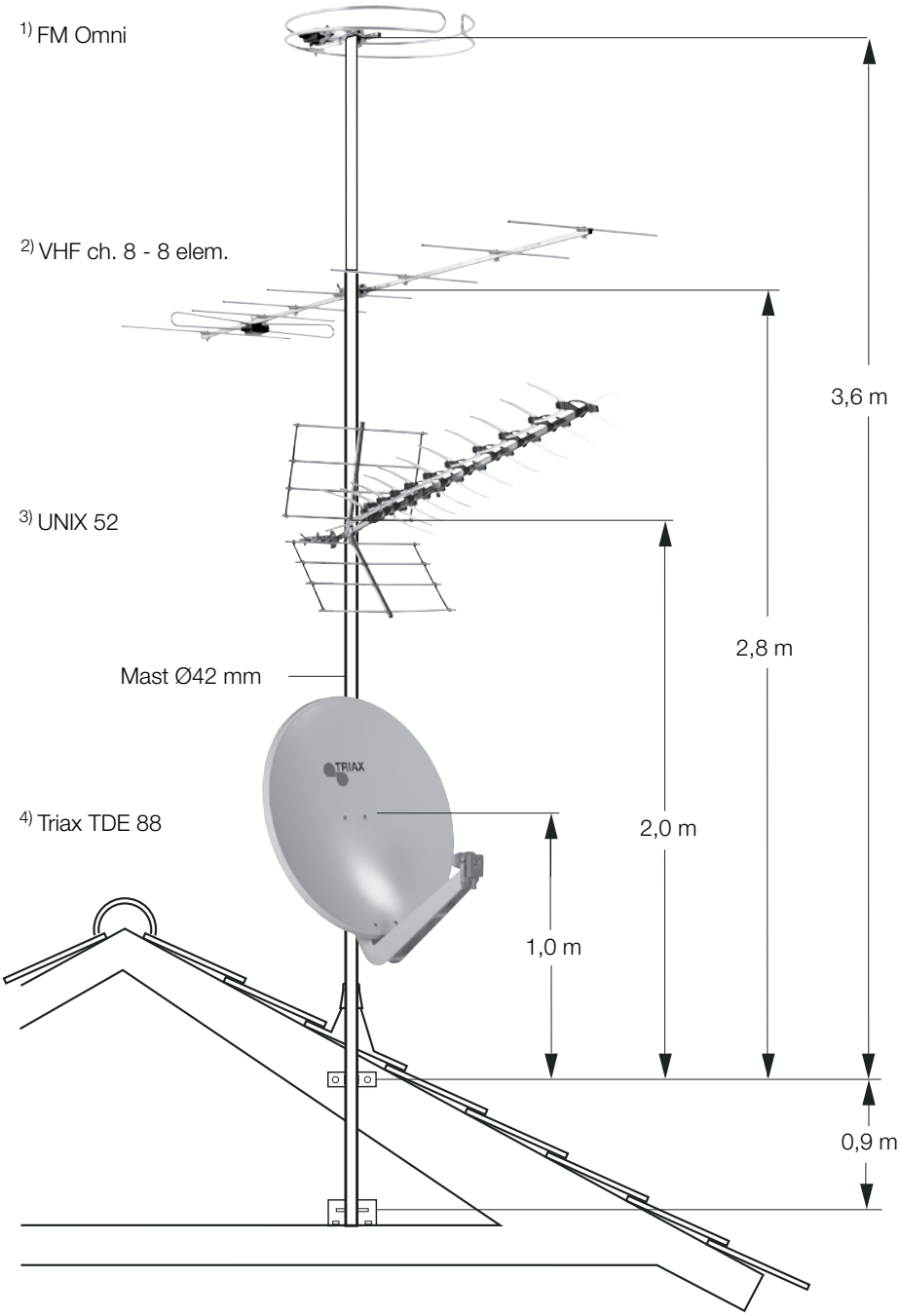
Wind load (N) x distance (m)
= bending moment (Nm)

The distance and bending moment refer to the top clamping point. Bending moments in excess of 1650 Nm require proof of structural stability.

Wind load	x	distance	=	bending moment
[1] 16 N	x	3,6 m	=	57.6 Nm
[2] 56 N	x	2,8 m	=	156.8 Nm
[3] 96 N	x	2,0 m	=	192,0 Nm
[4] 619 N	x	1 m	=	619,0 Nm

Total bending moment of the antennas **1025,4 Nm**

The total bending moment for the antenna at 1025.4 Nm is less than the usable bending moment for the antenna to be mounted of **1250 Nm**.
Therefore the intended configuration is permitted!



In accordance with DIN EN 50083-1 the clamped length of the mast must be at least 1/6 of the mast length

Mounting accessories

Terrestrial reception >> **Mechanical accessories**	
Masts	62 - 63
Window and wall brackets	64 - 66
Mounting pipes	67
Mounting clamps	68
Wires and accessories	69
Chimney bracket sets	70
Roof covers	71
Cable guards and duct	72
Screw, bolts, clips and strips	73 - 74

Mast for mounting on brackets, roof beams

Triax range of masts and brackets for perfect installations.
Triax has a wide range of mounting brackets for aerials, all for your needs.
Please read the section with mast calculation in accordance with the EN 50083-1 norm with a restriction of 1650 Nm as maximum on a normal building.

38 mm hot galvanized masts

42 mm masts for composition

50 mm hot galvanized masts

Technical data on hot galvanized 38 and 42 mm steel masts

Type Art. No.		Mast 38 mm 140030	Mast 38 mm 140113	Mast 38 mm 140031	Mast 38 mm 140112	Mast 38 mm 140110	Mast 38 mm 140111	Mast 42 mm 140025
Diameter	mm	38	38	38	38	38	38	42
Length	m	1.5	3.0	3.0	4.0	6.0	2.0	2.0
Thickness	mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Max. bending moment	Nm	540	540	540	540	540	540	
Weight	kg							
Packing QTY	pcs.	10	1	10	1	1	10	1
Remarks						DIN 2394	DIN 2394	- for composition

Technical data on hot galvanized 42 and 50 mm steel masts

Type Art. No.		Mast 42 mm 140115	Mast 42 mm 140114	Mast 50 mm 140028	Mast 50 mm 140029	Mast 50 mm 140008	Mast 50 mm 140120	Mast 50 mm 140126
Diameter	mm	42	42	50	50	50	50	50
Length	m	3.0	6.0	2.0	3.0	4.0	6.0	3.0
Thickness	mm	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max. bending moment	Nm	1250	1250		1540	1540	1540	1540
Weight	kg							
Packing QTY	pcs.	1	1	10	1	1	1	1
Remarks		DIN 2394	DIN 2394	- for composition	- for composition		DIN 2394	DIN 2394

Mast for mounting on brackets, roof beams

50 mm masts for extention brackets

Pipe holders for bottom pipe

Camping mast for indoor roof mounting

Technical data on 50 mm bottom steel masts and camping masts

Type Art. No.		Mast 50 mm 140121	Mast 50 mm 140122	Pipe holders f. bottom pipe 140128	Camping mast indoor 140135
Diameter	mm	50	50	52	16/20
Length	m	3.0	6.0		1.6
Thickness	mm	2.0	2.0		0.5
Max. bending moment	Nm				
Weight	kg				0.8
Packing QTY	pcs.	1	1	2	1
Remarks		- with holes for extention brackets	- with holes for extention brackets	- for extention of bottom masts	- indoor mounting supplied with cable

Technical data on mast tops

Type Art. No.		Mast top 28 mm 140210	Mast top 38 mm 140213	Mast top 42 mm 140214	Mast top 50 mm 140215
Diameter	mm	28	38	42	50
Colour		Black	Grey	Grey	Grey
Weight	kg				
Packing QTY	pcs.	1	1	1	1
Remarks					

Wall and window brackets

Triax's range of brackets for perfect installations.

Wall bracket with extra leg

3 legs wall bracket

Window bracket MT

Window bracket MT short

Technical data on wall and window brackets

Type		Wall bracket	Wall bracket	Window bracket Type MT	Window bracket Type MT short
Art. No.		**140044**	**140045**	**130009**	**130016**
Diameter	mm	Ø15	Ø15	18 x 18	18 x 18
Clearance from wall	mm	600	350	600	190
Height	mm	150	200		
Weight	kg				
Packing QTY	pcs.	1	1	1	1
Remarks		- with extra leg	- 3 legs	- complete with screws	- complete with screws

Technical data on complete sets of wall brackets

Type		Wall bracket 2 legs 7.5 cm	Wall bracket 2 legs 25-50 cm	Wall bracket 2+3 legs 25-50 cm	Wall bracket 2+3 legs 25-50 cm
Art. No.		**140036**	**140037**	**140047**	**140048**
Mast diameter	mm	30-50	max. Ø51	max. Ø51	max. Ø51
Clearance from wall	mm	75	250-500 adjustable	250-500 adjustable	500-750 adjustable
Material		Steel	5 x 35 steel	5 x 35 steel	5 x 35 steel
Surface tratment	mm	Galv.	Electrogalv.	Electrogalv.	Electrogalv.
Weight	kg				
Dimension box	mm		360 x 130 x 40	360 x 210 x 40	360 x 150 x 40
Packing QTY	pcs.	1	1	1	1

Technical data on hot galvanized wall brackets - 2 legs

Type Art. No.		Wall bracket 2 leg - 5 cm 131010	Wall bracket 2 leg - 15 cm 131020	Wall bracket 2 leg - 25 cm 131030	Wall bracket 2 leg - 35 cm 131040	Wall bracket 2 leg - 45 cm 131050
Mast diameter	mm	30-50	30-50	30-50	30-50	30-50
Clearance from wall	mm	50	150	250	350	450
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1





Technical data on hot galvanized wall brackets - 3 legs

Type Art. No.		Wall bracket 3 leg - 15 cm 131021	Wall bracket 3 leg - 25 cm 131031	Wall bracket 3 leg - 35 cm 131041	Wall bracket 3 leg - 45 cm 131051	Wall bracket 3 leg - 55 cm 131061
Mast diameter	mm	30-50	30-50	30-50	30-50	30-50
Clearance from wall	mm	150	250	350	450	550
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1



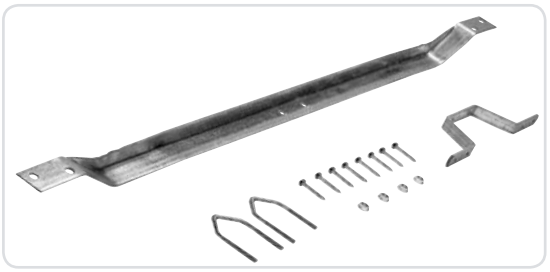


Technical data on hot galvanized wall brackets - 3 legs

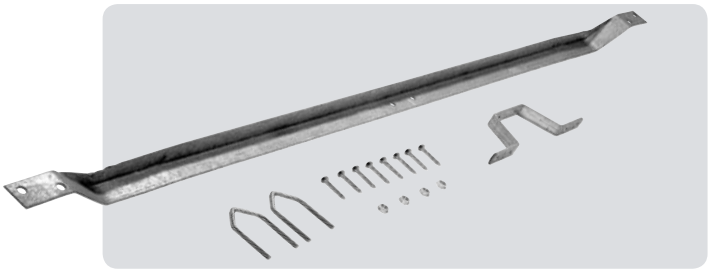
Type Art. No.		Wall bracket 3 leg - 65 cm 131071	Wall bracket 3 leg - 75 cm 131081
Mast diameter	mm	30-50	30-50
Clearance from wall	mm	650	750
Material		Galv. steel	Galv. steel
Weight	kg		
Packing QTY	pcs.	1	1


Wall bracket set

Triax's range of brackets for perfect installations.



Complete GF - wall bracket set



Complete GF - wall bracket set

Technical data on wall brackets

Type Art. No.		GF 85 bracket set 140033	GF 110-170 bracket set 140040	GF 125 bracket set 140038	GF 175 bracket set 140039
Diameter	mm	30-50	30-50	30-50	30-50
Clearance from wall	mm	75	75	75	75
Length	mm	850	1100-1750	1250	1750
Height	mm	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg				
Packing QTY	pcs.	1	1	1	1

Technical data on mast brackets

Type Art. No.		Mast brac. straight 132003	Mast brac. right 132004	Mast brac. left 132005	Mast brac. Universal 132102	Mast brac. straight 132006	Mast brac. right 132007	Mast brac. left 132008
Diameter	mm	38	38	38	42	50	50	50
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg							
Packing QTY	pcs.	1	1	1	1	1	1	1

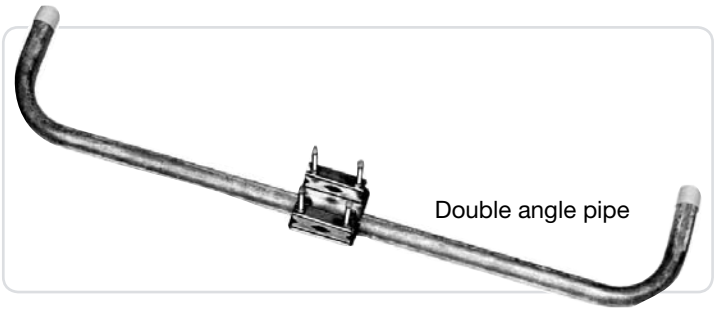
Mounting pipes

Single straight pipe

Single angle pipe - long

Double straight pipe

Single angle pipe - short



Double angle pipe

Technical data on mounting pipes

Type Art. No.		Single straight pipe 140005	Single angle pipe - short 140010	Single angle pipe - long 140011	Double straight pipe 140009	Double angle pipe 140012
Mast diameter	mm	30-50	30-50	30-50	30-50	30-50
Diameter on bracket	mm	32	32	32	32	32
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Length	mm	500	500	900	700	1000
Height	mm	210	210	210	210	210
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks					- for 2 x BB-grid	

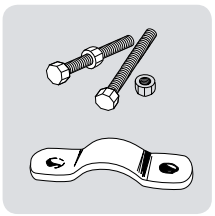
Technical data on mounting pipes

Type Art. No.		Pipe 140116	Pipe MF 38 140117	Pipe SR 2530-2B 140118
Mast diameter	mm	30-50	30-50	30-50
Diameter on bracket	mm			
Material		Galv. steel	Galv. steel	Galv. steel
Length	mm			
Height	mm			
Weight	kg			
Packing QTY	pcs.	1	1	1
Remarks		- for mounting aerials vertical		

Mounting clamps

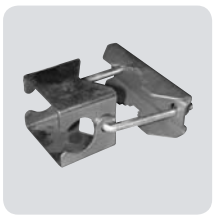
Technical data on accessories

Type		Clamp	Clamp with bolts	U-clamp	Mast clamp	Double mast clamp
Art. No.		133107	133100	140035	133223	133245
Mast diameter	mm	30-50	30-50		38-60	30-50
Material		Steel	Steel		Steel	Steel
Surface tratment	mm	Galv.	Galv.	Electro galv.	Electro galv.	Galv.
Weight	kg					
Packing QTY	pcs.	1	1	2	1	1
Remarks			Fits all types of mounting brackets	Galv. U-clamps for wall mounts		


Technical data on accessories

Type		Mast brac. straight	Jaw bracket Universal	Kip bracket 34 cm	Phone mast bracket
Art. No.		140041	130010	132020	130020
Mast diameter	mm	38	30-50	30-50	38 - 50
Material		Galv. steel	Steel	Galv. steel	Galv. steel
Weight	kg				
Packing QTY	pcs.	1	1	1	1
Remarks		- with 2 screws	Tilt mast bracket aerials beam		

Technical data on accessories

Type		G-bolt 1/2"	G-bolt 1/2"	G-bolt 1/2"	G-bolt 1/2"	1/2" Disc for G-bolt	1/2" Nuts for G-bolt
Art. No.		133090	133100	133101	133102	133086	850035
Diameter	mm	12	12	12	12		
Length	mm	120	200	300	400		
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg						
Packing QTY	pcs.	1	1	1	1	1	1
Remarks		- incl. disc and nuts	- incl. disc and nuts	- incl. disc and nuts	- incl. disc and nuts	- extra disc	- extra 1/2" nuts


Technical data on accessories

Type Art. No.		Botton clamp 30-50 mm 132015	Botton clamp 60 mm 132018	Mast bracket 15x15 - Ø60 133262	Mast bracket 18x18 - Ø60 133252	Stay ring 133010
Mast diameter	mm	30-50	30-50	30-50	30-50	30-50
Material		Galv. steel	Galv. steel	Steel	Steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks				Tilt mast bracket aerials beam	Tilt mast bracket aerials beam	3-point





Technical data on galvanized steelwire

Type Art. No.		Steel wire galvanized 133007	Steel wire galvanized 133105	Steel wire galvanized 133020	Steel wire PVC-covered 133005	Steel wire galvanized 133002
Diameter	mm	Ø 3	Ø 5	Ø 5	Ø 1.2-2.3	Ø 5
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks		Roll of 55 m or 220 m	Length of 3.6 m	Length as required	Roll of 100 m	- oilfree





Technical data on steelwire accessories

Type Art. No.		Rigging screw 133015	Wirelock 133025	Wirelock 133021	Thimble 133009	Thimble 133008
Diameter	mm	1/4”	3	5	3	5
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks			Fits 1/8” wire	Fits 3/16” wire	Fits 3 mm wire (1/8” wire)	Fits 5 mm wire (3/16” wire)





Chimney bracket sets

Technical data on accessories

Single wireset

Single chimney bracket set

Double chimney bracket set

2-parts chimney bracket set

Single chimney bracket set w. mast

Technical data on accessories

Type Art. No.		Single wireset - spare parts 130001	Single chimney bracket set 130002	Double chimney bracket set 130004	2-parts chimney bracket set 130000	2 m mast with chimney bracket 130006
Mast diameter	mm		38-50	38-50	38-50	38
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Sets consist of		1 x Wire Ø5 mm - lenght. 3.6 m 4 x Corner brackets 2 x J-bolts 2 x Wirelock	1 Chimney bracket 1 x Wire Ø5 mm - lenght. 3.6 m 3 x Corner brackets 2 x J-bolts 2 x Wirelock 2 x Clamps with bolts	1 Chimney bracket 2 x Wire Ø5 mm - lenght. 3.6 m 6 x Corner brackets 4 x J-bolts 4 x Wirelock 2 x Clamps with bolts	2 Chimney bracket 2 x Wire Ø5 mm - lenght. 3.6 m 6 x Corner brackets 4 x J-bolts 4 x Wirelock 2 x Clamps with bolts	1 x 2 m mast with chimney bracket 1 x Wire Ø5 mm - lenght. 3.6 m 3 x Corner brackets 2 x J-bolts 2 x Wirelock

Technical data on accessories

Type Art. No.		Chimney bracket 140032	Steel band 140034
Mast diameter	mm	38 - 50	
Material		Galv. steel	Galvanized
Weight	kg		
Packing QTY	pcs.	1	1
Remarks		Bracket with 2 x 5 m steel band	Roll with 10 m steel band

Roof covers for pitched roof

Roof cover - red

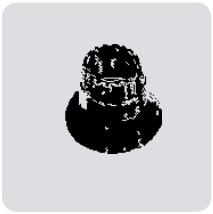
Roof cover - black

Technical data on roof covers

Type Art. No.		Roof cover Red - ral 8012 132202	Roof cover Black 132203
Size	mm	450 x 400	450 x 400
Mast diameter	mm	38-60	38-60
Material		Alu with polyester	Alu with polyester
Weight	kg		
Packing QTY	pcs.	1	1
Remarks		Weatherproof glue - leadfree roof cover	Weatherproof glue - leadfree roof cover

Technical data on clips and index

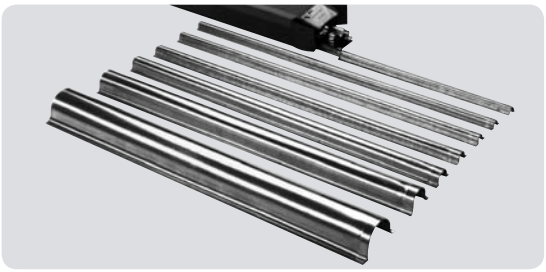
Type Art. No.		Clips large 133011	Index R79 small 132211	Index R76 big 132210	Index red 132212	Index black 132213
Diameter	mm	40 - 60	38 - 50	38 - 50	38 - 60	38 - 60
Material		Steel	Rubber	Rubber	Rubber	Rubber
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks			- delivered with clips	- delivered with clips	- delivered with clips	- delivered with clips



Cable guards

Cable duct
25 x 16 mm

Cable duct
16 x 16 mm



Cable guards - galvanized

Cable guards
- aluminium

Technical data on cable guards

Type Art. No.			Cable guards Galv. steel 550000	Cable guards Galv. steel 550001	Cable guards Galv. steel 550002	Cable guards Alu 133053	Cable guards Alu 133054
Size	Width	mm	16	19	23	Ø 10/Ø 12	Ø 10/Ø 12
	Lenght	mm	1000	1000	1000	2375	5500
Material			Galvanized steel	Galvanized steel	Galvanized steel	Aluminium	Aluminium
Weight		kg					
Packing QTY		pcs.	25	25	25	5	5
Remarks						Cable guard for 7 mm cable	Cable guard for 7 mm cable

Technical data on cable duct

Type Art. No.			Cable duct White plast 153090	Cable duct White plast 153092
Size	Width	mm	16	25
	Height	mm	16	16
Material			White plastic	White plastic
Weight		kg		
Packing QTY		m/roll	15	15
Remarks				

Technical data on cable clips (natural)

Type			Cable clips Natural	Cable clips Natural	Cable clips Natural	Cable clips Natural	Cable clips Natural	Cable clips Natural
Art. No.			153013	153001	153003	153004	153008	153010
Size	Diameter	mm	2 x 4	3 x 5	5/20	6/25	7/25	7/35
	Lenght	mm	20	20	20	25	25	35
Material			Plastic	Plastic	Plastic	Plastic	Plastic	Plastic
Weight		kg						
Packing QTY per box		pcs.	100	100	100	100	100	100
Remarks			Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes

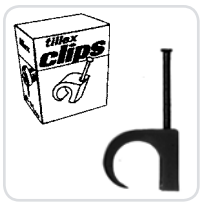
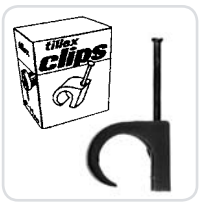





Technical data on cable clips (black) and expansion bolts

Type			Cable clips Black	Cable clips Black	Cable clips Black	Cable clips Black	Cable clips Black	Expansion bolts	Expansion bolts
Art. No.			153080	153081	153082	153083	153084	140380	140370
Size	Diameter	mm	FC 7-9	FC 9-11	FC 11-13	FC 13-15	FC 15-17	10	8
	Lenght	mm	20	25	25	30	35	80	100
Material			Plastic	Plastic	Plastic	Plastic	Plastic	Electro galv.	Electro galv.
Weight		kg							
Packing QTY per box		pcs.	100	100	100	100	100	50	50
Remarks			Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	-also available by the piece	-also available by the piece




Technical data on screws

Type			Screw	Screw	Screw	Screw	Screw	Screw
Art. No.			140340	140350	140351	153580	140360	140361
Size	Diameter	mm	Ø 6	Ø 8	Ø 8	Ø 8	Ø 10	Ø 10
	Lenght	mm	50	50	80	100	50	80
Material/Surface treatment			Electro galv.	Electro galv.	Electro galv.	Electro galv.	Electro galv.	Electro galv.
Weight		kg						
Packing QTY per box		pcs.	200	200	200	50	100	50
Remarks			-also available by the piece	-also available by the piece	-also available by the piece	-also available by the piece	-also available by the piece	-also available by the piece





Cable strips, tape, clips and stitcher

Technical data on cable strips

Type Art. No.			SST 21 Black 153065	PLT 2S Black 712290	PLT 2S Black 153067	PLT 4S Black 153066	PLT 3H Black 712296	PLT 3H Black 153068
Size	Diameter	mm	Ø 80	Ø 48	Ø 48	Ø 102	Ø 76	Ø 76
	Lenght	mm	290	188	188	368	290	290
	Height	mm	3.6	4.8	4.8	4.8	7.6	7.6
Material				SMO	SMO	SMO	SMO	SMO
Weight		kg						
Packing QTY per box		pcs.	100	1	100	100	1	100
Remarks								

Technical data on tape

Type Art. No.			Tape Grey 153060	Black self-vulcanized 153061	Cable grom-met - Grey 760056	Cable grom-met - Black 153057
Size	Width	mm	10	18		
	Lenght	mm				
Material			Plastic	Rubber	Rubber	Rubber
Weight		kg				
Packing QTY per box		pcs.	1	1	1	1
Remarks			Cartons of 10 rolls	Single pack	- for ALPS LNB units	Universal for F-con

Technical data on stitcher and clips

Type Art. No.			Arrow T25 Stitcher 153070	Clips 9/16" Galv. 153071	Clips 9/16" White 153069
Size	Width	mm		- for T25 stitcher	- for T25 stitcher
	Lenght	mm			
Material				Steel	Steel
Weight		kg			
Packing QTY per box		pcs.	1	1000	1000
Remarks			Single pack	Cartons of 10 boxes	Cartons of 10 boxes

Satellite reception >> Dishes	
- TDE series	77
- TD series	78 - 83
- Basic series	84
- DAP series	85
- Elliptical perforated	86
- Unique	87
LNB brackets and spare parts	88-89
Satellite reception >> Universal LNB units	
- Single, twin, quad, quattro	90-92
DiSEqC switches	93-94
Rotors and LNB covers	95
Mounting accessories	96-97

Well-proven solutions for customers´ needs

Not two customers are equal and therefore Triax is very flexible to find a solution that suits you as our customer. When choosing a satellite dish we can offer different solutions when it comes to size, material, colour, packing and accessories.

Aluminium or steel

Our TD dishes are made of either aluminium or steel. Steel is the most preferred material to our customers.

Colours

All dishes are available in different colours. Naturally other colours can be chosen depending on order size.

Packing methods

All Triax products can be ordered, packed and delivered in different ways optimizing your handling and distribution.
We can deliver either in single pack, mini-bulk or bulk, packed exactly in the way that best enables you to save costs and achieve your desired results.
We can deliver satellite dishes as complete systems including set-top boxes and LNBs and in consumer packaging. And we can deliver dishes in bulk to your stock or packaging line, with brackets and other components packed in bulk or as individual sets.

Single carton optional:

- Plastic plate
- Colour
- Wall bracket
- LNB holder
- LNB
- (Receiver)

Should you have other demands please ask your Triax sales contact and we will try to meet your requests.

Triax TDE series of high-quality dishes

Heavy-duty TDE 78/88/110 satellite dish – especially designed for SMATV systems

- Easy to install
- Mounted in just 2 minutes
- Arm and bracketry made in one piece, resulting in a safe and stable positioning of the LNB in relation to the reflector
- Secure positioning of satellite dish
- Newly designed LNB bracket in die cast aluminium
- Possibility of up to 4 LNBs with 2 different multifeed brackets
- Easy-to-read scale facilitates quick and simple adjustment of elevation angle
- Stable, non-slip bracketry with 2 U-brackets which ensure that the dish is kept in the right position
- Heavy-duty wing nuts on the azimuth and elevation brackets ensure that mounting and adjustment can be done without using tools

Technical data on TDE-aluminium dishes

Type		TDE 78	TDE 88	TDE 110
Size		**70 x 78 cm**	**85 x 95 cm**	**100 x 105 cm**
Art. No. (Light grey)	Ral 7035	123790	126385	126380
(Grey)	Ral 7016	123792	126387	126382
(Anthracite)	Ral 8012	123791	126386	126381
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27
Offset angle	degrees	26	26	26
Elevation range	degrees	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset
Beam width	degrees	2.6	2.0	1.8
Windload @ 42 m/s	N	619	902	1222
Material		Aluminium	Aluminium	Aluminium
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat
Aluminium LNB holder	mm	Ø40	Ø40	Ø40
Mast dimension	mm	Ø40 - 95	Ø40 - 95	Ø40 - 95
Wall bracket		- optional extra	- optional extra	- optional extra
Remarks				

Well-designed heavy-duty LNB bracket in die cast aluminium ensures stable and easy mounting.

- more detailed information on page 88 under LNB-brackets

Triax TDS series of standard steel dishes

TD dishes

Almost any dish can provide the signals needed to get a clear TV-picture. But will consumer satisfaction last, if signals deteriorate due to corrosion of the reflector or if the dish is damaged by a storm?
TD dishes minimize problems of any kind. Long-term corrosion is prevented by an extremely thorough anti-corrosive process and polyester coating. A solid construction of all parts, including the non-slip mast brackets, ensures that the dish remains in its correct position, when other dishes are torn down or twisted by a heavy storm.
TD dishes are of course manufactured according to Triax's quality standards

- with precision tools and robots ensuring absolute uniform and optimum geometry for perfect signal reception.

Technical data on TDS-steel dishes

Type		TDS 54	TDS 64	TDS 78	TDS 88	TDS 110
Size		**50 x 56 cm**	**60 x 65 cm**	**70 x 78 cm**	**85 x 95 cm**	**100 x 105 cm**
Art. No. (Light grey)	Ral 7035	122518	122618	123718	122818	122908
(Grey)	Ral 7030	122510	122610	122710	122810	
(Anthracite)	Ral 7016	122512	122612	123712	122812	122912
(Red)	Ral 8012					122910
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Plastic LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 95	Ø40 - 95	Ø40 - 95
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra	- optional extra
Remarks		- some types available without Triax logo, please contact our sales department				

Duo-block bracket

Flexi-block bracket

We can supply a wide range of different LNB brackets for the TD-series dishes

- more detailed information on page 88-89 under LNB-brackets

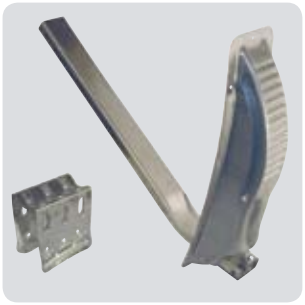
Multi-block bracket

Triax TDA series of standard aluminium dishes

A dish for any job

TD dishes are available in sizes, materials and colours for any job ranging from single to multiple user applications and any type of environment:

- 5 sizes ranging from 50 x 55 cm (34.2 dBi gain) to 100 x 105 cm (40.2 dBi gain)
- Delivered in aluminium or galvanized steel
- Available in a number of standard colours and any other colour and own label branding can be supplied against a minimum quantity
- Available in deluxe version with anti-corrosive coating also on the feedarm and the elevation and mast bracket
- Delivered in individual packaging, but also available in bulk packs minimizing costs of transportation and handling



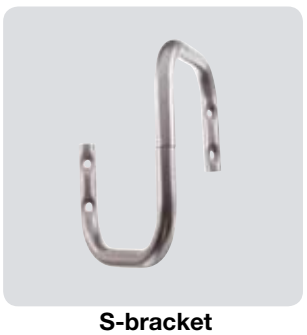
On TDS and TDA dishes the mast bracket and back structures are unpainted.

Technical data on TDA-aluminium dishes

Type		TDA 54	TDA 64	TDA 78	TDA 88	TDA 110
Size		**50 x 56 cm**	**60 x 65 cm**	**70 x 78 cm**	**85 x 95 cm**	**100 x 105 cm**
Art. No. (Light grey)	Ral 7035		123618	123718	123818	123908
(Grey)	Ral 7030					
(Anthracite)	Ral 7016		123612	123712	123812	
(Red)	Ral 8012		123614	123714	123814	
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Plastic LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 60	Ø40 - 60	Ø40 - 60
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra	- optional extra
Remarks		- some types available without Triax logo, please contact our salesdepartment				

A wide range of different mounting brackets for the TD-series dishes is also available - see more detailed information on page 96 under mounting accessories

J-bracket



S-bracket

Wall-bracket

Triax TDS Euroline series steel dishes

TDS and TDA Euroline dishes

All Euroline dishes will be delivered with painted mast bracket and back structure with pre-mounted feedarm. They also have a deluxe version of wingnuts

Mounted and adjusted in two minutes

Saving trouble and money is not only a long-term consumer benefit. TD dishes allow a substantial reduction in time used for mounting and adjusting:

1. The elevation bracket is pre-mounted and is easily fixed to the mast with non-slip mast brackets
2. A setting scale on the elevation brackets facilitates precise adjustment to the required satellite
3. The pre-mounted feedarm just needs unfolding, and the LNB holder with the LNB is simply clicked on.

Technical data on TDS Euroline steel dishes

Type		TDS 54	TDS 64	TDS 78	TDS 88	TDS 110
Size		**50 x 56 cm**	**60 x 65 cm**	**70 x 78 cm**	**85 x 95 cm**	**100 x 105 cm**
Art. No. (Light grey)	Ral 7035	121560	1221660	121760	121860	121960
(Grey)	Ral 7030					
(Anthracite)	Ral 7016		121661	121761	121861	121961
(Red)	Ral 8012		121662	121762	121862	121962
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Plastic LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 60	Ø40 - 60	Ø40 - 60
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra	- optional extra
Remarks		- some types available without Triax logo, please contact our sales department				

Duo-block bracket

Flexi-block bracket

We can supply a wide range of different LNB brackets for the TD-series dishes

- more detailed information on page 88-89 under LNB-brackets

Multi-block bracket

Triax TDA Euroline series aluminium dishes

Ral 7016 Ral 7030

TD dishes

Almost any dish can provide the signals needed to get a clear TV-picture. But will consumer satisfaction last, if signals deteriorate due to corrosion of the reflector or if the dish is damaged by a storm?
TD dishes minimize problems of any kind. Long-term corrosion is prevented by an extremely thorough anti-corrosive process and polyester coating.
A solid construction of all parts, including the non-slip mast brackets, ensures that the dish remains in its correct position, when other dishes are torn down or twisted by a heavy storm.
TD dishes are of course manufactured according to Triax's quality standards - with precision tools and robots ensuring absolute uniform and optimum geometry for perfect signal reception.

Technical data on TDA Euroline aluminium dishes

Type		TDA 54	TDA 64	TDA 78	TDA 88	TDA 110
Size		**50 x 56 cm**	**60 x 65 cm**	**70 x 78 cm**	**85 x 95 cm**	**100 x 105 cm**
Art. No. (Light grey)	Ral 7035	123560	123660	123760	123860	123960
(Grey)	Ral 7030					
(Anthracite)	Ral 7016		123661	123761	123861	123961
(Red)	Ral 8012		123662	123762	123862	123962
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Plastic LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 60	Ø40 - 60	Ø40 - 60
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra	- optional extra
Remarks		- some types available without Triax logo, please contact our sales department				

A wide range of different mounting brackets for the TD-series dishes is also available - see more detailed information on page 96 under mounting accessories

J-bracket

S-bracket

Wall-bracket

Triax TDS series of dishes with wallbracket

TDS dishes
- **mounted and adjusted in two minutes**

Saving trouble and money is not only a long-term consumer benefit. TD dishes allow a substantial reduction in time used for mounting and adjusting:

1. The elevation bracket is pre-mounted and is easily fixed to the mast with non-slip mast brackets
2. A setting scale on the elevation brackets facilitates precise adjustment to the required satellite
3. The pre-mounted feedarm just needs unfolding, and the LNB holder with the LNB is simply clicked on.

Technical data on TDS-steel dishes

Type		TDS 54	TDS 64	TDS 78	TDS 88	TDS 110
Size		**50 x 56 cm**	**60 x 65 cm**	**70 x 78 cm**	**85 x 95 cm**	**100 x 105 cm**
Art. No. (Grey)	Ral 7030	122501	122601	122701	122801	122901
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Plastic LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25	Ø40 + Ø25
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 60	Ø40 - 60	Ø40 - 60
Wall bracket		- included	- included	- included	- included	- optional extra

J-bracket

S-bracket

Triax TD bulk packed dishes

Triax bulk solution

Bulk solutions reduce costs and contribute considerably to the protection of the environment due to the heavy reduction of packaging costs.

Mini-bulk with 3-5 dishes

Three or five complete satellite dishes packed in one carton box.

Bulk with 50, 100 or 200 dishes

Complete satellite dishes packed on a pallet with all the accessories packed in separate carton boxes or in scantainers with backbracket and arm, mastbrackets, LNB-brackets and screw -sets in small bags.

TD bulk with single packed accessories

TD dishes - incl. Triax logo		
Art. No.	**TDS steel dishes**	
122567	TDS 54, Bulk w/single, Ral 7035	200 pcs/pll
122568	TDS 54, Bulk w/single, Ral 7016	200 pcs/pll
122569	TDS 54, Bulk w/single, Ral 8012	200 pcs/pll
122667	TDS 64, Bulk w/single, Ral 7035	100 pcs/pll
122668	TDS 64, Bulk w/single, Ral 7016	100 pcs/pll
122669	TDS 64, Bulk w/single, Ral 8012	100 pcs/pll
122672	TDS 64, Bulk w/single, Ral 7030	100 pcs/pll
122749	TDS 78, Bulk w/single, Ral 7035	100 pcs/pll
122754	TDS 78, Bulk w/single, Ral 7016	100 pcs/pll
122764	TDS 78, Bulk w/single, Ral 8012	100 pcs/pll
122737	TDS 78, Bulk w/single, Ral 7030	100 pcs/pll
122867	TDS 88, Bulk w/single, Ral 7035	100 pcs/pll
122868	TDS 88, Bulk w/single, Ral 7016	100 pcs/pll
122869	TDS 88, Bulk w/single, Ral 8012	100 pcs/pll
122823	TDS 88, Bulk w/single, Ral 7030	100 pcs/pll
122904	TDS 110, Bulk w/single, Ral 7035	50 pcs/pll
122924	TDS 110, Bulk w/single, Ral 7030	50 pcs/pll
122926	TDS 110, Bulk w/single, Ral 7016	50 pcs/pll
Art. No.	**TDA aluminium dishes**	
123666	TDA 64, Bulk w/single, Ral 7035	100 pcs/pll
123749	TDA 78, Bulk w/single, Ral 7035	100 pcs/pll
123754	TDA 78, Bulk w/single, Ral 7016	100 pcs/pll
123867	TDA 88, Bulk w/single, Ral 7035	100 pcs/pll
123868	TDA 88, Bulk w/single, Ral 7016	100 pcs/pll
123869	TDA 88, Bulk w/single, Ral 8012	100 pcs/pll

TD bulk with single packed accessories

TD dishes - incl. Triax logo		
Art. No.	**TDS steel dishes**	
121695	TD 64 SP bulk, Ral 7035	25 pcs/pll
121795	TD 78 SP bulk, Ral 7035	25 pcs/pll
121696	TD 64 SP bulk, Ral 7016	25 pcs/pll
121796	TD 64 SP bulk, Ral 7016	25 pcs/pll

TMB mini-bulk dishes (excl. logo)

TMB dishes		
Art. No.	**TMB steel dishes**	
122627	TMB 64, Ral 7035	5 pcs. Carton box
122674	TMB 64, Ral 7016	5 pcs. Carton box
122236	TMB 78, Ral 7016	5 pcs. Carton box
122733	TMB 78, Ral 7035	5 pcs. Carton box
122831	TMB 88, Ral 7035	3 pcs. Carton box
122832	TMB 88, Ral 7016	3 pcs. Carton box
Art. No.	**TMB aluminium dishes**	
123731	TMB 78, Ral 7035	5 pcs. Carton box
123732	TMB 78, Ral 7016	5 pcs. Carton box
123831	TMB 88, Ral 7035	3 pcs. Carton box
123832	TMB 88, Ral 7016	3 pcs. Carton box

TD bulk dishes

TD dishes - incl. Triax logo		
Art. No.	**TDS steel dishes**	
122525	TDS 54 Bulk, Ral 7016	200 pcs/pll
122526	TDS 54 Bulk, Ral 7035	200 pcs/pll
122547	TDS 54 Bulk, Ral 8012	200 pcs/pll
122617	TDS 64 Bulk, Ral 7035	100 pcs/pll
122624	TDS 64 Bulk, Ral 7030	100 pcs/pll
122625	TDS 64 Bulk, Ral 7016	100 pcs/pll
122647	TDS 64 Bulk, Ral 8012	100 pcs/pll
122717	TDS 78 Bulk, Ral 7035	100 pcs/pll
122724	TDS 78 Bulk, Ral 7030	100 pcs/pll
122725	TDS 78 Bulk, Ral 7016	100 pcs/pll
122824	TDS 88 Bulk, Ral 7030	100 pcs/pll
122825	TDS 88 Bulk, Ral 7016	100 pcs/pll
122826	TDS 88 Bulk, Ral 7035	100 pcs/pll
122847	TDS 88 Bulk, Ral 8012	100 pcs/pll
Art. No.	**TDA aluminium dishes**	
123647	TDA 64 Bulk, Ral 8012	100 pcs/pll
123648	TDA 64 Bulk, Ral 7035	100 pcs/pll
123747	TDA 78 Bulk, Ral 8012	100 pcs/pll
123748	TDA 78 Bulk, Ral 7035	100 pcs/pll
123846	TDA 88 Bulk, Ral 7016	100 pcs/pll

TRIAX Basic dishes

Complete range in Basic dishes
- carefully designed to give the best value in price and quality
The mechanical parts of the Basic dishes have been created with careful attention to detail and recommendations from installers. The dishes are manufactured using a fine anti-corrosive treatment

- Improved, maintenance-free reception
- Polyester powder-coated
- Computer aided design for high performance
- Easy to install
- 50 cm, 60 cm, 75 cm and 85 cm size options
- Pole mount
- Easy adjust elevation scale
- 100 pcs bulk pack

Ral 7035

Technical data on Basic dishes

Type		Basic 60	Basic 60 w. south bracket	Basic 75	Basic 85
Size		60 x 65 cm	60 x 65 cm	70 x 78 cm	85 x 95 cm
Art. No. (light grey)	Ral 7035	128601	128602	128701	128801
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	35.8	35.8	37.1	38.8
G/T LNB 0.7 dB	dB/K	16.0	16.0	17.3	19.2
X-polarisation	dB	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset
Beam width	degrees	3.1	3.1	2.6	2.0
Windload @ 42 m/s	N	445	445	619	902
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Aluminium LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40	Ø40
Mast dimension	mm	Ø28 - 60	Ø28 - 60	Ø32 - 60	Ø32 - 60
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra
Remarks					

Basic duo-block

Basic flexi-block

We can supply a wide range of different LNB brackets for the Basic-series dishes
- more detailed information on page 89 under LNB-brackets

Basic multi-block

Triax DAP fibre glass dishes

Fibre glass dishes are the preferred choice in some markets
The most durable long-term solutions in difficult environments, for example in coastal areas or mountain regions. Triax fulfils the demand with a series of dishes combining the resistance of glass fibre with the optimum geometry that characterises all Triax dishes whilst ensuring perfect reception quality.

- Available in 60, 70, 80 and 90 cm sizes with gains from 35.5 dB to 39.0 dB
- Light grey and anthracite colour

The mast bracket and the LNB holder are both easy to mount and absolutely stable with strength and stability tested in ‘ wind-tunnels and through mechanical tests.

Technical data for DAP dishes

Type		DAP 600 DAP 601	DAP 700 DAP 701	DAP 800	DAP 900 DAP 901
Size		58 x 61 cm	65 x 72 cm	80 x 90 cm	87 x 100 cm
Art. No. DAP X00 = Grey	Ral 1013	126310	126313	126318	126316
DAP X01 = Anthracite	Ral 7016	126311	126314	126319	126317
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	35.5	36.5	37.9	39.0
G/T LNB 0.7 dB	dB/K	13.6	14.7	15.8	16.9
X-polarisation	dB	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26
Elevation range	degrees	10 - 50	10 - 50	10 - 50	10 - 50
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset
Beam width	degrees				
Windload @ 42 m/s	N	378	600	735	846
Material		Fibre glass	Fibre glass	Fibre glass	Fibre glass
Finish		Alu. arm and brackets	Alu. arm and brackets	Alu. arm and brackets	Alu. arm and brackets
Aluminium LNB holder	mm	Ø40	Ø40	Ø40	Ø40
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø32 - 60	Ø32 - 60
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra
Remarks		Double U-brackets on all types			

The solid double mast bracket ensures that the fibre glass dish is fixed firmly to the mast, and locked in the desired position

TRIAX elliptical dishes

The Triax range of elliptical dishes has been designed specifically for reception of digital satellite signals.
The dishes are available in 2 sizes, 44 cm and 60 cm, and both have been approved by BSKYB, who is the world leader in digital platforms, and also used by NSAB on the Scandinavian market. The dishes can be used with "plug-in" optimised elliptical feed LNBs for maximum performance, or with standard universal LNBs using a 40 mm feed clamp.
Available in perforated or solid zinc coated steel, both dishes come with the following features:

- Tilt movement/skew adjustment
- Integrated spirit level on region 1 for correct alignment first time
- Polyester powder coated reflector and bracketry
- Pole or pole/wall mounting
- Packed in 1 pcs single pack

Technical data on elliptical dishes

Type Size		Elliptical (reg. 1) *perforated* 52 x 42 cm	Elliptical (reg. 1) *solid* 52 x 42 cm	Elliptical (reg. 2) *perforated* 72 x 58 cm	Elliptical (reg. 2) *solid* 72 x 58 cm
Art. No. (Anthracite)	Ral 7016	124225	124351	124226	124313
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 10.70 GHz @ 12.75 GHz	dBi dBi	32.3 33.7	32.3 33.7	35.2 36.7	35.2 36.7
G/T LNB 0.7 dB	dB/K				
X-polarisation	dB				
Offset angle	degrees	22.6	22.6	23.9	23.9
Elevation range	degrees	0 - 60	0 - 60	10 - 70	10 - 70
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset
Beam width	degrees				
Windload @ 42 m/s	N				
Material		Steel	Steel	Steel	Steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
LNB holder	mm	Ø40 or "Plug-in LNB"	Ø40 or "Plug-in LNB"	Ø40 or "Plug-in LNB"	Ø40 or "Plug-in LNB"
Mast dimension	mm	Ø30 - 50	Ø30 - 50	Ø30 - 40	Ø30 - 40
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra
Remarks		Single U-bracket	Single U-bracket	Double U-bracket	Double U-bracket

Triax Unique multi reception dish

Advantage of TRIAX Unique multi reception dish

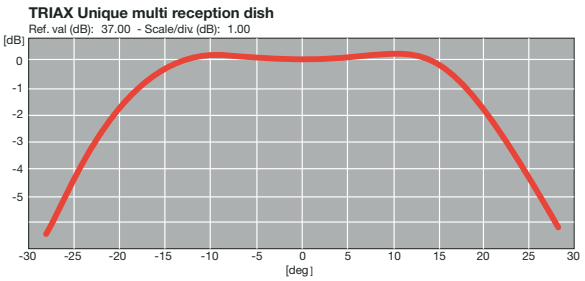
The Unique multi reception dish is the result of research into semi-parabolic shapes and the influence on available gain in both main and side directions. Through a special shaping we have stretched the focal point into a focal line and still letting each LNB utilize all of the dish's surface, thus succesfully combining efficient area utilization of sidemounting with the broad and uniform azimuth beam coverage of the torus antenna.

- Uniquely shaped dish giving high and constant gain within a 30 deg. range.
- Only one dish for reception of 2 - 4 satellites
- Simple and fast installation - quick and easy to mount
- Simple and easy adjustment
- Individual setting of each LNB
- High mechanical strength and resistance to corrosion mechanical tests

Ral 7030

Technical data for Unique multi reception dish

Type **Size**		**TD Unique** ***single pack*** **100 x 111 cm**	**TD Unique** ***100 pcs bulk*** **100 x 111 cm**
Art. No. (grey)	Ral 7030	126390	126391
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75
Gain @ 10.70 GHz	dBi	37.1	37.1
G/T LNB 0.7 dB	dB/K		
X-polarisation	dB	> 20	> 20
Offset angle	degrees	26.0	26.0
Elevation range	degrees	5 - 50	5 - 50
Reflector type	F/D 0.6	Offset	Offset
Beam width	degrees	2.6	2.6
Windload @ 42 m/s	N	1230	1230
Material		Steel	Steel
Finish		Polyester powder coat	Polyester powder coat
LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25
Mast dimension	mm	Ø32 - 60	Ø32 - 60
Wall bracket		- optional extra	- optional extra
Remarks		Double U-bracket	Double U-bracket



TRIAX Unique multi reception dish gain

It is quite obvious, how the TRIAX Unique multi reception dish design retains gain even at large changes of azimuth beam angles - where it really matters for multi-satellite reception! All TRIAX dishes have been wind-tunnel tested according to ETSI standard ETS 300784, Satellite Earth Stations (TVRO).

LNB brackets - multi satellite reception

Triax's range of LNB brackets and accessories for perfect installations.
Well-designed LNB bracket in UV-resistent plast and aluminium ensures stable and easy mounting, e.g.:

TDE multi-blocks
2 different heavy-duty multifeed brackets for 2 up to 4 pcs of Ø40 mm LNBs are also available for the TDE series of dishes.

Duo-blocks
3° and 6° duo-blocks for Ø40 mm LNBs are an elegant solution for reception from two satellite positions: e.g. Eutelsat (Hotbird) and ASTRA.
Available in black and grey for the TDE, TD and Basic series.

Flexi-blocks
A 3° to 10° Flexi-block for two Ø40 mm LNBs is also available for all 3 series.

Multi-blocks
A 3° to 20° Multi-block for four Ø40 mm LNBs with min. 4° between the satellite positions is available for the TD- and Basic-series.

Multi-block brackets for the TDE-series

Type Art. No.		TDE 88/110 2 LNB multi-block 300734	TDE 88/110 3 LNB multi-block 300735	TDE 78 2 LNB multi-block 300736	TDE 78 3 LNB multi-block 300737
Colour		Steel/alu	Steel/alu	Steel/alu	Steel/alu
LNB angle	degrees	6 - 20	6 - 20	6 - 20	6 - 20
LNB size	mm	Ø40	Ø40	Ø40	Ø40
Weight	kg				
Packing	type				
Remarks		Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra

Duo- and flexi-block brackets for the TD-series

Type Art. No.		TD 3⁰ Duo-block 300716	TD 6⁰ Duo-block 300715	TD 6⁰ Duo-block 300717	TD 3⁰ - 10⁰ Flexi-block 300719
Colour		Black	Black	Grey	Black
LNB angle	degrees	3	6	6	3 - 10
LNB size	mm	Ø40	Ø40	Ø40	Ø40
Weight	kg				
Packing	type				
Remarks		Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra

LNB brackets - multi satellite reception

Multi-block brackets for the TD-series

Type Art. No.		TD - 3 LNB Multi-block 300728	TD - 4 LNB Multi-block 300727	TD - 2 LNB Multi-block set 300730	TD - 4 LNB Multi-block set 300725
Colour		Black/alu	Black/alu	Black/alu	Black/alu
LNB angle	degrees	3 - 20	3 - 20	3 - 20	3 - 20
LNB size	mm	Ø40	Ø40	Ø40	Ø40
Packing	type				
Remarks		Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	- incl. 2 LNB and MFD 21 DiSEqC switch	- incl. 4 LNB and MFD 41 DiSEqC switch



Duo- and flexi-block brackets for the Basic-series

Type Art. No.		Basic - 4 LNB Multi-block 300729	Basic 3⁰ Duo-block 300724	Basic 6⁰ Duo-block 300722	Basic 3⁰ - 10⁰ Flexi-block 300723
Colour		Grey	Black	Black	Black
LNB angle	degrees	3 - 20	3	6	3 - 10
LNB size	mm	Ø40	Ø40	Ø40	Ø40
Packing	type				
Remarks		Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra




Multi-block brackets for the DAP-series and spareparts for dishes

Type Art. No.		MFD 850 DAP Flexi-block 126309	TD plastic Spareparts 129420	TD plastic Spareparts 129421	TD plastic Spareparts 129422
Colour		White/black	Plastic (Ral 7030)	Plastic (black)	Plastic (Ral 7035)
LNB angle	degrees	3 - 10			
LNB size	mm	Ø40			
Packing	type		Single pcs.	Single pcs.	Single pcs.
Remarks		Ø25 adaptor - optional extra	All plastic spare parts - fit TD 54, 64, 78 and 88 dish	All plastic spare parts - fit TD 54, 64, 78 and 88 dish	All plastic spare parts - fit TD 54, 64, 78 and 88 dish


Triax LNB units - the best choice

Complete range of LNB units, adopting the latest cutting-edge RF technology

- Full KU-band coverage for both analogue and digital reception
- Excellent noise figure and low phase noise
- High gain and excellent cross-pole isolation
- High output and low power consumption
- Qualified for harsh environments
- Waterproof
- Single packed in gift box

Technical data

+ 5 dB gain

Type			**TSI 003** Single universal	**TSI 004** Single universal	**TSI 005** Single universal
Art. No.			**300430**	**300432**	**300429**
Colour (light grey)			Ral 7035	Black	Ral 7035
RF input					
Input frequency range	Low band High band	GHz GHz	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75
Feedhorn		GHz	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7
IF output					
Output frequency range	Low band High band	MHz MHz	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150
Output connector type			75Ω female	75Ω female	75Ω female
Output VSWR @ room temp.			2.5:1 (typ.)	2.5:1 (typ.)	2.5:1 (typ.)
Local oscillator					
Frequency	Low band High band	GHz GHz	9.75 10.6	9.75 10.6	9.75 10.6
Frequency stability		MHz	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)
Phase noise @ room temperature		DBc/Hz DBc/Hz DBc/Hz	-50 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz max.)	-50 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz max.)	-50 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz max.)
Conversion gain	(Typ.) (Max.)	dB dB	56 62	56 62	60 **65**
Gain variation (over operating band)		dB	5 p-p (typ.)	5 p-p (typ.)	5 p-p (typ.)
Gain flatness (across 26 MHz segm)		dB	± 0.5 (typ.)	± 0.5 (typ.)	± 0.5 (typ.)
Output power @ 1 dB gain comp.		dBm	5 (typ.)	5 (typ.)	5 (typ.)
Spurious level		dBm	- 65 (max.)	- 65 (max.)	- 65 (max.)
Noise figure	(typ.) (max.)	dB dB	**0.3** 0.6	**0.3** 0.6	**0.3** 0.6
Image rejection		dB	45 (min.)	45 (min.)	45 (min.)
Cross polarization isolation		dB	25 Typ. (20 min.)	25 Typ. (20 min.)	25 Typ. (20 min.)
DC current consumption (typ.)		mA	110	110	150
Operating voltage	Vertical Horizontal	VDC VDC	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21
Switching	Low band High band	Hz KHz	0 22 ± 4	0 22 ± 4	0 22 ± 4
Operating temperature range		°C	-40 ~ +60	-40 ~ +60	-40 ~ +60
Diameter		mm	40	40	40
Width x Heigth x Depth		mm	59 x 59 x 112	59 x 59 x 112	59 x 59 x 112
Max. depth incl. feedhorn		mm	112	112	112
Weight		kg	0.130 ±0.025	0.130 ±0.025	0.130 ±0.025
Packing size		pcs.	50	50	50

Triax LNB units - the best choice

Technical data

Type **Art. No.**			**TTW 002** Twin universal **300435**	**TQD 002** Quad universal **300436**	**TQT 002** Quattro universal **300438**	**TMB 002** Mono-block **300439**
Colour (light grey)			Ral 7035	Ral 7035	Ral 7035	Ral 7035
RF input						
Input frequency range	Low band High band	GHz GHz	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75
Feedhorn		GHz	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7
IF output						
Output frequency range	Low band High band	MHz MHz	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150
Output connector type			75Ω female	75Ω female	75Ω female	75Ω female
Output VSWR @ room temp.			2.0:1 (max.)	2.0:1 (max.)	2.1:1 (max.)	2.0:1 (max.)
Local oscillator						
Frequency	Low band High band	GHz GHz	9.75 10.6	9.75 10.6	9.75 10.6	9.75 10.6
Frequency stability		MHz	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)
Phase noise @ room temperature		DBc/Hz DBc/Hz DBc/Hz	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-50 @ 1 kHz (max.) -75 @ 10 kHz (max.) -95 @ 100 kHz (max.)	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)
Conversion gain	(typ.) (max.)	dB dB	50 62	50 62	50 62	50 62
Gain variation (over operating band)		dB	5 p-p (typ.)	5 p-p (typ.)	5 p-p (typ.)	5 p-p (typ.)
Gain flatness (across 26 MHz segm)		dB	± 1.0 (typ.)	± 1.0 (typ.)	± 1.0 (typ.)	± 1.0 (typ.)
Spurious level		dBm	- 60 (max.)	- 60 (max.)	- 60 (max.)	- 60 (max.)
Noise figure	(Typ.) (Max.)	dB dB	**0.3** 0.6	**0.3** 0.6	**0.3** 0.6	**0.3** 0.6
Image rejection		dB	40 (min.)	40 (min.)	40 (min.)	40 (min.)
Cross polarization isolation		dB	25 typ. (20 min.)	25 typ. (20 min.)	25 typ. (20 min.)	25 typ. (20 min.)
DC current consumption (typ.)		mA	140	160	140	110
Operating voltage	Vertical Horizontal	VDC VDC	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 21 10.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21
Switching	Low band High band Position	Hz KHz	0 22 ± 4 none	0 22 ± 4 none	 none	0 22 ± 4 DiSEqC 2.0
Operating temperature range		°C	-40 ~ +60	-40 ~ +60	-40 ~ +60	-40 ~ +60
Diameter		mm	40	40	40	40
Width x Heigth x Depth		mm	59 x 137 x 97	59 x 137 x 97	59 x 137 x 97	59 x 137 x 97
Max. depth incl. feedhorn		mm	145	145	135	145
Weight		kg	0.355	0.365	0.365	0.375
Packing size		pcs.	30	30	30	30

Universal LNB units

Alps supplies a full range of quality LNBs

- Available as single, dual and quad for 1, 2 or 4 set top boxes
- Also available in quattro version for community aerial systems
- Full Ku-band coverage for both analogue and digital reception
- Low noise figures (0.6 dB)
- High cross polar isolation (typically >25 dB)

Technical data

Type **Art. No.**			**ALPS** Single universal **300464**	**ALPS Twin** universal **300462**	**ALPS Quad** universal **300467**	**ALPS Quattro** universal **300468**
Colour (light grey)			Ral 7035	Ral 7035	Ral 7035	Ral 7035
RF input						
Input frequency range	Low band High band	GHz GHz	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75
Feedhorn		GHz				
IF output						
Output frequency range	Low band High band	MHz MHz	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150
Output connector type			75Ω female	75Ω female	75Ω female	75Ω female
Output VSWR @ room temp.						
Local oscillator						
Frequency	Low band High band	GHz GHz	9.75 10.6	9.75 10.6	9.75 10.6	9.75 10.6
Frequency stability		MHz	± 3 (max.)	± 3 (max.)	± 3 (max.)	± 3 (max.)
Phase noise @ room temperature		DBc/Hz DBc/Hz DBc/Hz	-55 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-55 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-55 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-55 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)
Conversion gain	(typ.) (max.)	dB dB	48 60	48 60	48 60	48 60
Noise figure	Low High	dB dB	**0.6** **0.6**	**0.6** **0.6**	**0.6** **0.6**	**0.6** **0.6**
Image rejection	min./max.	dB	40/80	40/80	40/80	40/80
Cross polarization isolation		dB	25 typ.	25 typ.	25 typ.	25 typ.
DC current consumption (typ.)		mA	115 (typ.)/160 max.	150 (typ.)/220 max.	180 (typ.)/220 max.	180 (typ.)/220 max.
Operating voltage	Vertical Horizontal	VDC VDC	11.5 ~ 14.0 16.0 ~ 19.0	11.5 ~ 14.0 16.0 ~ 19.0	11.5 ~ 14.0 16.0 ~ 19.0	11.5 ~ 19.0 11.5 ~ 19.0
Band switching	Low band High band	Hz KHz	0 22	0 22	0 22	
Operating temperature range		°C	-40 ~ +60	-40 ~ +60	-40 ~ +60	-40 ~ +60
Diameter		mm	40	40	40	40
Width x Heigth x Depth		mm	-	56 x 159 x 76	56 x 159 x 76	56 x 159 x 76
Max. depth incl. feedhorn		mm	-	151	151	151
Weight		kg	-	0.35	0.35	0.35
Packing size		pcs.	1	1	1	1

DiSEqC switches - multi satellite reception

MFD 21D switch

MFD DiSEqC switches for switching between 2 or 4 LNBs

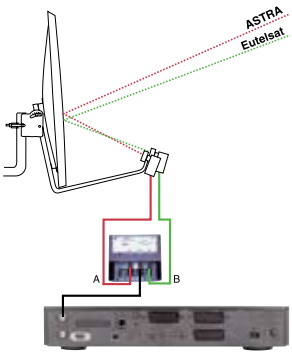
DiSEqC switches are used in multi satellite installations for switching between 2 or 4 LNBs each pointing at different satellites.

- Available with 2 or 4 inputs for switching between 2 or 4 satellite positions
- High isolation ensures problem-free operation in multi user installations
- Housed in fully shielded, waterproof mast box for outdoor installation. Housing is compact and has snap lock lid
- Easy installation using F-connectors for cable mounting and a releasable strap for mast mounting
- Instructions enclosed in the housing
- Can be used with single, dual and quad LNBs.

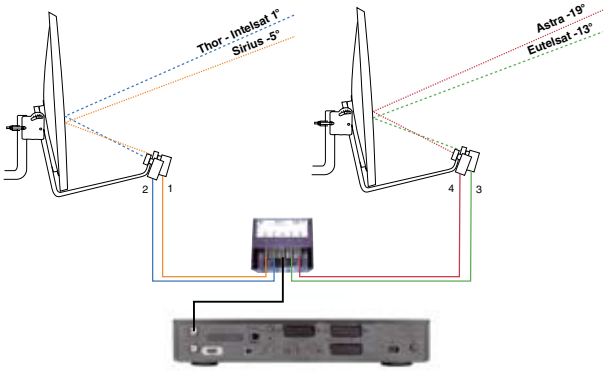
MFD 41D switch

Technical data on MFD high-end DiSEqC switches

Type Art. No.		MFD 21R DiSEqC 2x1 300508	MFD 21D DiSEqC 2x1 300510	MFD 41D DiSEqC 4x1 300509	MFD 21D + Ter DiSEqC 3x1 300511
Number of inputs (No. of positions)		2	2	4	3
Frequency range SAT Ter	MHz MHz	950 - 2200	950 - 2200	950 - 2200	950 - 2200 47-862
Switch type		Relay	Diodes	Diodes	Diodes
DiSEqC control		DiSEqC 1.0 and tone burst	DiSEqC 1.0 and tone burst	DiSEqC 1.0	DiSEqC 1.0 and tone burst
Through loss	dB	1	1.5	2.5	3.0/1.0
Isolation input A-B	dB	> 25	> 40	> 30	> 35
Return loss	dB	> 10	> 10	> 8	> 10/> 10
Linearity	dB	± 1	± 1	± 1	± 1
Function(s)		Position/option/band	Position/option/band	Position/option	Position/option
Control LEDs	pcs	2	2	4	2
DC loop through	mA	500 max.	500 max.	500 max.	500 max.
Current consumption	mA	< 30	< 30	< 30	< 30
Temperature range	°C	-30....+60	-30....+60	-30....+60	-30....+60
Dimensions (H x D x W)	mm	106 x 43 x 120	106 x 43 x 120	106 x 43 x 120	106 x 43 x 120
Weight	kg	0.220	0.220	0.220	0.220
Remarks		Hi-end DiSEqC switch	Hi-end DiSEqC switch	Hi-end DiSEqC switch	Hi-end DiSEqC switch



- LED-indicators for easy control of installation



DiSEqC switches - multi satellite reception

DiSEqC switch

A DiSEqC switch is applied when using 2-4 universal LNBs.

Priority switch

This switch connects two satellite receivers with one or more LNBs.
It may be a system with an analog and a digital receiver.
The switch has two outputs, the A-output having priority. If the receiver connected to the output having priority is switched off, the other receiver will control the LNBs. Both receivers can use the same LNB at the same time provided that the channels transmit with the same polarisation and in the same band.

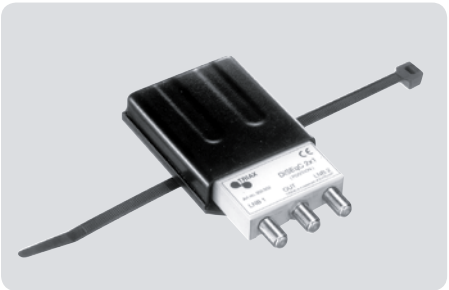
NB! The receiver having priority is in control.

DiSEqC 4x1 Pos - 300504

DiSEqC 2x1 Pos - 300502

Technical data on DiSEqC switches

Type Art. No.		DiSEqC 502 2x1 300502	Priority 503 1x2 300503	DiSEqC 504 4x1 300504	Priority 506 Hi-Iso 2x1 300506
Number of inputs outputs		2 1	1 2	4 1	2 1
Frequency range Sat Ter	MHz MHz	900 - 2150	920 - 2150	900 - 2150	920 - 2150
Switch type					
DiSEqC control					
Through loss	dB	typ. 1.5 (3.0)	4.0	typ. 1.5 (3.0)	typ. 1.5 (3.0)
Isolation input A/B	dB	> 10	> 20	> 10	> 40
Return loss	dB				
Linearity	dB				
Function(s)		position/tone burst (mini DiSEqC)	position	position/option	position/tone burst (mini DiSEqC)
DC loop through	mA				
Current consumption	mA	25	25	25	25
Temperature range	°C	-30....+60	-30....+60	-30....+60	-30....+60
Dimensions (H x D x W)	mm				
Weight	kg				
Remarks			DC-feedthrough 24V - 250 mA		Hi-Iso switch



DiSEqC 506 Hi-Iso - 300506

Priority switch - 300503

SatSelect and LNB covers

SatSelect motor for TD dishes
A motor for turning the TD dish on one axis and which gives you access to all geostationary satellites along this axis.

Para Protection will cover your LNB units
Mist, rain, snow, hoarfrost, road dust and pollen that lays on the LNBs, can make a reduction in quality of the TV- pictures. A bowed perspexsheet, held to the LNB-arm, gives the LNBs very effective protection against bad weather and climate. The result: The picture quality becomes considerably increased.

SatSelect motor for the TD-series

Type Size		Triax SatSelect 300053
DiSEqC level		**1.2 (Supports USALS)**
Rotation angle	degrees	± 60
Rotation speed	degrees	1 per sec.
Power	Stand by Operat. Peak	50 mA 200 mA 350 mA
Voltage	VDC	13-18
Mast dimension	mm	Ø32-50
Weight	kg	
Packing	type	Single pcs.
Remarks		F-con connection

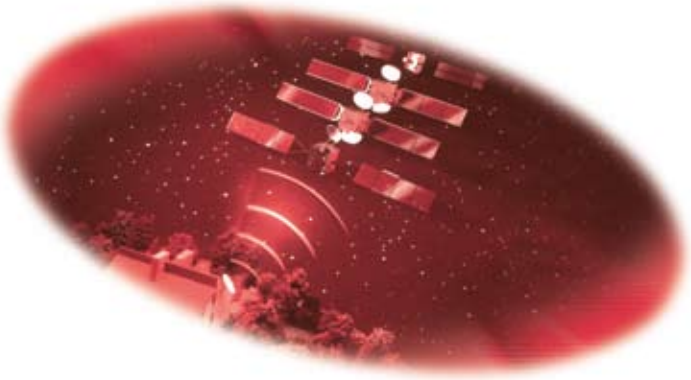
Para-Protection to cover LNB-units on dishes

Type Size		Para Protection TD and Basic 300708	Para Protection Unique dish 300707
Material and finish		Perspex-sheet and painted metal holder	Perspex-sheet and painted metal holder
Arm dimension W x H max.	mm	76 x 45	
Packing	type	Single pcs.	Single pcs.
Remarks		Fits on all Triax TD and Basic dishes	Fits on all Triax Unique dishes

Mounting accessories for dishes

TRIAX's brackets for all your needs

TRIAX has all kind of mounting brackets for dishes.
You will also find a complete range of different accessories
- everything for making a perfect mounting.



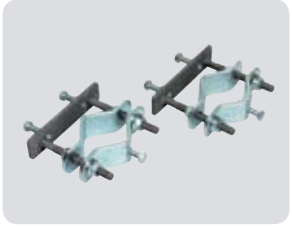
Triax 2561 stand

Mounting accessories for dishes

Type		Triax 2561 Stand (Ø50)	Type "J"	Type "S"	Type "U"	Universal roof/ wall bracket
Size		**127100**	**128050**	**128070**	**128080**	**300709**
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Tube dimension	mm	Ø50	Ø25	Ø25	Ø25	Ø45
Weight	kg					
Packing	type	Single pcs.	Single pcs.	Single pcs.	Single pcs.	Single pcs.
Remarks		For mounting dish on earth	Incl. 2 plastic plugs	Incl. 2 plastic plugs		For mounting dish on roof/wall

Mounting accessories for dishes

Type		Bracket for Unique	Bracket for TD 110			Tube 5 x 95 cm
Size		**140050**	**140051**			**140007**
Material		Galv. steel	Galv. steel			Galv. steel
Tube dimension	mm	Ø60	Ø60			Ø50 x 950
Weight	kg					
Packing	type	Single pcs.	Single pcs.			Single pcs.
Remarks		For mounting Unique on mast	For mounting Unique on mast			For mounting in wall brackets



Wall mounts for dishes

EXA 192 wall mount

EXA 194 wall mount

Technical data on EXA wall mount

Type Art. No.		EXA 192 Alu. 131092	EXA 194 Alu. 131094
Diameter	mm	Ø 48	Ø 48
Clearance from wall	mm	250	450
Plate dimension	mm	155 x 155 x 3	155 x 155 x 3
Material		Aluminium	Aluminium
Weight	kg		
Packing QTY	pcs.	10	10

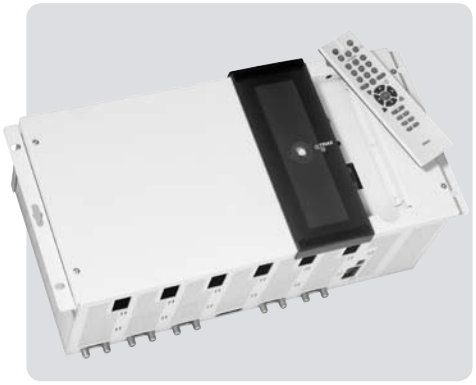
Notes

Headends

Antenna systems >> Headends	
- TDH 700	100 - 111
- TCH 600	112 - 114
- TNH 600	115
- TCM 08 modulator headend	116
- CM 01 single modulator	117
- TMB programmable amplifier	118
- AS single channel amplifiers	119
- ARM multiband amplifier	120
- IFM multiband amplifier	121-122
- SCT IF/IF converter	123
Antenna systems >> Headend accessories	
- TCC compact cabinets	124
- TMF frame system	125
- MDU lock box/11 S cabinets	126 - 127

TDH 700 main and sub unit - digital

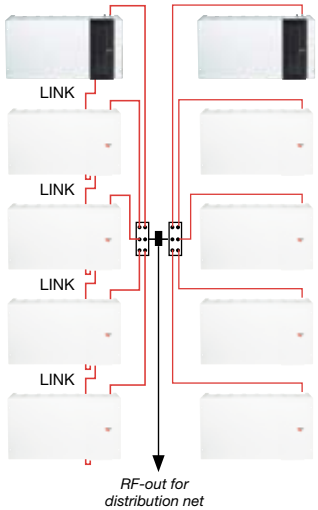
Triax digital headend - TDH 700
TDH 700 is a modern digital compact headend. Each basic unit holds up to six modules each carrying a satellite, cable, or terrestrial channel. A complete system is simply built with the main/sub unit system where 1 basic unit and 4 sub units can be coupled in cascade and operate as one integrated headend with 30 channels.
All communication between modules and the basic units is done via a high speed data-bus, and by means of this modern communication structure, important features like operating the system, software updates, and remote access have become extremely simple.
For maximum flexibility a one module basic TDH SA unit is also avaiable.



TDH 700 main unit

Technical data

TYPE Art. No.		TDH 700 Main unit 490790	TDH 701 Sub unit 490791	TDH 791 SA-cabinet 301791	TDH 700 SA-controller 301700
Number of channels	Pcs	6	6	1	
Output frequency range	MHz	47 - 862	47 - 862	- depending on module	
Max. output level - 6 combined ch. max. @ 60 dB IMD	dBµV	105	105		
Output level stability	dB	< 1	< 1		
Adjustment	dB	10	10	- depending on module	
Test point	dB	- 30	- 30		
Return loss output Tv in - tv out - module RF in	dB	≥ 10	≥ 10	- depending on module	
Impedance	Ohm	75	75		
Remote control		Yes			
PC-interface functions		Yes		- via controller	
Software download	9 pin	RS 232 female		- via controller	RS 232 female
Modem connector	9 pin	RS 232 male		- via controller	RS 232 male
Main/sub unit connector		USB A/B cable	USB A/B cable	USB A/B cable	USB A/B cable
Wall/rack bracket		Yes	Yes	Yes	Yes
Operation voltage	V/AC	190 - 260	190 - 260	190 - 260	- from SA cabinet
Power consumption	W	120 max.	110 max.	25 max.	8
Connector in - out		F female	F female	F female	F female
Operation temperature range	°C	-10...+50	-10...+50	-10...+50	-10...+50
Weight	kg	5.8	5.8	1.8	2.2
Dimensions (H x D x W)	mm	223 x 160 x 440	223 x 160 x 440	198 x 220 x 76	198 x 141 x 44
Remarks					

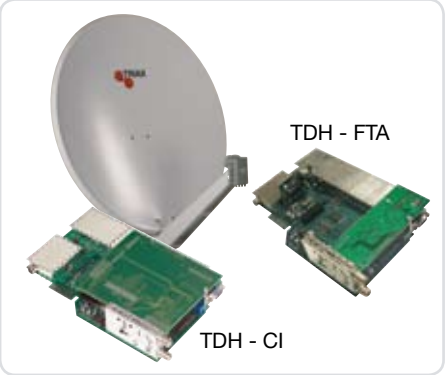


TDH 701sub unit

TDH 791
SA-cabinet

TDH 700
SA-controller

TDH digital satellite modules QPSK-PAL



TDH DVB-S modules convert a coded or uncoded digital signal from a satellite to a modulated PAL/SECAM signal for distribution in a community cable system.

- Full-band high-quality modulator
- Conditional access via CI or Free To Air
- Advanced watchdog function
- Fully DVB S compatible
- Multi language menu
- MPEG transport stream available for slave modules
- Mono sound / A2 stereo / Nicam available

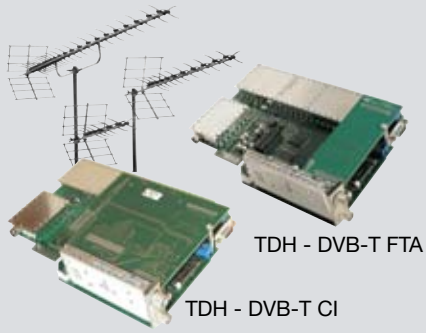
Technical data TDH - DVB-S master modules (VSB) VHF/UHF

TYPE		DVB-S master with CI	DVB-S master with CI		DVB-S master Free to air	DVB-S master Free to air	
	Norm	**Mono**	**A2 stereo**	**Nicam**	**Mono**	**A2 stereo**	**Nicam**
Art. No.	B/G	490742	490743	590743	490746	490747	590747
	D/K	490702	490703		490722	490723	
	Norm L	490702		590703	490722		590723
	Pal I	490702	590743		490722		591623
Modulator type		VSB	VSB		VSB	VSB	
Input frequency range	MHz	920 - 2150	920 - 2150		920 - 2150	920 - 2150	
Input level *	dBµV	44....84	44....84		44....84	44....84	
IF bandwidth	MHz	36	36		36	36	
Output channel frequency range	 MHz	2....69 47 - 862	2....69 47 - 862		2....69 47 - 862	2....69 47 - 862	
Output level SA modules **	dBµV	103	103		103	103	
Output level attenuator	dB	10	10		10	10	
Video S/N ratio	dB	> 54	> 54		> 54	> 54	
Differential phase	deg.	< 8	< 8		< 8	< 8	
Picture carrier stability	kHz	< +/- 70	< +/- 70		< +/- 70	< +/- 70	
Spurious signals ref pict. carrier C/N	dB	> - 60	> - 60		> - 60	> - 60	
Sound mode		**Mono**	**A2 stereo**	**Nicam**	**Mono**	**A2 stereo**	**Nicam**
Audio distortion @ 1 kHz	%	< 1	< 1		< 1	< 1	
Audio S/N ratio	dB	> 50	> 50		> 50	> 50	
Sound sub carrier stability	kHz	< +/- 5	< +/- 5		< +/- 5	< +/- 5	
LNB control 13/18 volt - 0/22 kHz	mA	200	200		200	200	
Conditional access	EN	50221	50221		FTA	FTA	
Teletext type		Reinserted in VBI	Reinserted in VBI		Reinserted in VBI	Reinserted in VBI	
Demultiplexer data rate	Mbps	< 65	< 65		< 65	< 65	
Video data rate	Mbps	< 15	< 15		< 15	< 15	
Viterbi rates	Mpps	1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)		1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)	
Impedance	Ohm	75	75		75	75	
Operation temperature range	°C	-10...+50	-10...+50		-10...+50	-10...+50	
Power supply - stand alone module	VAC	190 - 260	190 - 260		190 - 260	190 - 260	
Weight - standard module	kg	0.45	0.45		0.45	0.45	
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50		150 x 230 x 50	150 x 230 x 50	
Remarks		* Digital measuring - DCP ** Mounted in stand-alone cabinet					

TDH digital terrestrial - COFDM to PAL

TDH DVB-T modules convert a digtal terrestrial coded or uncoded signal to a modulated signal for distribution in a community cable system.

- Full-band high-quality modulator
- Conditional access via common interface (CI) or free to air (FTA)
- Advanced watchdog function
- Fully DVB T compatible
- Multi language menu
- MPEG transport stream available for slave modules
- Mono sound / A2 stereo / Nicam available



TDH - DVB-T FTA

TDH - DVB-T CI

Technical data TDH - DVB-T modules (VSB) VHF/UHF

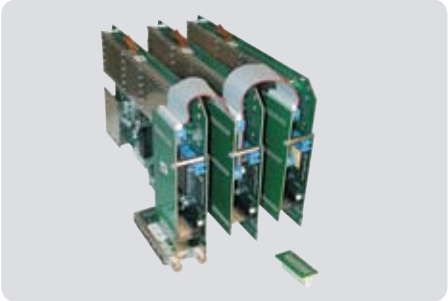
TYPE		DVB-T master with CI	DVB-T master with CI		DVB-T master Free to air	DVB-T master Free to air	
	Norm	Mono	A2 stereo	Nicam	Mono	A2 stereo	Nicam
Art. No.	B/G	490762	490763	590763	490764	490765	590765
	D/K	490712	490713		490714	490715	
	Norm L	490712			490714		590715
	Pal I	490712			490714		
Input frequency range	MHz	177.5 - 858.0	177.5 - 858.0		177.5 - 858.0	177.5 - 858.0	
Input level *	dBµV	44....84	44....84		44....84	44....84	
Output frequency range	Ch. MHz	2....69 47 - 862	2....69 47 - 862		2....69 47 - 862	2....69 47 - 862	
Output level SA modules **	dBµV	103	103		103	103	
Output level attenuator	dB	10	10		10	10	
Video S/N ratio	dB	> 54	> 54		> 54	> 54	
Differential phase	deg.	< 8	< 8		< 8	< 8	
Picture carrier stability	kHz	< +/- 70	< +/- 70		< +/- 70	< +/- 70	
Spurious signals ref pict. carrier C/N	dB	> - 60	> - 60		> - 60	> - 60	
Sound mode		**Mono**	**A2 stereo**	**Nicam**	**Mono**	**A2 stereo**	**Nicam**
Audio distortion @ 1 kHz	%	< 1	< 1		< 1	< 1	
Audio S/N ratio	dB	> 50	> 50		> 50	> 50	
Sound sub carrier stability	kHz	< +/- 5	< +/- 5		< +/- 5	< +/- 5	
LNB control 13/18 volt - 0/22 kHz	mA	200	200		200	200	
Conditional access	EN	50221	50221		FTA	FTA	
Teletext type		Reinserted in VBI	Reinserted in VBI		Reinserted in VBI	Reinserted in VBI	
Demultiplexer data rate	Mbps	< 65	< 65		< 65	< 65	
Video data rate	Mbps	< 15	< 15		< 15	< 15	
Viterbi rates	Mpps	1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)		1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)	
FFT mode	Mpps	2K/8K	2K/8K		2K/8K	2K/8K	
Constellations		QPSK, 16QAM, 64QAM			QPSK, 16QAM, 64QAM		
Guard interval		1/4, 1/8, 1/16, 1/32			1/4, 1/8, 1/16, 1/32		
Viterbi decoder		1/2, 2/3, 3/4, 5/6, 7/8			1/2, 2/3, 3/4, 5/6, 7/8		
Reed Solomon decoder		204,188, t=8.			204,188, t=8.		
Impedance	Ohm	75	75		75	75	
Operation temperature range	°C	-10...+50	-10...+50		-10...+50	-10...+50	
Weight - standard module	kg	0.45	0.45		0.45	0.45	
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50		150 x 230 x 50	150 x 230 x 50	
Remarks		* Digital measuring - DCP ** Mounted in stand-alone cabinet					

TDH digital slave modules - Sat/Ter


TDH slave module

Slave modules for DVB-S or DVB-T master modules

- Full-band high-quality modulator
- Mono sound / A2 stereo / Nicam available



Technical data TDH - Slave modules (VSB) VHF/UHF

TYPE		TDH slave DVB-S/T	TDH slave DVB-S/T	
	Norm	**Mono**	**A2 stereo**	**Nicam**
Art. No.	B/G	490744	490745	590745
	D/K	490704	490705	
	Norm L	490704		
	Pal I	490704		
Modulator type		VSB	VSB	
Output frequency range	Ch. MHz	2....69 47 - 862	2....69 47 - 862	
Output level attenuator	dB	10	10	
Video S/N ratio	dB	> 54	> 54	
Differential phase	deg.	< 8	< 8	
Picture carrier stability	kHz	< +/- 70	< +/- 70	
Spurious signals ref pict. carrier C/N	dB	> - 60	> - 60	
Sound mode		**Mono**	**A2 stereo**	**Nicam**
Audio distortion @ 1 kHz	%	< 1	< 1	
Audio S/N ratio	dB	> 50	> 50	
Sound sub carrier stability	kHz	< +/- 5	< +/- 5	
Teletext type		Reinserted in VBI	Reinserted in VBI	
Demultiplexer data rate	Mbps	< 65	< 65	
Video data rate	Mbps	< 15	< 15	
Viterbi rates	Mpps	1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)	
Impedance	Ohm	75	75	
Operation temperature range	°C	-10...+50	-10...+50	
Weight - standard module	kg	0.30	0.30	
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	
Remarks				

TDH digital QAM - QPSK to QAM

TDH QPSK to QAM module receives a QPSK channel (TV-program package) located in the sat-IF band, and remodulates it in QAM format on a 5-9 MHz channel located within the RF frequency band.

- Output frequency ranges: 120-306 or 306-858 MHz
- Input frequency range: 950-2150 MHz
- Programmable LNB control on each module
- Modulation: 16, 32, 64, 128, 256 QAM
- Adjustable symbol rate (TDH 732 & TDH 733)
- Multi language menu

TDH QAM module

Technical data TDH - QPSK/QAM modules

TYPE		DVB-C master TDH 73oC	DVB-C master TDH 731C	DVB-C master TDH 732C	DVB-C master TDH 733C
	Norm	**TDT**	**TDT**	**-adj. symbol rate**	**-adj. symbol rate**
Art. No.		490730	490731	490732	490733
Modulator type		QAM	QAM	QAM	QAM
Input frequency range	MHz	920 - 2150	920 - 2150	920 - 2150	920 - 2150
Input level *	dBµV	45....84	45....84	45....84	45....84
Return loss	dB	>10	>10	>10	>10
Aerial input	SAT	F	F	F	F
Aerial loop-through	SAT	Yes/F	Yes/F	Yes/F	Yes/F
Demolator					
Type		QPSK	QPSK	QPSK	QPSK
Symbol rate	Mbps	2-40 (SCPC/MCPC)	2-40 (SCPC/MCPC)	**Adjustable**	**Adjustable**
Viterbi decoder		1/2, 2/3, 3/4, 5/6, 7/8	1/2, 2/3, 3/4, 5/6, 7/8	1/2, 2/3, 3/4, 5/6, 7/8	1/2, 2/3, 3/4, 5/6, 7/8
Reed Solomon decoder		204, 188, t=8	204, 188, t=8	204, 188, t=8	204, 188, t=8
Modulator					
Output mode		QAM 16, 32, 64, 128, 256	QAM 16, 32, 64, 128, 256	QAM 16, 32, 64, 128, 256	QAM 16, 32, 64, 128, 256
Output control		Normal, inverted, random	Normal, inverted, random	Normal, inverted, random	Normal, inverted, random
Output frequency range	MHz	**306 - 858**	**120 - 306**	**306 - 858**	**120 - 306**
Output level	dBµV	97	97	97	97
LNB control 13/18 volt - 0/22 kHz	mA	200	200	200	200
Symbol rate	Mbaud	< 7.0	< 7.0	< 7.0	< 7.0
Roll-off factor	%	15	15	15	15
FEC block code		RS (204, 188)	RS (204, 188)	RS (204, 188)	RS (204, 188)
Scrambling		DVB ETS 300429	DVB ETS 300429	DVB ETS 300429	DVB ETS 300429
Interleaving		DVB ETS 300429	DVB ETS 300429	DVB ETS 300429	DVB ETS 300429
Carrier suppression	dB	>40	>40	>40	>40
C/N	dB	>38	>38	>38	>38
MER	dB	>35	>35	>35	>35
IQ imbalance	Dgr	<1	<1	<1	<1
Output impedance	Ohm	75	75	75	75
Return loss (MOD OUT)	dB	>10	>10	>10	>10
Temperature, operation	°C	-10..+50	-10..+50	-10..+50	-10..+50
Weight - standard module	kg	0.45	0.45	0.45	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50
Remarks	*	Digital measuring - DCP		With stuffing	With stuffing

TDH digital QPSK - FM module


TDH FM module

TDH QPSK-FM module includes a receiver, demodulator, high quality FM stereo modulator, and the built-in amplifier secures the right level for directly supplying the SMATV network with high-quality FM programs.

- QPSK to FM stereo
- Available for FTA reception or with CI option
- Built-in LNB supply
- Master/slave system option for easy installation
- Parameter setting via TDH controller or remote
- High output level
- Can be mixed with other modules in the TDH range

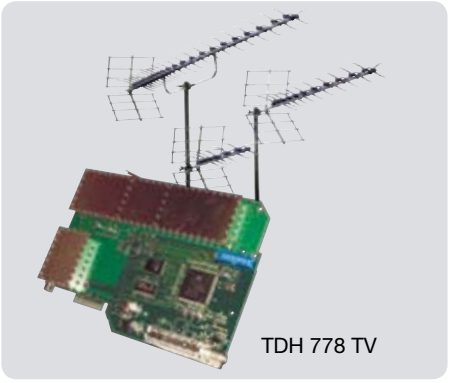
Technical data TDH - QPSK/FM module

TYPE		DVB-S/FM master TDH 737 FM	DVB-S/FM master TDH 738 FM	FM modulator TDH 736	DVB slave mod. TDH 739 FM
		Free to air	with CI		
Art. No.		490737	490738	490736	490739
Modulator type		QPSK - FM stereo	QPSK - FM stereo	FM stereo	FM stereo
Band		FM	FM	FM	FM
Input frequency range	kHz MHz	920 - 2150	920 - 2150	20 - 20.000	
Input level	dBµV	45....84	45....84		-
Modulation		FM	FM		FM
Output level max	dBµV	92	92	92	92
Output level attennuator	dB			10	
Input	Sat	F-female	F-female		
Loopthrough	Sat	Yes/F-female	Yes/F-female		-
Output frequency range	MHz	87.5 - 108.0	87.5 - 108.0	87.5 - 108.0	87.5 - 108.0
Spurious signals ref pict. carrier C/N	dB	> -60	> -60		> -60
Audio S/N ratio	dB	60	60		60
Audio distortion, 1 kHz	%	<1	<1		<1
Audio input level	V/RMS			0.5 V/RMS	
Audio input/output				15 pol SUB-D	
Return loss (MOD OUT)	dB	>10	>10		>10
Output impedance	Ohm	75	75		75
Temperature, operation	°C	-10...+50	-10...+50	-10...+50	-10...+50
Weight - standard module	kg	0.45	0.45	0.45	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50
Remarks Video/audio cable [Phone - Sub-D]	 15 cm 150 cm	 Art. No. 300748 Art. No. 300745		 Art. No. 300748 Art. No. 300745	

TDH digital/analogue TV converters

TV channel converter modules in the TDH range is converting any TV channel in the VHF and UHF band to another frequency.
For optimized function and performance in handling analogue or digital signals, two different versions are available.

- Wide-range automatic gain control (AGC) secures right level into the distribution net
- High modulation error rate (MER) valued by means of SAW filter technology, secures best possible signal quality
- Full-range conversion
- DC supply for preamplifier


TDH 778 TV

Technical data TDH - TV converter modules

TYPE		TV converter TDH 776	TV converter TDH 775	TV converter TDH 778
	Norm	**Analogue**	**Analogue**	**Digital**
Art. No.	B/G		490775	490778
	D/K	490776		490778
	Norm L	490776		490778
	Pal I	490776		490778
Modulator type		I, L, D/K	B/G	
Input frequency range	MHz	45 - 862	45 - 862	50.5- 858
Input level	dBµV	60 - 90	60 - 90	45 - 90
Optimum input level	dBµV	55 - 80	55 - 80	55 - 80
Output frequency range	MHz	K 2....69	K 2....69	K 2....69
Output level max	dBµV	105	105	95
Output level attennuator	dB	0...10	0...10	0...10
Return loss (MOF in output)	dB	> 10	> 10	> 10
MER @ MER input signal > 36 dB	dB			> 30
TV carrier wave stability	kHz	< ± 25	< ± 25	< ± 25
Spurious signals ref pict. carrier C/N	dB	> -60	> -60	> -60
Antenna input		IEC female	IEC female	IEC female
Antenna output		IEC male	IEC male	IEC male
Temperature, operation	°C	-10...+50	-10...+50	-10...+50
Weight - standard module	kg	0.45	0.45	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50
Remarks				

TDH FM amplifier module

TDH 772 Amplifier

Plug-in converter, modulator and amplifier module
The TDH 772 is e.g. a FM amplifier module for the TDH headend.
With this module it is possible to obtain the right professional insertion and amplification of the terrestrial FM signal in the distribution network.

Technical data TDH - FM converter, modulator and amplifier modules

TYPE		TDH 772 FM FM amplifier
Art. No.		490772
Modulator type		FM Stereo
Input frequency range	MHz	87.5 - 108.0
Gain	dB	9...44
Attenuation switchable in section	dB	10
Attenuation adjustable	dB	10
Notches adjustable (X 6)	dB	- 10
Noise figur	dB	< 6
Linearity	dB	+/- 1
Output frequency range	MHz	87.5 - 108.0
Output level max	dBµV	> 100
Return loss (MOF in output)	dB	> 10
Temperature, operation	°C	-10...+50
Weight - standard module	kg	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50
Remarks		6 individual filters

TDH AV modules

TDH modulator modules convert an audio/video signal to a TV channel in the VHF/UHF band for distribution in a community cable system.

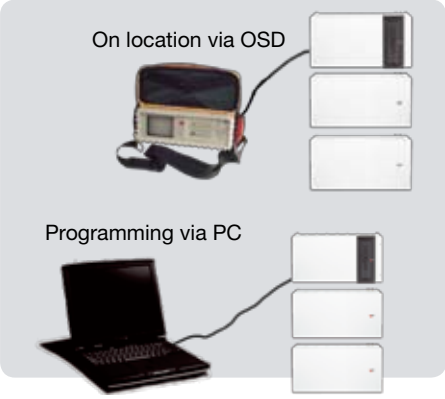
- Full-band high-quality modulator
- Adjacent channel operation
- Multi standard
- Mono sound / A2 stereo / Nicam available
- Multi language menu

TDH 725

Technical data TDH AV-modulator

TYPE			AV master VSB module	AV master VSB module	
		Norm	**Mono**	**A2 stereo** **Nicam**	
Art. No.		B/G	490766	490767 590767	
		D/K	490725	490726	
		Norm L	490725	590726	
		Pal I	490725	591626	
Modulator type			VSB	VSB	
Input level		dBµV	-15.....-25	-15.....-25	
Audio mode			**Mono**	**A2 stereo** **Nicam**	
Output	channel		K 2....69	K 2....69	
	frequency range	MHz	47-862	47-862	
Output level max		dBµV	105	105	
Output level attennuator		dB	10	10	
Spurious signals ref pict. carrier C/N		dB	> -60	> -60	
Video input CVBS niveau		Vpp	0.7 - 1.3	0.7 - 1.3	
Audio input level		V/RMS	0.5 V/RMS	0.5 V/RMS	
Video S/N ratio		dB	> 54	> 54	
Audio input/output			15 pol SUB-D	15 pol SUB-D	
Temperature, operation		°C	-10...+50	-10...+50	
Weight - standard module		kg	0.45	0.45	
Dimensions (H x D x W		mm	150 x 230 x 50	150 x 230 x 50	
Remarks					
Video/audio cable		15 cm	Art. No. 300748	Art. No. 300748	- more connection
[Phone - Sub-D]		150 cm	Art. No. 300745	Art. No. 300745	cables on page 111

Controlling Triax TDH 700 headend



5 ways to control your TDH 700 headend
and free software for controlling available on www.triax.com

- Unique, simple operation via On Screen Display [OSD]
- Programming via PC
- Controll and install software via NBOX and TDH Manager [Internet]
- Controll and install software via GSM modem and TDH Manager
- Controll and install software via telephone modem and TDH Manager

  - please see the user manual to make the correct connection of the units and you can also read more on our website about the different solutions

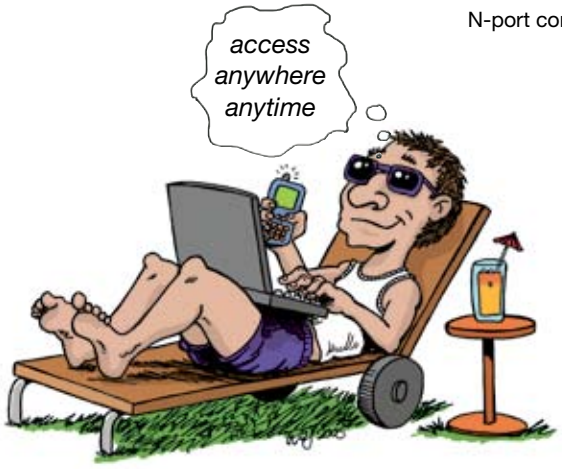
Controlling accessories for TDH headend

Type Art. No.		N-port - for Internet 300766	GSM modem - for mobile phone 300765	Telephone modem - for access 300764
Packing QTY	pcs.	1	1	1
What you can do		**Get access via Internet** • Install software for NBOX and TDH manager. • Type in the IP address • Select one of the virtual ports • Start controlling the TDH	**Get access via GSM** • Install software for TDH manager. • Dial up via built-in modem or external standard telephone modem • Insert SIM data card in the GSM modem • Connect the GSM modem to TDH 700 modem port	**Get access via phone modem** • Install software for TDH manager. • Type in the telephone number • Dial up via built-in modem or external standard telephone modem • Connect the standard telephone modem to TDH 700 modem port
Remarks		Power supply included - see page 111 for connection cable	Power supply **not** included - see page 111 for connection cable	Power supply included - see page 111 for connection cable

N-port connection

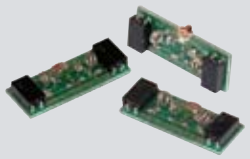

GSM connection


Telephone modem



Triax TDH channel filters

Channel filter option.
For all TDH modules with a modulator it is possible to improve the C/N in networks with high number of TV channels. This is done by means of adding a channel filter on each module.



TDH channel filter

Technical data on TDH channel filters

Channel filter - VHF/S-channels	
Art. No.	**Type**
301371	S 1 - 2 TDH channel filter
301372	S 2 - 3 TDH channel filter
301373	S 4 - 5 TDH channel filter
301374	S 6 - 7 TDH channel filter
301375	S 8 - 9 TDH channel filter
301376	S 10 - Ch. 5 TDH channel filter
301377	Ch. 6 - 7 TDH channel filter
301378	Ch. 8 - 9 TDH channel filter
301379	Ch. 10 - 11 TDH channel filter
301380	Ch. 12 - S 11 TDH channel filter
301381	S 12 - 13 TDH channel filter
301382	S 14 - 15 TDH channel filter
301383	S 16 - 17 TDH channel filter
301384	S 18 - 19 TDH channel filter
301385	S 20 - 21 TDH channel filter
301386	S 22 - 23 TDH channel filter
301387	S 24 - 25 TDH channel filter
301388	S 26 - 27 TDH channel filter
301389	S 28 - 29 TDH channel filter
301390	S 30 - 31 TDH channel filter
301391	S 32 - 33 TDH channel filter
301392	S 34 - 35 TDH channel filter
301393	S 36 - 37 TDH channel filter
301394	S 38 - 39 TDH channel filter
301395	S 40 - 41 TDH channel filter

Channel filter - UHF-channels	
Art. No.	**Type**
301321	Ch. 21 - 22 TDH channel filter
301323	Ch. 23 - 24 TDH channel filter
301325	Ch. 25 - 26 TDH channel filter
301327	Ch. 27 - 28 TDH channel filter
301329	Ch. 29 - 30 TDH channel filter
301331	Ch. 31 - 32 TDH channel filter
301333	Ch. 33 - 34 TDH channel filter
301335	Ch. 35 - 36 TDH channel filter
301337	Ch. 37 - 38 TDH channel filter
301339	Ch. 39 - 40 TDH channel filter
301341	Ch. 41 - 42 TDH channel filter
301343	Ch. 43 - 44 TDH channel filter
301345	Ch. 45 - 46 TDH channel filter
301347	Ch. 47 - 48 TDH channel filter
301349	Ch. 49 - 50 TDH channel filter
301351	Ch. 51 - 52 TDH channel filter
301353	Ch. 53 - 54 TDH channel filter
301355	Ch. 55 - 56 TDH channel filter
301357	Ch. 57 - 58 TDH channel filter
301359	Ch. 59 - 60 TDH channel filter
301361	Ch. 61 - 62 TDH channel filter
301363	Ch. 63 - 64 TDH channel filter
301365	Ch. 65 - 66 TDH channel filter
301367	Ch. 67 - 68 TDH channel filter

Technical data on TDH connection cable

Type Art. No.		USB cable A to B 453160	USB cable A to B 453161	RF cable 20 cm 452090	RF cable 35 cm 452091
Lenght	cm	50	100	20	35
Packing QTY	pcs.	1	1	1	1
Remarks		A to B connection for TDH 701 sub	A to B connection for TDH 701 sub	Connection from splitter/multi switch to TDH modules	Connection from splitter/multi switch to TDH modules


USB cable - 50 cm


USB cable - 100 cm


RF cable - 20 cm


RF cable - 35 cm

Technical data on TDH connection cable

Type Art. No.		Video/audio 15 cm 300748	Video/audio 150 cm 300745	Video/audio (in/out) 150 cm 300749	Video/audio 150 cm 300743	Video/audio 200 cm 300746
Lenght	cm	15	150	150	150	200
Packing QTY	pcs.	1	1	1	1	1
Remarks		15 cm cable fitted with 15 pol D-sub and 3 x phone male connector	150 cm cable fitted with 15 pol D-sub and 3 x phone male connector	150 cm cable fitted with 15 pol D-sub and 3 x phone male/ 3 x phone female connector	150 cm cable fitted with 3 x phone male and Scart-connector	200 cm cable fitted with 3 x phone male and Scart-connector


Video/audio -15 cm


Video/audio -150 cm


Video/audio -150 cm


Modulator -150 cm


Video/audio -200 cm

Technical data on TDH connection cable

Type Art. No.		Decoder cable 150 cm 300742	Video/audio for Nicam 300738	USB/ RS 232 cable 300768	RS 232 cable 180 cm 300769
Lenght	cm	150	100	40	180
Packing QTY	pcs.	1	1	1	1
Remarks		150 cm cable fitted with 15 pol D-sub to Scart-connector	Modulatorcable with scart and 3 phono connector for TCM08	40 cm cable between TDH/PC or TDH/N-port box	180 cm cable between TDH/PC or TDH/N-port box


Decoder cable


TCM 08 - Nicam


USB/RS 232 cable


RS 232 cable

TCH 600 headend for analogue TV-FM

Triax TCH 600 compact headend

TCH 600 is an analogue, compact headend with a high level of flexibility. The basic unit holds up to 8 analogue modulators each carrying one VHF, UHF or FM channel. Several basic units can be cascaded in order to reach the number of channels required.

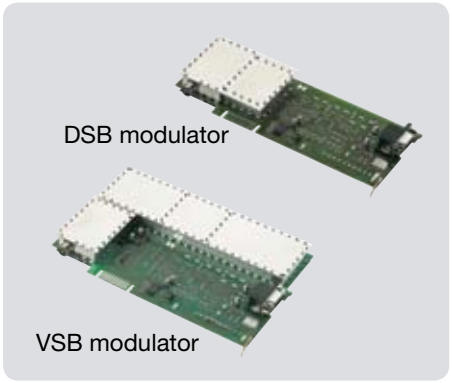
- Flexible - configuration can be changed according to changing needs
- Quick and easy programming
- Analogue satellite modules available in DSB
- Modulator modules available in DSB and VSB
- Individual adjustment of output levels.


TCH 600

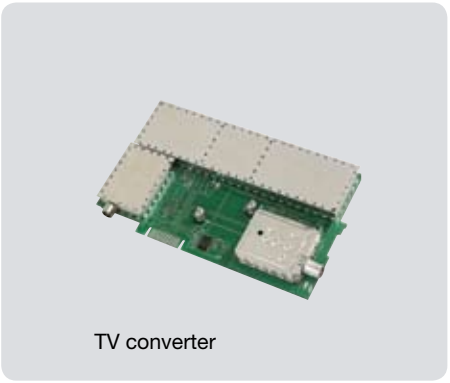
Technical data TCH 600 basic unit

TYPE Art. No.		TCH 600 basic unit 490600
Number of inputs		1
Number of combined outputs		1
Number of module space		8 analogue
Frequency range TV in - TV out - module RF in	MHz	47 - 862
Output level - 8 combined channels max. @ 54 dB IMD max. @ 60 dB IMD	dBµV dBµV	100 90
Return loss TV in - TV out - module RF in	dB	> 10
Through loss - TV in - TV out	dB	4
Impedance	Ohm	75
Operation voltage	V/AC	190 - 260
Power consumption	W	65 max.
Connector in - out		F female
Operation temperature range	°C	0...+50
Weight	kg	4.1
Dimensions (H x D x W)	mm	200 x 130 x 440

TCH modulator and converter modules



Plug-in modulator modules for TCH 600 headend



Technical data TCMA-modulator modules (VSB) VHF/UHF

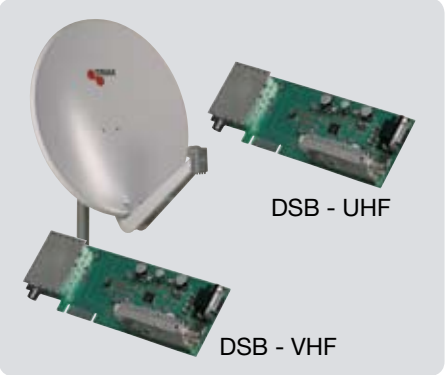
TYPE Art. No.		TCMA 615 modulator 490615	TCMA 617 modulator 490617	TCMA 616 modulator 490616	TCMA 618 modulator 490618	TCMA 673 modulator 490673	TCMA 674 modulator 490674
Modulator type		DSB	DSB	DSB	DSB	VSB	VSB
Band		VHF/S	VHF/S	UHF	UHF	VHF/UHF	VHF/UHF
TV standard system		B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K
Output channel		E5....E12 S11....S25	E5....E12 S11....S25	21....69	21....69	2....69	2....69
Output level	dBµV	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Output level attenuator	dB	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10
Video S/N ratio	dB	> 54	> 54	> 54	> 54	> 54	> 54
Sound mode		**Mono**	**A2 stereo**	**Mono**	**A2 stereo**	**Mono**	**A2 stereo**
Video input CVBS-level	Vpp	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3
Audio input level	V RMS	0.5	0.5	0.5	0.5	0.5	0.5
Input connector		15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D
Impedance	Ohm	75	75	75	75	75	75
Operation temperature range	°C	0...+50	0...+50	0...+50	0...+50	0...+50	0...+50
Weight	kg	0.232	0.232	0.232	0.232	0.350	0.350
Dimensions (H x D x W)	mm	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	120 x 190 x 45	120 x 190 x 45

Technical data TCCC and TCFC converters

TYPE Art. No.		TCCC 677 TV converter 490677	TCCC 678 TV converter 490678
TV standard system		I, L, D/K	B/G
Input frequency range	MHz	47 - 862	47 - 862
Input level	dBµV	65 - 90	65 - 90
Output frequency range	MHz	47 - 862	47 - 862
Output channel bandwidth	MHz	8	7
Output level	dBµV	90 - 100	90 - 100
Output level attenuator	dB	0 - 10	0 - 10
Impedance	Ohm	75	75
Temperature range	°C	0...+50	0...+50
Weight	kg	0.377	0.377
Dimensions (H x D x W)	mm	120 x 190 x 45	120 x 190 x 45

TCH - TCSA analogue satellite modules

Plug-in analogue satellite modules for TCH 600 headend



Technical data TCSA-analogue satellite modules (DSB) VHF/S and UHF

TYPE Art. No.		TCSA 611 analogue 490611	TCSA 613 analogue 490613	TCSA 621 analogue 490648	TCSA 612 analogue 490612	TCSA 614 analogue 490614	TCSA 622 analogue 490649
Modulator type		DSB	DSB	DSB	DSB	DSB	DSB
Band		VHF/S	VHF/S	VHF/S	UHF	UHF	UHF
TV standard system		B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K
Input frequency range	MHz	920 - 2150	920 - 2150	920 - 2150	920 - 2150	920 - 2150	920 - 2150
Input level	dBm	-65....-25	-65....-25	-65....-25	-65....-25	-65....-25	-65....-25
IF bandwidth programmable	MHz	18/27	18/27	**27/32**	18/27	18/27	**27/32**
Output frequency range	Ch.	E5....E12, S11....S25	E5....E12, S11....S25	E5....E12, S11....S25	21....69	21....69	21....69
Output level	dBµV	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Output level attenuator	dB	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10
Video S/N ratio	dB	> 54	> 54	> 54	> 48	> 48	> 48
Spurious signals ref picture carrier	dB	> -60	> -60	> -60	> -60	> -60	> -60
Sound mode		**Mono**	**A2 stereo**	**Mono**	**Mono**	**A2 stereo**	**Mono**
Audio frequencies	MHz	5.50-9.77	5.50-9.77	5.50-9.77	5.50-9.77	5.50-9.77	5.50-9.77
LNB control	Volt kHz	14/18 0/22	14/18 0/22	14/18 0/22	14/18 0/22	14/18 0/22	14/18 0/22
Software download		15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D
Impedance	Ohm	75	75	75	75	75	75
Operation temperature range	°C	0...+50	0...+50	0...+50	0...+50	0...+50	0...+50
Weight	kg	0.282	0.282	0.282	0.282	0.282	0.282
Dimensions (H x D x W)	mm	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45

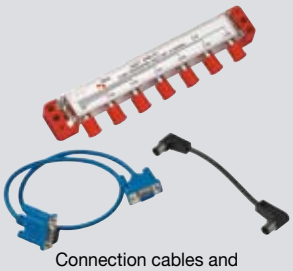
TNH 600 – Triax modular, digital headend

TNH 600V

TNH 600 is the solution when a simple, cost-efficient conversion from DVB-T to analogue with NICAM sound is required.
The modular design makes it easy to adapt the system to the required number of programmes.The system is designed with a powerful switch-mode power supply which supplies from 1 to 6 modules from separate outputs.

Technical data TNH 600V
6-channel complete premounted headend

TYPE Art. No.		TNH 600 V headend 324990
Input frequency range	MHz	177-858
Output frequency range	MHz	174-300
Output channels		E5-E12, S11-S20
Output level - combined	dBµV	83
Output level adjustment	dB	0-15
Modulator type		DSB
Antenna input		IEC female/male
Output connector		F-female
TV standard		B
Audio system		NICAM
ANT control		off
Power supply		from mains unit
IR-remote control eye		internal
Weight	kg	12.4
Dimensions per module (H x D x B)	mm	315 x 190 x 420



Connection cables and combiner included

A/V + data cable for programming TNH via PC
Art. No. 324904

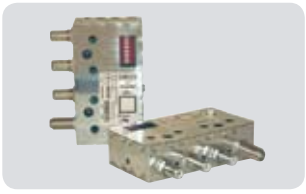
Technical data - Power supply

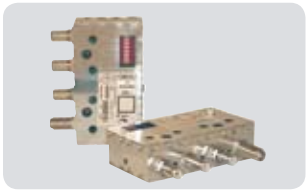
TYPE Art. No.		TNH 006 Power supply 324900
Input voltage	V/AC	90-264 / 50-60 Hz
Output voltage	V/DC V/DC V/DC V/DC	30 15 5 3.3
Weight	kg	5.0
Dimensions per module (H x D x B)	mm	231 x 148 x 70

TNH 006 power supply

Triax TCM 08 - modulator headend

TCM-08 8 modulator unit
The modular design makes it easy to adapt the system to the required number of programmes.


VHF modules for TCM 08


UHF modules for TCM 08


TCM 08

Technical data - TCM 08 modulator cabinets and CM 02 modulator modules

TYPE Art. No.		TCM-08 basic unit 300110	TCM-08A basic unit 300111	CM 02V VHF mod. 490898	CM 02U UHF mod. 490899	Nicam encoder 490884
TV system				(B-D-I-L)+(AU/NZ)	(G-K-I-L)+(AU/NZ)	BG
Output frequency range	MHz	47 - 862	47 - 862	**175-342**	**470 - 862**	
Picture carrier stability	kHz			< +/-70	< +/-70	
Spurious ref. picture carrier	dB			> - 60	> - 60	
Output level max (IMD @ 60 dB)	dBµV	**80 (8 ch.)**	**105 (8 ch.)**	95 +/- 2,5	95 +/- 2.5	
Return loss	dB	>14 @ 47 MHz - min. 10	>14 @ 47 MHz - min. 10	> 10	> 10	
Differentiel gain	%			< 8	< 8	
Differentiel phase	Deg.			< 8	< 8	
Crominance/luminance delay	nS			< 80	< 80	
Luminance non-linearity	%			< 8	< 8	
Video S/N ratio	dB			> 55	> 52	
Sound sub carrier	MHz			5.5 / 6.0 / 6.5	5.5 / 6.0 / 6.5	
Sound sub carrier stability	kHz			< +/-5	< +/-5	
Audio distortion, 1 KHz	%			< 1	< 1	
Audio S/N ratio	dB			> 55	> 55	
Video: - Input level - Input impedance	Vpp Ohm			0.8-1.3 75	0.8-1.3 75	
Audio: - Input level - Input impedance	Vrms kOhm			0.5-1.0 10	0.5-1.0 10	0.2 > 10
Power supply - Voltage Power consumption	DC - mA W			12/117 1.4	12/110 1.5	12/135
Connectors - RF output, OUT - Audio/Video input - Power supply				1 x F 3 x RCA -via RF output	1 x F 3 x RCA -via RF output	 4 x RCA 1 x F
Input voltage	V-ac	190 - 260	190 - 260			
Power consumption (8 moduls)	W	17	20			
Temperature, operation	°C	0..+50	0..+50	0..+50	0..+50	0..+50
Weight	kg	4.4	4.6	0.1	0.1	0.1
Dimensions L x B x H	mm	180 x 440 x 130	180 x 440 x 130	96 x 25 x 67	96 x 25 x 67	96 x 25 x 67

- other types of connection cables, please look on page 111 in this catalogue


Video/audio cable for Nicam
Modulator cable with scart and 3 phono connector - 100 cm
Art. No. 300738


Video/audio cable
Modulator cable with scart and 3 phone connectors - 150 cm
Art. No. 300743


Spare RF connection cable
Length 20 cm Art. No. 452090
Length 35 cm Art. No. 452091

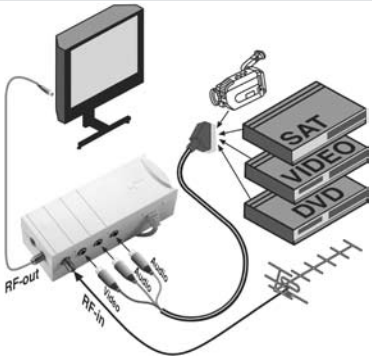
Triax stand-alone modulator

CM 01V

CM 01U

CM 01 single channel stand-alone modulator units

CM 01U + amp.



Technical data - 1 channel modulator

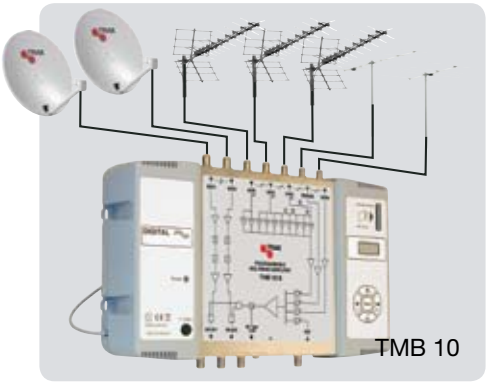
TYPE		CM 01V type VHF	CM 01U type UHF	CM 01U + amp.	CM 01 combi type FM/UHF
Art. No.	Pal AU/NZ	300101 300107	300102 300108	300116	300104
Number of inputs	Pcs.	1	1	1	1
Number of outputs	Pcs.	**1**	**1**	**2**	**2**
Number of channels	Pcs.	1	1	1	1 FM + 1 TV
Modulator	Type	DSB Double side band	DSB Double side band	DSB Double side band	DSB Double side band
Frequency range TV FM	MHz MHz	**175 - 335**	**470 - 860**	**470 - 860**	**88 - 89.2** **470 - 860**
TV standard		Pal-B	Pal-G	Pal-G	Pal-G
Input level	dBµV			max. 70	max. 70
Gain from RF in to RF out 1 to RF out 2	dB dB			**2** **10**	
Output level out 1 out 2	dBµV dBµV	Max. 80	Max. 80	72 82	77 77
Output attenuation	dB	0....10	0....10	0....10	0....10
Through loss	MHz	4.0	4.0		4.0
Video Input CVBS-level	Vpp	1	1	0.8....1.0	1
Audio input level	V RMS	0.5	0.5	0.5....1.0	0.5
Power consumption	W	3	3		3
Connectors		F-female	F-female	F-female	F-female
Impedance	Ohm	75	75	75	75
Operation voltage	V/AC	230	230	230	230
Operation temperature range	°C	0 to +50	0 to +50	0 to +50	0 to +50
Dimensions (h x d x w)	mm	75 x 54 x 174	75 x 54 x 174	75 x 54 x 174	75 x 54 x 174
Remarks		Use scart cable 300743	Use scart cable 300743	Use scart cable 300743	Use scart cable 300743

CM 01 cable
Art. No. 300743
Modulator cable with scart (1.5 m) connector and 3 phone connectors (1 video/2 audio)

TMB multiband amplifiers

Triax TMB programmable multi band amplifier has all the features needed for amplifying and distributing a high number of signals into a network.

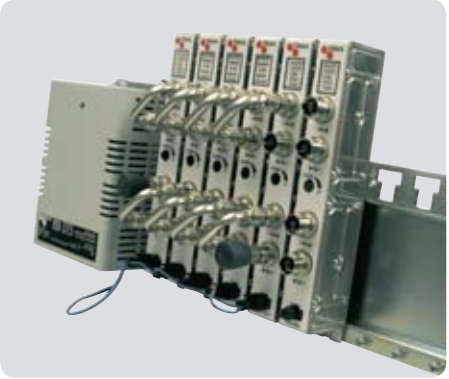
- High flexibility
- 10 highly selective and adjustable filters in the UHF frequency range secure high flexibility. Each of these clusters can have 1-6 channels (48 MHz) bandwidth.
- 6 inputs: FM/DAB/VHF/UHF and 3 UHF inputs split over 10 UHF programmable clusters
- Automatic or manual levelling of the signal
- Easy programming - Designed for both digital and analogue operation


TMB 10

Technical data - TMB multiband amplifiers with adjustable filters

TYPE Art. No.		TMB 6 324571	TMB 10A 324575	TMB 10B 324576	TMB 10S 324577
Numbers of inputs	pcs	5	5	6	8
Numbers of outputs	pcs	1	1	1	2
Numbers of channel filters		6	6	10	10
Test point		no	Yes (- 20 dB)	Yes (- 20 dB)	Yes (- 20 dB)
Gain					
Input BI/FM	dB	24	48	48	43
Input BIII/DAB	dB	35	48	48	43
Input VHF and UHF (aux)	dB		39	39	33
Input UHF 1	dB	48	55	55	48
Input UHF 2	dB	42	55	55	48
Input UHF 3	dB	30		55	48
Input satellite 1	dB				40 sloped
Input satellite 2	dB				40 sloped
Attenuation	dB	0-20	0-20	0-20	0-20
Selectivity	dB/MHz		16 / 16	16 / 16	16 / 16, 40@862
UHF filter combinations		**a b c d**	**a b c d**	**a b c d e f**	**a b c d e f**
UHF 1 input			4 3 1 -	3 1 - 3 1 -	3 1 - 3 1 -
UHF 2 input			2 3 5 6	5 7 8 - - -	5 7 8 - - -
UHF 3 input				2 2 2 7 9 10	2 2 2 7 9 10
Noise figure					
BI/FM	dB	9.0/3.0	5.0	5.0	5.0
BIII/DAB	dB		5.0	5.0	5.0
VHF and UHF (aux)	dB		10.0	10.0	10.0
UHF	dB	3.0/5.0/5.0	9.0	9.0	9.0
Satellite	dB				6.0
Output level (IMD3 /-60 dB/3rd order)					
BI	dBµV	103	122	122	116
BIII	dBµV	108	122	122	116
VHF/UHF (aux)	dBµV		124	124	120
UHF	dBµV	112/115/112	124	124	120
SAT (-35 dB)	dBµV				120
DC power for preamplifier	V/mA	12/50	12 or 24/55	12 or 24/55	12 or 24/55
LNB supply	V/mA kHz				0, 13, 17/300 0-22
Power supply	VAC/Hz	230/50 Hz	230/50 Hz	230/50 Hz	230/50 Hz
Connectors		F-female	F-female	F-female	F-female
Impedance	Ohm	75	75	75	75
Temperature, operation	°C	- 10 to + 50	- 5...+ 50	- 5...+ 50	- 5...+ 50
Dimensions (L x H x D)	mm	230 x 130 x 50	354 x 215 x 50	354 x 215 x 50	354 x 215 x 50

AS single channel analogue headend



Triax AS series single channel amplifier for high quality reception and distribution of terrestrial TV signals.

- High gain
- High selectivity
- +15 VDC supply voltage Fast-On connector.
- Input and output loop through single channel active filters.

ASV modules

Technical data on AS-modules

TYPE		ASV 137	ASV 237	ASV 337	ASU 040	ASU 050
Art. No.		**324590**	**324591**	**324592**	**324593**	**324594**
Frequency band		BI E2-E4	FM 87.5-108 MHz	BIII E5-E12	Channel X* (21...69)	Channel X* (21...69)
Channel band width	MHz	7		7	8	8
Gain	dB	37	37	37	40	50
Selectivity	dB	36 at ±16 MHz	36 at ±16 MHz	36 at ±16 MHz	36 at ±16 MHz	36 at ±16 MHz
Attenuation	dB	0-18	0-18	0-18	0-18	0-18
Output level ***	dBµV	117	112	117	117	125
Output level **	dBµV	105	105	105	105	113
Power consumption	mA	35	35	35	60	110
Connector	IEC	Female	Female	Female	Female	Female
Temperature range	ºC	0 - 50	0 - 50	0 - 50	0 - 50	0 - 50
Dimensions (H x D x W)	mm	160 x 45 x 20	160 x 45 x 20	160 x 45 x 20	160 x 45 x 20	160 x 45 x 20

* Remember to order the specific channel / ** IMA 3 (-52 dB) / *** DIN norm D45004

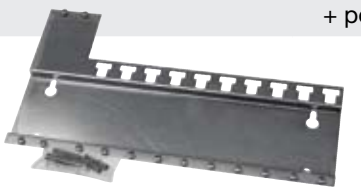
Technical data - AS power supply

TYPE		ASA 02
Art. No.		**324596**
Mains input voltage	V/AC	230 ±10%
Output DC	V	+15
Max output current	mA	2200
Temperature range	ºC	0 - 50
Dimensions (H x D x W)	mm	128 x 57 x 85

AS power supply

Accessories

TYPE	ASC 011	ASR 075	ASL 030
Art. No.	**324587**	**324598**	**324599**
Description	Mounting frame for 10 modules + power supply	75 Ohm termination plug	Rigid coaxial interconnection cable

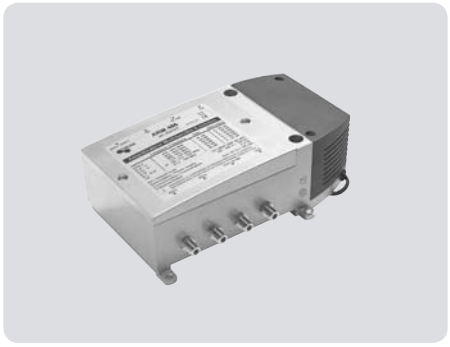


ARM multiband amplifiers

ARM multiband amplifiers
ARM are a series of multiband amplifiers with up to 5 separate adjustable inputs, one for each band.


ARM 404


ARM 455


ARM 486

Technical data - ARM multiband amplifiers

TYPE		ARM 404	ARM 455	ARM 486
Art. No.		**324121**	**324122**	**324123**
Number of inputs		**4**	**5**	**6**
Input 1 - Frequency range	MHz	47 - 68 + 87.5 - 108	47 - 68 + 87.5 - 108	87.5 - 108
Input 1 - Gain	dB	17-32	14-34	16-36
Input 1 - Noise figure	dB	5.0	5.0	8.0
Input 2 - Frequency range	MHz	174 - 230	174 - 230	47 - 68 + 470 - 862
Input 2 - Gain	dB	17-32	14-34	16-36
Input 2 - Noise figure	dB	5.0	5.0	8.0
Input 3 - Frequency range	MHz	470 - 862	470 - 862	174 - 230
Input 3 - Gain	dB	25-40	27-47	16-36
Input 3 - Noise figure	dB	8.0	5.0	7.0
Input 4 - Frequency range	MHz	470 - 862	470 - 862	470 - 862
Input 4 - Gain	dB	25-40	20-40	24-44
Input 4 - Noise figure	dB	8.0	9.0	5.0
Input 5 - Frequency range	MHz		470 - 862	470 - 862
Input 5 - Gain	dB		20-40	24-44
Input 5 - Noise figure	dB		9.0	9.0
Input 6 - Frequency range	MHz			470 - 862
Input 6 - Gain	dB			27-47
Input 6 - Noise figure	dB			9.0
Output level 3.order - VHF	dBµV	117.0	117.0	121.0
@ 60 dB IMD - UHF	dBµV	117.0	117.0	121.0
Connectors		F	F	F
Impedance	Ohm	75	75	75
Power consumption	W	7	7.5	11.3
Remote supply	V/mA	12/100	12/100	12/60
Operation voltage	V/AC	185 - 265	185 - 265	185 - 265
Operation temperature range	°C	0...+50	0...+50	0...+50
Weight	kg	1.250	1.250	1.250
Dimensions (H x D x W)	mm	122 x 70 x 210	122 x 70 x 210	122 x 70 x 210

Triax IFM indoor multiband amplifiers

IFM amplifier housing

Low noise multi-range amplifiers with digital capability

- 4 highly selective range inputs and one output
- You can select operationrange by use of integrated jumper
- Level controller 0...-20 dB at each input
- Low power consumption
- Low-noise inputs for DVB-T
- Die-cast housing with cooling fins for reducing temperature
- F-connectors

Technical data on IFM series

Type		IFM 120	IFM 130	IFM 135
Art. No.		**339120**	**339130**	**339135**
Frequency range				
Input 1 - UHF (1)	MHz	470-862	470-862	470-862
Input 2 - VHF III	MHz	174-230	174-230	174-230
Input 3 - VHF I	MHz	-	47-68	-
- UHF (2)	MHz	-	-	470-862
Input 4 - FM	MHz	87.5-108 and	87.5-108	87.5-108 and
- VHF I	MHz	47-68	-	47-68
Input 1 + 2				
Combined with jumpers	MHz	470-862 and	470-862 and	470-862 and
	MHz	174-230	174-230	174-230
Gain (w. level controller 0 dB)				
Input 1 - UHF (1)	dB	22	31	35
Input 2 - VHF III	dB	20	30	34
Input 3 - VHF I	dB	-	30	-
- UHF (2)	dB	-	-	35
Input 4 - FM - VHF I	dB	20	30	34
Level controller at all inputs	dB	0...-20	0...-20	0...-20
Noise figure (w. level controller 0 dB)				
Input 1 - UHF (1)	dB	4	4	7
Input 2 - VHF III	dB	4	4	5
Input 3 - VHF I	dB	-	-	-
- UHF (2)	dB	-	-	7
Input 4 - FM - VHF I	dB	4	4	5
Output level				
IMA3 ≥ 60 dB acc. EN 500873-5	dBµV	113	115	121
IMA2 ≥ 60 dB acc. EN 500873-3	dBµV	102	105	110
RF connectors (75 Ohm)				
Input		F-female	F-female	F-female
Output		F-female	F-female	F-female
Operating conditions acc. EN 60065				
Supply voltage	V	230 / ±10%	230 / ±10%	230 / ±10%
Power consumption	W	3.5	6	7.5
Operating temperature	°C	-25...+55	-25...+55	-25...+55
Protection class		II	II	II
Degree of protection	IP	20	20	20
Screening acc. EN 50083-2		class A	class A	class A
Dimensions W x H x D	mm	150 x 80 x 50	150 x 80 x 50	150 x 80 x 50
Weight	kg	0.68	0.68	0.68
Packing unit		1 pcs. carton box	1 pcs. carton box	1 pcs. carton box
Reference standards				
Product standards/safety/EMC		EN 50083-3 - Class 2 / EN 50083-1; EN 60065 / EN 50083-2		
RoHS 2002/95/EG compliant		Yes		

Triax multiband amplifiers

IFM indoor multiband amplifier with F-connectors

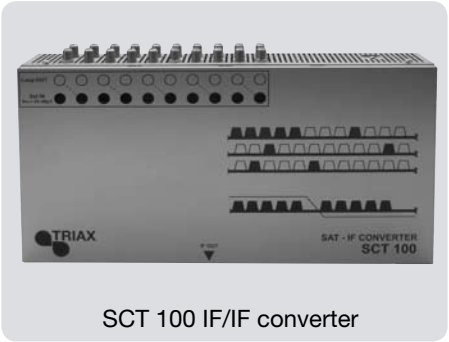
- Attractive housing design
- F-connectors
- Separate adjustable gain on VHF and UHF
- Built-in power supply
- New click-on wall mounting

IFM amplifier housing

Technical data on IFM multiband amplifiers

Type			IFM 102	IFM 103	IFM 104
Art. No.			**339102**	**339103**	**339104**
Input 1	Band		UHF	UHF	UHF
	Channel		21-69	21-69	21-69
	Gain	dB	20-30	12-22	25-35
Input 2	Band		VHF	BIII	BIII
	Channel		2-12	5-12	5-12
	Gain	dB	12-22	12-22	15-25
Input 3	Band			BI + FM	BI + FM
	Channel				
	Gain	dB		2-12	15-25
Noise figure					
	UHF	dB	5.0	4.0	4.5
	VHF	dB	3.0	4.0	4.0
Max. output voltage @ -60 dB IMA3		dBµV	103	105	103
Number of in-/output			2/1	3/1	3/1
Operation voltage		V/AC	230	230	230
Power consumption		W	2	3	3
Connector		type	F	F	F
Impedance		Ohm	75	75	75
Operation temperature range		°C	0...+50	0...+50	0...+50
Weight		kg	0.400	0.400	0.400
Dimensions (h x d x w)		mm	61 x 44 x 118	61 x 44 x 118	65 x 50 x 173
Remarks				Automatic DC-pass to UHF input	

Triax SCT 100 - IF/IF converter



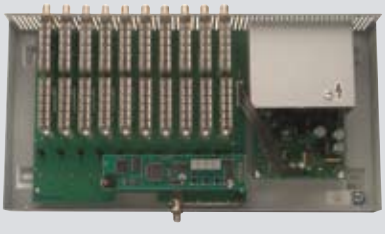
SCT 100 IF/IF converter

SCT 100 is a compact SAT-IF-channel converter for 10 channels, which makes it practicable to convert analogue and digital transponders from different satellites. SCT 100 converts any required SAT-IF transponders from its origin position into a free choosen frequency, in the SAT-IF range. The SCT 10 SAT-IF unit can be inserted into existing tree-distribution networks (if the existing cable is suitable for up to 2150 MHz). The splitters, taps and outlets of the distribution system must support the SAT-IF range.

- Programmable SAT-IF transponders processing system for 10 digital and analogue transponders
- AGC operation
- LNB remote feed voltage on each input
- Integrated power supply and programming unit
- Output level separately adjustable for each channel

Technical data - SCT 100 - IF/IF converter

TYPE		**SCT 100**
Art. No.		**364100**
Numbers of inputs		10
Input requency range	MHz	950 - 2150
Input level	dBµV	52 - 75
Frequency steps	MHz	1
LNB feeding voltage	V/mA	12 / 250 per input (max. 500 mA total)
Spurious emission	dBm	- 63
Intermediate frequency	MHz	480
Line output	MHz	950 - 2150
Line output attenuation	dB	max. - 3.0
Connections		F-con
Impedance	Ohm	75
Output basic unit		
Output frequency range	MHz	1000 - 2150
Frequency steps	MHz	1 MHz
Oscillator suppression	dB	> 20
Spurious emission	dB	± 26
Variable attenuator	dB	- 20
Output level - typ.	dBµV	85
General data		
Power consumption	W	max. 40
Operation voltage	V/AC	190 - 260
Operation temperature range	°C	0 to +50
Weight	kg	3.0
Dimensions (H x D x W)	mm	195 x 80 x 280

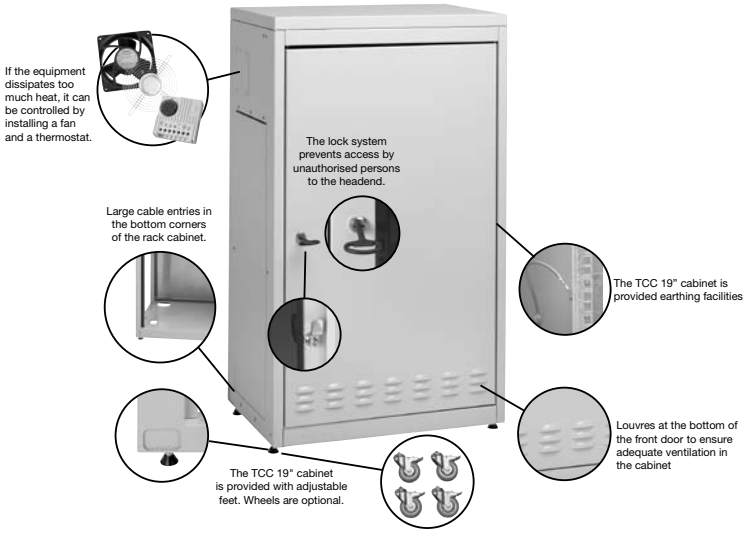


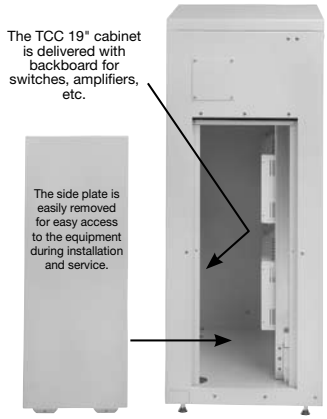
Triax TCC 19" compact cabinet

19” swing rack cabinet providing easy access and excellent overview
If more basic units are built together, they can conveniently be inserted in Triax’s 19” swing rack providing an excellent overview and easy access to all connections and programming units.

Technical data - TCC 19” compact cabinet

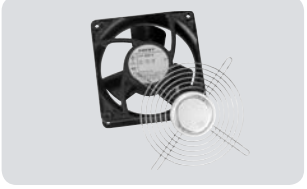
TYPE Art. No.		TCC 19” cabinet with glass door 251493	TCC 19” cabinet with steel door 251494
Colour		Grey (Ral 7030)	Grey (Ral 7030)
Height (outer)	mm	1100	1100
Width (outer)	mm	650	650
Depth (outer)	mm	450	450
Backboard dimension (H x W x D)	mm	940 x 550 x 16	940 x 550 x 16
Units in mountring frame	pcs.	21	21
Remarks		Backboard included	Backboard included



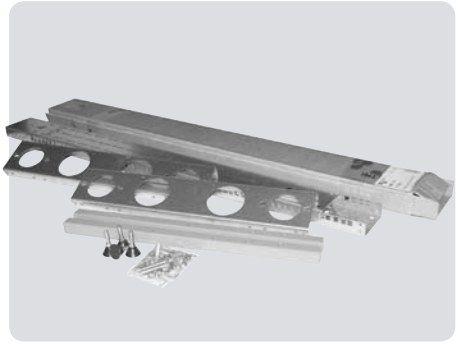


Accessories

TYPE Art. No.		Fan 230V 708020	Protection grid 708017	Thermostat 708028	4 Wheels with lock 737030	Key for EMKA lock 848616
Dimension (H x W x D)	mm	120 x 120 x 38	Ø 115	70 x 70 x30	Ø 74 on wheels	
Outer pack	pcs.	1	1	1	1	1
Remarks					4 in a set	Security lock




Triax mounting frame TMF 512



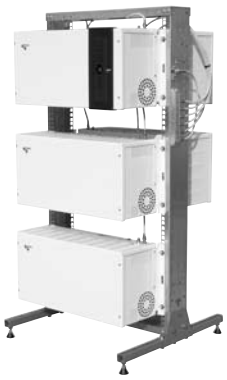
Complete TMF 512 pack

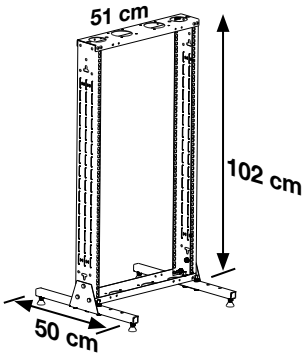
Use the possibilities of an open 19” mounting frame providing easy access and excellent overview

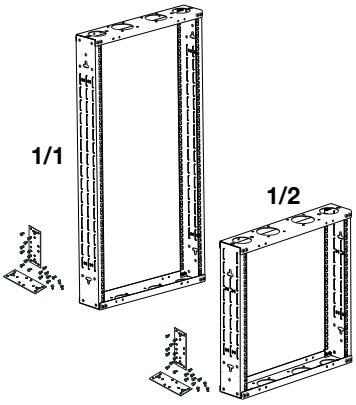
With the open 19” mounting frame Triax offers you a quite new and functional mounting solution for your headend if more units are built together.

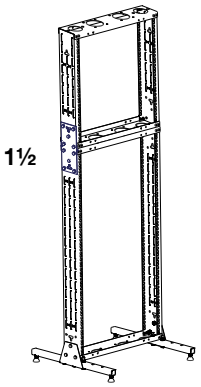
Technical data - TMF 512 mounting frame

TYPE Art. No.		TMF 512 19” basic frame 251512	1/1 - 19” frame with fittings 251513	1/2 - 19” frame with fittings 251514
Colour		Galv. steel	Galv. steel	Galv. steel
Height (outer)	mm	1020	1020	510
Width (outer)	mm	510	510	510
Depth (outer)	mm	500	500	500
Units in mountring frame	pcs.	21	21	10
Remarks		Wheels as option	Fittings included	Fittings included



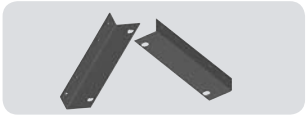






Accessories

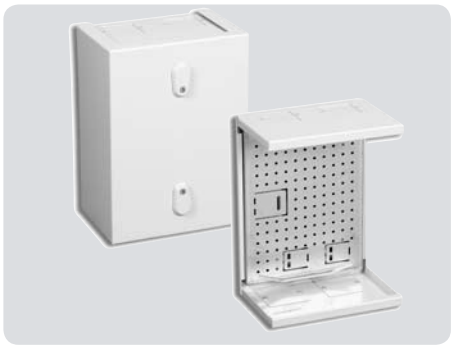
TYPE Art. No.		Set of screws 737040	Brackets for CM 04 unit 737029	4 Wheels with lock 737030	19" Shelf 251496
Dimension (H x W x D)	mm		75 x 42 x 24	Ø 74 on wheels	81 x 44.45 x 270
Outer pack	pcs.	1	1	1	1
Remarks		10 nut bushings 10 M6x8 screws 10 plastic washers		4 in a set	19“ shelf for satellite receiver for use together with e.g. the TCM 08 or TCH modulator modules



Triax indoor multi distribution cabinets

Indoor wall cabinets with steel backboard

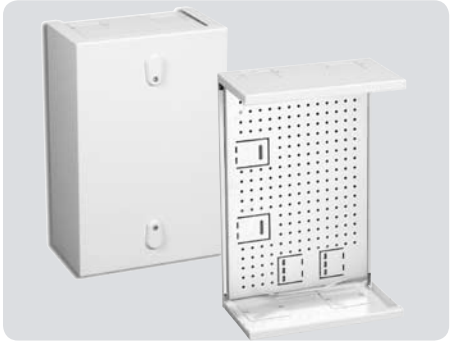
- Cable entries in top and bottom
- 2 EMKA locks
- Steel mounting backboard with pop-up brackets for taps, splitters and pouyet connectors
- Wooden backboard also available



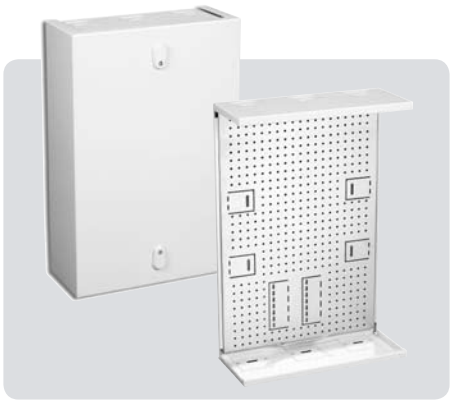
MDU 8 - lock box

Technical data - MDU lock box

TYPE Art. No.		MDU 8 lock box 251000	MDU 16 lock box 251005	MDU 32 lock box 251010
Colour		Grey (Ral 7035)	Grey (Ral 7035)	Grey (Ral 7035)
Height (outer)	mm	370	490	660
Width (outer)	mm	270	320	440
Depth (outer)	mm	180	180	180
Mounting volume - height - width - depth	 mm mm mm	 325 250 160	 445 300 160	 615 420 160
Locking system - lock type - locking system - lock protection		 2 x EMKA 1000 2 x single cam 2 x teardrop	 2 x EMKA 1000 2 x single cam 2 x teardrop	 2 x EMKA 1000 2 x single cam 2 x teardrop
Door type		Cabinet cover	Cabinet cover	Cabinet cover
Cable entries	pcs.	2 top/2 bottom	2 top/2 bottom	3 top/3 bottom
Packaging		Carton box	Carton box	Carton box
Weight	kg	7.2	10.0	15.6
Remarks		Backboard included	Backboard included	Backboard included



MDU 16 - lock box



MDU 32 - lock box

Triax outdoor wall cabinets

11S cabinet - open

11S series of outdoor wall cabinets with 3-point security locking system and backboard.

- Keyhole slot in each corner for easy wall mounting
- 3-point security locking system
- Safety lock protected by teardrop
- Stay-hook on door
- Cable entries at the base with cover plates

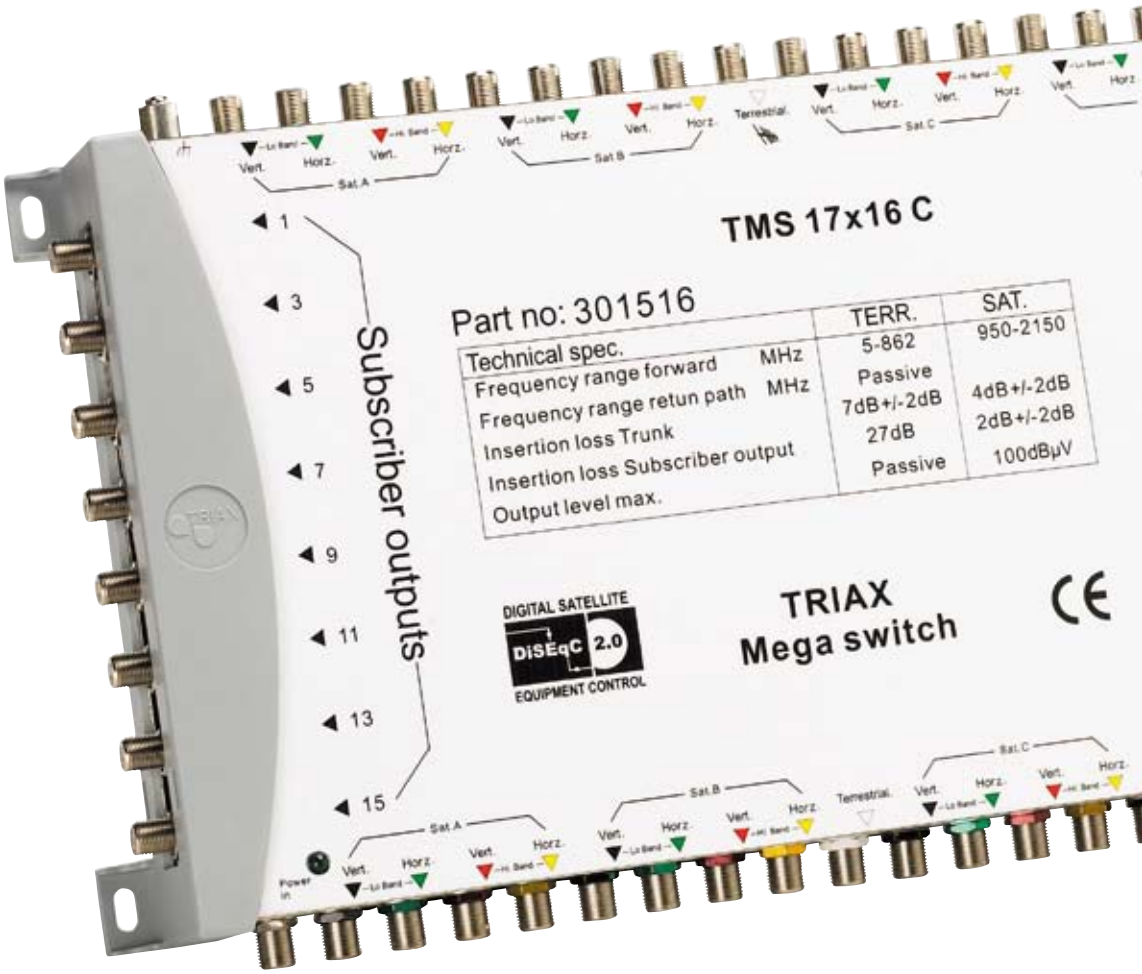
Technical data - 11S outdoor wall cabinets

TYPE		11S 6	11S 8	11S 10
Art. No.		**160622**	**160822**	**160922**
Colour		Grey (Ral 7030)	Grey (Ral 7030)	Grey (Ral 7030)
Height (outer)	mm	600	800	940
Width (outer)	mm	396	516	790
Depth (outer)	mm	240	240	325
Mounting volume				
- height	mm	447	660	800
- width	mm	330	450	700
- depth	mm	220	220	305
Locking system				
- lock type		1 x EMKA 1000	1 x EMKA 1000	1 x EMKA 1000
- locking system		3 point security	3 point security	3 point security
- lock protection		Teardrop	Teardrop	Teardrop
Door type		Hinged	Hinged	Hinged
Cable entries	pcs.	3 in bottom	3 in bottom	3 in bottom
Packaging		Carton box	Carton box	Carton box
Weight	kg	14.4	14.4	14.4
Remarks		EMKA lock included	EMKA lock included	EMKA lock included

11S 8 cabinet

Notes

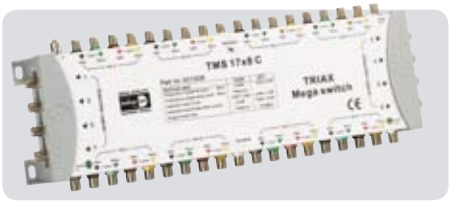
Antenna systems >> **Multiswitches**	
- TMS 17C and 17T series	130-131
- TMS 9C and 9P series	132-135
- TMS 5 and 5P series	136-138
- TMS 2C series	139
- TMS taps/splitters	140
- TMS amplifiers	141-142
- TMS power supplies	143
- TMM cascadable series	144-146



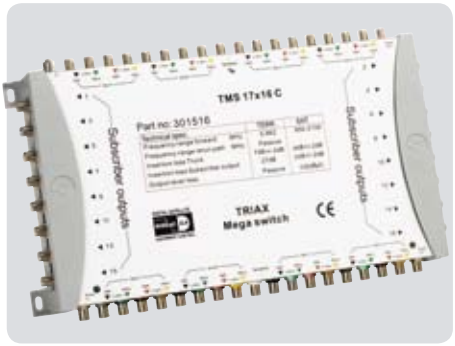
Triax TMS 17xC multiswitches

Fulfilling subscriber needs the most efficient way

Each of our multiswitch systems offers unique subscriber benefits in terms of performance and individual freedom. Advanced technology is used to provide these benefits, but is applied in a logical, modular way helping the professional installer save time.



TMS 17X8C

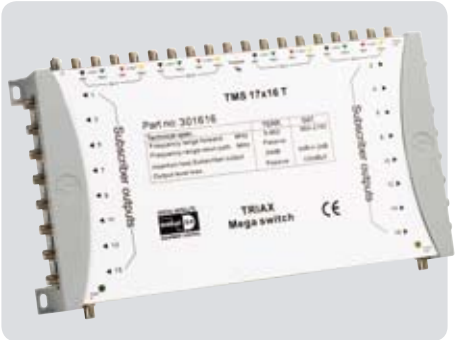


TMS 17X16C

Technical data
Cascadable multiswitches with 16 polarities, 1 terr. input. External power supply

TYPE Art. No.		TMS 17x6C 301506	TMS 17x8C 301508	TMS 17x12C 301512	TMS 17x16C 301516
Number of inputs		16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER
Number of outputs		16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER
Subscriber outputs		**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female
Frequency range SAT	MHz	950-2150 (active)	950-2150 (active)	950-2150 (active)	950-2150 (active)
Frequency range TER	MHz	5-862 (passive)	5-862 (passive)	5-862 (passive)	5-862 (passive)
Gain SAT	dB	0	0	-2	-2
Gain TER	dB	-24	-24	-27	-27
Insertion loss trunkline SAT	dB	3	3	4	4
Insertion loss trunkline TER	dB	4	4	4	4
Isolation LNB to LNB	dB	35	30	35	35
Isolation TER to SAT	dB	20	20	20	20
Isolation SAT to TER	dB	30	30	30	30
Isolation cross polarisation H/V	dB	28	28	28	28
Isolation out - out TER	dB	25	25	25	25
Isolation out - out SAT	dB	30	30	30	30
Return loss SAT inputs	dB	12	12	12	12
Return loss SAT outputs	dB	12	12	12	12
Return loss TER inputs	dB	8	8	8	8
Return loss TER outputs	dB	8	8	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100
Impedance input/output	Ohm	75	75	75	75
Switching	VDC	13 V - 18 V - 13 V/22 kHz 18 V/22 kHz - DiSEqC 2.0 Toneburst		13 V - 18 V - 13 V/22 kHz 18 V/22 kHz - DiSEqC 2.0 Toneburst	
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		External	External	External	External
LNB power supply max.	A	1.3	1.3	1.3	1.3
Power link (for amplifiers in the line)		Yes	Yes	Yes	Yes
Control LEDs		Green for power Yellow for power link	Green for power Yellow for power link	Green for power Yellow for power link	Green for power Yellow for power link
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	125 x 55 x 355	125 x 55 x 355	215 x 55 x 355	215 x 55 x 355

Triax TMS 17xT multiswitches



TMS 17X16T

TMS17xC and 17XT multiswitches

- are rational solutions for building 4-satellite position systems for many subscribers using relatively few components. The cascadable systems can easily be extended for more subscribers.

TMS 17X8T

Technical data

Terminated multiswitches with 16 polarities, 1 terr. input. External power

TYPE Art. No.		TMS 17x6T 301606	TMS 17x8T 301608	TMS 17x12T 301612	TMS 17x16T 301616
Number of inputs		16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER
Number of outputs		16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER
Subscriber outputs		**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female
Frequency range SAT	MHz	950-2150 (active)	950-2150 (active)	950-2150 (active)	950-2150 (active)
Frequency range TER	MHz	5-862 (passive)	5-862 (passive)	5-862 (passive)	5-862 (passive)
Gain SAT	dB	-2	0	-2	0
Gain TER	dB	-21	-22	-24	-24
Isolation LNB to LNB	dB	35	35	35	35
Isolation TER to SAT	dB	20	20	20	20
Isolation SAT to TER	dB	30	30	30	30
Isolation cross polarisation H/V	dB	28	28	28	28
Isolation out - out TER	dB	25	25	25	25
Isolation out - out SAT	dB	30	30	30	30
Return loss SAT inputs	dB	12	12	12	12
Return loss SAT outputs	dB	12	12	12	12
Return loss TER inputs	dB	8	8	8	8
Return loss TER outputs	dB	8	8	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100
Impedance input/output	Ohm	75	75	75	75
Switching	VDC	13 V - 18 V - 13 V/22 kHz 18 V/22 kHz - DiSEqC 2.0 Toneburst		13 V - 18 V - 13 V/22 kHz 18 V/22 kHz - DiSEqC 2.0 Toneburst	
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		External	External	External	External
LNB power supply max.	A	1.3	1.3	1.3	1.3
Power link (for amplifiers in the line)		Yes	Yes	Yes	Yes
Control LEDs		Green for power Yellow for power link	Green for power Yellow for power link	Green for power Yellow for power link	Green for power Yellow for power link
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	125 x 55 x 355	125 x 55 x 355	215 x 55 x 355	215 x 55 x 355

Triax TMS 9xC multiswitches

Fulfilling subscriber needs the most efficient way

The TMS 9x series of our multiswitch systems offers unique subscriber benefits in terms of performance and individual freedom.

Advanced technology is used to provide these benefits, but is applied in a logical, modular way helping the professional installer save time.

TMS 9X8C

TMS 9X12C

Technical data
Cascadable multiswitches with 8 polarities, 1 terr. input. External power supply

TYPE Art. No.		TMS 9x4C 300364	TMS 9x6C 300366	TMS 9x8C 300368	TMS 9x12C 300372	TMS 9x16C 300376
Number of inputs		8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER
Number of outputs		8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER
Subscriber outputs		**4**	**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150 (active)	950-2150 (active)	950-2150 (active)	950-2150 (active)	950-2150 (active)
Frequency range TER	MHz	5-862 (active)	5-862 (active)	5-862 (active)	5-862 (active)	5-862 (active)
Return path TER	MHz	5-65 (passive)	5-65 (passive)	5-65 (passive)	5-65 (passive)	5-65 (passive)
Gain SAT (with 5 dB slope)	dB	- 3 to 2 (± 1.0)	- 3 to 2 (± 1.0)	- 3 to 2 (± 1.0)	- 3	- 3
Gain TER	dB	- 9	- 9	- 9	- 9	- 9
Insertion loss trunkline SAT	dB	2 (± 2.0)	3 (± 2.0)	4 (± 2.0)	4 (± 2.0)	4 (± 2.0)
Insertion loss trunkline TER	dB	4 (± 1.0)	4 (± 1.0)	5 (± 1.0)	5 (± 1.0)	5 (± 1.0)
Isolation LNB to LNB	dB	35	35	35	35	35
Isolation TER to SAT	dB	23	23	23	23	23
Isolation SAT to TER	dB	28	28	28	28	28
Isolation cross polarisation H/V	dB	28	28	28	28	28
Isolation out - out TER	dB	28	28	28	28	28
Isolation out - out SAT	dB	30	30	30	30	30
Return loss SAT inputs	dB	13	13	13	13	13
Return loss SAT outputs	dB	8	8	8	8	8
Return loss TER inputs	dB	11	11	11	11	11
Return loss TER outputs	dB	8	8	8	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	88	88	88	88	88
Impedance input/output	Ohm	75	75	75	75	75
Switching	VDC	14 V - 18 V 14 V/22 kHz - 18 V/22 kHz - DiSEqC 2.0				
Supply voltage	VDC	15 (± 1.0)	15 (± 1.0)	15 (± 1.0)	15 (± 1.0)	15 (± 1.0)
Power supply		External PSU	External PSU	External PSU	External PSU	External PSU
Max. current pass per F-connector	mA	500	500	500	500	500
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	124 x 51 x 253	124 x 51 x 253	152 x 51 x 253	210 x 51 x 257	210 x 51 x 257

Triax TMP 9x multiswitches

TMP 9X32

TMP 9x series stand-alone multiswitch

- 8 satellite polarities and 1 terrestrial input, combined output.
- Versions for 8, 12, 16, 24 and 32 subscriber outputs
- Adjustable attenuator per polarity (0-15 dB)
- Slide switch for long, medium and short subscriber cable runs (0, 6 and 12 dB)
- Low power consumption
- Small footprint, compact design, fits into tight spaces
- Switchable DC supply into terrestrial input (for mast amplifier)

Technical data
Stand-alone multiswitches with 8 polarities, 1 terr. input. With power supply

TYPE Art. No.		TMP 9x8 301630	TMP 9x12 301632	TMP 9x16 301634	TMP 9x24 301636	TMP 9x32 301638
Number of inputs		8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER
Subscriber outputs		**8**	**12**	**16**	**24**	**32**
Connectors	F-con	female	female	female	female	female
Frequency range - SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range - Wideband	MHz	47-862	47-862	47-862	47-862	47-862
Insertion loss trunkline SAT	dB	3.0	3.0	3.0	2.0	2.0
Insertion loss trunkline TER	dB	3.0	3.0	3.0	0.0	2.0
Input polarity gain control SAT	dB	4 x 10	4 x 10	4 x 10	4 x 15	4 x 15
Input polarity gain control TER	dB	15	15	15	15	15
TERR slope control	dB	10	10	10	10	10
Output level control (4 outputs)						
Long cable	dB	/	/	/	0	0
Medium cable	dB	/	/	/	6	6
Short cable	dB	/	/	/	12	12
Isolation TER to SAT	dB	32	32	32	32	32
Isolation SAT to TER	dB	32	32	32	32	32
Isolation cross polarisation H/V	dB	30	30	30	30	30
Isolation out - out TER	dB	30	30	30	30	30
Isolation out - out SAT	dB	30	30	30	30	30
Return loss SAT inputs	dB	10	10	10	10	10
Return loss SAT outputs	dB	8	8	8	10	10
Return loss TER inputs	dB	10	10	10	12	12
Return loss TER outputs	dB	8	8	8	10	10
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	95	95	95	95	95
Line power Voltage (TERR)	V	12	12	12	12	12
Current (TERR)	mA	50	50	50	50	50
Switching commands	VDC/ kHz	13V / 18V 13V - 22 kHz / 18 - 22 kHz, DiSEqC 2.0				
Supply voltage	VAC VDC/A	180 - 264 18 / 1.5 (47 - 63 Hz)				
LNB current, max.	mA	600	600	600	600	600
Colourcoding of inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	157 x 51 x 190	157 x 51 x 240	157 x 51 x 240	157 x 51 x 340	157 x 51 x 340

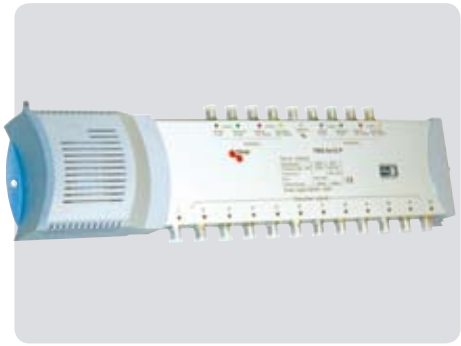
Triax TMS 9xP multiswitches

TMS 9xC and 9XP multiswitches

- offer a flexible and cost efficient system for providing two position satellite distribution in small and medium sized networks. The system's uniqueness in design and performance makes community networks attractive even in buildings with only 2 or 3 households.

TMS 9X8P

TMS 9X4P



TMS 9X12P

Technical data

Terminated multi switches with 8 polarities, 1 terr. input. With power supply

TYPE Art. No. (EU plug) Art. No. (UK plug)		TMS 9x4P 300344 300354	TMS 9x6P 300346 300356	TMS 9x8P 300348 300358	TMS 9x12P 300342 300352	TMS 9x16P 300347 300357
Number of inputs		8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER
Subscriber outputs		**4**	**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range TER	MHz	47-862	47-862	47-862	47-862	47-862
Gain SAT	dB	2	2	2	0	0
Gain TER	dB	- 2	- 2	- 2	4	2
Isolation LNB to LNB	dB					
Isolation TER to SAT	dB	28	28	28	30	30
Isolation SAT to TER	dB	30	30	30	30	28
Isolation cross polarisation H/V	dB	28	28	28	25	25
Isolation out - out TER	dB	26	26	26	28	30
Isolation out - out SAT	dB	30	30	30	30	30
Return loss SAT inputs	dB	14	14	14	10	10
Return loss SAT outputs	dB	7	7	7	10	10
Return loss TER inputs	dB	11	11	11	12	12
Return loss TER outputs	dB	8	8	8	10	10
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	85	85	85	83	82
Impedance input/output	Ohm	75	75	75	75	75
Switching	VDC			13 V - 18 V 13 V/22 kHz - 18 V/22 kHz DiSEqC 2.0		
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		Included	Included	Included	Included	Included
LNB power supply max.	mA	1000	1000	1000	1000	1000
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	103 x 71 x 359	103 x 71 x 359	103 x 71 x 359	103 x 71 x 459	103 x 71 x 559

TMP 8x32

TMP 8x series for one satellite position

- 4 satellite polarities and 4 terrestrial inputs (FM, DAB, UHF or wideband), combined output.
- Versions for 24 and 32 subscriber outputs
- Adjustable attenuator per polarity (0-15 dB)
- Slide switch for long, medium and short subscriber cable runs (0, 6 and 12 dB)
- Low power consumption
- Small footprint, compact design, fits into tight spaces
- Switchable DC supply into terrestrial input (for mast amplifier)

Technical data
Single multiswitches with 8 polarities, 1 terr. input. With power supply

TYPE Art. No.		TMP 8x24 301652	TMP 8x32 301654
Number of inputs		4 SAT, 4 TER	4 SAT, 4 TER
Subscriber outputs		**24**	**32**
Connectors	F-con	female	female
Frequency range - SAT	MHz	950-2150	950-2150
Frequency range - FM	MHz	87.5-108	87.5-108
Frequency range - DAB	MHz	215-230	215-230
Frequency range - UHF	MHz	470-862	470-862
Frequency range - Wideband	MHz	47-862	47-862
Insertion loss - SAT	dB	2.0	3.0
Insertion loss - TER	dB	0.0	0.0
Input polarity gain control SAT	dB	4 x 10	4 x 10
Input polarity gain control TER	dB	15	15
TERR slope control	dB	10	10
Output level control (4 outputs)			
Long cable	dB	0	0
Medium cable	dB	6	6
Short cable	dB	12	12
Isolation TER to SAT	dB	32	32
Isolation SAT to TER	dB	32	32
Isolation cross polarisation H/V	dB	30	30
Isolation out - out TER	dB	30	30
Isolation out - out SAT	dB	30	30
Return loss SAT inputs	dB	10	10
Return loss SAT outputs	dB	8	8
Return loss TER inputs	dB	10	10
Return loss TER outputs	dB	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	95	95
Line power Voltage (TERR)	V	12	12
Current (TERR)	mA	50	50
Switching commands	VDC/ kHz	13V / 18V 13V - 22 kHz / 18 - 22 kHz	
Supply voltage	VAC VDC/A	180 - 264 18 / 1.5 (47 - 63 Hz)	
LNB current, max.	mA	600	600
Colourcoding of inputs		Yes	Yes
Temperature range	°C	0...+55	0...+55
Dimensions (H x D x W)	mm	157 x 51 x 340	157 x 51 x 340

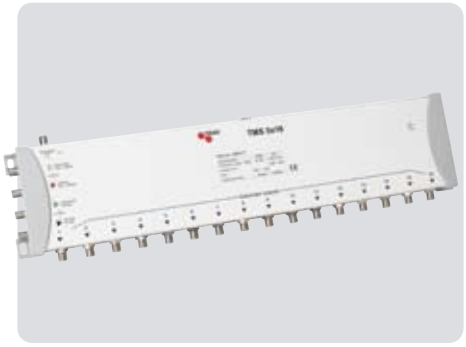
Triax TMP 5x multiswitches

TMP 5x series for one satellite position

- 4 satellite polarities and 1 terrestrial input, combined output.
- Versions for 8, 12, 16, 24 and 32 subscriber outputs
- Adjustable attenuator per polarity (0-15 dB)
- Slide switch for long, medium and short subscriber cable runs (0, 6 and 12 dB)
- Low power consumption
- Small footprint, compact design, fits into tight spaces
- Switchable DC supply into terrestrial input (for mast amplifier)

Technical data
Single multiswitches with 4 polarities, 1 terr. input. With power supply

TYPE Art. No.		TMP 5x8 301620	TMP 5x12 301622	TMP 5x16 301624	TMP 5x24 301626	TMP 5x32 301628
Number of inputs		4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER
Subscriber outputs		**8**	**12**	**16**	**24**	**32**
Connectors	F-con	female	female	female	female	female
Frequency range - SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range - Wideband	MHz	47-862	47-862	47-862	47-862	47-862
Insertion loss - SAT	dB	3.0	3.0	3.0	2.0	3.0
Insertion loss - TER	dB	3.0	3.0	3.0	0.0	0.0
Input polarity gain control SAT	dB	4 x 10	4 x 10	4 x 10	4 x 10	4 x 10
Input polarity gain control TER	dB	15	15	15	15	15
TERR slope control	dB	10	10	10	10	10
Output level control (4 outputs)						
Long cable	dB	/	/	/	0	0
Medium cable	dB	/	/	/	6	6
Short cable	dB	/	/	/	12	12
Isolation TER to SAT	dB	32	32	32	32	32
Isolation SAT to TER	dB	32	32	32	32	32
Isolation cross polarisation H/V	dB	30	30	30	30	30
Isolation out - out TER	dB	30	30	30	30	30
Isolation out - out SAT	dB	30	30	30	30	30
Return loss SAT inputs	dB	10	10	10	10	12
Return loss SAT outputs	dB	8	8	8	8	10
Return loss TER inputs	dB	10	10	10	10	12
Return loss TER outputs	dB	8	8	8	8	10
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	95	95	95	95	95
Line power Voltage (TERR)	V	12	12	12	12	12
Current (TERR)	mA	50	50	50	50	50
Switching commands	VDC/ kHz	13V / 18V 13V - 22 kHz / 18 - 22 kHz				
Supply voltage	VAC VDC/A	180 - 264 18 / 1.5 (47 - 63 Hz)				
LNB current, max.	mA	600	600	600	600	600
Colourcoding of inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	157 x 51 x 190	157 x 51 x 240	157 x 51 x 240	157 x 51 x 340	157 x 51 x 340



TMS 5X16

Standard 5x multiswitch

The TMS 5x series of our multiswitch systems offers unique subscriber benefits in terms of performance and individual freedom.

TMS 5x6

TMS 5X12

Technical data
Modular multiswitches with 4 polarities, 1 terr. input. External power supply

TYPE Art. No.		TMS 5x4 300314	TMS 5x6 300316	TMS 5x8 300318	TMS 5x12 300312	TMS 5x16 300317
Number of inputs		4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER
Subscriber outputs		**4**	**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range TER	MHz	47-862	47-862	47-862	47-862	47-862
Gain SAT	dB	- 6	- 5	- 5	0	0
Gain TER	dB	4	3	3	4	2
Isolation TER to SAT	dB	22	25	25	22	22
Isolation SAT to TER	dB	22	28	28	22	22
Isolation cross polarisation H/V	dB	25	28	28	25	25
Isolation out - out TER	dB	30	28	28	28	28
Isolation out - out SAT	dB	30	35	35	35	35
Return loss SAT inputs	dB	12	11	11	11	10
Return loss SAT outputs	dB	7	9	9	8	8
Return loss TER inputs	dB	11	11	11	11	10
Return loss TER outputs	dB	7	9	9	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	101	101	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	88	85	85	85	85
Impedance input/output	Ohm	75	75	75	75	75
Switching	VDC			13 V - 18 V 13 V/22 kHz 18 V/22 kHz		
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		External PSU	External PSU	External PSU	External PSU	External PSU
LNB power supply max.	mA	600	600	600	600	600
Colourcoding of IF and TER Inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	103 x 51 x 145	103 x 51 x 255	103 x 51 x 255	103 x 51 x 355	103 x 51 x 455

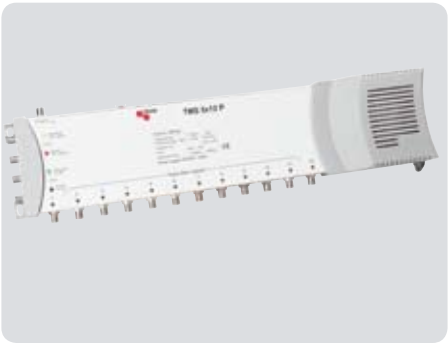
Triax TMS 5xP multiswitches

Fulfilling subscriber needs the most efficient way

The TMS 5x series of our multiswitch systems offers unique subscriber benefits in terms of performance and individual freedom.
Advanced technology is used to provide these benefits, but is applied in a logical, modular way helping the professional installer save time.

TMS 5x4p

TMS 5X8p

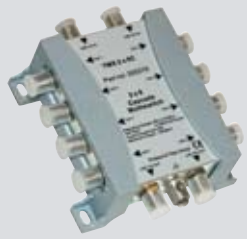


TMS 5x12p

Technical data

Single multiswitches with 4 polarities, 1 terr. input. With power supply

TYPE Art. No. (EU plug) Art. No. (UK plug)		TMS 5x4P 300324 300334	TMS 5x6P 300326 300336	TMS 5x8P 300328 300338	TMS 5x12P 300322 300332	TMS 5x16P 300327 300337
Number of inputs		4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER
Subscriber outputs		4	6	8	12	16
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range TER	MHz	47-862	47-862	47-862	47-862	47-862
Gain SAT	dB	- 6	- 5	- 5	- 5	- 3
Gain TER	dB	4	3	3	0	4
Isolation TER to SAT	dB	22	25	25	22	22
Isolation SAT to TER	dB	22	28	28	22	22
Isolation cross polarisation H/V	dB	25	28	28	25	25
Isolation out - out TER	dB	30	28	28	28	28
Isolation out - out SAT	dB	30	35	35	35	35
Return loss SAT inputs	dB	12	11	11	11	10
Return loss SAT outputs	dB	7	9	9	8	8
Return loss TER inputs	dB	11	11	11	11	10
Return loss TER outputs	dB	7	9	9	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	101	101	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	88	85	85	85	85
Impedance input/output	Ohm	75	75	75	75	75
Switching	VDC	13 V - 18 V 13 V/22 kHz 18 V/22 kHz	13 V - 18 V 13 V/22 kHz 18 V/22 kHz	13 V - 18 V 13 V/22 kHz 18 V/22 kHz	13 V - 18 V 13 V/22 kHz 18 V/22 kHz	13 V - 18 V 13 V/22 kHz 18 V/22 kHz
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		Included	Included	Included	Included	Included
LNB power supply max.	mA	600	600	600	600	600
Colourcoding of IF and TER Inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	103 x 71 x 249	103 x 71 x 359	103 x 71 x 359	103 x 71 x 459	103 x 71 x 559



TMS 2x8C

1 position 2 polarity switch, many users and expandability
For systems with one satellite position.
Simple, yet expandable. Easy to install.

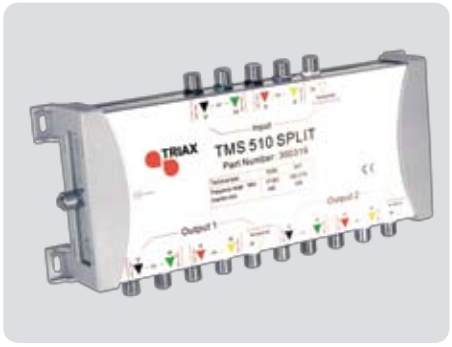
TMS 2x4C

Technical data
Cascadable multiswitches with 2 polarities. External power supply

TYPE Art. No.		TMS 2x4C 300274	TMS 2x8C 300278
Number of inputs		2 SAT, 1 TER	2 SAT, 1 TER
Subscriber outputs		**4**	**8**
Connectors	F-con	female	female
Frequency range SAT	MHz	950-2150	950-2150
Frequency range TER	MHz	5-862	5-862
Gain SAT	dB	- 2	- 2
Noise figure	dB	6	6
Insertion loss trunkline SAT	dB	3.5	4.0
Isolation trunk to trunk	dB	40	40
Isolation LNB to LNB	dB	30	30
Isolation cross polarisation H/V	dB	30	30
Return loss SAT inputs	dB	12	12
Return loss SAT outputs	dB	12	12
Return loss TAP outputs	dB	10	10
Output level (IMD3 - 35 dB)	dBµV	100	100
Input level (IMD3 - 35 dB)	dBµV	40-90	40-90
Impedance input/output	Ohm	75	75
Supply voltage from receiver via subscriber ports	V	10 - 18	10 - 18
Max. current @ 13 V/18 V	mA	< 80	< 80
Max. current to each H/V LNB	mA	< 500	< 500
Temperature range	°C	-20...+60	-20...+60
Dimensions (H x D x W)	mm		

Triax TMS and TMM IF taps and splitters

Expand the TMS 5x series into a cascadable system
Using TMS 55 taps makes it possible to construct large cascadable systems. Different tap-values allow fine-tuning of available signal levels. By using splitters you can balance your distribution system the best possible way.



TMS 510 splitter


TMS 55-xx tap

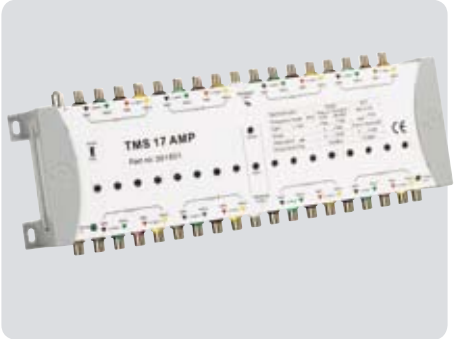
Technical data
TMS taps and splitter

TYPE Art. No.		TMS 55-12 tap 300313	TMS 55-15 tap 300333	TMS 55-20 tap 300343	TMS 55-24 tap 300353	TMS 55-6S splitter 300363	TMS 510 splitter 300319
Number of inputs		4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER
Number of outputs		4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	**8 SAT 2 TER**	**8 SAT 2 TER**
Number of taps		4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER		
Connectors	F-con	female	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range TER	MHz	47-862	47-862	47-862	47-862		47-862
Through loss SAT	dB	1.2 ± 1	1.2 ± 1	1.2 ± 1	1.2 ± 1	1.2 ± 1	4 ± 1
Through loss TER	dB	2.5 ± 1.5	2.5 ± 1.5	2.5 ± 1.5	2.5 ± 1.5		6 ± 1
Tap loss SAT	dB	12.5	15	20	24	6.0	
Tap loss TER	dB	12.5	15	20	24		
Isolation trunkline	dB	> 30	> 30	> 30	> 30	> 30	> 30
Temperature range	ºC	0...+55	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	145 x 42 x 119	145 x 42 x 119	145 x 42 x 119	145 x 42 x 119	145 x 42 x 119	145 x 42 x 255

TYPE Art. No.		TMM 5x10 splitter 305319	TMM 4x10 splitter 305320
Number of inputs		4 SAT 1 TER	4 SAT 1 TER
Number of outputs		**2x4 SAT 2x1 TER**	**2x4 SAT 2x1 TER**
Connectors	F-con	female	female
Frequency range	MHz	47-2150	47-2150
Through loss SAT	dB	4.5	4.5
Through loss TER	dB	4.3	4.3
Output return loss SAT	dB	In 15/ out 15	In 15/ out 15
Output return loss TER	dB	In 15/ out 15	In 15/ out 15
Isolation - Out/out SAT - Out/out TER	dB	> 20 > 22	> 20 > 22
Temperature range	ºC	0...+55	0...+55
Dimensions (H x D x W)	mm		

TMM splitter

Triax TMS 17 - 9 - 8 - 5 - 1 IF-amplifiers



TMS 17 AMP cascadable amplifier

Boost your signal to get more mileage.
Using a TMS line amplifier you can compensate for the cable loss in your distribution system.

TMS 9 AMP cascadable amplifier

TMS 55 AMP cascadable amplifier

TMS 2 AMP

Technical data
IF amplifiers. External power supply

TYPE		TMS 17 Amp	TMS 9 Amp	TMS 55 Amp	TMS 8 AMPP	TMS 2 AMP
Art. No.		**301501**	**300365**	**300315**	**300425**	**300275**
Number of inputs		16 SAT, 1 TER + Power link	8 SAT, 1 TER	4 SAT, 1 TER	8 SAT	2 SAT
Number of outputs		16 SAT, 1 TER + Power link	8 SAT, 1 TER	4 SAT, 1 TER	8 SAT	2 SAT
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2200	950-2150
Frequency range TER	MHz	5-862	47-862	47-862		
Return path - switchable	MHz	5-30 or 5-65				
Return path TER	MHz	5-65 (passive)				
Gain SAT 950 - 2150 MHz	dB	18....24 (± 2)	14 (± 2)	20...25 (± 2)	32....36 (4 dB slope)	30
Gain TER forward	dB	17	17 (± 2)	17 (± 2)		
Noise figur SAT	dB	< 8			< 16.0	??
Noise figur TER	dB	< 7				
Adjustable attenuator SAT	dB	0...10	0...20	0...15	0 - 20	0 - 10
Adjustable attenuator TER	dB	0...10	0...20	0...17		
Equalizer SAT	dB	0 or 6 (switch-able)	5 (fixed)	5 (fixed)	0 - 10	0 - 8
Equalizer TER	dB	0...15 (adjustable)	2...15 (adjustable)	7...12 (adjustable)		
Isolation SAT to SAT	dB	30			> 25	
Isolation TER to SAT	dB	22				
Max. output level SAT (IMD_3 - 35 dB)	dBµV	110	110	110	120	115
Max. output level TER (IMD_3 - 60 dB)	dBµV	105	105	105		
Return loss	dB	10	10	10	10	10
Impedance input/output	Ohm	75	75	75	75	75
Supply voltage	VDC	18 (via power link)	18 (via DC plug or trunk)		15 (built in)	18 (via DC plug)
Power supply		External power adaptor	External power adaptor	External power adaptor	Internal	External power adaptor
Colourcoding of IF and TER inputs		Yes	Yes	Yes		
Temperature range	°C	0...+55	0...+55	0...+55	0...+50	0...+50
Dimensions (H x D x W)	mm	152 x 51 x 355	152 x 51 x 253	105 x 43 x 196	140 x 121 x 250	

Triax TMM 5 - 4 - 1 and terrestrial amplifiers

Get a good head start!
- with TMM add-on launch and distribution amplifier parts for one to four satellite positions or a TMS launch amplifier you can ensure you will get as much as possible out through/of your cables.

SAT line amplifier

TMM 55 amplifier

Technical data
IF and terrestrial amplifiers. External power supply

TYPE Art. No.				TMM 55AMP distribution 305335	TMM 44AMP launch 305300	TMM TDA Terr. distr. 305306	TMM TER launch 305315	Sat line amplifier 300401
Frequency range			MHz	950-2150	950-2150	47-862	47-862	47-2300
Input	TERR	47-862 MHz		1		1		
	BI/FM	47-108 MHz					1	
	BIII/DAB	170-230 MHz					1	
	UHF 1	470-108 MHz					1	
	UHF 2	470-108 MHz					1	
	SAT	950-2150 MHz		4	4			1
Outputs	TERR	47-862 MHz		**1**		**1**	**1**	
	SAT	950-2150 MHz		**4**	**4**			**1**
Connectors				F-type	F-type	F-type	F-type	F-type
Gain	TERR	47-862 MHz	dB	17		30		
	BI/FM	47-108 MHz	dB				40	
	BIII/DAB	170-230 MHz	dB				40	
	UHF 1	470-108 MHz	dB				40	
	UHF 2	470-108 MHz	dB				40	
	SAT	950-2150 MHz	dB	25	40			16-20
Polarity gain control		TERR	dB	20		0-20		
		BI/FM	dB				0 - 20	
		BIII/DAB	dB				0 - 20	
		UHF 1	dB				0 - 20	
		UHF 2	dB				0 - 20	
		SAT	dB	20	0-20			
Slope control		TERR	dB	2-15		0-18		
		UHF 1	dB					
		UHF 2	dB				0-10	
		SAT	dB	0-5	0-10		0-10	
Isolation		Trunk - trunk	dB	32	35			
		Out/out - TERR	dB					
		Out/out - SAT	dB					
Output return loss		TERR	dB	10		10	10	
		SAT	dB	10	10			10
Max. output level		TERR	dBµV	105		118		
(IMA3 / -60 dB)		BI/FM	dBµV				118	
		BIII/DAB	dBµV				118	
		UHF 1	dBµV				115	
		UHF 2	dBµV				115	
(IMA3 / -35 dB)		SAT	dBµV	110	115			100
LNB power supply			VDC	2 x 14/2 x 18	2 x 14/2 x 18			
max.			mA	400	400			
Line power supply - Horisontal				18V ±0.5V	18V ±0.5V		12	
- Vertical				13V ±0.5V	13V ±0.5V		50	
External power supply			VDC	18 via 3.5 jack	18 via 3.5 jack	18 via 3.5 jack	18 via 3.5 jack	15 via trunk
Terrestrial through voltage			VDC	12 ±0.5V		12 ±0.5V	12 ±0.5V	
Current			A	1.5		1.5	1.5	
Power consumption			mA	350	390	200	320	
Line powering				via in- or output	via in- or output	via in- or output	via in- or output	
DC switch (for injecting DC)						Switchable		
Masthead power supply (UHF 1)			VDC				12 ±0.5	

Triax TMS/TMM power supplies and inserters

TMS 5 PSU

TMS power supply/power inserter

Triax TMS 5 PSU is an easy-to-install power supply/power inserter to be used with the TMS 5x series products.

TMS 17 PSUMB w. mounting bracket

TMP PSI power inserter

Technical data
TMS power supply/power inserter

TYPE Art. No. (EU plug) Art. No. (UK plug)		TMS 17 PSU-MB 301504	TMS 55 PSU 300310	TMS 5 PSU 300309 300311	TMS 55 PSI 300308	TMP PSI inserter 305311	TMM PSU 305340 305310
Number of inputs				4 SAT, 1 TER		4 SAT, 1 TER	
Number of outputs		1	1	4 SAT, 1 TER	1	4 SAT, 1 TER	1
Inputs (230V)		1	1	PSU included	1		1
Connectors	F-con	F-type	F-type	F-type	F-type	F-type	F-type
Input voltage	V/AC	96 to 250	96 to 250	180 to 264	96 to 250		96 to 250
Frequency range	Hz	47 - 63	47 - 63	47 - 63	47 - 63	47-2150	47 - 63
Frequency range SAT	MHz			950 - 2150		950 - 2150	
Frequency range TER	MHz			DC to 862			
Insertion loss SAT	dB			1		2.5	
Insertion loss TER	dB			1		1.5	
Isolation Out/out - TER	dB					35	
Isolation Out/out - SAT	dB					35	
Output return loss - TER	dB					11	
Output return loss - SAT	dB					11	
Impedance input/output	Ohm			75			
Supply direction switch terr.				Up/down/ both			
Max. current	A	1 x 2.0	1 x 1.9		1 x 1.9		1 x 1.9
Output voltage	VDC	15 (± 0.5)	18	3 x 14 2 x 18	18		1 18 (± 0.5)
LNB power supply / max.	V/mA					18V-13V/500	
Supply power - horisontal - vertical	V V					18V ±0.5V 13V ±0.5V	
Supply power	W			26		18 via 3.5 jack	
Terrestrial through voltage	V/W					12 ±0.5V/1.5	
Cable length from supply	mm	1800	1800		1800		1800
Colourcoding of IF and TER inputs				Yes			
Temperature range	°C	0 - 50	0 - 50	0 - 50	0 - 50		0 - 50
Dimensions (H x D x W)	mm	64 x 111 x 35	64 x 111 x 35		64 x 111 x 35		64 x 111 x 35
Remarks		Incl. power cable, mounting bracket and 1800 mm power cable with F-male		Power supply unit integrated	Power inserter unit		Incl. power cable, bracket and power cable with 3.5 mm mini jack

Triax TMM 4x series
cascadable multiswitches

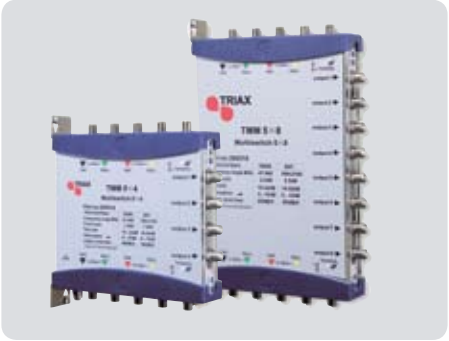
TMM 4x multiswitches

- 4 satellite polarities, SAT outputs.
- Versions for 8, 12 and 16 subscriber outputs
- Adjustable attenuator per polarity (0-12 dB)
- Low power consumption
- Small footprint, compact design, fits into tight spaces 2-, 3- and 4-way DiSEqC bridger units with TER loop-through
- Wide range of launch and line amplifiers available

TMM 4x series

Technical data
Cascadable multiswitches with 4 satellite polarities. External power supply

TYPE		TMM 4x4	TMM 4x8	TMM 4x12	TMM 4x16
Art. No.		**305324**	**305328**	**305322**	**305326**
Number of inputs		4 x SAT	4 x SAT	4 x SAT	4 x SAT
Number of outputs		4 x SAT	4 x SAT	4 x SAT	4 x SAT
Subscriber outputs		**4**	**8**	**12**	**16**
Connectors	F-con	F-female	F-female	F-female	F-female
Frequency range	MHz	950-2150	950-2150	950-2150	950-2150
Through loss (trunk cascade)	dB	1.5	2.5	2.5	2.5
Tap loss - SAT	dB	10	10	12	12
Input polarity gain control	dB	4 x 12	4 x 12	4 x 12	4 x 12
Isolation cross polarisation H/V	dB	30	30	28	28
Isolation out - out SAT	dB	30	30	30	30
Return loss SAT inputs	dB	12	12	12	12
Return loss SAT outputs	dB	12	12	12	12
Return loss TAP outputs	dB	10	10	10	10
Max. input level (IMA3 / -35 dB)	dBµV	117	117	119	119
Max. output level (IMA3 / -35 dB)	dBµV	95	95	95	95
Noise figure	dB	≤ 8	≤ 8	≤ 8	≤ 8
Power consumption from receiver	mA	≤ 90	≤ 90	≤ 90	≤ 90
Power supply voltage	VDC	15 ± 1	15 ± 1	15 ± 1	15 ± 1
Power supply current	mA	≤ 15	≤ 15	≤ 15	≤ 15
Power connector	mm	2 x 1.3	2 x 1.3	2 x 1.3	2 x 1.3
Switching commands	VDC/ kHz	13V / 18V 13V - 22 kHz / 18 - 22 kHz			
Switching voltage	V	15 /±1V	15 /±1V	15 /±1V	15 /±1V
External power supply		**NO** (DC on all 4 trunk lines via power inserter or amplifier)			
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes
Max. current of each output (supplied by satellite receiver)	mA	< 150	< 150	< 150	< 150
Temperature range	°C	0 - 50	0 - 50	0 - 50	0 - 50



TMM 5x series

TMM 5x multiswitches

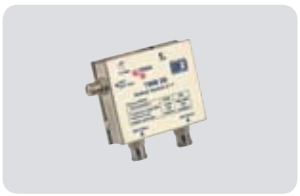
- 4 satellite polarities and 1 terrestrial input, combined output.
- Versions for 8, 12 and 16 subscriber outputs
- Adjustable attenuator per polarity (0-12 dB)
- Low power consumption
- Small footprint, compact design, fits into tight spaces 2-, 3- and 4-way DiSEqC bridger units with TER loop-through
- Wide range of launch and line amplifiers available

Technical data
Cascadable multiswitches with 4 polarities and 1 terrestrial. Ext. power supply

TYPE		TMM 5x4	TMM 5x8	TMM 5x12	TMM 5x16	TMM 5x12T
Art. No.		**305314**	**305318**	**305312**	**305316**	**305317**
Number of inputs		4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER
Number of trunk outputs		4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER
Subscriber outputs		**4**	**8**	**12**	**16**	**12**
Connectors	F-con	F-female	F-female	F-female	F-female	F-female
Frequency range	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Through loss (trunk TER)	dB	1.5	2.5	3.0	3.0	
Through loss (trunk SAT)	dB	1.5	2.5	2.5	2.5	
Tap loss - TER	dB	10	10	12	12	5
Tap loss - SAT	dB	10	10	12	12	5
Input polarity gain control - TER	dB	12	12	12	12	12
Input polarity gain control - SAT	dB	4 x 12	4 x 12	4 x 12	4 x 12	4 x 12
Isolation TER to SAT	dB	35	35	30	30	30
Isolation SAT to TER	dB	35	35	30	30	30
Isolation cross polarisation H/V	dB	30	30	28	28	28
Isolation out - out TER	dB	30	30	30	30	30
Isolation out - out SAT	dB	30	30	30	30	30
Return loss TER inputs	dB	12	12	12	12	12
Return loss TER outputs	dB	12	12	12	12	
Return loss SAT inputs	dB	12	12	12	12	12
Return loss SAT outputs	dB	12	12	12	12	
Return loss switch out - TER	dB	10	10	10	10	12
Return loss switch out - SAT	dB	10	10	10	10	12
Max. input level						
TERR (IMA3 / -60 dB)	dBµV	110	107	109	109	102
SAT (IMA3 / -35 dB)	dBµV	117	117	119	119	112
Max. output level						
TERR (IMA3 / -60 dB)	dBµV	88	88	88	88	88
SAT (IMA3 / -35 dB)	dBµV	95	95	95	95	95
Line power						
Voltage (Switched TERR)	V	12	12	12	12	12
Current (Switched TERR)	mA	50	50	50	50	50
Switching commands	VDC/ kHz			13V / 18V 13V - 22 kHz / 18 - 22 kHz, DiSEqC 2.0		
Switching voltage	V	15 /±1V	15 /±1V	15 /±1V	15 /±1V	15 /±1V
TER current (supplied from TERR trunkline)	mA	50	50	50	50	50
Max. current of each output (supplied by satellite receiver)	mA	< 150	< 150	< 150	< 150	< 150
Temperature range	°C	0 - 50	0 - 50	0 - 50	0 - 50	0 - 50

Triax TMM accessories for multiswitches

Everything you need
- to make a professional installation



TMM 2B

TMM 3B

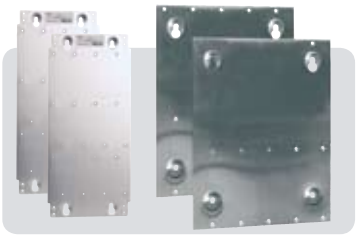
TMM 4B

TMM accessories

TYPE Art. No.		TMM 2B 305352	TMM 3B 305353	TMM 4B 305354	TMM 4/5 IN 4 in 305344 5 in 305345	TMM 4/6/8 out 4 out 305346 6 out 305347 8 out 305348
Description		2x1 DiSEqC bridger unit	3x1 DiSEqC bridger unit	4x1 DiSEqC bridger unit	Push-on earth bond ears	Push-on earth bond ears
Number of connectors	In/out	2/1	3/1	4/1	4/5 + ground	4/6/8 + ground
Connectors	F-con	male/female	male/female	male/female	female to male	female to male

TMM accessories

TYPE Art. No.		TMM Link 305303	TMM CL 305308	TMM LK 305309	TMM DCL-DC 305307	TMM RPL 305350
Description		Fixed link conn. (5 pack)	Long connection lead	Connection lead (5 pack)	Link lead	Remote power lead
Number of connectors		2		2		
Connectors	F-con	male		male		



TMM accessories

TYPE Art. No.		TMM 4 way 305301	TMM 6 way 305302	TMM 305304	TMM 75 ohm 305349	TMM F-F male 305009
Description		Mounting plate	Mounting plate	Mounting frame coupler, 2-pack	Terminator	Quick connector
Number of connectors					1	2
Connectors	F-con				female	male to male

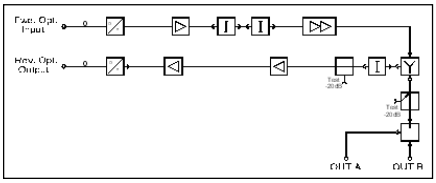
Triax Distribution amplifiers

Antenna systems >> Outdoor amplifiers	
- HNA series	148
- HTA series	149
- HDA series	150
- HEA series	151
- accessories	152-154
- HFA series	155
- accessories	156
- HEF series	157
Antenna systems >> Indoor amplifiers	
- IFE series	158-159
- IFA series	160-161
- IFB series	162
- IIB series	163
- TA, Type 02, 2TV+ series	164

Triax optical fibre node amplifiers

HNA D- and HNA E series of optical fibre node amplifiers

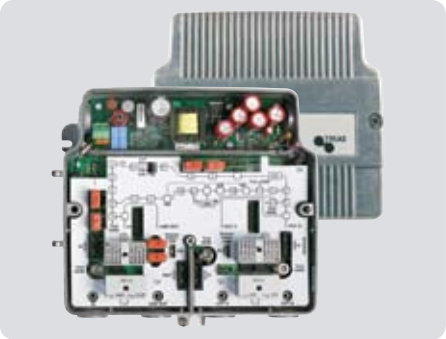
Compact, yet highly versatile, the platform covers all needs for two-way transmission in hybrid fibre/coax (HFC) networks. All amplifiers are suitable for establishing new networks or upgrading an existing network and enable the step-by-step design and configuration of networks. All share common plug-in accessories to lower your cost of spare parts, resulting in convenient mainteinance and reduction of operational costs.



Block diagram

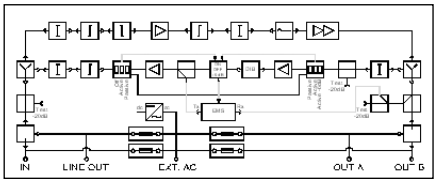
Technical data on HNA D- and HNA E series

TYPE		HNA D series LP & MP	HNA E series LP & MP
Type/Art. No.			
HNA D - LPS (line powered, SC/APC)		322103	
HNA D - MPS (mains powered, SC/APC)		322106	
HNA D - LPE (line powered, E2000)		322109	
HNA D - MPE (mains powered, E2000)		322112	
HNA E - LPS (line powered, SC/APC)			322115
HNA E - MPS (mains powered, SC/APC)			322118
HNA E - LPE (line powered, E2000)			322121
HNA E - MPE (mains powered, E2000)			322124
Forward path - optical part			
Optical wavelength	nm	1290-1600	1290-1600
Optical input power level	dBm	- 6 to + 2	- 6 to + 2
Equivalent current noise 47/862 MHz	pA/VHz	8/6	8/6
Forward path - coaxial part			
Forward path, bandwidth (depending on diplexer modules)	MHz	47-862	47-862
Gain switch (high/low)	dB	0/10	
Interstage attenuation (depending of pads)	dB	0-8	0-12
Interstage tilt (depending of pads)	dB	0-8	0-8
Linearity	dB	± 1	± 1
Output level - high gain (optical link specification)	dBµV	102-112	100-110
CTB (42 ch. CENELEC) @ 110 dBµV flat 0 dBm - 4.5% OMI	dB	62	62
CSO (42 ch. CENELEC) @ 110 dBµV flat 0 dBm - 4.5% OMI	dB	65	65
Output level - low gain (optical link specification)	dBµV	90-106	
CTB (42 ch. CENELEC) @ 110 dBµV flat 0 dBm - 4.5% OMI	dB	68 (transmitter spec.)	
CSO (42 ch. CENELEC) @ 110 dBµV flat 0 dBm - 4.5% OMI	dB	65 (transmitter spec.)	
Return loss, @ 40 MHz	dB	18 (-1.5/oct)	18 (-1.5/oct)
Return path			
Return path, bandwidth (depending on diplexer modules)	MHz	5-65	5-65
Other specifications will depend on the selected transmitter module		-	-
General			
Line power, voltage	VAC	24-65	24-65
Line power, current	mA	1080-450	800-350
Mains power, voltage	VAC	175-260	175-260
Power consumption (incl. return path)	W	19.0	15.0
Water and dust protection	IP	65	65
Internally used optical connector		SC/APC	SC/APC
Coaxial outputs		PG 11	PG 11
Dimensions W x H x D	mm	200 x 180 x 82	200 x 180 x 82
Weight	kg	2	2



HTA series of trunk and distribution end amplifiers

- Line powered or mains powered
- Medium distribution: High output level -108.5/111 dBµV, 8 dB tilt
- Large distribution: Very high output level - 110.5/113 dBuV, 8 dB tilt
- Standard attenuator pads for gain and tilt adjustment as well as interstage attenuation and tilt functions



Block diagram

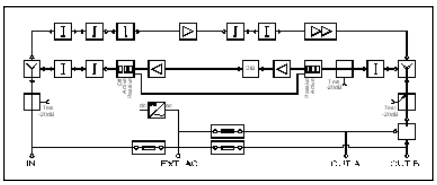
Technical data on HTA series

TYPE		HTA 3038 LP1/MP1 & LA1/MA1	HTA 3038 LP2/MP2 & LA2/MA2
Type/Art. No.			
HTA 3038 LP1 (line powered)		322051	
HTA 3038 MP1 (mains powered)		322054	
HTA 3038 LA1 (line powered)		322063	
HTA 3038 MA1 (mains powered)		322066	
HTA 3038 LP2 (line powered)			322057
HTA 3038 MP2 (mains powered)			322060
HTA 3038 LA2 (line powered)			322069
HTA 3038 MA2 (mains powered)			322072
Forward path			
Forward path, bandwidth (depending on diplexer modules)	MHz	47-862	47-862
Gain (8 dB gain switch) 47/862 MHz	dB	30/30 or 38/38	30/30 or 38/38
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18 & 22	0-18 & 22
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Linearity	dB	± 1	± 1
3rd order (DIN 45004 B)	dBµV	124	127
2nd order (DIN 45004 A1)	dBµV	122	124
CTB (42 ch. CENELEC) flat/8 dB tilt	dBµV	108.5/111	110.5/113
CTB (42 ch. CENELEC) by 6 dB interstage att. flat/8 dB tilt	dBµV	108/110	110/112
CSO (42 ch. CENELEC)	dBµV	112	114
Noise figure 47/862 MHz	dB	5/6.5-5/6.5	5/6.5-5/6.5
Noise figure by 6 dB interstage attenuation 47/862 MHz	dB	6/8-5/7	6/8-5/7
Return loss, @ 40 MHz	dB	18 (-1.5/oct)	18 (-1.5/oct)
Return path			
Return path, bandwidth (depending on diplexer modules)	MHz	5-65	5-65
Gain	dB	23	23
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-8	0-8
Linearity	dB	± 1	± 1
3rd order (DIN 45004B)	dBµV	119	119
2nd order (DIN 45004A1)	dBµV	104	104
Noise figure	dB	6	6
General			
Line power, voltage	VAC	24-65	24-65
Line power, current	mA	79820-3460	900-390
Mains power, voltage	VAC	175-260	175-260
Power consumption (incl. return path)	W	14.5	16.5
Dimensions W x H x D	mm	200 x 180 x 82	200 x 180 x 82
Weight	kg	2	2

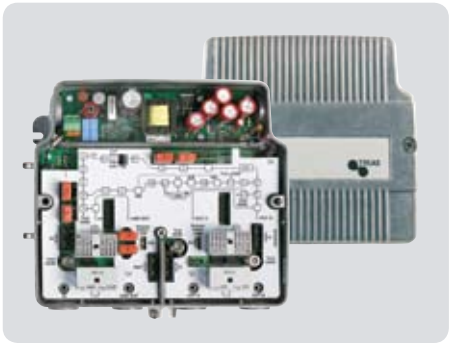
Triax distribution amplifiers

HDA series of mini-trunk and distribution end amplifiers

- Adjustable attenuators for gain & tilt adjustment. The interstage attenuation and tilt function is combined in one compact MEX module
- Upgradeable with a DIBTM (Dynamic ingress blocking) module - a solution for ingress blocking, return path management and secured/longer return path channel up-time (HTA and HDA series only)



Block diagram

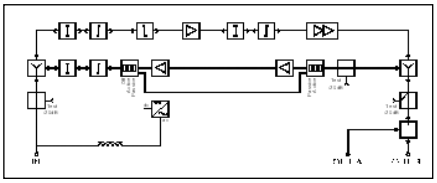


Technical data on HDA series

TYPE		HDA 3038 LP1/MP1 & LA1/MA1	HDA 3038 LP2/MP2 & LA2/MA2
Type/Art. No.			
HDA 3038 LP1 (line powered)		322027	
HDA 3038 MP1 (mains powered)		322030	
HDA 3038 LA1 (line powered)		322039	
HDA 3038 MA1 (mains powered)		322042	
HDA 3038 LP2 (line powered)			322033
HDA 3038 MP2 (mains powered)			322036
HDA 3038 LA2 (line powered)			322045
HDA 3038 MA2 (mains powered)			322048
Forward path			
Forward path, bandwidth (depending on diplexer modules)	MHz	47-862	47-862
Gain (8 dB gain switch) 47/862 MHz	dB	30/30 or 38/38	30/30 or 38/38
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18 & 22	0-18 & 22
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Linearity	dB	± 1	± 1
3rd order (DIN 45004 B)	dBµV	124	127
2nd order (DIN 45004 A1)	dBµV	122	124
CTB (42 ch. CENELEC) flat/8 dB tilt	dBµV	108.5/111	110.5/113
CTB (42 ch. CENELEC) by 6 dB interstage att. flat/8 dB tilt	dBµV	108/110	110/112
CSO (42 ch. CENELEC)	dBµV	112	114
Noise figure 47/862 MHz	dB	5/6.5-5/6.5	5/6.5-5/6.5
Noise figure by 6 dB interstage attenuation 47/862 MHz	dB	6/8-5/7	6/8-5/7
Return loss, @ 40 MHz	dB	18 (-1.5/oct)	18 (-1.5/oct)
Return path			
Return path, bandwidth (depending on diplexer modules)	MHz	5-65	5-65
Gain	dB	23	23
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-8	0-8
Linearity	dB	± 1	± 1
3rd order (DIN 45004B)	dBµV	119	119
2nd order (DIN 45004A1)	dBµV	104	104
Noise figure	dB	6	6
General			
Line power, voltage	VAC	24-65	24-65
Line power, current	mA	750-330	870-380
Mains power, voltage	VAC	175-260	175-260
Power consumption (incl. return path)	W	13.5	16.0
Dimensions W x H x D	mm	200 x 180 x 82	200 x 180 x 82
Weight	kg	2	2

HEA series of distribution end amplifiers

- Line powered or mains powered
- Medium distribution: High output level -108.5/111 dBµV, 8 dB tilt
- Large distribution: Very high output level - 110.5/113 dBuV, 8 dB tilt
- Standard attenuator pads for gain and tilt adjustment as well as interstage attenuation and tilt functions



Block diagram

Technical data on HEA series

TYPE		HEA 38 LP1/MP1 & LA1/MA1	HEA 38 LP2/MP2 & LA2/MA2
Type/Art. No.			
HEA 38 LP1 (line powered)		322003	
HEA 38 MP1 (mains powered)		322006	
HEA 38 LA1 (line powered)		322015	
HEA 38 MA1 (mains powered)		322018	
HEA 38 LP2 (line powered)			322009
HEA 38 MP2 (mains powered)			322012
HEA 38 LA2 (line powered)			322021
HEA 38 MA2 (mains powered)			322024
Forward path			
Forward path, bandwidth (depending on diplexer modules)	MHz	47-862	47-862
Gain 47/862 MHz	dB	38/38	38/38
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Linearity	dB	± 1	± 1
3rd order (DIN 45004 B)	dBµV	124	127
2nd order (DIN 45004 A1)	dBµV	122	124
CTB (42 ch. CENELEC) flat/8 dB tilt	dBµV	108.5/111	110.5/113
CTB (42 ch. CENELEC) by 6 dB interstage att. flat/8 dB tilt	dBµV	108/110	110/112
CSO (42 ch. CENELEC)	dBµV	112	114
Noise figure 47/862 MHz	dB	5/6.5	5/6.5
Noise figure by 6 dB interstage attenuation 47/862 MHz	dB	6/7	6/7
Return loss, @ 40 MHz	dB	18 (-1.5/oct)	18 (-1.5/oct)
Return path			
Return path, bandwidth (depending on diplexer modules)	MHz	5-65	5-65
Gain	dB	23	23
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)			
Linearity	dB	± 1	± 1
3rd order (DIN 45004B)	dBµV	118	118
2nd order (DIN 45004A1)	dBµV	104	104
Noise Figure	dB	6	6
General			
Line power, voltage	VAC	24-65	24-65
Line power, current	mA	750-330	870-380
Mains power, voltage	VAC	175-260	175-260
Power consumption (incl. return path)	W	13.5	16.0
Dimensions W x H x D	mm	200 x 180 x 82	200 x 180 x 82
Weight	kg	2	2

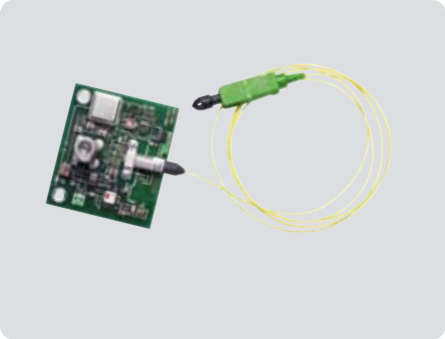
Triax - Accessories for amplifiers

MRT

- optical return path transmitter modules feature test point, pilot tone option (HNA-D only), SC/APC or E2000 optical connectors.

MCA 100

- automatic gain control features - requires only one pilot frequency, any tone or signal can be used as pilot, very easy alignment procedure, allows for compensation for seasonal temperatures prior to adjustment
- Automatic “shift to manual” function



Technical data on MRT - optical return path transmitter modules

TYPE		MRT 300L	MRT 300	MRT 400	MRT 50X
Type/Art. No.					
MRT X00 SC/APC		322290	322292	322294	322296
MRT X00 E2000		322291	322293	322295	322297
Return path					
Type of laser		Fabry-Perot	Fabry-Perot	DFB uncooled	DFB uncooled CWDM
Bandwidth	MHz	5 - 65	5 - 65	5 - 65	5 – 65
Wavelength	nm	1310 +/- 20	1310 +/- 20	1310 +/- 3	1510/30/50/70 +/- 3
Output power	mW	0.5	1.0	2.0	2.0
RIN	dB/Hz	-125	-130	-145	-140
IM2 (Measured at 10% OMI)	dBc	-40	-40	-44	-45
IM3 (Measured at 10% OMI)	dBc	-50	-50	-57	-55
CNR (2.5% OMI, 5 db loss, W=600 kHz)	dBc	35	38	52	52
CNR (10 % OMI, 5 db loss, BW=2 MHz)	dBc	42	45	59	59
Input level (for 10% OMI)	dBµV	74	72	74	77
Flatness	dB	+/- 0.5	+/- 0.5	+/- 0.5	+/- 0.5
Attenuation (by pads on motherboard)	dB	0 – 18	0 – 18	0 – 18	0 – 18
General					
Power consumption	W	0.2 (max. 0.5)	0.2 (max. 0.5)	0.2 (max. 0.5)	0.2 (max. 0.5)
Temperature range (for the node)	°C	-20 to +55	-20 to +55	-20 to +55	-20 to +55
Internally used connector		SC/APC	SC/APC	SC/APC	SC/APC

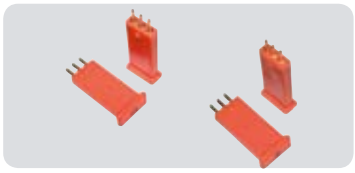
Technical data on MCA - automatic gain control modules

TYPE		MCA 100/ 423 MHz	MCA 100/ 519 MHz	MCA 100/ 639 MHz
Art. No.		322240	322242	322244
AGC attenuation range	dB	± 4	± 4	± 4
AGC accuracy	dB	± 0.5	± 0.5	± 0.5
Pilot frequency (factory adjusted)	MHz	400 to 750	400 to 750	400 to 750
Nominal output level range	dBµV	100 - 110	100 - 110	100 - 110
Power consumption	W	1.5	1.5	1.5
Dimensions (W x H x D)	mm	112 x 70 x 38	112 x 70 x 38	112 x 70 x 38

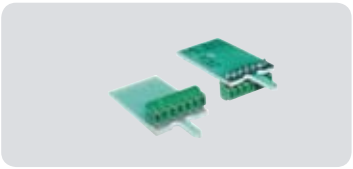
Triax - Accessories for amplifiers

Pads

TYPE	Art. No.	Attenuation (dB)	Tilt (dB)	Supplied in bags of 10 pcs
JXP-OT200	322200	0	0	Tall, orange
JXP-OT201	322201	1	1	Tall, orange
JXP-OT202	322202	2	2	Tall, orange
JXP-OT203	322203	3	3	Tall, orange
JXP-OT204	322204	4	4	Tall, orange
JXP-OT205	322205	5	5	Tall, orange
JXP-OT206	322206	6	6	Tall, orange
JXP-OT207	322207	7	7	Tall, orange
JXP-OT208	322208	8	8	Tall, orange
JXP-OT209	322209	9	9	Tall, orange
JXP-OT210	322210	10	10	Tall, orange
JXP-OT211	322211	11		Tall, orange
JXP-OT212	322212	12	11,5	Tall, orange
JXP-OT213	322213	13		Tall, orange
JXP-OT214	322214	14	13	Tall, orange
JXP-OT215	322215	15		Tall, orange
JXP-OT216	322216	16	14,5	Tall, orange
JXP-OT217	322217	17		Tall, orange
JXP-OT218	322218	18	16	Tall, orange
JXP-OT219	322219	19		Tall, orange
JXP-OT220	322220	20	17	Tall, orange
JXP-OT221	322221	21		Tall, orange
JXP-OT222	322222	22	18,5	Tall, orange
JXP-OT223	322223	23		Tall, orange
JXP-OT224	322224	24	20	Tall, orange
JXP-OT225	322225	25		Tall, orange
JXP-OT226	322226	26		Tall, orange
Accessory box	322230			Box with pads and other accessories

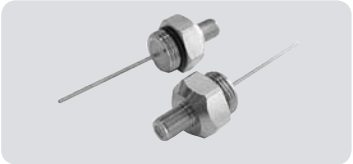


Interstage modules
(Interstage attenuation and equalisation combined)



TYPE	Art. No.	Attenuation (dB)	Tilt (dB)	Description
606 MHz				
MEX 600/06	322260	0,3	6	Pivot point at 606 MHz
MEX 602/06	322262	2	6	Pivot point at 606 MHz
MEX 604/06	322264	4	6	Pivot point at 606 MHz
MEX 606/06	322266	6	6	Pivot point at 606 MHz
862 MHz				
MEX 800/08	322280	0,3	8	Pivot point at 862 MHz
MEX 802/08	322282	2	8	Pivot point at 862 MHz
MEX 804/08	322284	4	8	Pivot point at 862 MHz
MEX 806/08	322286	6	8	Pivot point at 862 MHz

Adaptor for Hxx amplifiers



TYPE Art. No.		PG11 - Ff 153580
Dimension	mm	HEX 20 x 72.5
Weight	kg	0.046

Triax - Accessories for amplifiers

Diplex filter modules

TYPE	Art. No.	Description
MDA 3047	322250	Low loss high precision diplex filter for 5-30 MHz return path
MDA 4254	322252	Low loss high precision diplex filter for 5-42 MHz return path
MDA 5573	322254	Low loss high precision diplex filter for 5-55 MHz return path
MDA 6080	322256	Low loss high precision diplex filter for 5-60 MHz return path
MDA 6587	322258	Low loss high precision diplex filter for 5-65 MHz return path

Splitter/tap modules

TYPE	Art. No.	Description
MS 100	322270	MS 100 module out A-B: 0 - no pass
MS 101	322271	MS 101 module out A-B: No pass - 0
MS 404	322273	MS 404 splitter module out A-B: 3.5/3.8 - 3.3/3.7 dB
MS 207	322274	MS 206 tap module out A-B: 5.6/5.8 - 32.2/2.4 dB
MS 110	322276	MS 110 tap module out A-B: 10.0/10.0 - 1.1/1.0 dB
MS 114	322277	MS 114 tap module out A-B: 14.0/14.0 - 0.7/0.0 dB
MS 118	322278	MS 118 tap module out A-B: 18.0/17.8 - 0.4/0.0 dB

MA 6510 - return-path amplifier

TYPE Art. No.		MA 6510 322248
Frequency range	MHz	5 - 65
Gain	dB	10
Packing size	pcs.	1

Dynamic ingress blocker module

TYPE	Art. No.	Description
MDIB 100	322246	Dynamic ingress blocker module

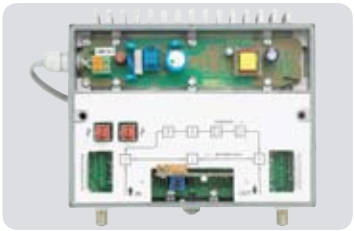
Link module

TYPE	Art. No.	Description
ML 01	322232	Link module (interstage)
ML 02	322234	Link module (return path)

HFA 60x amplifier

Powerful, reliable and easy to install HFA distribution amplifiers

With the HFA series of broadband distribution amplifiers, both the installer and the network operator obtain all the benefits of a quality product: Reliability and a long lifetime, quick installation, effective shielding and the option to use the network for all conceivable interactive services.

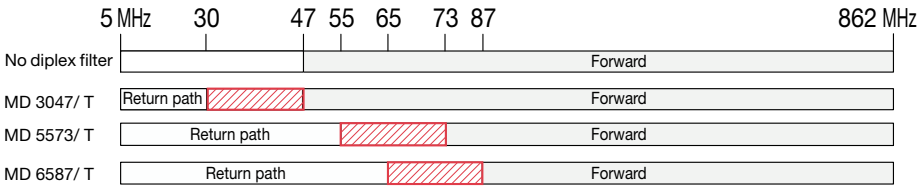


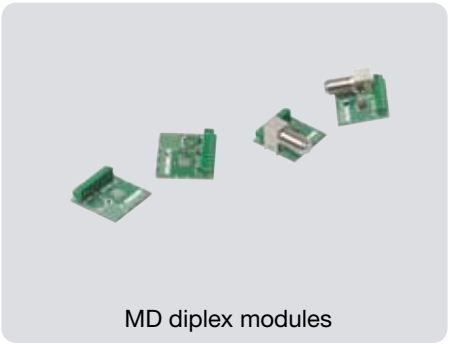
Technical data on HFA distribution amplifier - mains powered

TYPE Art. No.		HFA 602 324602	HFA 603 324603	HFA 604 324604
Forward path				
Frequency range (depending on module)	MHz	47/73/87-862	47/73/87-862	47/73/87-862
Gain adjustable	dB	22	30	40
Attenuation	dB	0 - 20	0 - 20	0 - 20
Noise figure	dB	< 8.5 (typical 7.5)	< 7.5 (typical 6.5)	< 7.0 (typical 6.0)
Linearity	dB	± 1.0	± 1.0	± 1.0
Equalization	dB	0 - 18	0 - 18	0 - 18
Output level IMD 3 in acc. with EN 50083-3 IMD 2 in acc. with EN 50083-3 60 dB CTB 1) 60 dB CSO 1)	 dBµV dBµV dBµV dBµV	 118 112 101 101	 118 112 101 101	 118 112 101 101
Return loss input (-1.5 dB/octave)	dB	>14 @ 40 MHz (min. 10)	>14 @ 40 MHz (min. 10)	>14 @ 40 MHz (min. 10)
Return loss output (-1.5 dB/octave)	dB	>14 @ 40 MHz (min. 10)	>14 @ 40 MHz (min. 10)	>14 @ 40 MHz (min. 10)
Return path				
Frequency range (depending on module)	MHz	5-30, 5-55 or 5-65	5-30, 5-55 or 5-65	5-30, 5-55 or 5-65
Gain (adjustable)	dB	passive -1.0 active 17.0	passive -1.0 active 17.0	passive -1.0 active 17.0
Linearity	dB	± 1.0	± 1.0	± 1.0
Return loss input (-1.5 dB/octave)	dB	> 14 @ 5 MHz to 65 MHz	> 14 @ 5 MHz to 65 MHz	> 14 @ 5 MHz to 65 MHz
Return loss output (-1.5 dB/octave)	dB	> 14 @ 5 MHz to 65 MHz	> 14 @ 5 MHz to 65 MHz	> 14 @ 5 MHz to 65 MHz
General				
Power supply type		Mains powered	Mains powered	Mains powered
Power supply	V/AC	230 ± 10%	230 ± 10%	230 ± 10%
Power consumption	W	7.5	7.5	7.5
Shielding efficiency VHF	dB	100	100	100
Shielding efficiency UHF	dB	90	90	90
Housing - protection class		IP65	IP65	IP65
Connectors		F-connectors	F-connectors	F-connectors
Certification		CE	CE	CE
Impedance	Ohm	75	75	75
Operation temperature range	°C	0...+55	0...+55	0...+55
Weight	kg	1.325	1.325	1.325
Dimensions (h x d x w)	mm	145 x 70 x 170	145 x 70 x 170	145 x 70 x 170

1) EN 50083 Part 3 CTB (Composite triple beat) @ 60 dB IMD, CENELEC-raster 42 channels

Triax - Accessories for HFA amplifiers





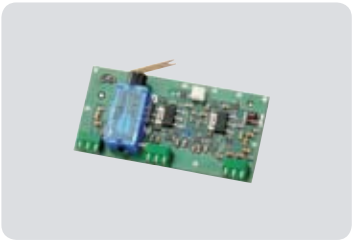
MD diplex modules

MD diplex filter modules

TYPE Art. No.		MD 3047 324681	MD 3047T 324682	MD 6587 324683	MD 6587T 324684
Frequency range (return path)	MHz	5 - 30	5 - 30	5 - 65	5 - 65
Frequency range (forward path)	MHz	47 - 862	47 - 862	87 - 862	87 - 862
Test point	dB	-	- 20	-	- 20
Packing size	pcs.	2	2	2	2

MA 617 return-path amplifier

TYPE Art. No.		MA 617 324617
Frequency range	MHz	5 - 65
Gain	MHz	17
Attenuation	dB	20
Packing size	pcs.	1

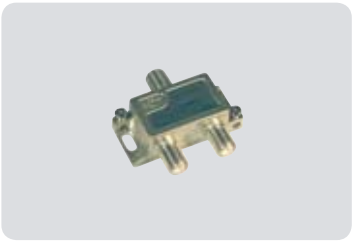


Line power supply

TYPE Art. No.		TRP 416014
Power supply input	V/AC	230 ± 10%
Power supply output	V/AC	48
Max. current	A	1.25
Dimensions (height x diameter)	mm	60 x 100

Power inserter with F-con

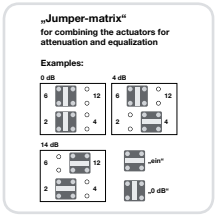
TYPE Art. No.		TPI - 01 347001
Frequency range	MHz	5 - 2400
Through loss 5-862 MHz	dB	≥ 0.5
1000-2150 MHz	dB	≥ 1.5
Max. current	A	2.5
Power	V/AC	65



HEF amplifier housing

HEF amplifiers – Reliable, flexible for large multi-dwelling houses

- ROB – “Return Path on Board” without any external modules or pads means more flexibility and lower efforts in installation and logistics
- Jumper matrixes to switch the fix elements for attenuation/equalization and to select return path or VHF I operation increase the reliability and reduce the logistics
- High gain at the return path meets also special requirements in multimedia networks
- For SMATV HEF 845 without return path and with spin potentiometers instead of jumper matrixes.



Technical data on HEF series

Type Art. No.		HEF 845 323068	HEF 845 C 323071	HEF 845 CL 323074
Frequency range				
selected: VHF I “on”, RP “off”	MHz	40-862	40-862/85-862	40-862/85-862
selected: VHF I “off”, RP “on”	MHz		5-65	5-65
Gain forward				
Gain @ 862 MHz	dB	36	36	36
Attenuator at input (2 dB steps)	dB	0-20 (pot)	0-16	0-16
Attenuator elements interstage	dB	0/6	0/6	0/6
Gain return path				
Gain @ 60 MHz	dB		27	27
Attenuator elements at input	dB		0-6/50	0-6/50
Attenuator elements at output	dB		0/3/6/9	0/3/6/9
Amplitude response forward				
40...862 MHz (VHF I: on)	dB		1.0	1.0
Line equalizer at input	dB	0-18 (pot)		
Line equalizer (2...3 dB steps)	dB		0-16	0-16
Slope interstage	dB	0/7	0/7	0/7
Amplitude response return path 5...60 MHz	dB		1.0	1.0
Equalizer element interstage	dB		0/3/6	0/3/6
Random noise				
Forward (VHF I „on“)	dB	5.0	5.5	5.5
Return path (VHF I „off“)	dB		5.5	5.5
Return loss @ 40 MHz, -1.5 dB/octave	dB	> 14	> 14	> 14
Output level forward				
IMD2/ IMD3 ≥ 60 dB	dBµV	114/123	114/123	114/123
CSO ≥ 60 dB, 42 ch. Slope 0/7 dB	dBµV	109/111	109/111	109/108
CTB ≥ 60 dB, 42 ch. Slope 0/7 dB	dBµV	108/110	108/110	111/110
Output level return path				
IMD2/ IMD3 ≥ 60 dB	dBµV		104/115	104/115
RF connectors (75 Ohm)				
Input		F-female	F-female	F-female
Output		F-female	F-female	F-female
Test point input: bi-directional	dB		-20	-20
Test point output: directional	dB	-20 (bi-dir)	-20	-20
Operating conditions				
Max. RF level (EMC)	dBµV	113	113	113
Supply voltage (50-60 Hz)	V	180-253	180-253	
(DC)				25-65
Power consumption	W	6	9	9
Operating temperature	°C	-25...+55	-25...+55	-25...+55
Protection class		II, Protective	II, Protective	II, Protective
Housing protection degree	IP	65	65	65
Dimensions W x H x D	mm	190 x 110 x 80	190 x 110 x 80	190 x 110 x 80
Weight	kg	2	2	2
Packing unit		1 pcs. carton box	1 pcs. carton box	1 pcs. carton box
Reference standards				
Product standards/safety/EMC		EN 50083-3 - Class 2 / EN 50083-1; EN 60065 / EN 50083-2		
RoHS 2002/95/EG compliant		Yes		

Triax distribution amplifiers

Reliable, flexible and cost-efficient for small and middle sized buildings

- ROB – “Return Path on Board” without any external modules or pads means more flexibility and lower efforts in installation and logistics
- High gain at the return path meets also requirements in multimedia networks
- C-Type: with jumper matrixes to switch the fix elements for attenuation/ equalization and to select return path or VHF I operation increase the reliability and reduce the logistics
- Excellent electrical performance for low cost and low power consumption

IFE amplifier housing

Technical data on IFE series

Type Art. No.		IFE 820 A 323010	IFE 830 A 323016	IFE 834 C 323037
Frequency range				
Forward path	MHz	85-862	85-862	47-862/87-862
Return path	MHz	5-65	5-65	5-65
Gain forward				
Gain @ 862 MHz	dB	21	30	34
Attenuator at input (2 dB steps)	dB	0-20	0-20	0-16
Attenuator elements interstage	dB			
Gain return path				
Gain @ 60 MHz	dB	19	24	26
Attenuator elements at input	dB	0-20	0-20	0/3/6/9/ >50
Attenuator elements at output	dB	0/10	0/10	0/10
Amplitude response forward				
Line equalizer at input	dB	0-18	0-18	
Line equalizer (2-3 dB steps)	dB			0-16
Slope interstage	dB			0/7
Amplitude response return path 5-60 MHz	dB			
Equalizer element interstage	dB	± 1.0	± 1.0	± 1.0
Random noise				
Forward (VHF I „on“)	dB	6.0	6.0	5.5
Return path (VHF I „off“)	dB	6.0	6.0	5.5
Return loss @ 40 MHz, -1.5 dB/octave				
Forward	dB	> 14	> 14	> 14
Return path	dB	> 17	> 17	
Output level forward				
IMD2/ IMD3 ≥ 60 dB	dBµV	100/107	105/109	112/118
CSO/CTB ≥ 60 dB. 42 ch, flat	dBµV	97/100	101/100	104/103
CSO/CTB ≥ 60 dB, 42 ch. Slope 0/7 dB	dBµV			
Output level return path				
IMD2/ IMD3 ≥ 60 dB	dBµV	102/107	102/107	102/113
RF connectors (75 Ohm)				
Input		F-female	F-female	F-female
Output		F-female	F-female	F-female
Operating conditions				
Max. RF level (EMC)	dBµV	105	105	110
Supply voltage	V	230 / ±10%	230 / ±10%	230 / ±10%
Power consumption	W	5	6	7.5
Operating temperature	°C	-25...+55	-25...+55	-25...+55
Protection class		II	II	II
Degree of protection	IP	20	20	20
Dimensions W x H x D	mm	150 x 80 x 50	150 x 80 x 50	150 x 80 x 50
Weight	kg	0.65	0.65	0.68
Packing unit		1 pcs. carton box	1 pcs. carton box	1 pcs. carton box
Reference standards				
Product standards/safety/EMC		EN 50083-3 - Class 2 / EN 50083-1; EN 60065 / EN 50083-2		
RoHS 2002/95/EG compliant		Yes		

IFE amplifier housing

IFE amplifiers – for SMATV applications

- Excellent electrical performance for low cost and low power consumption
- Simple initiation because of reduced controller elements
- Q-types: apartment amplifiers with 4 outputs for simple home installations

Technical data on IFE series

Type Art. No.		IFE 20 323022	IFE 30 323025	IFE 12 QM 323028	IFE 16 Q 323031
Frequency range					
Forward path	MHz	40-862 (1000)	40-862 (1000)	85-862	40-862 (1000)
Return path	MHz			5-65	
Gain forward					
Gain @ 862 MHz out 1	dB	21	29	12	18
Gain @ 862 MHz out 2-3-4	dB			10.5	17
Attenuator at input	dB	0-20	0-20	0-20	0-20
Gain return path					
Gain @ 60 MHz	dB			0	
Attenuator elements at input	dB				
Attenuator elements at output	dB				
Amplitude response forward					
40-862 MHz (VHF I: on)	dB	1.5	1.5	1.5	1.5 (3.5)
Fix slope	dB			+ 1	+ 1
Amplitude response return path 5-60 MHz	dB			1.0	
Equalizer element interstage	dB				
Random noise					
Noise figure	dB	6.0	6.0	6.0	4.5
Forward (VHF I „on“)	dB				
Return loss @ 40 MHz, -1.5 dB/octave					
Forward	dB	> 16	> 16	> 16	> 16
Return path	dB			> 17	
Output level forward					
IMD2/ IMD3 ≥ 60 dB	dBµV	100/107	105/109	90/97	92/103
CSO/CTB ≥ 60 dB, 42 ch. flat	dBµV	97/100	101/101	87/90	91/91
Output level return path					
IMD2/ IMD3 ≥ 60 dB	dBµV			passive	
RF connectors (75 Ohm)					
Input		F-female	F-female	F-female	F-female
Output		F-female	F-female	F-female	F-female
Operating conditions					
Max. RF level (EMC)	dBµV	105	105	105	105
Supply voltage	V	230 / ±10%	230 / ±10%	230 / ±10%	230 / ±10%
Power consumption	W	3	5	3	5
Operating temperature	°C	-25...+55	-25...+55	-25...+55	-25...+55
Protection class		II	II	II	II
Degree of protection	IP	20	20	20	20
Dimensions W x H x D	mm	150 x 80 x 50	150 x 80 x 50	150 x 80 x 50	150 x 80 x 50
Weight	kg	0.65	0.65	0.65	0.65
Packing unit		1 pcs. carton box	1 pcs. carton box	1 pcs. carton box	1 pcs. carton box
Reference standards					
Product standards/safety/EMC		EN 50083-3 - Class 2 / EN 50083-1; EN 60065 / EN 50083-2			
RoHS 2002/95/EG compliant		Yes			

Triax IFA indoor distribution amplifiers

IFA distribution amplifiers - without return path

- Compact indoor distribution amplifier in a modern white shielded plastic housing for indoor use only.
- Recommended for low channel density (MATV).

IFA amplifier housing

Technical data on IFA distribution amplifiers

TYPE Art. No.		IFA 218 339218	IFA 219 339219	IFA 220 339220
Forward path				
Frequency range	MHz	47 - 862	47 - 862	47 - 862
Gain 47-862 MHz	dB	11	0-20	0-17
Noise figure	dB	< 5.5	< 6.0	< 6.0
Linearity	dB	± 1.0	± 1.5	± 1.5
Slope	dB			
Equalizer	dB		0-18	0-18
Outputs	pcs	**1**	**1**	**2**
Output level				
IMD 3 in acc. with EN 50083-3	dBµV	114.0	112.0	108.0
IMD 2 in acc. with EN 50083-3	dBµV	104.0	104.0	100.0
60 dB CTB [1)]	dBµV	96.0	96.0	92.0
60 dB CSO [1)]	dBµV	96.0	96.0	92.0
Return loss @ 47 MHz, -1.5 dB/octave	dB	> 14	> 14	> 14
Return path				
Frequency range	MHz			
Through loss	dB			
General				
Power supply	VDC	230 ± 10%	230 ± 10%	230 ± 10%
Power consumption	W	3.0	3.0	3.0
Shielding efficiency VHF	dB	75	75	75
Shielding efficiency UHF	dB	65	65	65
Connectors		F-connector	F-connector	F-connector
Certification		CE	CE	CE
Impedance	Ohm	75	75	75
Operation temperature range	°C	0...+50	0...+50	0...+50
Weight	kg	0.400	0.400	0.400
Dimensions (h x d x w)	mm	61 x 44 x 118	61 x 44 x 118	61 x 44 x 118

1) EN 50083 Part 3 CTB (Composite triple beat) @ 60 dB IMR, CENELEC-raster 42 channels

Triax IFA indoor distribution amplifiers

IFA amplifier housing

IFA distribution amplifiers - with 5-30 and 5-65 MHz return path

- compact indoor distribution amplifier in a modern white shielded plastic housing for indoor use only.
- Recommended for low channel density (MATV).

Technical data on IFA distribution amplifiers

TYPE Art. No.		IFA 212 339212	IFA 213 339213
Forward path			
Frequency range	MHz	47 - 862	87 - 862
Gain @ 47 or 87 MHz/@ 862 MHz	dB	0-20	0-20
Noise figure	dB	< 6.0 (typical 4.5)	< 6.0 (typical 5.5)
Linearity	dB	± 1.5	± 1.5
Slope	dB		
Equalizer	dB	0-18	0-18
Outputs	pcs	1	1
Output level			
IMD 3 in acc. with EN 50083-3	dBµV	112.0	112.0
IMD 2 in acc. with EN 50083-3	dBµV	104.0	104.0
60 dB CTB [1)]	dBµV	96.0	96.0
60 dB CSO [1)]	dBµV	96.0	96.0
Return loss, -1.5 dB/octave	dB	> 14 @ 47 MHz	> 12.3 @ 87 MHz
Return path			
Frequency range	MHz	5 - 30	5 - 65
Through loss	dB	1.0	1.0
Linearity	dB	± 1.0	± 1.0
General			
Power supply	VDC	230 ± 10%	230 ± 10%
Power consumption	W	3.0	3.0
Shielding efficiency VHF	dB	75	75
Shielding efficiency UHF	dB	65	65
Connectors		F-connector	F-connector
Certification		CE	CE
Impedance	Ohm	75	75
Operation temperature range	°C	0...+50	0...+50
Weight	kg	0.400	0.475
Dimensions (h x d x w)	mm	61 x 44 x 118	61 x 44 x 118

1) EN 50083 Part 3 CTB (Composite triple beat) @ 60 dB IMR, CENELEC-raster 42 channels

Triax IFB indoor booster amplifiers

IFB indoor amplifiers with F connectors

- Booster amplifier for MATV
- F-connector
- Wide range with 2 outputs
- Separate adjustable gain on VHF and UHF
- Click-on wall mounting

IFB booster amplifier housing

Technical data on IFB booster amplifiers

Type Art. No.		IFB 402 339402	IFB 403 339403	IFB 404 339404	IFB 405 339405
Input 1					
Channel/Band		UHF/VHF	UHF/VHF	UHF/VHF	UHF/VHF
Gain	dB	6-16/0-10	6-16/6-16	7-17	15-25/15-25
Noise figure					
UHF	dB	< 5.0	< 5.0	< 5.0	< 5.0
VHF	dB	< 4.0	< 4.0	< 4.0	< 4.0
Max. output voltage IMD 3 in acc. with EN 50083-3	dBµV	2 x 107	2 x 107	2 x 107	2 x 105
Numbers of in-/output		1/2	1/2	1/2	1/2
Voltage	V/AC	230	230	230	230
Power consumption	W	3	3	3	3
Connector		F-connector	F-connector	F-connector	F-connector
Impedance	Ohm	75	75	75	75
Operation temperature range	°C	0...+50	0...+50	0...+50	0...+50
Weight	kg	0.400	0.400	0.400	0.400
Dimensions (h x d x w)	mm	61 x 44 x 118	61 x 44 x 118	61 x 44 x 118	61 x 44 x 118
Remarks		2 separat UHF and VHF attenuator	2 separat UHF and VHF attenuator	1 attenuator	2 separat UHF and VHF attenuator

Triax IIB indoor booster amplifiers

IIB amplifier housing

IIB indoor amplifiers with IEC-connectors

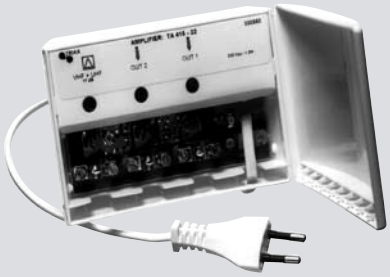
- Booster amplifier for MATV
- IEC-connector
- Wide range with 1 and 2 outputs
- Separate adjustable gain on VHF and UHF
- Click-on wall mounting

Technical data on IIB booster amplifiers

Type			IIB 434	IIB 435	IIB 445
Art. No.			**339434**	**339435**	**339445**
Input 1	Band		UHF/VHF	UHF/VHF	UHF/VHF
	Channel		2-12/21-69	2-12/21-69	2-12/21-69
	Gain	dB	6-16	10-20	15-25/15-25
Noise figure					
	UHF	dB	< 5.0	< 5.0	< 5.0
	VHF	dB	< 5.0	< 5.0	< 5.0
Max. output voltage IMD 3 in acc. with EN 50083-3		dBµV	2 x 105	108	2 x 105
Numbers of in-/output			1/2	1/1	1/2
Voltage		V/AC	230	230	230
Power consumption		W	3	3	3
Connector		type	IEC	IEC	IEC
Impedance		Ohm	75	75	75
Operation temperature range		°C	0...+50	0...+50	0...+50
Weight		kg	0.400	0.400	0.400
Dimensions (h x d x w)		mm	61 x 44 x 118	61 x 44 x 118	61 x 44 x 118
Remarks			IEC connectors 1 female - 2 male 1 Attenuator	IEC connectors 1 female - 2 male 1 Attenuator	IEC connectors 1 female - 2 male 1 Attenuator

Triax indoor booster amplifiers

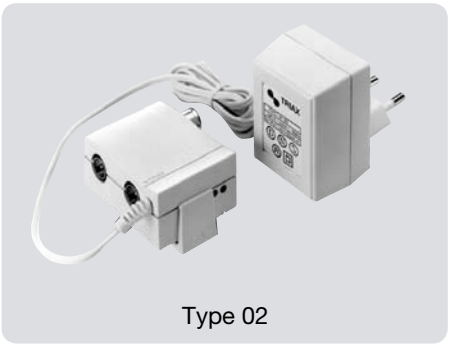
Indoor amplifiers with saddle and clamp or IEC-connectors
TRIAX TA distribution amplifiers are with saddle and clamp cable mounting, designed for indoor mounting and have built-in power supply. They are used primarily when signals are too weak for distribution to several outlets. Distribution amplifiers are available with 1 or 2 outputs.



TA 415-22

Technical data on indoor amplifiers

Type			TA 415-22	TA 415-22R	Type 02	2TV *plus*
Art. No.			**330550**	**330551**	**345100**	**345111**
Input 1	Band		UHF/VHF	UHF/VHF	UHF/VHF	UHF/VHF
	Channel					1 in ch. 30-40
	Frequency	MHz	47-862	47-862	47-862	47-862
Gain	Out 1	dB	18.0	8-18	15.0	0
	Out 2	dB	18.0	8-18	15.0	12.0
Noise figure						
	UHF/VHF	dB	4.5	4.5	4.0	4.0
Max. output voltage						
IMD 3 in acc. with EN 50083-3		dBµV	2 x 101	2 x 101	2 x 103	2 x 101
Max. output level						
	@ 10 channels	dBµV				78
	@ 10 channels	dBµV				76
	@ 10 channels	dBµV				75
Numbers of in-/output			2	2	2	1 a+b 2 a+b
Voltage		V/AC	230	230	230	230
Power consumption		W	1.2	1.2	3	3
Connector		type	S&C	S&C	IEC	IEC
Impedance		Ohm	75	75	75	75
Operation temperature range		°C	0...+50	0...+50	0...+50	0...+50
Weight		kg				
Dimensions (h x d x w)		mm				
Remarks					Power adaptor included	Power adaptor included



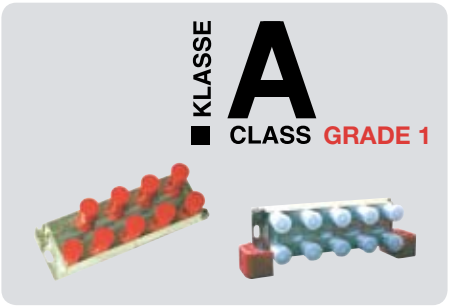
Type 02

2TV*plus* amplifiers for mounting directly on the outlet box

Triax passive components

Antenna systems >> **Splitters, taps and cables**	
- A-TECH 5-1000 MHz	166-171
- H-TECH 5-1000 MHz	172-178
- S-TECH 5-2400 MHz	179-183
TDP delivery point	184
TLS range of outdoor splitters	185
TLT range of outdoor taps	186-191
Triax indoor splitters	192-193
Attenuators	194
Power inserters	195
Power supplies	196-197
Cables and tools	
- Indoor, outdoor	198-203
- Multi and Fly leads	204-205
- HDMI cables	206
- Tools and connectors	207-209
Adapters - terminators - isolators - electrical articles	210-212

Triax splitters - ATS series [5-1000 MHz]



Technical data 5-1000 MHz professional range in splitters

TYPE Art. No.		ATS 2 346002	ATS 3 346003	ATS 4 346004	ATS 6 346006	ATS 8 346008	ATS 33 346010	
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	
Outputs	pcs	**2**	**3**	**4**	**6**	**8**	**3**	
							Out 1	Out 2+3
Insertion loss (in - out)								
5 - 40 MHz	dB	< 3.6	< 5.4	< 7.2	< 9.4	< 10.2	< 3.3	< 6.8
40 - 470 MHz	dB	< 3.8	< 5.8	< 7.4	< 9.8	< 10.2	< 3.5	< 7.0
470 - 750 MHz	dB	< 3.9	< 6.2	< 7.6	< 10.2	< 10.7	< 3.6	< 7.2
750 - 860 MHz	dB	< 4.0	< 6.5	< 7.8	< 10.5	< 10.7	< 3.9	< 7.6
860 - 1000 MHz	dB	< 4.2	< 6.8	< 8.2	< 10.8	< 11.0	< 3.9	< 7.6
Isolation								
5 - 40 MHz	dB	> 28.0	> 23.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 26.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 750 MHz	dB	> 26.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 860 MHz	dB	> 25.0	> 24.0	> 24.0	> 24.0	> 24.0	> 25.0	> 25.0
860 - 1000 MHz	dB	> 25.0	> 24.0	> 24.0	> 22.0	> 22.0	> 24.0	> 24.0
Return loss (in)								
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 19.0	> 22.0	> 19.0	> 18.0	> 18.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 19.0	> 19.0	> 19.0	> 17.0	> 17.0	> 20.0	> 20.0
860 - 1000 MHz	dB	> 19.0	> 19.0	> 18.0	> 17.0	> 17.0	> 18.0	> 18.0
Return loss (out)								
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 20.0	> 20.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 22.0	> 20.0	> 20.0	> 18.0	> 18.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 20.0	> 18.0	> 18.0	> 18.0	> 18.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 20.0	> 18.0	> 18.0	> 18.0	> 18.0	> 20.0	> 20.0
860 - 1000 MHz	dB	> 19.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	
Power pass		No	No	No	No	No	No	
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector	
Certification		CE	CE	CE	CE	CE	CE	
Impedance	Ohm	75	75	75	75	75	75	
Weight	kg	0.070	0.085	0.106	0.138	0.135	0.085	
Dimensions (h x d x w)	mm	38 x 16 x 74	38 x 16 x 96	38 x 16 x 118	38 x 16 x 161	36 x 28 x 115	38 x 16 x 96	

Triax taps - ATT series [5-1000 MHz]

KLASSE **A**
CLASS **GRADE 1**

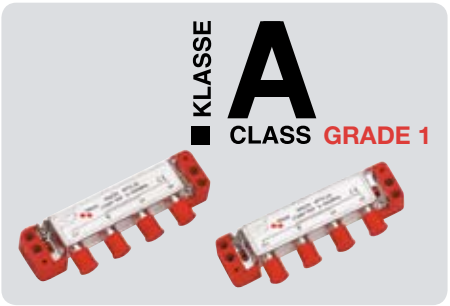




Technical data 5-1000 MHz professional range in 1-way taps

TYPE Art. No.		ATT 1-6 346106	ATT 1-8 346108	ATT 1-12 346112	ATT 1-16 346116	ATT 1-20 346120	ATT 1-24 346124	ATT 1-30 346130
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Insertion loss (in - out)								
5 - 40 MHz	dB	< 2.4	< 2.1	< 0.9	< 0.8	< 0.7	< 0.7	< 0.7
40 - 470 MHz	dB	< 2.7	< 2.2	< 1.1	< 0.9	< 0.8	< 0.8	< 0.8
470 - 750 MHz	dB	< 3.0	< 2.4	< 1.2	< 1.0	< 1.0	< 1.0	< 1.0
750 - 860 MHz	dB	< 3.2	< 2.5	< 1.3	< 1.1	< 1.1	< 1.1	< 1.1
860 - 1000 MHz	dB	< 3.4	< 2.7	< 1.5	< 1.2	< 1.2	< 1.2	< 1.2
Tap loss (in - tap)								
5 - 40 MHz	dB	6.0 (± 1.5)	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)	30.0 (± 1.0)
40 - 470 MHz	dB	6.0 (± 1.5)	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)	30.0 (± 1.0)
470 - 750 MHz	dB	6.0 (± 1.5)	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)	30.0 (± 1.0)
750 - 860 MHz	dB	6.0 (± 1.5)	8.0 (± 1.2)	12.0 (± 1.2)	16.0 (± 1.2)	20.0 (± 1.2)	24.0 (± 1.2)	30.0 (± 1.2)
860 - 1000 MHz	dB	6.0 (± 2.0)	8.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	30.0 (± 1.5)
Isolation (out - tap)								
5 - 40 MHz	dB	> 25.0	> 24.0	> 24.0	> 28.0	> 32.0	> 36.0	> 36.0
40 - 470 MHz	dB	> 28.0	> 28.0	> 28.0	> 30.0	> 32.0	> 34.0	> 34.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 28.0	> 30.0	> 33.0	> 33.0
750 - 860 MHz	dB	> 24.0	> 25.0	> 26.0	> 28.0	> 30.0	> 32.0	> 32.0
860 - 1000 MHz	dB	> 23.0	> 24.0	> 25.0	> 27.0	> 29.0	> 31.0	> 31.0
Return loss (in - out)								
5 - 40 MHz	dB	> 21.0	> 19.0	> 21.0	> 21.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 19.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Return loss (tap)								
5 - 40 MHz	dB	> 18.0	> 18.0	> 19.0	> 22.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 20.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75	75
Weight	kg	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Dimensions (h x d x w)	mm	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74

Triax taps - ATT series [5-1000 MHz]



Technical data 5-1000 MHz professional series in 2-way taps

TYPE Art. No.		ATT 2-8 346208	ATT 2-10 346210	ATT 2-12 346212	ATT 2-16 346216	ATT 2-20 346220	ATT 2-24 346224
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**2**	**2**	**2**	**2**	**2**	**2**
Insertion loss (in -out)							
5 - 40 MHz	dB	< 3.6	< 2.5	< 2.2	< 1.0	< 0.7	< 0.7
40 - 470 MHz	dB	< 3.7	< 2.8	< 2.5	< 1.2	< 0.8	< 0.8
470 - 750 MHz	dB	< 3.9	< 3.0	< 2.8	< 1.3	< 0.9	< 0.9
750 - 860 MHz	dB	< 4.1	< 3.2	< 3.0	< 1.5	< 1.1	< 1.1
860 - 1000 MHz	dB	< 4.3	< 3.5	< 3.2	< 1.8	< 1.5	< 1.5
Tap loss (in - tap)							
5 - 40 MHz	dB	8.0 (± 1.0)	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
40 - 470 MHz	dB	8.0 (± 1.0)	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
470 - 750 MHz	dB	8.0 (± 1.2)	10.0 (± 1.2)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
750 - 860 MHz	dB	8.0 (± 1.2)	10.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.2)	20.0 (± 1.2)	24.0 (± 1.2)
860 - 1000 MHz	dB	8.0 (± 1.5)	10.0 (± 2.0)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
Isolation (tap - tap)							
5 - 40 MHz	dB	> 22.0	> 22.0	> 24.0	> 24.0	> 24.0	> 24.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 860 MHz	dB	> 24.0	> 24.0	> 24.0	> 24.0	> 24.0	> 24.0
860 - 1000 MHz	dB	> 23.0	> 23.0	> 23.0	> 23.0	> 23.0	> 23.0
Isolation (out - tap)							
5 - 40 MHz	dB	> 26.0	> 30.0	> 30.0	> 28.0	> 32.0	> 32.0
40 - 470 MHz	dB	> 25.0	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 22.0	> 25.0	> 28.0	> 28.0	> 28.0	> 28.0
750 - 860 MHz	dB	> 21.0	> 25.0	> 25.0	> 25.0	> 26.0	> 26.0
860 - 1000 MHz	dB	> 20.0	> 24.0	> 25.0	> 25.0	> 26.0	> 26.0
Return loss (in - out)							
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 17.0	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0
Return loss (tap)							
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.085	0.085	0.085	0.085	0.085	0.085
Dimensions (h x d x w)	mm	38 x 16 x 96	38 x 16 x 96	38 x 16 x 96	38 x 16 x 96	38 x 16 x 96	38 x 16 x 96

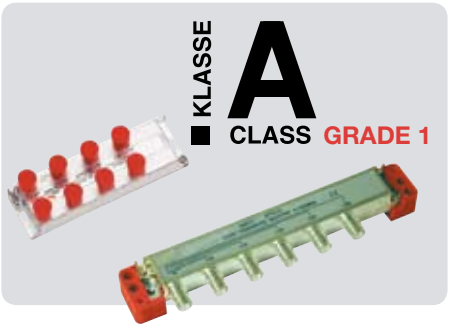
Triax taps - ATT series [5-1000 MHz]

KLASSE **A** CLASS **GRADE 1**

Technical data 5-1000 MHz professional series in 3-way taps

TYPE Art. No.		ATT 3-10 346310	ATT 3-12 346312	ATT 3-16 346316	ATT 3-20 346320
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**3**	**3**	**3**	**3**
Insertion loss (in - out)					
5 - 40 MHz	dB	< 3.9	< 2.3	< 1.1	< 0.9
40 - 470 MHz	dB	< 4.0	< 2.4	< 1.3	< 1.0
470 - 750 MHz	dB	< 4.2	< 2.6	< 1.5	< 1.1
750 - 860 MHz	dB	< 4.4	< 2.8	< 1.7	< 1.3
860 - 1000 MHz	dB	< 4.6	< 3.0	< 2.0	< 1.5
Tap loss (in - tap)					
5 - 40 MHz	dB	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)
40 - 470 MHz	dB	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)
470 - 750 MHz	dB	10.0 (± 1.0)	12.0 (± 1.2)	16.0 (± 1.0)	20.0 (± 1.0)
750 - 860 MHz	dB	10.0 (± 1.2)	12.0 (± 1.5)	16.0 (± 1.2)	20.0 (± 1.2)
860 - 1000 MHz	dB	10.0 (± 1.5)	12.0 (± 2.0)	16.0 (± 1.5)	20.0 (± 1.5)
Isolation (tap - tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 26.0	> 26.0	> 26.0	> 26.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
750 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
860 - 1000 MHz	dB	> 24.0	> 24.0	> 24.0	> 24.0
Isolation (out - tap)					
5 - 40 MHz	dB	> 30.0	> 35.0	> 30.0	> 34.0
40 - 470 MHz	dB	> 26.0	> 28.0	> 30.0	> 32.0
470 - 750 MHz	dB	> 25.0	> 26.0	> 28.0	> 30.0
750 - 860 MHz	dB	> 23.0	> 25.0	> 26.0	> 27.0
860 - 1000 MHz	dB	> 23.0	> 24.0	> 25.0	> 26.0
Return loss (in - out)					
5 - 40 MHz	dB	> 22.0	> 20.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 18.0	> 20.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 20.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 17.0	> 17.0	> 17.0	> 17.0
Return loss (tap)					
5 - 40 MHz	dB	> 22.0	> 20.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 18.0	> 18.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg	0.106	0.106	0.106	0.106
Dimensions (h x d x w)	mm	38 x 16 x 118	38 x 16 x 118	38 x 16 x 118	38 x 16 x 118

Triax taps - ATT series [5-1000 MHz]

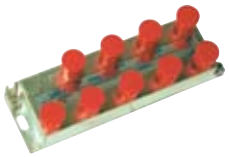


Technical data 5-1000 MHz professional series in 4-, 5- and 6 ways taps

TYPE Art. No.		ATT 4-12 346412	ATT 4-16 346416	ATT 4-20 346420	ATT 5-12 346512	ATT 6-16 346616
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**4**	**4**	**4**	**5**	**6**
Insertion loss (in - out)						
5 - 40 MHz	dB	< 3.6	< 2.2	< 0.9	< 3.6	< 2.3
40 - 470 MHz	dB	< 3.7	< 2.3	< 1.0	< 3.7	< 2.5
470 - 750 MHz	dB	< 3.8	< 2.5	< 1.1	< 3.8	< 2.7
750 - 860 MHz	dB	< 4.0	< 2.7	< 1.3	< 4.0	< 2.9
860 - 1000 MHz	dB	< 4.2	< 3.0	< 1.5	< 4.2	< 3.0
Tap loss (in - tap)						
5 - 40 MHz	dB	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.5)
40 - 470 MHz	dB	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.5)
470 - 750 MHz	dB	12.0 (± 1.2)	16.0 (± 1.2)	20.0 (± 1.0)	12.0 (± 1.2)	16.0 (± 1.5)
750 - 860 MHz	dB	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.2)	12.0 (± 1.5)	16.0 (± 1.5)
860 - 1000 MHz	dB	12.0 (± 2.0)	16.0 (± 2.0)	20.0 (± 1.5)	12.0 (± 2.0)	16.0 (± 2.0)
Isolation (tap - tap)						
5 - 40 MHz	dB	> 26.0	> 26.0	> 26.0	> 26.0	> 26.0
40 - 470 MHz	dB	> 26.0	> 26.0	> 26.0	> 26.0	> 26.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 860 MHz	dB	> 24.0	> 24.0	> 24.0	> 24.0	> 24.0
860 - 1000 MHz	dB	> 23.0	> 23.0	> 23.0	> 23.0	> 23.0
Isolation (out - tap)						
5 - 40 MHz	dB	> 28.0	> 30.0	> 32.0	> 28.0	> 36.0
40 - 470 MHz	dB	> 28.0	> 30.0	> 32.0	> 28.0	> 30.0
470 - 750 MHz	dB	> 26.0	> 28.0	> 30.0	> 26.0	> 25.0
750 - 860 MHz	dB	> 25.0	> 26.0	> 28.0	> 25.0	> 24.0
860 - 1000 MHz	dB	> 23.0	> 25.0	> 27.0	> 23.0	> 24.0
Return loss (in - out)						
5 - 40 MHz	dB	> 22.0	> 20.0	> 22.0	> 22.0	> 21.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 22.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 18.0	> 20.0	> 20.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 17.0
860 - 1000 MHz	dB	> 17.0	> 18.0	> 18.0	> 17.0	> 16.0
Return loss (tap)						
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 19.0
40 - 470 MHz	dB	> 22.0	> 20.0	> 22.0	> 22.0	> 20.0
470 - 750 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 17.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.138	0.138	0.138	0.138	0.131
Dimensions (h x d x w)	mm	38 x 16 x 161	38 x 16 x 161	38 x 16 x 161	38 x 16 x 161	36 x 28 x 115

Triax taps - ATM series [5-1000 MHz]

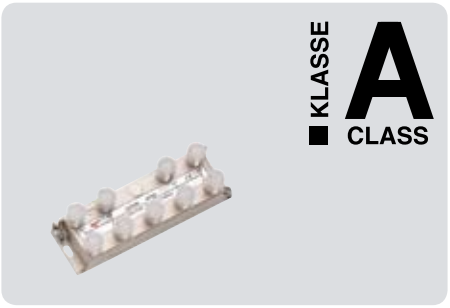
KLASSE **A** CLASS GRADE 1



Technical data 5-1000 MHz professional multi taps

TYPE Art. No.		ATM 4-12T 346413	ATM 6-12T 346617	ATM 8-12T 346812
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**4**	**6**	**8**
Tap loss (In - Tap 1-2)				
5 - 40 MHz	dB	12.5 (± 1.0)	12.5 (± 1.0)	12.5 (± 1.0)
40 - 470 MHz	dB	12.5 (± 1.0)	12.5 (± 1.0)	12.5 (± 1.0)
470 - 750 MHz	dB	12.5 (± 1.2)	12.5 (± 1.2)	12.5 (± 1.2)
750 - 860 MHz	dB	12.5 (± 1.5)	12.5 (± 1.5)	12.5 (± 1.5)
860 - 1000 MHz	dB	12.5 (± 1.5)	12.5 (± 1.5)	12.5 (± 1.5)
Tap loss (In - Tap 3-4)				
5 - 40 MHz	dB	12.0 (± 1.0)	13.5 (± 1.2)	13.5 (± 1.2)
40 - 470 MHz	dB	12.0 (± 1.0)	13.5 (± 1.2)	13.5 (± 1.2)
470 - 750 MHz	dB	12.0 (± 1.2)	13.5 (± 1.5)	13.5 (± 1.2)
750 - 860 MHz	dB	12.0 (± 1.5)	13.5 (± 2.0)	13.5 (± 1.5)
860 - 1000 MHz	dB	12.0 (± 2.0)	13.5 (± 2.0)	13.5 (± 1.5)
Tap loss (In - Tap 5-6)				
5 - 40 MHz	dB		14.5 (± 1.2)	14.5 (± 1.2)
40 - 470 MHz	dB		14.5 (± 1.2)	14.5 (± 1.2)
470 - 750 MHz	dB		14.5 (± 1.5)	14.5 (± 1.5)
750 - 860 MHz	dB		14.5 (± 2.0)	14.5 (± 2.0)
860 - 1000 MHz	dB		14.5 (± 2.5)	14.5 (± 2.0)
Tap loss (In - Tap 7-8)				
5 - 40 MHz	dB			15.5 (± 1.5)
40 - 470 MHz	dB			15.5 (± 1.5)
470 - 750 MHz	dB			15.5 (± 2.0)
750 - 860 MHz	dB			15.5 (± 2.5)
860 - 1000 MHz	dB			15.5 (± 2.5)
Isolation (Tap - Tap)				
5 - 40 MHz	dB	> 32.0	> 32.0	> 32.0
40 - 470 MHz	dB	> 30.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 28.0	> 28.0	> 28.0
750 - 860 MHz	dB	> 28.0	> 28.0	> 28.0
860 - 1000 MHz	dB	> 28.0	> 28.0	> 28.0
Return loss (In - Tap)				
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No
Connectors		F-connector	F-connector	F-connector
Certification		CE	CE	CE
Impedance	Ohm	75	75	75
Weight	kg	0.138	0.138	0.135
Dimensions (h x d x w)	mm	38 x 16 x 161	38 x 16 x 161	36 x 28 x 115

Triax splitter - HTS series [5-1000 MHz]



Technical data 5-1000 MHz standard range in splitters

TYPE Art. No. Art. No. with DC pass		HTS 2 347002 347012	HTS 3 347003 347013	HTS 4 347004 347014	HTS 6 347006 347016	HTS 8 347008 347018	HTS 12 347912	HTS 16 347916
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**2**	**3**	**4**	**6**	**8**	**12**	**16**
Insertion loss (in - out)								
5 - 40 MHz	dB	< 3.2	< 5.7	< 6.7	< 9.7	< 10.2	12.0	13.2
40 - 470 MHz	dB	< 3.5	< 5.8	< 6.7	< 10.2	< 10.2	13.0	13.2
470 - 860 MHz	dB	< 3.7	< 6.2	< 7.9	< 10.7	< 12.2	13.5	14.2
Isolation								
5 - 40 MHz	dB	> 28.0	> 25.0	> 25.0	> 25.0	> 25.0	>30	>30
40 - 470 MHz	dB	> 28.0	> 25.0	> 28.0	> 25.0	> 25.0	>30	>30
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	>30	>30
Return loss (in)								
5 - 40 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
40 - 470 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
470 - 860 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
Return loss (out)								
5 - 40 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
40 - 470 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
470 - 860 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F	F
Certification		CE	CE	CE	CE	CE	W	CE
Impedance	Ohm	75	75	75	75	75	75	75
Weight	kg	0.046	0.063	0.069	0.130	0.137	6.595	0.615
Dimensions (h x d x w)	mm	50 x 16 x 52	50 x 16 x 74	50 x 16 x 74	60 x 16 x 117	60 x 16 x 117	78 x 44 x 242	78 x 44 x 242

Triax taps - HTT series [5-1000 MHz]

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Technical data 5-1000 MHz standard range in 1-way taps

TYPE Art. No.		HTT 1-6 347106	HTT 1-8 347108	HTT 1-12 347112	HTT 1-16 347116	HTT 1-20 347120	HTT 1-24 347124
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**1**	**1**	**1**	**1**	**1**	**1**
Insertion loss (in - out)							
5 - 40 MHz	dB	< 2.5	< 1.5	< 0.9	< 0.7	< 0.7	< 0.7
40 - 470 MHz	dB	< 2.5	< 1.7	< 0.9	< 0.7	< 0.7	< 0.7
470 - 860 MHz	dB	< 2.7	< 2.2	< 1.2	< 0.9	< 0.9	< 0.9
Tap loss (in - tap)							
5 - 40 MHz	dB	6.5 (± 1.0)	8.5 (± 1.0)	12.5 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
40 - 470 MHz	dB	6.0 (± 1.0)	8.5 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
470 - 860 MHz	dB	6.0 (± 1.2)	8.8 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
Isolation (tap - tap)							
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (out - tap)							
5 - 40 MHz	dB	> 20.0	> 25.0	> 30.0	> 32.0	> 35.0	> 35.0
40 - 470 MHz	dB	> 22.0	> 25.0	> 28.0	> 28.0	> 32.0	> 32.0
470 - 860 MHz	dB	> 20.0	> 22.0	> 25.0	> 30.0	> 30.0	> 30.0
Return loss (in - out)							
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)							
5 - 40 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
40 - 470 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
470 - 860 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.046	0.046	0.046	0.046	0.046	0.046
Dimensions (h x d x w)	mm	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52

Triax taps - HTT series [5-1000 MHz]

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Technical data 5-1000 MHz standard range in 2-way taps

TYPE Art. No.		HTT 2-8 347208	HTT 2-10 347210	HTT 2-12 347212	HTT 2-16 347216	HTT 2-20 347220
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**2**	**2**	**2**	**2**	**2**
Insertion loss (in - out)						
5 - 40 MHz	dB	< 3.3	< 2.5	< 1.7	< 0.9	< 0.7
40 - 470 MHz	dB	< 3.5	< 2.5	< 1.7	< 0.9	< 0.7
470 - 860 MHz	dB	< 4.2	< 3.2	< 2.2	< 1.2	< 0.9
Tap loss (in - tap)						
5 - 40 MHz	dB	8.0 (± 1.0)	10.0 (± 1.0)	12.5 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)
40 - 470 MHz	dB	8.0 (± 1.0)	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.5)
470 - 860 MHz	dB	8.0 (± 1.2)	10.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)
Isolation (tap - tap)						
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (out - tap)						
5 - 40 MHz	dB	>30.0	> 25.0	> 28.0	> 32.0	> 40.0
40 - 470 MHz	dB	> 27.0	> 25.0	> 26.0	> 30.0	> 35.0
470 - 860 MHz	dB	> 25.0	> 22.0	> 25.0	> 25.0	> 30.0
Return loss (in - out)						
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)						
5 - 40 MHz	dB	>25.0	> 25.0	> 25.0	> 26.0	> 26.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 23.0	> 25.0	> 25.0	> 25.0	> 25.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.063	0.063	0.063	0.063	0.063
Dimensions (h x d x w)	mm	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74

Triax taps - HTT series [5-1000 MHz]

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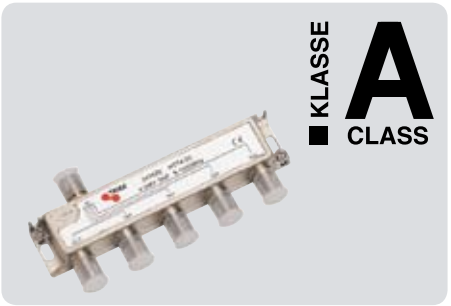
Technical data 5-1000 MHz standard range in 3-way taps

TYPE Art. No.		HTT 3-10 347310	HTT 3-12 347312	HTT 3-16 347316	HTT 3-20 347320
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**3**	**3**	**3**	**3**
Insertion loss (in - out)					
5 - 40 MHz	dB	< 2.7	< 2.7	< 1.7	< 0.9
40 - 470 MHz	dB	< 2.9	< 2.9	< 1.7	< 0.9
470 - 860 MHz	dB	< 3.9	< 3.9	< 2.2	< 1.2
Tap loss (in - tap)					
5 - 40 MHz	dB	10.0 (± 1.5)	12.5 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)
40 - 470 MHz	dB	10.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)
470 - 860 MHz	dB	10.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)
Isolation (tap - tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (out - tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 32.0	> 32.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 30.0	> 30.0
470 - 860 MHz	dB	> 22.0	> 22.0	> 28.0	> 28.0
Return loss (in - out)					
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg	0.069	0.069	0.069	0.069
Dimensions (h x d x w)	mm	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74

Triax taps - HTT series [5-1000 MHz]



Technical data 5-1000 MHz standard range in 4-way taps

TYPE Art. No.		HTT 4-12 347412	HTT 4-16 347416	HTT 4-20 347420	HTT 4-24 347424
Frequency range	MHz	5 - 862	5 - 862	5 - 862	5 - 862
Outputs	pcs	**4**	**4**	**4**	**4**
Insertion loss (in - out)					
5 - 40 MHz	dB	< 2.9	< 1.5	< 0.7	< 0.7
40 - 470 MHz	dB	< 3.2	< 1.7	< 0.7	< 0.7
470 - 860 MHz	dB	< 3.7	< 2.1	< 1.2	< 1.2
Tap loss (in - tap)					
5 - 40 MHz	dB	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
40 - 470 MHz	dB	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
470 - 860 MHz	dB	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
Isolation (tap - tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (out - tap)					
5 - 40 MHz	dB	> 25.0	> 35.0	> 40.0	> 40.0
40 - 470 MHz	dB	> 25.0	> 30.0	> 35.0	> 35.0
470 - 860 MHz	dB	> 22.0	> 28.0	> 30.0	> 30.0
Return loss (in - out)					
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg	0.092	0.092	0.092	0.092
Dimensions (h x d x w)	mm	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70

Triax taps - HTT series [5-1000 MHz]

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Technical data 5-1000 MHz standard range in 6-way and 8-ways taps

TYPE Art. No.		HTT 6-16 347616	HTT 6-20 347620	HTT 6-24 347624	HTT 8-16 347816	HTT 8-20 347820	HTT 8-24 347824
Frequency range	MHz	5 - 862	5 - 862	5 - 862	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**6**	**6**	**6**	**8**	**8**	**8**
Insertion loss (in - out)							
5 - 40 MHz	dB	< 2.0	< 1.2	< 1.2	< 2.5	< 1.2	< 1.2
40 - 470 MHz	dB	< 2.5	< 1.2	< 1.2	< 2.5	< 1.2	< 1.2
470 - 860 MHz	dB	< 2.9	< 2.2	< 2.2	< 2.9	< 1.9	< 1.9
Tap loss (lin - tap)							
5 - 40 MHz	dB	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)	16.0 (± 1.5)	20.0 (± 1.0)	24.0 (± 1.0)
40 - 470 MHz	dB	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.0)	24.0 (± 1.0)
470 - 860 MHz	dB	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	16.0 (± 2.0)	20.0 (± 1.8)	24.0 (± 1.8)
Isolation (tap - tap)							
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (Oout - tap)							
5 - 40 MHz	dB	> 25.0	> 30.0	> 30.0	> 27.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 25.0	> 30.0	> 30.0	> 25.0	> 30.0	> 30.0
470 - 860 MHz	dB	> 25.0	> 28.0	> 28.0	> 28.0	> 25.0	> 25.0
Return loss (in - out)							
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)							
5 - 40 MHz	dB	> 23.0	> 23.0	> 23.0	> 24.0	> 24.0	> 24.0
40 - 470 MHz	dB	> 24.0	> 24.0	> 24.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 20.0	> 21.0	> 21.0	> 22.0	> 22.0	> 22.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.134	0.134	0.134	0.137	0.137	0.137
Dimensions (h x d x w)	mm	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117

Triax multitaps - HTM/TTM series [5-1000 MHz]

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Technical data 5-1000 MHz standard range in multi taps

TYPE Art. No.		HTM 4-12T 347413	HTM 6-12T 347617	HTM 8-12T 347810	TTM 12 343912	TTM 16 343916
Frequency range	MHz	5 - 862	5 - 862	5 - 862	5 - 862	5 - 862
Outputs	pcs	**4**	**6**	**8**	**12**	**16**
Insertion loss (in - out)						
5 - 40 MHz	dB	4.0 (± 1.5)	6.0 (± 1.5)	8.0 (± 1.5)		
40 - 470 MHz	dB	4.0 (± 1.5)	6.0 (± 1.5)	8.0 (± 1.5)	Terminal	Terminal
470 - 860 MHz	dB	4.0 (± 1.5)	6.0 (± 1.5)	8.0 (± 1.5)		
Tap loss (in - tap)		(± 1.5)	(± 1.5)	(± 1.5)	(± 1.5)	(± 1.5)
5 - 860 MHz tap 1-4	dB	13.0/13.5/14.5/15.5	13.0/13.5/15.5/14.5	13.0/14.0/15.0/16.0	13.0/13.5/15.0/15.5	13.0/13.5/15.0/15.5
5 - 860 MHz tap 5-8	dB		16.5/17.5	17.0/18.0/19.0/20.0	16.0/16.5/18.0/19.0	16.0/16.5/18.0/19.0
5 - 860 MHz tap 9-12	dB				19.5/20.0/21.5/22.0	19.5/20.0/21.5/22.0
5 - 860 MHz tap 13-16	dB					23.5/24.0/25.0/25.5
Isolation (tap - tap)						
5 - 40 MHz	dB	> 32.0	> 32.0	> 30.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 32.0	> 32.0	> 30.0	> 30.0	> 30.0
470 - 860 MHz	dB	> 30.0	> 30.0	> 30.0	> 30.0	> 30.0
Isolation (out - tap)						
5 - 40 MHz	dB	> 26.0	> 26.0	> 20.0		
40 - 470 MHz	dB	> 26.0	> 26.0	> 20.0	Terminal	Terminal
470 - 860 MHz	dB	> 22.0	> 22.0	> 20.0		
Return loss (tap)						
5 - 40 MHz	dB	> 32.0	> 32.0	> 30.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 32.0	> 32.0	> 30.0	> 30.0	> 30.0
470 - 860 MHz	dB	> 30.0	> 30.0	> 30.0	> 30.0	> 30.0
Shielding efficiency VHF/UHF	dB	≥ 75.0	≥ 75.0	≥ 75.0	≥ 75.0	≥ 75.0
Power pass		Yes	Yes	Yes	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.183	0.183	0.205	0.595	0.615
Dimensions (h x d x w)	mm	54 x 42 x 84	54 x 42 x 84	54 x 42 x 107	78 x 44 x 242	78 x 44 x 242

Triax splitter - STS series [5-2400 MHz]

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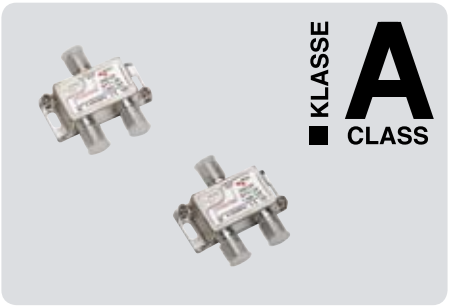
Technical data 5-2400 MHz standard range in splitters

TYPE Art. No.		STS 2 348002	STS 3 348003	STS 4 348004	STS 6 348006	STS 8 348008
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**2**	**3**	**4**	**6**	**8**
Insertion loss (in - out)						
5 - 40 MHz	dB	< 4.2	< 7.2	< 8.2	< 11.2	< 11.7
40 - 1000 MHz	dB	< 4.7	< 7.7	< 8.2	< 11.7	< 12.2
1000 - 1750 MHz	dB	< 6.2	< 9.7	< 10.2	< 11.7	< 15.2
1750 - 2150 MHz	dB	< 6.5	< 10.7	< 10.9	< 16.7	< 18.0
2150 - 2400 MHz	dB	< 6.7	< 11.2	< 12.5	< 16.7	< 18.2
Return loss (in)						
5 - 40 MHz	dB	> 18.0	> 14.0	> 14.0	> 14.0	> 14.0
40 - 1000 MHz	dB	> 17.0	> 18.0	> 18.0	> 14.0	> 14.0
1000 - 1750 MHz	dB	> 15.0	> 15.0	> 15.0	> 16.0	> 16.0
1750 - 2150 MHz	dB	> 14.0	> 15.0	> 16.0	> 15.0	> 15.0
2150 - 2400 MHz	dB	> 15.0	> 14.0	> 16.0	> 16.0	> 15.0
Return loss (out)						
5 - 40 MHz	dB	> 16.0	> 18.0	> 18.0	> 18.0	> 20.0
40 - 1000 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
1000 - 1750 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
1750 - 2150 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 17.0	> 17.0	> 17.0	> 17.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		All	All	All	All	All
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.046	0.063	0.069	0.130	0.137
Dimensions (h x d x w)	mm	50 x 16 x 52	50 x 16 x 74	50 x 16 x 74	60 x 16 x 117	60 x 16 x 117

Triax taps - STT series [5-2400 MHz]



Technical data 5-2400 MHz standard range in 1-way taps

TYPE Art. No.		STT 1-8 348108	STT 1-10 348110	STT 1-12 348112	STT 1-16 348116	STT 1-20 348120	STT 1-24 348124
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**1**	**1**	**1**	**1**	**1**	**1**
Insertion loss							
5 - 40 MHz	dB	< 2.2	< 1.7	< 1.5	< 1.2	< 1.2	< 1.2
40 - 1000 MHz	dB	< 2.2	< 1.9	< 1.7	< 1.2	< 1.2	< 1.2
1000 - 1750 MHz	dB	< 3.2	< 2.2	< 2.2	< 1.9	< 1.9	< 1.9
1750 - 2150 MHz	dB	< 4.7	< 3.2	< 2.7	< 2.2	< 2.2	< 2.2
2150 - 2400 MHz	dB	< 5.0	< 3.5	< 3.2	< 2.5	< 2.5	< 2.5
Tap loss							
5 - 40 MHz	dB	8.5 (± 2.0)	11.0 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)	24.0 (± 2.0)
40 - 1000 MHz	dB	8.0 (± 1.5)	10.0 (± 1.5)	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
1000 - 1750 MHz	dB	8.0 (± 1.5)	10.0 (± 1.5)	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
1750 - 2150 MHz	dB	8.0 (± 2.0)	10.0 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)	24.0 (± 2.0)
2150 - 2400 MHz	dB	8.5 (± 2.0)	10.5 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)	24.0 (± 2.0)
Isolation							
5 - 40 MHz	dB	> 18.0	> 25.0	> 28.0	> 28.0	> 32.0	> 32.0
40 - 1000 MHz	dB	> 20.0	> 22.0	> 25.0	> 25.0	> 30.0	> 30.0
1000 - 1750 MHz	dB	> 20.0	> 22.0	> 22.0	> 25.0	> 25.0	> 25.0
1750 - 2150 MHz	dB	> 18.0	> 20.0	> 20.0	> 22.0	> 25.0	> 25.0
2150 - 2400 MHz	dB	> 18.0	> 18.0	> 20.0	> 22.0	> 25.0	> 25.0
Return loss (in - out)							
5 - 40 MHz	dB	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0
40 - 1000 MHz	dB	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0
1000 - 1750 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
1750 - 2150 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
2150 - 2400 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
Return loss (tap)							
5 - 40 MHz	dB	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0
40 - 1000 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 16.0	> 16.0
1000 - 1750 MHz	dB	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0
1750 - 2150 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
2150 - 2400 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		In/Out	In/Out	In/Out	In/Out	In/Out	In/Out
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.046	0.046	0.046	0.046	0.046	0.046
Dimensions (h x d x w)	mm	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52

Triax taps - STT series [5-2400 MHz]

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Technical data 5-2400 MHz standard range in 2-way taps

TYPE Art. No.		STT 2-10 348210	STT 2-12 348212	STT 2-16 348216	STT 2-20 348220
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**2**	**2**	**2**	**2**
Insertion loss					
5 - 40 MHz	dB	< 4.2	< 2.7	< 2.7	< 1.7
40 - 1000 MHz	dB	< 3.2	< 2.7	< 2.7	< 1.7
1000 - 1750 MHz	dB	< 4.2	< 3.2	< 3.7	< 2.7
1750 - 2150 MHz	dB	< 4.7	< 4.2	< 4.2	< 3.2
2150 - 2400 MHz	dB	< 5.5	< 4.7	< 4.5	< 4.0
Tap loss					
5 - 40 MHz	dB	11.0 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)
40 - 1000 MHz	dB	10.5 (± 1.5)	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)
1000 - 1750 MHz	dB	10.5 (± 1.5)	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)
1750 - 2150 MHz	dB	10.5 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)
2150 - 2400 MHz	dB	10.5 (± 2.0)	12.0 (± 2.5)	15.0 (± 2.5)	20.0 (± 2.5)
Isolation					
5 - 40 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
40 - 1000 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
1000 - 1750 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
1750 - 2150 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
2150 - 2400 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
Return loss (in - out)					
5 - 40 MHz	dB	> 18.0	> 22.0	> 22.0	> 23.0
40 - 1000 MHz	dB	> 18.0	> 20.0	> 20.0	> 22.0
1000 - 1750 MHz	dB	> 18.0	> 20.0	> 20.0	> 22.0
1750 - 2150 MHz	dB	>16.0	> 18.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 16.0	> 18.0	> 20.0	> 20.0
Return loss (tap)					
5 - 40 MHz	dB	> 30.0	> 35.0	> 35.0	> 40.0
40 - 1000 MHz	dB	> 25.0	> 25.0	> 30.0	> 32.0
1000 - 1750 MHz	dB	> 25.0	> 25.0	> 30.0	> 30.0
1750 - 2150 MHz	dB	> 20.0	> 22.0	> 25.0	> 25.0
2150 - 2400 MHz	dB	> 18.0	> 20.0	> 22.0	> 22.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		In/Out	In/Out	In/Out	In/Out
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg	0.063	0.063	0.063	0.063
Dimensions (h x d x w)	mm	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74

Triax taps - STT series [5-2400 MHz]

KLASSE A CLASS

Technical data 5-2400 MHz standard range in 4-way taps

TYPE Art. No.		STT 4-12 348412	STT 4-16 348416	STT 4-20 348420	STT 4-24 348424	STT 4-30 348430
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**4**	**4**	**4**	**4**	**4**
Insertion loss (in - out)						
5 - 40 MHz	dB	< 4.7	< 2.7	< 1.2	< 2.7	< 1.2
40 - 1000 MHz	dB	< 4.7	< 3.2	< 1.7	< 3.2	< 1.7
1000 - 1750 MHz	dB	< 5.2	< 4.2	< 2.2	< 4.2	< 2.2
1750 - 2150 MHz	dB	< 6.2	< 5.2	< 3.2	< 5.2	< 3.2
2150 - 2400 MHz	dB	< 7.0	< 6.0	< 4.0	< 6.0	< 4.0
Tap loss						
5 - 40 MHz	dB	12.0 (± 2.0)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	30.0 (± 1.5)
40 - 1000 MHz	dB	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	30.0 (± 1.5)
1000 - 1750 MHz	dB	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	30.0 (± 1.5)
1750 - 2150 MHz	dB	13.0 (± 2.0)	15.0 (± 2.0)	20.5 (± 2.0)	24.0 (± 2.0)	30.0 (± 2.0)
2150 - 2400 MHz	dB	14.0 (± 2.5)	16.0 (± 2.0)	21.0 (± 2.0)	24.0 (± 2.0)	30.0 (± 2.0)
Isolation						
5 - 40 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
40 - 1000 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
1000 - 1750 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
1750 - 2150 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
2150 - 2400 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
Return loss (in - out)						
5 - 40 MHz	dB	> 20.0	> 30.0	> 35.0	> 30.0	> 35.0
40 - 1000 MHz	dB	> 23.0	> 23.0	> 25.0	> 23.0	> 25.0
1000 - 1750 MHz	dB	> 20.0	> 22.0	> 20.0	> 22.0	> 20.0
1750 - 2150 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
Return loss (tap)						
5 - 40 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
40 - 1000 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
1000 - 1750 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
1750 - 2150 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		In/Out	In/Out	In/Out	In/Out	In/Out
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.092	0.092	0.092	0.092	0.092
Dimensions (h x d x w)	mm	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70

Triax taps - STT series [5-2400 MHz]

KLASSE A CLASS

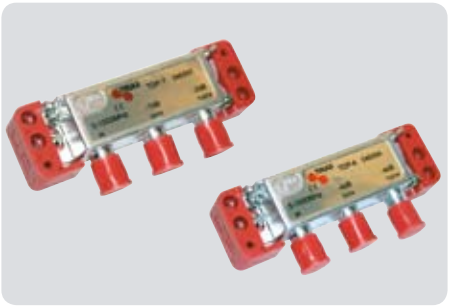
Technical data 5-2400 MHz standard range in 6- and 8-way taps

TYPE Art. No.		STT 6-16 348616	STT 6-20 348620	STT 6-24 348624	STT 6-30 348630	STT 8-16 348816	STT 8-20 348820
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**6**	**6**	**6**	**6**	**8**	**8**
Insertion loss (in - out)							
5 - 40 MHz	dB	< 4.5	< 2.5	< 2.0	< 2.0	< 4.5	< 2.5
40 - 1000 MHz	dB	< 5.0	< 3.0	< 3.0	< 3.0	< 5.0	< 3.0
1000 - 1750 MHz	dB	< 6.0	< 4.0	< 4.0	< 4.0	< 6.0	< 4.0
1750 - 2150 MHz	dB	< 7.0	< 5.0	< 5.0	< 5.0	< 7.0	< 5.0
2150 - 2400 MHz	dB	< 8.0	< 6.0	< 6.0	< 6.0	< 8.0	< 6.0
Tap loss							
5 - 40 MHz	dB	16.0 (± 2.0)	20.0 (± 2.0)	25.0 (± 2.0)	30.0 (± 2.0)	16.0 (± 2.0)	20.0 (± 2.0)
40 - 1000 MHz	dB	16.0 (± 2.0)	20.5 (± 2.0)	25.0 (± 2.0)	30.0 (± 2.0)	16.0 (± 2.0)	20.5 (± 2.0)
1000 - 1750 MHz	dB	18.0 (± 2.0)	21.0 (± 3.0)	25.0 (± 3.0)	30.0 (± 3.0)	18.0 (± 2.0)	21.0 (± 3.0)
1750 - 2150 MHz	dB	19.0 (± 3.0)	21.5 (± 4.0)	25.0 (± 4.0)	30.0 (± 4.0)	19.0 (± 3.0)	21.5 (± 4.0)
2150 - 2400 MHz	dB	19.0 (± 3.0)	21.5 (± 4.0)	25.0 (± 4.0)	30.0 (± 4.0)	19.0 (± 3.0)	21.5 (± 4.0)
Isolation							
5 - 40 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
40 - 1000 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
1000 - 1750 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
1750 - 2150 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
2150 - 2400 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
Return loss (in)							
5 - 40 MHz	dB	> 25.0	> 30.0	> 30.0	> 40.0	> 25.0	> 30.0
40 - 1000 MHz	dB	> 22.0	> 20.0	> 20.0	> 20.0	> 22.0	> 20.0
1000 - 1750 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
1750 - 2150 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
Return loss (out)							
5 - 40 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
40 - 1000 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
1000 - 1750 MHz	dB	> 17.0	> 17.0	> 17.0	> 17.0	> 17.0	> 17.0
1750 - 2150 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
2150 - 2400 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		In/Out	In/Out	In/Out	In/Out	In/Out	In/Out
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.137	0.137	0.137	0.137	0.137	0.137
Dimensions (h x d x w)	mm	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117

Triax TDP delivery point for TV/R and data

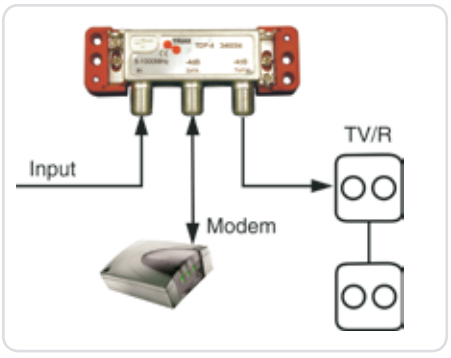
Triax delivery point for separating TV/R and data signals
Mount a Triax TDP delivery point on the main connection cable to your SMATV system and get a stabile and secure separation of your signal to your tv, radio and cable modem.

- High isolation
- Low insertion loss
- Class A shielding



Technical data on TDP delivery points

TYPE Art. No.		TDP-4 346094	TDP-7 346097
Frequency range	MHz	5 - 1000	5 - 1000
Outputs	pcs	**TV/R/Data**	**TV/R/Data**
Insertion loss			
5 - 40 MHz	dB	4.0	
40 - 1000 MHz	dB	4.0	
Tap loss			
5 - 40 MHz	dB		2.0
40 - 1000 MHz	dB		7.0
Isolation			
5 - 40 MHz	dB	> 50.0	> 50.0
40 - 1000 MHz	dB	> 50.0	> 50.0
Return loss (-1.5 dB/octav)			
5 - 40 MHz	dB	> 20.0	> 20.0
40 - 1000 MHz	dB	> 20.0	> 20.0
Shielding efficiency	dB	Class A (≥ 100.0)	Class A (≥ 100.0)
Power pass		No	No
Connectors		F-connector	F-connector
Certification		CE	CE
Impedance	Ohm	75	75
Weight	kg	0.063	0.063
Dimensions (h x d x w)	mm	50 x 16 x 74	50 x 16 x 74



Triax splitter - TLS/TLT series [outdoor]

Outdoor trunk splitter with frequency ranges from 5 to 1000 MHz

- All ports impedance: 75 Ohm
- In-out current passing: 10 A, 60 VAC
- The 100 dB RFI integrity is maintained by the use of tongue and groove design and with a stainless steel mesh RFI gasket
- Continual power through between input and output
- Aluminum housing is finished with a acrylic paint to protect from elements
- Neoprene sealed and nickel-plated brass for all 5/8" port entry and taps "F-(f)" port
- Provides uninterrupted power and RF service when the faceplate is removed

Technical data TLS series of 5-1000 MHz outdoor splitters and 1-tap

TYPE **Art. No.**		**TLS 102** **80225**	**TLS 103** **80226**	**TLS 103 S** **80263**	**TLT 108** **80236**	**TLT 112** **80237**	**TLT 116** **80238**
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1	1
Outputs	pcs	**2**	**3**	**3**	**2**	**2**	**2**
Insertion loss							
5 - 40 MHz	dB				< 2.4	< 1.4	< 1.4
40 - 470 MHz	dB				< 2.7	< 1.6	< 1.6
470 - 750 MHz	dB				< 3.3	<1.8	<1.8
750 - 862 MHz	dB				< 3.8	< 2.1	< 2.1
Tap loss - output **1 / 2 - 3**							
5 - 40 MHz	dB	< 3.9	< 3.9 /< 7.2	< 5.7 /< 5.7	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)
40 - 470 MHz	dB	< 4.1	< 4.2 /< 7.5	< 6.1 /< 6.1	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)
470 - 750 MHz	dB	< 4.5	< 4.5 /< 8.0	< 6.6 /< 6.6	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)
750 - 862 MHz	dB	< 4.8	< 4.6 /< 8.5	< 7.5 /< 7.5	8.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.0)
Isolation - out/tap							
5 - 40 MHz	dB	> 22.0	> 22.0	> 25.0	> 22.0	> 24.0	> 25.0
40 - 470 MHz	dB	> 27.0	> 27.0	> 27.0	> 24.0	> 24.0	> 24.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 22.0	> 23.0	> 25.0
750 - 862 MHz	dB	> 25.0	> 23.0	> 22.0	> 22.0	> 23.0	> 25.0
Isolation - tap/tap							
5 - 40 MHz	dB						
40 - 470 MHz	dB						
470 - 750 MHz	dB						
750 - 862 MHz	dB						
Return loss (out)							
5 - 40 MHz	dB	> 16.0	> 18.0	> 18.0	> 16.0	> 16.0	> 18.0
40 - 470 MHz	dB	> 18.0	> 18.0	> 18.0	> 16.0	> 16.0	> 18.0
470 - 750 MHz	dB	> 17.0	> 18.0	> 17.0	> 16.0	> 16.0	> 16.0
750 - 862 MHz	dB	> 17.0	> 18.0	> 17.0	> 16.0	> 16.0	> 16.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg						
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

- Fix-TLD bracket for wall-mounting of splitters Art. No. 80262

Triax taps - TLT series [outdoor]

Outdoor trunk taps with frequency ranges from 5 to 1000 MHz

- All ports impedance: 75 Ohm
- In-out current passing: 10 A, 60 VAC
- The 100 dB RFI integrity is maintained by the use of tongue and groove design and with a stainless steel mesh RFI gasket
- Continual power through between input and output
- Aluminum alloy housing is finished with a baked acrylic paint to protect from elements
- Neoprene sealed and nickel-plated brass for all 5/8" port entry and taps "F-(f)" port
- Provides uninterrupted power and RF service when the faceplate is removed

Technical data TLT series of 5-1000 MHz outdoor 2-taps

TYPE Art. No.		TLT 204 80261	TLT 208 80243	TLT 211 80228	TLT 214 80234	TLT 217 80229	TLT 220 80230
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1	1
Outputs	pcs	**2**	**2**	**2**	**2**	**2**	**2**
Insertion loss							
5 - 40 MHz	dB		< 3.2	< 2.4	< 1.4	< 1.2	< 0.8
40 - 470 MHz	dB		< 4.0	< 2.5	< 1.8	< 1.6	< 1.3
470 - 750 MHz	dB		< 5.0	< 3.5	< 2.3	< 2.1	< 1.8
750 - 862 MHz	dB		< 5.0	< 4.0	< 3.0	< 2.4	< 2.2
Tap loss - output							
5 - 40 MHz	dB	4.0 (± 1.0)	8.0 (± 1.0)	11.0 (± 1.0)	14.0 (± 1.0)	17.0 (± 1.0)	20.0 (± 1.0)
40 - 470 MHz	dB	4.0 (± 1.0)	8.0 (± 1.2)	11.0 (± 1.0)	14.0 (± 1.0)	17.0 (± 1.0)	20.0 (± 1.0)
470 - 750 MHz	dB	4.0 (± 1.0)	8.0 (± 1.5)	11.0 (± 1.5)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
750 - 862 MHz	dB	4.0 (± 1.0)	8.0 (± 1.5)	11.0 (± 1.5)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
Isolation - out/tap							
5 - 40 MHz	dB	> 16.0	> 15.0	> 20.0	> 25.0	> 26.0	> 26.0
40 - 470 MHz	dB	> 24.0	> 22.0	> 24.0	> 24.0	> 28.0	> 28.0
470 - 750 MHz	dB	> 24.0	> 20.0	> 20.0	> 25.0	> 25.0	> 25.0
750 - 862 MHz	dB	> 23.0	> 18.0	> 18.0	> 25.0	> 23.0	> 23.0
Isolation - tap/tap							
5 - 40 MHz	dB		> 16.0	> 20.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB		> 24.0	> 25.0	> 24.0	> 25.0	> 25.0
470 - 750 MHz	dB		> 24.0	> 24.0	> 25.0	> 25.0	> 25.0
750 - 862 MHz	dB		> 23.0	> 23.0	> 25.0	> 24.0	> 24.0
Return loss (out)							
5 - 40 MHz	dB	> 15.0	> 15.0	> 16.0	> 18.0	> 17.0	> 17.0
40 - 470 MHz	dB	> 17.0	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0
470 - 750 MHz	dB	> 17.0	> 17.0	> 18.0	> 16.0	> 18.0	> 18.0
750 - 862 MHz	dB	> 17.0	> 17.0	> 17.0	> 16.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg						
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

- Fix-TLD bracket for wall-mounting of splitters Art. No. 80262

Technical data TLT series of 5-1000 MHz outdoor 2-taps

TYPE Art. No.		TLT 223 80244	TLT 226 80245	TLT 229 80246	TLT 232 80247	TLT 235 80248
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1
Outputs	pcs	**2**	**2**	**2**	**2**	**2**
Insertion loss						
5 - 40 MHz	dB	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
40 - 470 MHz	dB	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
470 - 750 MHz	dB	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
750 - 862 MHz	dB	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
Tap loss - output						
5 - 40 MHz	dB	23.0 (± 1.0)	26.0 (± 1.0)	29.0 (± 1.0)	32.0 (± 1.0)	35.0 (± 1.0)
40 - 470 MHz	dB	23.0 (± 1.0)	26.0 (± 1.0)	29.0 (± 1.0)	32.0 (± 1.0)	35.0 (± 1.0)
470 - 750 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
750 - 862 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
Isolation - out/tap						
5 - 40 MHz	dB	> 26.0	> 26.0	> 26.0	> 26.0	> 26.0
40 - 470 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0	> 28.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 862 MHz	dB	> 23.0	> 23.0	> 23.0	> 23.0	> 23.0
Isolation - tap/tap						
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 862 MHz	dB	> 24.0	> 24.0	> 24.0	> 24.0	> 24.0
Return loss (out)						
5 - 40 MHz	dB	> 17.0	> 17.0	> 17.0	> 17.0	> 17.0
40 - 470 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
750 - 862 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

- Fix-TLD bracket for wall-mounting of splitters Art. No. 80262

Triax taps - TLT series [outdoor]

Outdoor trunk taps with frequency ranges from 5 to 1000 MHz

- All ports impedance: 75 Ohm
- In-out current passing: 10 A, 60 VAC
- The 100 dB RFI integrity is maintained by the use of tongue and groove design and with a stainless steel mesh RFI gasket
- Continual power through between input and output
- Aluminum alloy housing is finished with a baked acrylic paint to protect from elements
- Neoprene sealed and nickel-plated brass for all 5/8" port entry and taps "F-(f)" port
- Provides uninterrupted power and RF service when the faceplate is removed

Technical data TLT series of 5-1000 MHz outdoor 4-taps

TYPE Art. No.		TLT 408 80249	TLT 411 80231	TLT 414 80235	TLT 417 80232	TLT 420 80233
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1
Outputs	pcs	**4**	**4**	**4**	**4**	**4**
Insertion loss						
5 - 40 MHz	dB		< 3.5	< 2.5	< 1.2	< 1.0
40 - 470 MHz	dB		< 4.1	< 3.0	< 1.8	< 1.5
470 - 750 MHz	dB		< 5.2	< 4.5	< 3.0	< 2.3
750 - 862 MHz	dB		< 5.4	< 4.5	< 3.0	< 2.3
Tap loss - output						
5 - 40 MHz	dB	8.0 (± 1.0)	11.0 (± 1.2)	14.0 (± 1.2)	17.0 (± 1.2)	20.0 (± 1.2)
40 - 470 MHz	dB	8.0 (± 1.0)	11.0 (± 1.2)	14.0 (± 1.2)	17.0 (± 1.2)	20.0 (± 1.2)
470 - 750 MHz	dB	8.0 (± 1.0)	11.0 (± 1.5)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
750 - 862 MHz	dB	8.0 (± 1.0)	11.0 (± 1.5)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
Isolation - out/tap						
5 - 40 MHz	dB		> 19.0	> 25.0	> 25.0	> 30.0
40 - 470 MHz	dB		> 25.0	> 25.0	> 25.0	> 30.0
470 - 750 MHz	dB		> 25.0	> 25.0	> 25.0	> 30.0
750 - 862 MHz	dB		> 25.0	> 24.0	> 25.0	> 30.0
Isolation - tap/tap						
5 - 40 MHz	dB	> 25.0	> 20.0	> 25.0	> 25.0	> 27.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 27.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 27.0
750 - 862 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 27.0
Return loss (out)						
5 - 40 MHz	dB	> 19.0	> 20.0	> 20.0	> 18.0	> 18.0
40 - 470 MHz	dB	> 19.0	> 20.0	> 20.0	> 18.0	> 20.0
470 - 750 MHz	dB	> 19.0	> 18.0	> 18.0	> 18.0	> 20.0
750 - 862 MHz	dB	> 19.0	> 20.0	> 20.0	> 16.0	> 20.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

Technical data TLT series of 5-1000 MHz outdoor 4-taps

TYPE Art. No.		TLT 423 80251	TLT 426 80252	TLT 429 80253	TLT 432 80254	TLT 435 80255
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1
Outputs	pcs	**4**	**4**	**4**	**4**	**4**
Insertion loss						
5 - 40 MHz	dB	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
40 - 470 MHz	dB	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
470 - 750 MHz	dB	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
750 - 862 MHz	dB	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Tap loss - output						
5 - 40 MHz	dB	23.0 (± 1.2)	26.0 (± 1.2)	29.0 (± 1.2)	32.0 (± 1.2)	35.0 (± 1.2)
40 - 470 MHz	dB	23.0 (± 1.2)	26.0 (± 1.2)	29.0 (± 1.2)	32.0 (± 1.2)	35.0 (± 1.2)
470 - 750 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
750 - 862 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
Isolation - out/tap						
5 - 40 MHz	dB	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
750 - 862 MHz	dB	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
Isolation - tap/tap						
5 - 40 MHz	dB	> 28.0	> 27.0	> 29.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 28.0	> 27.0	> 29.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 28.0	> 27.0	> 29.0	> 30.0	> 30.0
750 - 862 MHz	dB	> 28.0	> 27.0	> 29.0	> 30.0	> 30.0
Return loss (out)						
5 - 40 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
40 - 470 MHz	dB	> 19.0	> 22.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 19.0	> 22.0	> 22.0	> 22.0	> 22.0
750 - 862 MHz	dB	> 19.0	> 22.0	> 22.0	> 22.0	> 22.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

Triax taps - TLT series [outdoor]

Outdoor trunk taps with frequency ranges from 5 to 1000 MHz

- All ports impedance: 75 Ohm
- In-out current passing: 10 A, 60 VAC
- The 100 dB RFI integrity is maintained by the use of tongue and groove design and with a stainless steel mesh RFI gasket
- Continual power through between input and output
- Aluminum alloy housing is finished with a baked acrylic paint to protect from elements
- Neoprene sealed and nickel-plated brass for all 5/8" port entry and taps "F-(f)" port
- Provides uninterrupted power and RF service when the faceplate is removed

Technical data TLT series of 5 - 1000 MHz outdoor 8-taps

TYPE Art. No.		TLT 811 80242	TLT 814 80239	TLT 817 80240	TLT 820 80241
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1
Outputs	pcs	**8**	**8**	**8**	**8**
Insertion loss					
5 - 40 MHz	dB		< 3.4	< 1.8	< 1.2
40 - 470 MHz	dB		< 3.4	< 1.8	< 1.2
470 - 750 MHz	dB		< 4.5	< 2.5	< 2.5
750 - 862 MHz	dB		< 4.5	< 3.0	< 2.5
Tap loss - output					
5 - 40 MHz	dB	11.0 (± 1.0)	14.0 (± 1.2)	17.0 (± 1.2)	20.0 (± 1.2)
40 - 470 MHz	dB	11.0 (± 1.0)	14.0 (± 1.2)	17.0 (± 1.2)	20.0 (± 1.2)
470 - 750 MHz	dB	11.0 (± 1.0)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
750 - 862 MHz	dB	11.0 (± 1.0)	14.0 (± 1.5)	14.0 (± 1.5)	20.0 (± 1.5)
Isolation - out/tap					
5 - 40 MHz	dB		> 23.0	> 25.0	> 27.0
40 - 470 MHz	dB		> 25.0	> 25.0	> 27.0
470 - 750 MHz	dB		> 25.0	> 25.0	> 27.0
750 - 862 MHz	dB		> 25.0	> 25.0	> 27.0
Isolation - tap/tap					
5 - 40 MHz	dB	> 20.0	> 25.0	> 25.0	> 28.0
40 - 470 MHz	dB	> 20.0	> 25.0	> 25.0	> 28.0
470 - 750 MHz	dB	> 20.0	> 25.0	> 25.0	> 28.0
750 - 862 MHz	dB	> 20.0	> 25.0	> 25.0	> 28.0
Return loss (out)					
5 - 40 MHz	dB	> 16.0	> 18.0	> 18.0	> 18.0
40 - 470 MHz	dB	> 16.0	> 20.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 14.0	> 20.0	> 20.0	> 20.0
750 - 862 MHz	dB	> 14.0	> 20.0	> 20.0	> 20.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/Out	In/Out	In/Out	In/Out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg				
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

Technical data TLT series of 5-1000 MHz outdoor 8-taps

TYPE Art. No.		TLT 823 80256	TLT 826 80257	TLT 829 80258	TLT 832 80259	TLT 835 80260
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1
Outputs	pcs	**8**	**8**	**8**	**8**	**8**
Insertion loss						
5 - 40 MHz	dB	< 1.5	< 1.2	< 1.2	< 1.2	< 1.2
40 - 470 MHz	dB	< 1.5	< 1.3	< 1.3	< 1.3	< 1.3
470 - 750 MHz	dB	< 2.2	< 2.0	< 2.0	< 2.0	< 2.0
750 - 862 MHz	dB	< 2.5	< 2.2	< 2.2	< 2.2	< 2.2
Tap loss - output **1 / 2 - 3**						
5 - 40 MHz	dB	23.0 (± 1.2)	26.0 (± 1.2)	29.0 (± 1.2)	32.0 (± 1.2)	35.0 (± 1.2)
40 - 470 MHz	dB	23.0 (± 1.2)	26.0 (± 1.2)	29.0 (± 1.2)	32.0 (± 1.2)	35.0 (± 1.2)
470 - 750 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
750 - 862 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
Isolation - out/tap						
5 - 40 MHz	dB	> 32.0	> 30.0	> 30.0	> 35.0	> 35.0
40 - 470 MHz	dB	> 32.0	> 30.0	> 30.0	> 35.0	> 35.0
470 - 750 MHz	dB	> 32.0	> 30.0	> 30.0	> 35.0	> 35.0
750 - 862 MHz	dB	> 32.0	> 30.0	> 30.0	> 35.0	> 35.0
Isolation - tap/tap						
5 - 40 MHz	dB	> 29.0	> 29.0	> 29.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 29.0	> 29.0	> 29.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 29.0	> 29.0	> 29.0	> 30.0	> 30.0
750 - 862 MHz	dB	> 29.0	> 29.0	> 29.0	> 30.0	> 30.0
Return loss (out)						
5 - 40 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 20.0	> 20.0	> 22.0	> 22.0	> 22.0
750 - 862 MHz	dB	> 20.0	> 20.0	> 22.0	> 22.0	> 22.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/Out	In/Out	In/Out	In/Out	In/Out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

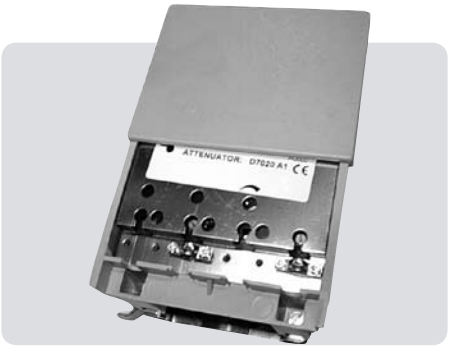
Triax splitters

Indoor splitters with F-connectors in a shielded housing with white plastic cover and only for indoor use.

- TS and TFS are splitters in a plastic housing for indoor mounting.
- Different types with broadband input and one output for DAB and one for TV-FM - see the data below.
- The products are shielded and supplied with F-connectors.
- DC-through power to TV-FM output.
- The TFS 715 are normal indoor TV/FM splitters to be mounted on a wall.

Technical data on Triax splitters

Type			TS 315-2 DC	TFS 220 DAB/TV-FM	TFS 221 DAB/TV-FM	TFS 715-2	TFS 715-3	TFS 715-4
Art. No.			**332323**	**334220**	**334221**	**334202**	**334203**	**334204**
Input 1			VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
Channel/band			2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM
Frequency range		MHz	47 - 862	47 - 862	47 - 862	47 - 862	47 - 862	47 - 862
Splitter type			Inductive					
Through loss								
VHF		dB	4.0	DAB 1.5	DAB 1.5	4.0	6.0	8.0
UHF		dB	4.0	TV-FM 1.5	TV-FM 1.5	4.0	6.0	8.0
Isolation		dB	18			18	18	18
TV-FM		dB		> 20	> 20			
DAB		dB		> 10	> 10			
Number of outputs		pcs	**2**			**2**	**3**	**4**
TV-FM				**1**	**1**			
DAB				**1**	**1**			
DC throughpower				TV-FM	TV-FM			
Output 1			Switchable			DC	DC	DC
Output 2			Switchable			DC	DC	DC
Output 3							DC	DC
Output 4								DC
Connector			S&C	F-con	F-con	F-con	F-con	F-con
Weight		kg		0.150	0.150			
Dimensions	Height	mm		75	75			
	Depth	mm		36	36			
	Width	mm		75	75			
Remarks				DAB ch. 11-13 **216-240 MHz**	DAB ch. 12-13 **223-251 MHz**	DC pass can be removed by cutting PCB	DC pass can be removed by cutting PCB	DC pass can be removed by cutting PCB

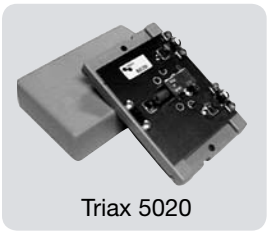


Technical data on Triax splitters

Type Art. No.		S7200 2-splitter 338300	203 B 2-splitter 338106	309 3-splitter 338125	407 3-splitter 338130	102 FF/M 338365	102 MM/F 338366
Input 1		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
Channel/band		2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM
Frequency range	MHz	47 - 862	47 - 862	47 - 862	47 - 862	47 - 862	47 - 862
Splitter type							
Through loss							
VHF	dB	4.0	3.4	6.0	8.0	3.5	3.5
UHF	dB	4.0	3.8	6.0	9.0	3.5	3.5
Isolation	dB	> 20	> 20	> 20	> 20		
TV-FM	dB						
DAB	dB						
Number of outputs	pcs	**2**	**2**	**3**	**4**	**2**	**2**
TV-FM							
DAB							
DC throughpower							
Output 1		Switchable	DC pass can	No	DC	DC	DC
Output 2		Switchable	be removed by	No	DC	DC	DC
Output 3			cutting PCB	No	DC		
Output 4					DC		
Connector		S&C	S&C	S&C	S&C	IEC	IEC
Weight	kg						
Dimensions Height	mm						
Depth	mm						
Width	mm						
Remarks		Outdoor for mastmounting	Indoor	Indoor	Indoor	IEC female	IEC male

Triax attenuators

Variable attenuators (20 dB)
TRIAX variable attenuators are available in types for indoor as well as outdoor mounting.


Triax 5020


D7020 A1

Technical data on Triax attenuators

Type		D7020 A1	5020	753343 var.	VA 20 F
Art. No.		**342000**	**342101**	**316110**	**153600**
Input 1		VHF/UHF	VHF/UHF	UHF	VHF/UHF
Channel/band		2-69 + FM	2-69 + FM	Ch. 21-33/43-60	2-69 + FM
Frequency range	MHz	47 - 862	47 - 862	47 - 862	47 - 862
Insertion loss	dB	1.5-20	1.5-20	2 - 15	0-20
Through loss					
VHF	dB				
UHF	dB				
Number of outputs	pcs	**1**	**1**	**1**	**1**
DC throughpower		Yes	No	Yes	Yes
Connector		S&C	S&C	S&C	F-con
Remarks		Outdoor	Indoor	Centre frequency 608 MHz Channel 33: 470-574 MHz Channel 43: 646-860 MHz	Indoor




Technical data on F-attenuator

Type		F-att. 3 dB	F-att. 6 dB	F-att. 10 dB	F-att. 20 dB
Art. No.		**153710**	**153711**	**153712**	**153713**
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Attenuation	dB	3	6	10	20
Packing size	pcs	1	1	1	1

Technical data on IEC-attenuator

Type		IEC-att. 3 dB	IEC-att. 6 dB	IEC-att. 9 dB	IEC-att. 12 dB	IEC-att. 18 dB	IEC-att. 24 dB
Art. No.		**153720**	**153721**	**153722**	**153723**	**153724**	**153725**
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Attenuation	dB	3	6	9	12	18	24
Packing size	pcs	1	1	1	1	1	1

IFP 529

Battery filter
TRIAX battery filter is intended to power an amplifier through the coax cable from a battery.

Technical data on battery filter/power inserter

TYPE		IFP 529	TPI 01 DC	APS 007
Art. No.		**339529**	**347001**	**336182**
Frequency range	MHz	47-862	47-862	
Inputs	pcs	1	1	
Outputs	pcs	**2**	**1**	
Insertion loss 47-852	dB	2 x 4.0		
5 - 40 MHz	dB			
40 - 470 MHz	dB			
470 - 750 MHz	dB			
750 - 862 MHz	dB			
Tap loss - output 47-852		4.0		
5 - 40 MHz	dB			
40 - 470 MHz	dB			
470 - 750 MHz	dB			
750 - 862 MHz	dB			
Shielding efficiency VHF/UHF	dB			
Hum modulation @ 10 A	dB			
Power pass connection 5/8				
Supply voltage	V	12-24	65	
Fuse		Automatic		
DC-throughpass	A/VAC		2.5 A	
	mA	max. 100		
Connectors		F-con	F-con	
Certification		CE	CE	
Impedance	Ohm	75	75	
Weight	kg			
Dimensions (h x d x w)	mm			
Remarks		Power inserter incl. 1.2m cable with jackplug		Power inserter for cameras

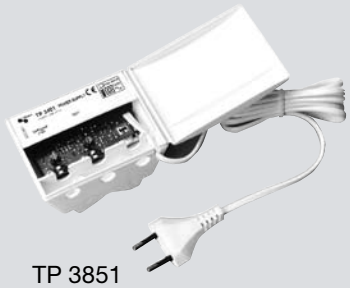
Triax power supplies

NT 50/241

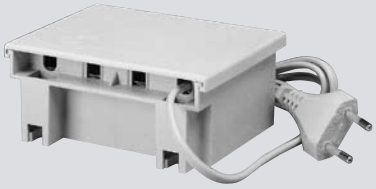
IFP 50x housing

Technical data on Triax power supplies

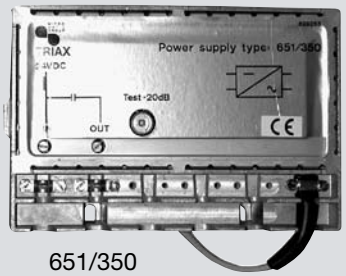
TYPE		NT 50/241	NT 130/241	IFP 501	IFP 502	IFP 503	IFP 504	IFP 505
Art. No.		**336150**	**336154**	**339501**	**339502**	**339503**	**339504**	**339505**
Band		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
Frequency range	MHz	47-862	47-862	47-862	47-862	47-862	47-862	47-862
Inputs	pcs	1	1	1	1	1	1	1
Outputs	pcs	**1**	**1**	**1**	**2**	**1**	**2**	**1**
Through loss	dB	1.0	1.0	1.0	4.0	1.0	4.0	1.0
Voltage	V/DC	+ 24	+ 24	+ 12	+ 12	+ 24	+ 24	**+ 5**
Max. power	mA/DC	50	130	85	85	45	45	45
Main voltage	V/AC	230	230	230	230	230	230	230
Power	W	2	6	3	3	3	3	2
Connectors		IEC	IEC	F-con	F-con	F-con	F-con	F-con
Certification		CE	CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75	75
Weight	kg			0.4	0.4	0.4	0.4	0.4
Dimensions (h x d x w)	mm			61x44x118	61x44x118	61x44x118	61x44x118	61x44x118
Remarks								



TP 3851



602/60



651/350

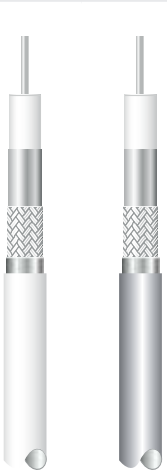
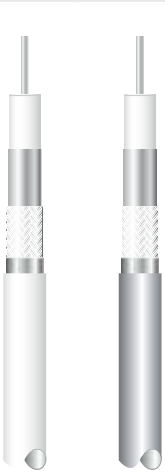
Technical data on Triax power supplies

TYPE		TP 3851	TP 3852	601/60B	602/60B	P601/100	P602/100	651/350
Art. No.		**332303**	**332304**	**336106**	**336121**	**336362**	**336363**	**336350**
Band		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
Frequency range	MHz	47-860	47-860	47-860	47-860	47-860	47-860	47-860
Inputs	pcs	1	1	1	1	1	1	1
Outputs	pcs	**1**	**2**	**1**	**2**	**1**	**2**	**1**
Through loss	dB	0.5	4.0	1.0	4.0	1.0	4.0	1.0/1.5
Voltage	V/DC	+ 12	+ 24	+ 24	+ 24	+ 24	+ 24	+ 24
Max. power	mA/DC	85	85	60	60	100	60	350
Main voltage	V/AC	230	230	230	230	230	230	230
Power	W	2.6	2.6	4.0	4.0	8.0	8.0	15.0
Connectors		S&C	S&C	S&C	S&C	S&C	S&C	S&C
Certification		CE	CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75	75
Weight	kg	0.2	0.2	0.25	0.25	0.25	0.25	
Dimensions (h x d x w)	mm	69x55x94	69x55x94	90x48x115	90x48x115	90x48x115	90x48x115	
Remarks								

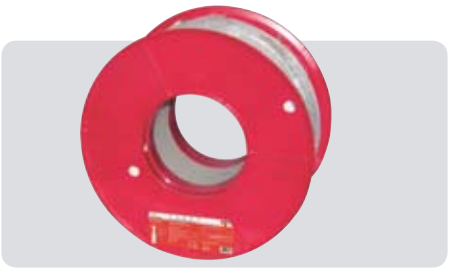
Triax KOKA cable for indoor use

KOKA 100 is a HiQ universal coaxial cable for TV broadcast in-house cabling.
The low attenuation, the optimised shielding and the high return loss predestine the cable for use of both SAT-IF, SMATV and CATV with returnpath applications.
Transfer impedance less than 5 mΩ/m 5-30 MHz.
KOKA 80 premium quality cable for SAT-IF, SMATV and CATV without returnpath applications (not recomended).

Technical data on KOKA 100 (HiQ) and 80 indoor cable

TYPE			KOKA 100 Double shielded		KOKA 80 Double shielded	
Colour			White PVC	Grey LSZH	White PVC	Grey LSZH
Art. No. Coil	100 m		150180		150160	
Reel	100 m		150181		150161	
Reel	250 m		150182		150162	
Drum	500 m			150193		150173
Drum (1000 feet)	305 m					
Centre conductor	Ø mm	**1.13**			**1.02**	
Centre conductor material		Cu blank			Cu blank	
Isolation	Ø mm	**4.8**			**4.8**	
Dielectric		PE foamed			PE foamed	
Screen		AL/PET/ Copolymer 25/12/25			AL/P/AL	
	µm				9/12/9	
Braid - material		24x7x0.11 - CuSn			16x4x0.11 - CuSn	
- construction	Ø mm	5.4			5.4	
- coverage	%	80.1			> 38	
Screening attenuation	dB	105			83	
Anti migration foil	µm	12			12	
Outer sheath		**PVC/LSZH**			**PVC/LSZH**	
Minimum bending radius	Ø mm	35/70			35/70	
Diameter	Ø mm	**6.8**			**6.8**	
Application		Indoor			Indoor	
Electrical data						
Impedance	Ohm	75			75	
Capacitance	pF/m	52			52	
Velocity ratio	%	81			81	
Centre conductor dc resistance	Ohm/km	17.5			22.5	
Outer conductor dc resistance	Ohm/km	11.5			19.8	
Attenuation (at 20°C)						
@ 5 MHz	dB/100m	1.4			1.5	
@ 50 MHz	dB/100m	4.0			4.6	
@ 100 MHz	dB/100m	5.8			6.3	
@ 200 MHz	dB/100m	8.2			9.0	
@ 400 MHz	dB/100m	11.7			13.3	
@ 800 MHz	dB/100m	16.8			18.8	
@ 862 MHz	dB/100m	17.7			19.5	
@ 1000 MHz	dB/100m	19.0			21.1	
@ 1600 MHz	dB/100m	24.5			26.6	
@ 2150 MHz	dB/100m	29.0			30.8	
@ 2400 MHz	dB/100m	30.7			32.9	
Structural Return Loss (SRL)						
@ 5-470 MHz	dB	> 35.0			> 33.0	
@ 470-862 MHz	dB	> 28.0			> 26.0	
@ 862-2400 MHz	dB	> 24.0			> 22.0	
Approval						
EN 50117/CEI 46-1/CEI 12-15		Yes/Yes/Yes			Yes/Yes/Yes	

Triax KOKA cable for indoor use

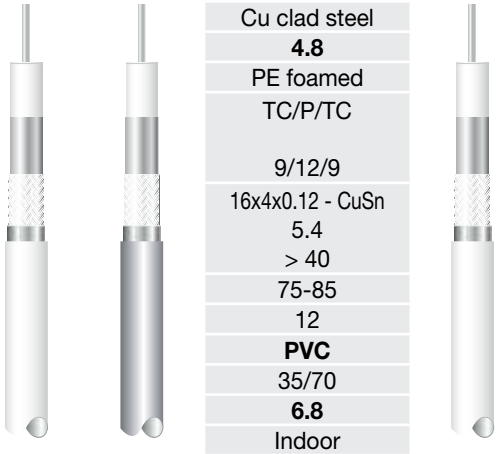


KOKA 6/6 CCS is a low cost universal coaxial cable for TV broadcast in-house cabling

The low attenuation predestine the cable for use of SAT-IF especially and SMATV applications without any return path services as well.

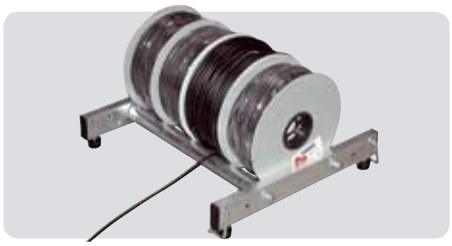
Technical data on KOKA 6 and 6 CCS indoor cable

TYPE			KOKA 6 Double shielded		KOKA 6 CCS Double shielded	
Colour			White PVC	Grey PVC	White PVC	Grey
Art. No.	Coil	100 m	150120			
	Reel	100 m	150121	150131		
	Reel	250 m	150122			
	Drum	500 m				
	Drum (1000 feet)	305 m			150144	
Centre conductor		Ø mm	**1.02**		**1.02**	
Centre conductor material			Cu blank		Cu clad steel	
Isolation		Ø mm	**4.8**		**4.8**	
Dielectric			PE foamed		PE foamed	
Screen			AL/P/AL		TC/P/TC	
		µm	9/12/9		9/12/9	
Braid	- material		16x4x0.12		16x4x0.12 - CuSn	
	- construction	Ø mm	AL 5.4		5.4	
	- coverage	%	> 43		> 40	
Screening attenuation		dB	85		75-85	
Anti migration foil		µm	12		12	
Outer sheath			**PVC**		**PVC**	
Minimum bending radius		Ø mm	35/70		35/70	
Diameter		Ø mm	**6.8**		**6.8**	
Application			Indoor		Indoor	
Electrical data						
Impedance		Ohm	75		75	
Capacitance		pF/m	52		52	
Velocity ratio		%	81		84	
Centre conductor dc resistance		Ohm/km	22.4			
Outer conductor dc resistance		Ohm/km	35.5			
Attenuation (at 20°C)						
@ 5 MHz		dB/100m	1.5		1.5	
@ 50 MHz		dB/100m	4.6		4.6	
@ 100 MHz		dB/100m	6.3			
@ 200 MHz		dB/100m	9.0		9.0	
@ 400 MHz		dB/100m	13.3			
@ 800 MHz		dB/100m	18.8		18.8	
@ 862 MHz		dB/100m	19.5			
@ 1000 MHz		dB/100m	21.1		21.1	
@ 1600 MHz		dB/100m	26.6			
@ 2150 MHz		dB/100m	30.8		30.8	
@ 2400 MHz		dB/100m	32.9		32.9	
Structural Return Loss (SRL)						
@ 5-470 MHz		dB	> 28.0		> 28.0	
@ 470-862 MHz		dB	> 25.0		> 25.0	
@ 862-2400 MHz		dB	> 20.0		> 20.0	
Approval						
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes		Yes/Yes/Yes	



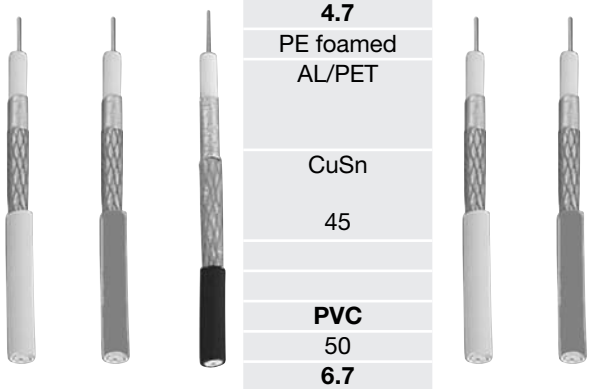
Triax QX cable for indoor use

Triax QX universal coaxial cable for TV broadcast in-house cabling
The good attenuation, shielding and return loss predestine the cable for use of both SAT-IF and SMATV applications



Technical data on QX double shielded indoor cable

TYPE			QX 4S Double shielded			QX 5S Double shielded		
Colour			White PVC	Grey PVC	Black PVC	White PVC	Grey PVC	Black PVC
Art. No.	Cardboard roll	100 m				150008	150007	
	Cardboard roll	200 m	150022	150021				
	Plastic reel	100 m	150053	150052	150054	150056	150055	
	Plastic reel	250 m						
	Plastic reel	500 m						
Centre conductor		Ø mm	**0.8**			**1.1**		
Centre conductor material			Cu blank			Cu blank		
Isolation		Ø mm	**3.7**			**4.7**		
Dielectric			PEE foamed			PE foamed		
Screen			AL/PET/AL			AL/PET		
		µm						
Braid	- material		CuSn			CuSn		
	- construction	Ø mm						
	- coverage	%	56.0			45		
Screening attenuation		dB						
Anti migration foil		µm						
Outer sheath			**PVC**			**PVC**		
Minimum bending radius		Ø mm	35/70			50		
Diameter		Ø mm	**5.3**			**6.7**		
Application			Indoor			Indoor		
Electrical data								
Impedance		Ohm	75			75		
Capacitance		pF/m	55			55		
Velocity ratio		%	84			80		
Centre conductor dc resistance		Ohm/km	38			22		
Outer conductor dc resistance		Ohm/km	40			28		
Attenuation (at 20°C)								
@ 5 MHz		dB/100m	2.1			1.3		
@ 50 MHz		dB/100m	6.0			4.2		
@ 200 MHz		dB/100m	11.0			8.4		
@ 470 MHz		dB/100m	17.5			12.8		
@ 600 MHz		dB/100m	20.5			14.5		
@ 800 MHz		dB/100m	23.1			17.5		
@ 1000 MHz		dB/100m	26.2			20.3		
@ 1350 MHz		dB/100m	31.9			23.6		
@ 1750 MHz		dB/100m	35.8			27.3		
@ 2050 MHz		dB/100m	38.7			29.5		
@ 2400 MHz		dB/100m	41.9			32.0		
Structural Return Loss (SRL)								
@ 5-470 MHz		dB	> 30.0			> 30.0		
@ 470-862 MHz		dB	> 25.0			> 25.0		
@ 862-2400 MHz		dB	> 18.0			> 20.0		
Approval								
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes			Yes/Yes/Yes		



Triax mini and multi cable for indoor use

Technical data on indoor mini cable and 18 multi 5 cable

TYPE			Mini cable Double shielded			18 multi 5 cable Triple shielded		
Colour			White PVC	Grey PVC	Black PVC	White PVC	Grey PVC	Black PVC
Art. No.	Cardboard roll	100 m	150000					
	Cardboard roll	200 m				150075 on wood reel		
	Plastic reel	100 m						
	Plastic reel	250 m						
	Plastic reel	500 m						
Centre conductor		Ø mm	**0.41**			**1.02**		
Centre conductor material			Cu blank			Cu blank		
Isolation		Ø mm	**1.9**			**4.8**		
Dielectric			PEE foamed			PEE foamed		
Screen		µm	AL/PET			AL/PET/AL		
Braid	- material		CuSn			CuSn		
	- construction	Ø mm						
	- coverage	%	58.0			40		
Screening attenuation		dB						
Anti migration foil		µm						
Outer sheath			**PVC**			**PVC**		
Minimum bending radius		Ø mm	20			100		
Diameter		Ø mm	**3.6**			**20.5**		
Application			Indoor			Indoor		
Electrical data								
Impedance		Ohm	75			75		
Capacitance		pF/m	56			52		
Velocity ratio		%	82			84		
Centre conductor dc resistance		Ohm/km	32			22		
Outer conductor dc resistance		Ohm/km	32			26		
Attenuation (at 20°C)								
@ 5 MHz		dB/100m	1.5			1.5		
@ 50 MHz		dB/100m	11.0			4.6		
@ 200 MHz		dB/100m	21.0			9.0		
@ 470 MHz		dB/100m	33.9			14.4		
@ 600 MHz		dB/100m	37.1			16.3		
@ 800 MHz		dB/100m	44.0			18.8		
@ 1000 MHz		dB/100m	49.9			21.1		
@ 1350 MHz		dB/100m	58.0			24.6		
@ 1750 MHz		dB/100m	66.0			28.0		
@ 2050 MHz		dB/100m	80.5			30.3		
@ 2400 MHz		dB/100m	87.1			32.9		
Structural Return Loss (SRL)								
@ 5-470 MHz		dB	> 20.0			> 30.0		
@ 470-862 MHz		dB	> 18.0			> 25.0		
@ 862-2400 MHz		dB	> 16.0			> 20.0		
Approval								
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes			Yes/Yes/Yes		

Triax KOKA cable for outdoor use

KOKA 100 is a HiQ universal coaxial cable for TV broadcast in-house.
The low attenuation, the optimised shielding and the high return loss predestine the cable for use of both SAT-IF, SMATV and CATV with returnpath applications.
Transfer impedance less than 5 mΩ/m 5-30 MHz

Technical data on KOKA 100 (HiQ), 80 and 6 CCS outdoor cable

TYPE		KOKA 100 Double shielded	KOKA 80 Double shielded	KOKA 6 CCS Double shielded
Colour		Black PE	Black PE	Black PE
Art. No. Coil	100 m			
Reel	100 m	150186	150166	
Reel	250 m	150187	150167	
Drum	500 m			
Drum (1000 feet)	305 m			150149
Centre conductor	Ø mm	**1.13**	**1.02**	**1.02**
Centre conductor material		Cu blank	Cu blank	Cu clad steel
Isolation	Ø mm	**4.8**	**4.8**	**4.8**
Dielectric		PE foamed	PE foamed	PE foamed
Screen		AL/PET/ Copolymer	AL/P/AL	TC/P/TC
	µm	25/12/25	9/12/9	9/12/9
Braid - material		24x7x0.11 - CuSn 5.4	16x4x0.11 - CuSn 5.4	16x4x0.12 AL 5.4
- construction	Ø mm		> 38	> 40
- coverage	%	80.1		
Screening attenuation	dB	90-105	75-90	75-90
Anti migration foil	µm	12	12	12
Outer sheath		**PE**	**PE**	**PE**
Minimum bending radius	Ø mm	35/70	35/70	35/70
Diameter	Ø mm	**6.8**	**6.8**	**6.8**
Application		Outdoor	Outdoor	Outdoor
Electrical data				
Impedance	Ohm	75	75	75
Capacitance	pF/m	52	52	52
Velocity ratio	%	84	84	84
Centre conductor dc resistance	Ohm/km	17.5		
Outer conductor dc resistance	Ohm/km	11.5		
Attenuation (at 20°C)				
@ 5 MHz	dB/100m	1.4	1.5	1.5
@ 50 MHz	dB/100m	4.0	4.6	4.6
@ 100 MHz	dB/100m	5.8		
@ 200 MHz	dB/100m	8.2	9.0	9.0
@ 400 MHz	dB/100m	11.7		
@ 800 MHz	dB/100m	16.8	18.8	18.8
@ 862 MHz	dB/100m	17.7		
@ 1000 MHz	dB/100m	19.0	21.1	21.1
@ 1600 MHz	dB/100m	24.5		
@ 2150 MHz	dB/100m	29.0	30.8	30.8
@ 2400 MHz	dB/100m	30.7	32.8	32.8
Structural Return Loss (SRL)				
@ 5-470 MHz	dB	> 35.0	> 33.0	> 28.0
@ 470-862 MHz	dB	> 28.0	> 26.0	> 25.0
@ 862-2400 MHz	dB	> 24.0	> 22.0	> 20.0
Approval				
EN 50117/CEI 46-1/CEI 12-15		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Burial		Yes		

Triax RG 11/Bedea cable for outdoor use

Durable and effectively shielded, quality cables offering high stability in many years to come. With meter marking and physical foam dielectric.
All cables meet European standard EN 500117. Outdoor cables must be unbroken, and cables under ground must be a least 45 cm below the surface.

Technical data on RG 11 and Bedea 110 double shielded outdoor cable

TYPE			RG 11 Double shielded		Bedea 110 KU (1.1/7.3) Double shielded
Colour			Black PE	White LZW	Black PE
Art. No.	Cardboard roll	100 m			
	Cardboard roll	200 m			
	Plastic reel	100 m	Wood drum 150062	150098	150030
	Plastic reel	250 m			
	Plastic reel	500 m		150099	150031
Centre conductor		Ø mm	**1.7**		**1.1**
Centre conductor material			Cu blank		Cu blank
Isolation		Ø mm	**7.2**		**4.9**
Dielectric			PEE foamed		PE foamed
Screen			Al/PET/Al		Cu foil
		µm			
Braid	- material		CuSn		Cu
	- construction	Ø mm			
	- coverage	%	56.0		
Screening attenuation		dB			
Anti migration foil		µm			
Outer sheath			**PE**		**PE**
Minimum bending radius		Ø mm	100/120		70
Diameter		Ø mm	**10.25**		**7.3**
Application			Outdoor		Outdoor
Electrical data					
Impedance		Ohm	75		75
Capacitance		pF/m	53		55
Velocity ratio		%	84		81
Centre conductor dc resistance		Ohm/km	7.8		18
Outer conductor dc resistance		Ohm/km	9.7		11
Attenuation (at 20°C)					
@ 5 MHz		dB/100m	0.8		1.3
@ 50 MHz		dB/100m	2.6		4.1
@ 200 MHz		dB/100m	5.5		8.2
@ 470 MHz		dB/100m	8.9		13.9
@ 600 MHz		dB/100m	10.0		15.7
@ 800 MHz		dB/100m	11.4		18.1
@ 1000 MHz		dB/100m	13.5		20.2
@ 1350 MHz		dB/100m	15.6		24.9
@ 1750 MHz		dB/100m	18.6		28.4
@ 2050 MHz		dB/100m	20.5		30.7
@ 2400 MHz		dB/100m	22.7		33.2
Structural Return Loss (SRL)					
@ 5-470 MHz		dB	> 30.0		> 30.0
@ 470-862 MHz		dB	> 25.0		> 25.0
@ 862-2400 MHz		dB	> 20.0		> 20.0
Approval					
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes		Yes/Yes/Yes
Burial			Yes (black)		Yes

Triax multi cable for outdoor use

Multi cables for networks
Triple shielded RG 6 multi cables where individual cable colours can be used through the whole system to facilitate proper connection.

Technical data on triple shielded outdoor multi cable

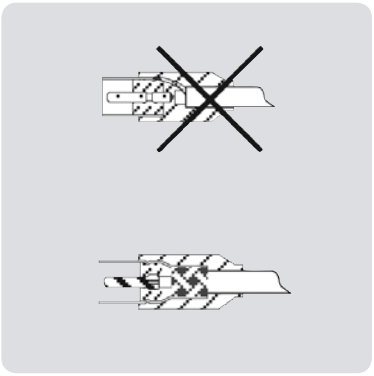
TYPE			18 multi 4 cable Triple shielded		18 multi 9 cable Triple shielded	
Colour			Black PE		White PVC	
Art. No.	Wood drum	50 m			150078	
	Wood drum	100 m	150074		150079	
	Wood drum	250 m				
	Wood drum	500 m				
Centre conductor		Ø mm	**1.02**		**1.02**	
Centre conductor material			Cu blank		Cu blank	
Isolation		Ø mm	**4.6**		**4.6**	
Dielectric			PEE foamed		PEE foamed	
Screen			Al/PET/Al		Al/PET/Al	
		µm				
Braid	- material		CuSn		CuSn	
	- construction	Ø mm				
	- coverage	%	40.0		40.0	
Screening attenuation		dB				
Anti migration foil		µm				
Outer sheath			**PE**		**PE**	
Minimum bending radius		Ø mm	100		100	
Diameter		Ø mm	**19.0**		**25.0**	
Application			Outdoor		Outdoor	
Electrical data						
Impedance		Ohm	75		75	
Capacitance		pF/m	52		52	
Velocity ratio		%	84		84	
Centre conductor dc resistance		Ohm/km	22		22	
Outer conductor dc resistance		Ohm/km	26		26	
Attenuation (at 20°C)						
@ 5 MHz		dB/100m	1.5		1.5	
@ 50 MHz		dB/100m	4.6		4.6	
@ 200 MHz		dB/100m	9.0		9.0	
@ 470 MHz		dB/100m	14.4		14.4	
@ 600 MHz		dB/100m	16.3		16.3	
@ 800 MHz		dB/100m	18.8		18.8	
@ 1000 MHz		dB/100m	21.1		21.1	
@ 1350 MHz		dB/100m	24.6		24.6	
@ 1750 MHz		dB/100m	28.0		28.0	
@ 2050 MHz		dB/100m	30.3		30.3	
@ 2400 MHz		dB/100m	32.9		32.9	
Structural Return Loss (SRL)						
@ 5-470 MHz		dB	> 30.0		> 30.0	
@ 470-862 MHz		dB	> 25.0		> 25.0	
@ 862-2400 MHz		dB	> 20.0		> 20.0	
Approval						
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes		Yes/Yes/Yes	

Double screen fly leads

Fly leads for TV & radio
75 Ohm white double-screened cable with coax IEC male and female connectors.
The connectors are crimped to ensure screening better than 70 dB.

Technical data on quality double shielded fly leads

TYPE Art. No.		RF 1.5 IEC male/female 153400	RF 2.5 IEC male/female 153401	RF 5.0 IEC male/female 153402	RF 7.5 IEC male/female 153403	RF 10.0 IEC male/female 153404
Inner conductor	mm	0.8	0.8	0.8	0.8	0.8
Dielectric		PE	PE	PE	PE	PE
Outer sheath	mm	5.8	5.8	5.8	5.8	5.8
Min. bending radius	mm	60	60	60	60	60
Colour sheath		White	White	White	White	White
Attenuation at 100 m 50 MHz 2150 MHz	 dB dB	 5.5 42.0	 5.5 42.0	 5.5 42.0	 5.5 42.0	 5.5 42.0
Standards		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Length	cm	150	250	500	750	1000
Remarks		Single pieces in plastic bag	Single pieces in plastic bag	Single pieces in plastic bag	Single pieces in plastic bag	Single pieces in plastic bag



Cable stand Art. No. 150110

Triax HDMI cable

- Professional grade HDMI cable for a perfect high definition connection.
- Sealed moulded diecast connectors.
- Gold plated contacts for quality transmission and tarnish resistance.
- EMI interference suppressed.
- Compatible with all HD resolutions.
- Ideal for connecting SkyHD boxes, DVD players and all other HDMI equipped AV equipment.

Technical data HDMI cable

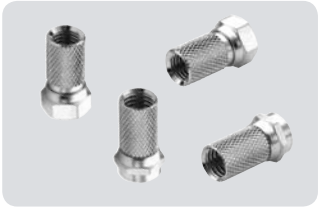
TYPE		HDMI cable 2 m
Art. No.		153411
Length	m	2
Ferrite		2
Signal pairs		
- conductor		Tinned copper
- conductor size	AWG	28
- insulation material		Foamed PE
- Insulation core colour		White/Green White/Brown White/Blue White/Red White/Green
Drain wire		Tinned copper
Drain wire size	AWG	28
Shield		AL/Mylar/Mylar
Signal wire		
- conductor		Tinned copper
- conductor size	AWG	28
- insulation material		HDPE
- Insulation core colour		White Green Orange Yellow Red Purple
Outer shield		
- conductor	shield 1	Aluminium mylar
- conductor size	shield 2	Tinned copper (braiding)
Outer shield		
- overall diameter	mm	Ø 7.3
- material		PVC
Electrical data		
Differential impedance	Ohm	100 (± 10%)
Max differential delay	ns/m	5.05
Max intra - pair skew	ps	151
Far-end crosstalk (@ 1-5000 MHz)	dB	- 26
Connector		
Pin		19
Metal shell		Parl chrome plated
Connector impedance	Ohm	100 (± 15%)

Matching connectors and tools - for your RF cable

Reduces installation time as the connectors have no loose parts.
Designed for a very high degree of pull strength.

Suitable connector

Type of cable	KOKA 100	KOKA 80	KOKA 6
Crimp connector part no.			
100 pcs. box ex. logo	153200	153200	153200
100 pcs. box	153201	153201	153201
100 pcs. box [EPA]	153202	153202	153202
25 pcs. box [EPA]			
50 pcs. box			
Compression connector			
100 pcs. box	153220	153220	153220
50 pcs. box			
5 pcs. box			
1 pcs.			
Twist-on connector			
100 pcs. box	153073	153073	153073
5 pcs. box	153053	153053	153053
1 pcs.			



Tools for professional cable installation

Suitable tooling

Type of cable	KOKA 100	KOKA 80	KOKA 6
Stripping tool			
Type **K** - 153602	X	X	X
Crimp tool			
Crimp connector	A	A	A
Compression connector	E	E	E
Twist-on connectors			

F-connectors for drop cables

One-piece crimp connectors

Reduces installation time as the connectors have no loose parts.
Designed for a very high degree of pull strength

TYPE		F-crimp 4.9/8.4	F-crimp 4.9/8.4	F-crimp 4.9/8.1 (EPA)	F-crimp 5.1/8.4
Art. No.	100 pcs	153200	153201	153202	153203
Remarks		Without logo for RG 6	for RG 6	Rubber sealing for RG 6	For triple shielded

TYPE		F-crimp 5.1/8.8	F-crimp 5.3/8.4	F-crimp 3.7/6.4
Art. No.	100 pcs	153211	153240	153204
Remarks		for 110 KU (1.1/7.3)	for QX 5	for QX 4

TYPE		RG11 7.6/11.7	RG11 EPA 7.6/11.5
Art. No.	25 pcs 50 pcs	153231	153230
Remarks		for RG 11	Rubber sealing for RG 11

Water resistant compression types for outdoor use:

The tight interface effectively seals the cable and prevents corrosion from damaging the RF shielding abilities. O-rings inside prevent moisture ingress through the interface part of the connector.

TYPE		F-compression CX3 - 4.9	F-compression CX3 - 5.1	F-compression CX3 - 7.5
Art. No.	100 pcs	153220	153221	153222
Remarks		RG 6 cables - use together with tooling no. 153603	RG 6 triple shielded - use together with tooling no. 153603	RG 11 cables - use together with tooling no. 153603

Twist-on connectors

TYPE		F-con mini cable	F-con 5 mm	F-con 6.8 mm	F-con 7.2 mm
Art. No.	5 pcs 100 pcs	153049	153048 153072	153053 153073	153052 153074
Outer cable diameter	mm	3.6	5.2	6.8	7.2
Remarks		for mini cables	for QX 4	for QX 5	for 110 KU

IEC crimp connectors

TYPE		IEC-crimp Male	IEC-crimp Female
Art. No.	100 pcs	153030	153031
Remarks		for RG 6 cables Crimp tooling no. 153607	for RG 6 cables Crimp tooling no. 153607

F- grounding block

TYPE		F female - block	F female - HQ block
Art. No.	1 pcs	153597	153599

IEC coax connectors

TYPE		RZ 20 male White	RZ 20 female White	Coax male Angle (grey)	Coax female Angle (grey)	Coax male Angle (white)	Coax female Angle (white)
Art. No.	1 pcs 10 pcs	153033	153038	153032	153035	153042	153043






IEC coax connectors (high shielded)

TYPE		Coax male Angle	Coax female Angle	Plastic cover White		F/IEC Male Angle	F/IEC Female Angle
Art. No.	1 pcs 10 pcs	153021	153022	153017		153550	153551





IEC adaptors

TYPE		IEC male to F-type male	IEC female to F-type male	F female to IEC male	F male to IEC female
Art. No.	1 pcs	153610	153611	153613	153614




F adaptors

TYPE		F female snap adaptor	F angle adaptor	F male - male	F female - female
Art. No.	5 pcs	153612	153592	153596	153593

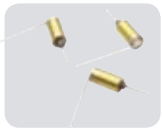



F terminator

TYPE		F - R75 terminator	RTF 75-DC terminator
Art. No.	10 pcs	153054	364025
Remarks			


RF terminator

TYPE		R75 - 75Ω terminator	R1000 - 75Ω terminator
Art. No.	5 pcs	342503	342504
Remarks		TD-outlets	TOU-outlets




Tools for professional cable mounting

Tools for stripping, crimping and mounting

The most efficient and stable connection between cable and connector is obtained, when crimping is done in one, swift operation (no re-crimping) and with a tool in the exact, right size. Triax's range of F-connector tools is easy to use and reduces stripping, crimping and mounting to a few, quick and precise operations.

Art. No. 153607
CRP 106H crimp tool
- is for .324" (8.2 mm) and .360" (9.2 mm) one-piece F-connectors and EPA typically used with RG 6 and QX 5 cables

Art. No. 153609
CRP 106F crimp tool
- is for .324" (8.2 mm) and .475" (11.9 mm) one-piece F-connectors typically used with RG 11 cables

Art. No. 153605
Crimp tool universal
- is for two-piece F-connectors.

Art. No. 153603
Compression tool universal RG 6/RG 11
is used for compression type F-connectors for outdoor use and ensures waterresistant connections.

Art. No. 153602
Stripping tools:
With rotary cable strippers, preparation of cable is reduced to a single operation resulting in precise stripping in the dimensions matching exactly with the connector.
The non-expensive stripping tools are pre-adjusted for RG 6 and RG 11 cables respectively.

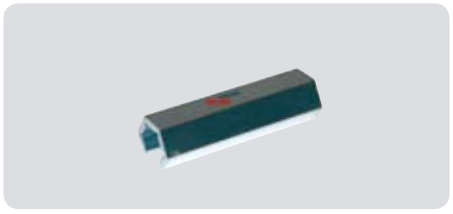
Art. No. 153601

Art. No. 153633
Mounting tool for F-connectors:
The plastic handle gives you a good grip of the connector and is more convenient to work with than the metal types of mounting tools.
Especially for one-piece and compression type of F-connectors.

Art. No. 153634
Cable support tool:
While mounting the connector this unique rubber tool gives you a good grip of the cable, and with no risk of damaging the cable.
Support cables with dimensions 3-12 mm.

Art. No. 153606
Mounting T-tool:
With female thread. Efficient for two-piece and twist-on types of F-connectors.

Art. No. 153632
Torque wrench spanner:
The spanner ensures a proper installation in accordance with SCTE standards, minimizing the risk of heavy screening leakage.
When using F- connectors outdoors SCTE recommends a torque of 3,4 - 5,6 Nm.



Art. No. 153608
TRIAX F-key:
Indispensable to anyone working with F-connectors

Triax isolator (DC blocker) and couplings

Ground isolator (DC blocker)

TYPE		Ground Isolator - SAT	Ground Isolator - RF
Art. No.	1 pcs	153571	153572
Insertion loss 5-470 MHz	dB	1.0	1.0
Insertion loss 470-1000 MHz	dB	1.5	1.5
Insertion loss 1000-1750 MHz	dB	2.5	
Insertion loss 1750-2400 MHz	dB	3.5	

IEC coax gather

TYPE		Coax coupling Grey	Coax coupling White
Art. No.	1 pcs	153051	153055

Cable-Con cable assembly kit

TYPE		CC-SP 01 cable assembly kit	CC-SP 02 cable assembly kit	CC-SP 04 cable assembly kit
Art. No.	1 pcs	153540	153542	153544
Cable diameter	mm	7	10	15
Remarks		Complete set with coupling and crimp flex	Complete set with coupling and crimp flex	Complete set with coupling and crimp flex

Cable assembly kit

TYPE		Triatan 18-05 cable assembly kit	Triatan 18-10 cable assembly kit
Art. No.	1 pcs	590205	153542
Cable diameter	mm	7	10
Remarks		Complete kit for coupling with mould and form	Complete kit for coupling with mould and form

Power cable and electricity articles

Loudspeaker and power cable

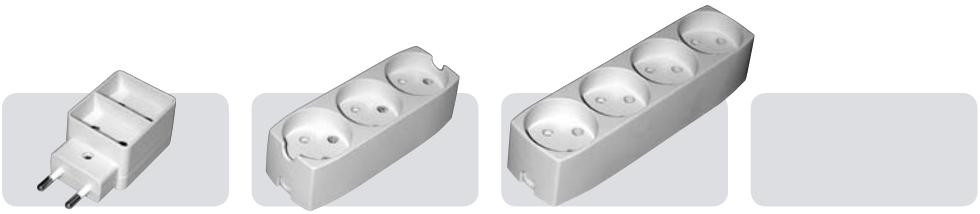
TYPE		2 x 0.5 ❑ grey loudspeaker cable	2 x 0.5 ❑ white loudspeaker cable	2 x 0.75 ❑ grey PKLF power cable	2 x 0.75 ❑ white PKLF power cable
Art. No.					
Plastic drum	100 m	152015	152010	152003	152004
Remarks		with marking	with marking	with marking	with marking

Power plug

TYPE		Male power plug Type 12 - grey	Female power plug Type 22 - grey	Power coupling C4012 (12 pcs.)
Art. No.	1 pcs	153300	153310	153616
Remarks		with pull relief	with pull relief	

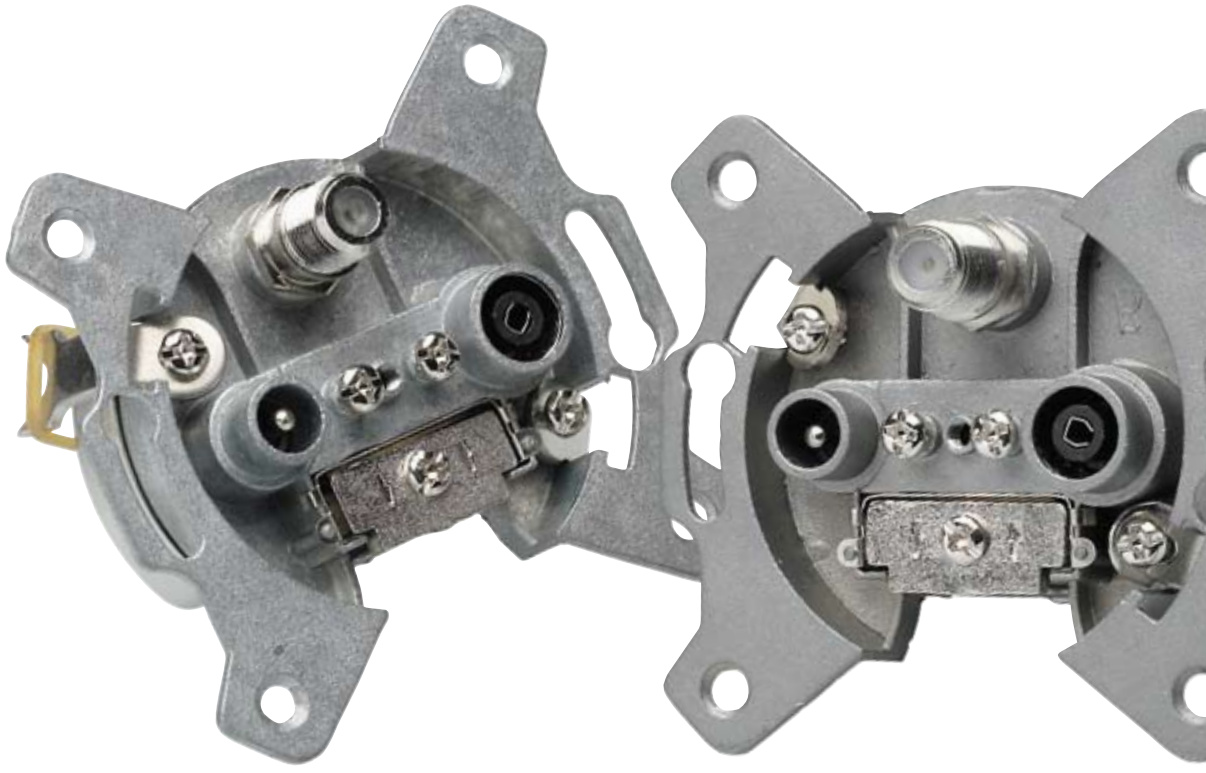
Power outlet point

TYPE		2-way point Type 43 - grey	3-way point Type 74 - grey	4-way point Type 71 - grey
Art. No.	1 pcs	153320	153322	153340
Remarks			for 3 round plugs - with pull relief	for 4 round plugs - with pull relief



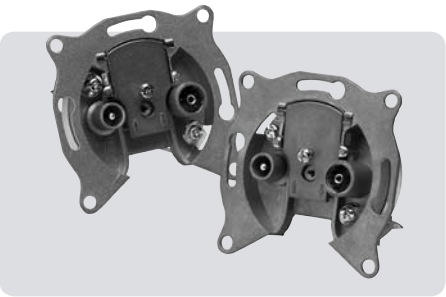
Triax outlets

Antenna systems >> **Outlets**	
TOU series	
- standard, multimedia, satellite	214 - 218
FUGA series	
- standard, multimedia, satellite	219 - 222
- special TD-outlets	223
OPUS series	
- standard, multimedia, satellite	224
Triax UK series	225
Triax GAD series	226 - 227
Triax GRID series	228 - 229
Accessories	
TOU covers, frames, terminators	230
FUGA covers, frames, terminators	231



Triax TOU tv/radio outlets

Triax TOU standard tv/radio high-quality outlets
The Triax TOU series of outlets is made of diecast aluminium, the coax IEC connectors fulfil the DIN 45325 and IEC 169 standards. The outlets can be built into a Ø60 mm round wall box or surface mounted by means of a TOU frame.



TOU tv/radio outlet housing

Technical data 5-862 MHz standard outlets

TYPE **Art. No.** **- incl. cover and frame** **- excl. cover and frame**		**TOU - 1DC terminated** **1 pcs** **1 pcs** **303620**	**TOU - 1 terminated** **303621**	**TOU - 1FI terminated** **303619**	**TOU - 1FB terminated** **303664**	**TOU - 4 loop through** **303624**
Outputs		TV - Radio	TV - Radio	TV - Radio	TV - Radio	TV - Radio
Frequency range						
TV	MHz	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 2150	5 - 74/120 - 2150	5 - 74/120 - 862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
Through loss						
TV	dB					4.0
Radio	dB					4.0
Tap loss						
TV	dB	1.5	1.5	2.0	2.0	4.5
Radio	dB	2.0	2.0	2.5	2.5	5.5
Isolation						
TV-radio	dB	>10.0	>10.0	>15.0	>15.0	> 10.0
Out-TV	dB					> 15.0
Out-Radio	dB					> 20.0
Return loss *)						
TV EN 50083-4	dB	Cat. C	Cat. C	Cat. C	Cat. C	Cat. C
Radio EN 50083-4	dB	Cat. D	Cat. D	Cat. D	Cat. D	Cat. D
Shielding factor						
VHF	dB	> 85.0	> 85.0	> 85.0	> 85.0	> 85.0
UHF	dB	> 75.0	> 75.0	> 75.0	> 75.0	> 75.0
Connectors						
TV		IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
DC through		TV	No	TV	???	No
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.146	0.146	0.146	0.146	0.146
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60	Ø60	Ø60
Remarks		Please refer to page 230 for cover, frame and terminators				

*) According to CENELEC:
B: 5-40 MHz > 18 dB, 40-862 MHz min. 18 dB - 1.5/oct.
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TOU standard tv/radio high-quality outlets

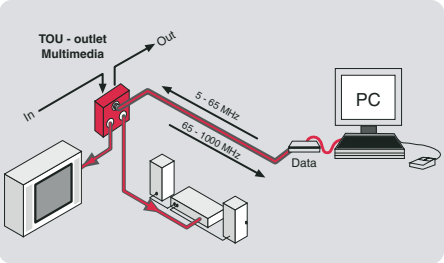
Technical data 5-862 MHz standard outlets

TYPE Art. No. - incl. cover and frame - excl. cover and frame		TOU - 7 loop through 1 pcs 1 pcs 303627	TOU - 10 loop through 303630	TOU - 14 loop through 303614	TOU - 20 loop through 303629	TOU - 23 loop through 303323
Outputs		TV - Radio	TV - Radio	TV - Radio	TV - Radio	TV - Radio
Frequency range						
TV	MHz	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
Through loss						
TV	dB	2.5	1.5	1.5	1.0	1.0
Radio	dB	2.5	1.5	1.5	1.0	1.0
Tap loss						
TV	dB	7.5	10.0	14.0	20.0	23.0
Radio	dB	7.5	11.0	15.0	20.0	23.0
Isolation						
TV-radio	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
TV-out	dB	> 18.0	> 25.0	> 25.0	> 25.0	> 25.0
Radio-out	dB	> 30.0	> 30.0	> 30.0	> 30.0	> 30.0
Return loss *)						
TV EN 50083-4	dB	Cat. C	Cat. C	Cat. C	Cat. C	Cat. C
Radio EN 50083-4	dB	Cat. D	Cat. D	Cat. D	Cat. D	Cat. D
Shielding factor						
VHF	dB	> 85.0	> 85.0	> 85.0	> 85.0	> 85.0
UHF	dB	> 75.0	> 75.0	> 75.0	> 75.0	> 75.0
Connectors						
TV		IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
DC through		No	No	No	No	No
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.146	0.146	0.146	0.146	0.146
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60	Ø60	Ø60
Remarks		Please refer to page 230 for cover, frame and terminators				

*) According to CENELEC:
B: 5-40 MHz > 18 dB, 40-862 MHz min. 18 dB - 1.5/oct.
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TOU multimedia, tv/radio outlets

Triax TOU loop through multimedia, tv/radio high-quality outlets
The Triax TOU series of outlets is made of diecast aluminium, the coax IEC connectors fulfil the DIN 45325 and IEC 169 standards. The outlets can be built into a Ø60 mm round wall box or surface mounted by means of a TOU frame.



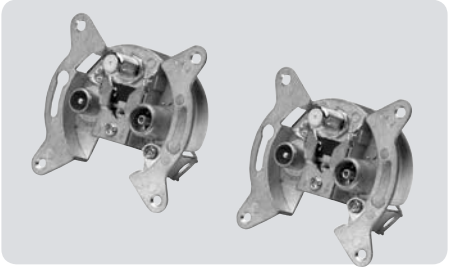
TOU multimedia outlet housing

Technical data loop through multimedia outlets - Data 5-65 MHz

TYPE Art. No. - incl. cover and frame - excl. cover and frame	1 pcs 5 pcs	TOU - 8DL loop through 302636 302686	TOU - 10DL loop through 302637 302687	TOU - 13DL loop through 302638 302688	TOU - 17DL loop through 302639 302689
Outputs		TV - Radio Data	TV - Radio Data	TV - Radio Data	TV - Radio Data
Frequency range					
TV	MHz	125-862	125-862	125-862	125-862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
Data	MHz	5-1000	5-1000	5-1000	5-1000
Through loss					
TV	dB	3.8	3.0	2.0	1.5
Radio	dB	3.8	3.0	2.0	1.5
Data	dB	3.8	3.0	2.0	1.5
Tap loss					
TV	dB	8.5	11.5	13.5	17.5
Radio	dB	9.5	11.5	14.5	18.0
Data	dB	8.5	10.5	13.5	17.5
Isolation					
Data-Radio 5-65/65/862	dB	≥ 60/ ≥ 25	≥ 60/ ≥ 25	≥ 60/ ≥ 25	≥ 60/ ≥ 25
Data-TV 5-65/65/862	dB	≥ 60/ ≥ 25	≥ 60/ ≥ 25	≥ 60/ ≥ 25	≥ 60/ ≥ 25
Data out	dB	≥ 22	≥ 22	≥ 22	≥ 22
Radio-TV	dB	≥ 20	≥ 20	≥ 20	≥ 20
TV-out	dB	≥ 25	≥ 25	≥ 25	≥ 25
Radio-out	dB	≥ 25	≥ 25	≥ 25	≥ 25
Return loss *)					
TV EN 50083-4	dB	Cat. C	Cat. C	Cat. C	Cat. C
Radio EN 50083-4	dB	Cat. D	Cat. D	Cat. D	Cat. D
Data EN 50083-4	dB	Cat. B	Cat. B	Cat. B	Cat. B
Shielding factor					
VHF	dB	> 85	> 85	> 85	> 85
UHF	dB	> 75	> 75	> 75	> 75
Connectors					
TV Radio Data		IEC-male IEC-female F-female	IEC-male IEC-female F-female	IEC-male IEC-female F-female	IEC-male IEC-female F-female
DC through		No	No	No	No
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75	75
Weight	kg	0.165	0.165	0.165	0.165
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60	Ø60
Remarks		Please refer to page 230 for cover, frame and terminators			

*) According to CENELEC:
B: 5-40 MHz > 18 dB, 40-862 MHz min. 18 dB - 1.5/oct.
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TOU multimedia, tv/radio outlets



Triax TOU loop through multimedia, tv/radio high-quality outlets
The Triax TOU series of outlets is made of diecast aluminium, the coax IEC connectors fulfil the DIN 45325 and IEC 169 standards. The outlets can be built into a Ø60 mm round wall box or surface mounted by means of a TOU frame.

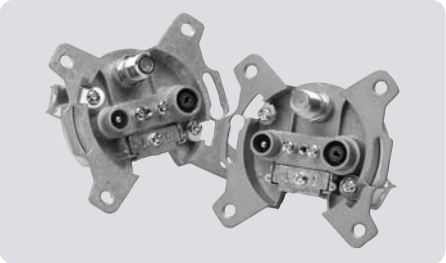
Technical data terminated multimedia outlets - Data 5-65 MHz

TYPE **Art. No.** **- incl. cover and frame** **- excl. cover and frame**		**TOU - 4DT terminated** **1 pcs** **302630** **5 pcs** **302680**	**TOU - 8DT terminated** **302631** **302681**	**TOU - 10DT terminated** **302632** **302682**
Outputs		TV - Radio Data	TV - Radio Data	TV - Radio Data
Frequency range				
TV	MHz	125-862	125-862	125-862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108
Data	MHz	5-1000	5-1000	5-1000
Through loss				
TV	dB			
Radio	dB			
Data	dB			
Tap loss				
TV	dB	4.5	2.5	2.0
Radio	dB	4.5	2.5	2.0
Data	dB	4.0	8.0	10.0
Isolation				
Data-Radio 5-65/65/862	dB	≥ 50/ ≥ 25	≥ 50/ ≥ 25	≥ 50/ ≥ 25
Data-TV 5-65/65/862	dB	≥ 60/ ≥ 22	≥ 60/ ≥ 22	≥ 60/ ≥ 22
Data out	dB			
Radio-TV	dB	≥ 20	≥ 20	≥ 20
TV-out	dB			
Radio-out	dB			
Return loss *)				
TV EN 50083-4	dB	Cat. C	Cat. C	Cat. C
Radio EN 50083-4	dB	Cat. D	Cat. D	Cat. D
Data EN 50083-4	dB	Cat. B	Cat. B	Cat. B
Shielding factor				
VHF	dB	> 85	> 85	> 85
UHF	dB	> 75	> 75	> 75
Connectors				
TV		IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female
Data		F-female	F-female	F-female
DC through		No	No	No
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75
Weight	kg	0.165	0.165	0.165
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60
Remarks		Please refer to page 230 for cover, frame and terminators		

*) According to CENELEC:
B: 5-40 MHz > 18 dB, 40-862 MHz min. 18 dB - 1.5/oct.
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TOU satellite, tv & radio outlets

Triax TOU loop through satellite, tv/radio high-quality outlets
The Triax TOU series of outlets is made of diecast aluminium, the coax IEC connectors fulfil the DIN 45325 and IEC 169 standards. The outlets can be built into a Ø60 mm round wall box or surface mounted by means of a TOU frame.



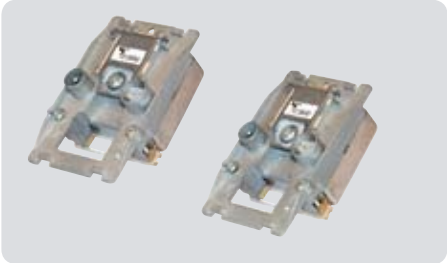
TOU satellite outlet housing

Technical data SAT outlets - 5-2200 MHz

TYPE Art. No. incl. cover (White) Art. No. excl. cover		TOU - 01S terminated 303661 303662	TOU - 10S loop through 303670	TOU - 14S loop through 303674 303675
Outputs		TV - Radio SAT	TV - Radio SAT	TV - Radio SAT
Frequency range				
TV	MHz	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108
SAT	MHz	950 - 2250	950 - 2250	950 - 2250
Through loss				
TV	dB		1.5	2.0
Radio	dB		1.5	2.0
SAT	dB		3.5	3.5
Tap loss				
TV	dB	2.0	10.0	14.0
Radio	dB	1.5	10.0	14.0
SAT	dB	2.0	10.0	14.0
Isolation				
TV-Radio	dB	> 15	> 20	> 20
TV-SAT	dB		> 25	> 25
Radio-SAT	dB		> 30	> 30
Out-Radio	dB			
Out-TV	dB	> 10	> 10	> 10
Out-SAT	dB			
Return loss *)				
TV EN 50083-4	dB	Cat. C	Cat. C	Cat. C
Radio EN 50083-4	dB	Cat. D	Cat. D	Cat. D
SAT	dB			
Shielding factor				
VHF	dB	> 85.0	> 85.0	> 85.0
UHF	dB	> 75.0	> 75.0	> 75.0
SAT	dB			
Connectors				
TV		IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female
SAT		F-female	F-female	F-female
DC through (In-SAT)	V/mA	20/500	20/500	20/500
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75
Weight	kg	0.156	0.156	0.156
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60
Remarks		Please refer to page 230 for cover, frame and terminators		

*) According to CENELEC:
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax FUGA tv/radio outlets



TD outlet housing

Triax's FUGA TV/radio outlets have improved shielding factor and are much faster to mount. The newly developed design, where backplate and terminals are die cast in one piece sets new standards to shielding and mechanical stability.

- High HF-tightness
- Simple and quick mounting
- Solid mechanical quality
- Fulfil modern-day's technical multimedia requirements

Technical data FUGA-outlets - 5-862 MHz

TYPE **Art. No. (White) in bag** **Art. No. (Grey) in bag** **Art. No. (White) in box** **Art. No. (Grey) in box**		**TD 260D terminated** **302510** **303510** **302560** **303560**	**TD 263D loop through** **302511** **303511** **302561** **303561**	**TD 212B loop through** **302412** **303412**	**TD 280 DAB White/Grey** **303430**
Outputs		TV - Radio	TV - Radio	TV - Radio	TV - Radio **DAB**
Frequency range					
TV	MHz	5-68/139-862	47-68/139-862	47-68/132-862	47-862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
DAB	MHz				175-862
Through loss					
TV	dB		4.5	0.8	
Radio	dB		4.5	1.0	
DAB	dB				
Tap loss					
TV	dB	1.0	4.5	13.0	4.5
Radio	dB	1.5	4.5	13.0	5.0
DAB	dB				4.5
Linearity TV/radio	dB	± 1/ ± 1	± 1/ ± 1		
Isolation					
TV - radio	dB	≥ 12	>12	>18	>10
TV-out	dB		>20 db @ 40 Mhz		
Radio-out	dB		-1,5dB/octave		
TV - DAB/ DAB-radio	dB				> 20
Return loss *)					
TV EN 50083-4	dB				>18 @ 40 MHz
Radio EN 50083-4	dB				>18 @ 40 MHz
Shielding factor					
VHF 5-300/300-470	dB	> 85/> 80	> 85/> 80		> 75
UHF 470-862	dB	> 75	> 75		> 65
Connectors					
TV		IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female
DAB					F-female
DC through TV/radio	mA	100/ - / -	100/ - / -	No	No
Standards CE		EN 50083-2 EN 50083-4	EN 50083-2 EN 50083-4		
Impedance	Ohm	75	75	75	75
Weight	kg	0.100	0.100	0.100	0.068
Dimensions (w x h x d)	mm	50 x 77 x 26	50 x 77 x 26	50 x 77 x 26	50 x 77 x 26
Replacing		TD 26oC	TD 263C		
Remarks		Please refer to page 231 for cover, frame and terminators			

Triax FUGA satellite, tv & radio outlets

Triax's FUGA TV/radio outlets have improved shielding factor and are much faster to mount. The newly developed design, where backplate and terminals are die cast in one piece sets new standards to shielding and mechanical stability.

- High HF-tightness
- Simple and quick mounting
- Solid mechanical quality
- Fulfil modern-day's technical multimedia requirements

TDsatellite outlet housing

Technical data FUGA sat outlets - 5-2200 MHz

TYPE		**TD 250 SAT Terminated**	**TD 252 SAT Terminated**
Art. No. (white) in bag		**302415**	**302416**
Art. No. (grey) in bag		**303415**	**303416**
Art. No. (white) in box		**302465**	**302466**
Art. No. (grey) in box		**303465**	**303466**
Outputs		TV - Radio SAT	TV - Radio SAT
Frequency range			
TV	MHz	47-862	47-68/132-862
Radio	MHz		87.5-108
SAT	MHz	950-2150	950-2150
Through loss			
TV	dB		
Radio	dB		
SAT	dB		
Tap loss			
TV	dB	1.0/1.5	1.0/1.5
Radio	dB		
SAT	dB	1.0	1.0
Linearitet TV/radio/SAT	dB	± 1/ ± 1/ ± 1	± 1/ ± 1/ ± 1
Isolation			
SAT-Radio 5-65/65/862	dB		
SAT-TV 5-65/65/862	dB	> 12	> 12
SAT out	dB		
Radio-TV	dB		> 12
TV-out	dB		
Radio-out	dB		
Connectors			
TV		IEC-male	IEC-male
Radio		IEC-female	IEC-female
SAT		F-female	F-female
DC through	mA	Max. 250	Max. 250
Impedance	Ohm	75	75
Weight	kg	0.165	0.165
Dimensions (w x h x d)	mm	50 x 77 x 26	50 x 77 x 26
Remarks		Please refer to page 231 for cover, frame and terminators	

Triax FUGA multimedia, tv & radio outlets

TD multimedia outlet housing

Triax's FUGA multimedia,TV/radio outlets have improved shielding factor and are much faster to mount. The newly developed design, where backplate and terminals are die cast in one piece sets new standards to shielding and mechanical stability.

- High HF-tightness
- Simple and quick mounting
- Solid mechanical quality
- Fulfil modern-day's technical multimedia requirements

Technical data FUGA multimedia outlets - Data 5-65 or 5-42 MHz

TYPE **Art. No. (white) in bag** **Art. No. (grey) in bag** **Art. No. (white) in box** **Art. No. (grey) in box**		**TD 272D** **Terminated** **302522** **303522**	**TD 278** **Loop through** **302428** **303428**
Outputs		TV - Radio Data	TV - Radio Data
Frequency range			
TV	MHz	139-862	47-862
Radio (FM)	MHz	87.5 - 108	87.5 - 108
Data	MHz	5-862	132-862
Returnpath	MHz	5-65	5-65
Through loss			4.0
TV	dB		4.0
Radio (FM)	dB		4.0
Data	dB		4.0
Tap loss			
TV	dB	4.5	8.5
Radio (FM)	dB	5.5	10.0
Data	dB	4.5	8.5
Return path	dB	1.0	4.5
Liniaritet TV/radio	dB	± 1/ ± 1/ ± 1	± 1/ ± 1/ ± 1
Isolation			
TV-radio	dB	> 12	> 12
TV-out	dB		
TV-data 5-65/139-862	dB	> 55/> 20	> 55/> 18
Radio-out	dB		
Radio-data 5-65/139-862	dB	> 55/> 30	> 55/> 18
Shielding factor			
VHF 5-300/300-470	dB	> 85	> 85
UHF 470-862	dB	> 80	> 80
Data 5-65	dB	> 75	> 75
Connectors			
TV		IEC-male	IEC-male
Radio (FM)		IEC-female	IEC-female
Data		F-female	F-female
DC through TV/radio/data	mA	- /-/100	- /-/100
CE standard		EN 50083-2 EN 50083-4	EN 50083-2 EN 50083-4
Impedance	Ohm	75	75
Weight	kg	0.100	0.100
Dimensions (w x h x d)	mm	50 x 77 x 26	50 x 77 x 26
Replaces type		TD 272C	
Remarks		Please refer to page 231 for cover, frame and terminators	

Triax FUGA tv & radio outlets

TRIAX TD 200 – Fuga

The TV/radio outlets in series TD 200 have been made in 'FUGA' design and fit into their standard range of baseplates and terminal boxes for wall flush mounting. The outlets have built-in radio/TV filter, are HF-tight and have IEC specified plug outlets.

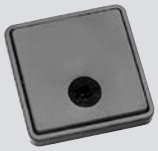
TD 201R /TD 201T TD 200 outlet

Technical data FUGA special outlets

TYPE		TD 200 terminated	TD 201R terminated	TD 201T terminated
Art. No. (white) in bag				
Art. No. (grey) in bag				
Art. No. (white/grey) in box		303450	303455	303456
Inputs		2 x TV-radio		
Outputs		2 x TV-radio	1 x Radio	1 x TV
Frequency range				
TV	MHz	47-862	87.5-108	47-862
Radio	MHz			
SAT	MHz			
Tap loss				
TV VHF	dB	0.2	0.2	0.2
TV UHF	dB	0.5	0.5	0.5
Radio	dB			
Connectors				
TV		IEC-male	IEC-female	IEC-male
Radio		IEC-female		
SAT				
DC through	mA	Yes	Yes	Yes
CE standard				
Impedance	Ohm	75	75	75
Weight	kg	0.165	0.125	0.125
Dimensions (w x h x d)	mm	50 x 77 x 26	50 x 50 x 26	50 x 50 x 26
Remarks		Please refer to page 231 for cover, frame and terminators		

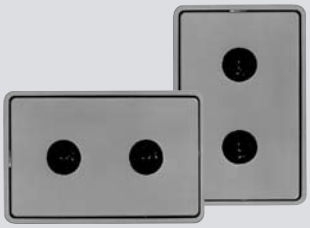
Triax - FUGA special outlets

HT - 02



HT - 01

TRIAX FUGA special outlets
TRIAX has a range of special outlets in FUGA design for e.g. loudspeaker and F-connectors.



HT - 03

Technical data FUGA special outlets

TYPE		HT 01	HT 02	HT 03	FV 01	FV 02
Art. No. (white) in bag						
Art. No. (grey) in bag						
Art. No. (white) in box		**303491**	**303492**	**303493**	**303481**	**303482**
Art. No. (grey) in box		**303491**	**303492**	**303493**	**303481**	**303482**
Outputs		Loudspeakers 1 x 2 pol. connectors	Loudspeakers 2 x 2 pol. connectors	Loudspeakers 2 x 2 pol. connectors	F-connector	F-connector
Connectors TV Radio (loudspeakers) SAT		Din	Din	Din	F-angle connector	F-angle connector
Outlet connection		Screw	Screw	Screw		
Weight	kg	0.125	0.125	0.125	0.125	0.125
Dimensions (w x h x d)	mm	50 x 50 x 26	50 x 50 x 26	50 x 77 x 26	50 x 50 x 26	50 x 77 x 26
Remarks		Please refer to page 231 for cover, frame and terminators				

FV 01 outlet

FV 02 outlet

Triax OPUS tv/radio outlets

Triax's range of OPUS TV/radio outlets have improved shielding factor and are much faster to mount. The newly developed design, where backplate and terminals are die cast in one piece sets new standards to shielding and mechanical stability.

OPUS outlet housing

Technical data OPUS outlets - 5-862 MHz

TYPE Art. No. (white) in bag Art. No. (grey) in bag		TD 301 terminated 302131 303131	TD 304 loop through 302134 303134	TD 312 loop through 302132 303132	TD 352 sat 302152 303152	TD 372 multimedia 302172 303172
Outputs		TV-radio	TV-radio	TV-radio	TV-radio SAT	TV-radio data
Frequency range						
TV	MHz	5-68/132-862	5-68/132-862	5-68/132-862	5-68/132-862	139-862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
SAT/data	MHz				950-2150	5-862
Return path	MHz					5-65
Through loss						
TV	dB		4.5	0.8		
Radio	dB		4.5	0.8		
SAT	dB					
Tap loss						
TV	dB	1.0	4.5	12.0	1.0	4.5
Radio	dB	1.5	4.5	12.0	1.0	5.5
SAT	dB				1.0	4.5
Data	dB					1.0
Liniarity TV/radio/SAT	dB	± 1/ ± 1	± 1/ ± 1	± 1/ ± 1	± 1/ ± 1/ ± 1	± 1/ ± 1/ ± 1
Isolation						
TV-radio	dB	≥ 12	>12	>12		
TV-out	dB		>20 db @ 40 Mhz	>20 db @ 40 Mhz	> 15	
TV-SAT/data 5-65/139-862	dB		-1,5dB/octave	-1,5dB/octave		> 55/> 20
Radio-out	dB				> 12	> 12
Radio-SAT/data	dB					> 55/> 30
Return loss *)						
TV EN 50083-4	dB					
Radio EN 50083-4	dB					
SAT EN 50083-4	dB					
Shielding factor						
VHF / UHF	dB	> 85/> 80	> 85/> 80	> 85/> 80	> 85/> 80	> 85/> 80
SAT/data	dB				> 75	> 75
Connectors						
TV		IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
SAT					F-female	F-female
DC through	mA	on TV	on TV	on TV	Max. 250	- /-/100
Max. outlets per string			1	3		
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.225	0.225	0.225	0.225	0.225
Dimensions (w x h x d)	mm	66 x 25 x 66	66 x 25 x 66	66 x 25 x 66	66 x 25 x 66	66 x 25 x 66
Remarks		Please refer to page 231 for cover, frame and terminators				

Triax UK-style in SAT, TV/radio outlets

UK-style outlet housing

Triax comprehensive series for domestic and system applications

- Fully screened
- Die-cast housing
- DAB compatible
- Output for SAT and return path
- DDU outlet designed for installations using **D**omestic **D**istribution **U**nit

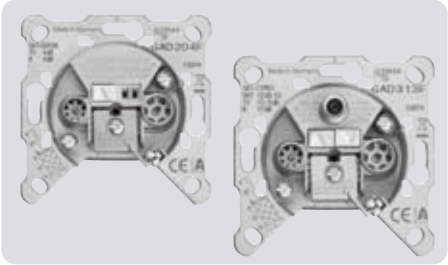
Technical data UK-style outlets

TYPE **Art. No. incl. cover (White)**		**TOU diplexed (2-way) 304101**	**TOU - DC diplexed (2-way) 304118**	**TOU triplexed (3-way) 304102**	**TOU quad (4-way) 304109**	**TOU DDU (4-way) 304115**
Outputs		TV - Radio	TV - Radio	TV - Radio SAT	TV - Radio SAT / Return	TV - Radio SAT / Return
Frequency range						
TV	MHz	47-68/254-862	47-68/254-862	47-68/254-862	47-68/254-862	47-68/254-862
Radio	MHz	87.5 - 230	87.5 - 230	87.5 - 230	87.5 - 230	87.5 - 230
SAT I / II	MHz			950-2150/ -	950-2150/ -	950-2150/950-2150
Return	MHz				DC - 2150	DC - 862
Tap loss						
TV	dB	< 1.5	< 1.5	< 1.5	< 1.5	< 3.5
Radio	dB	< 2.5	< 2.5	< 2.5	< 2.5	< 3.0
SAT I / II	dB			< 3.0	< 3.0	< 3.5/< 4.0
Return	dB				< 2.0	< 4.0
Connectors						
TV		IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
SAT				F-female	F-female	2 x F-female
Return					F-female	IEC-female
DC through (In-SAT)	V/mA		on TV			
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.250	0.250	0.250	0.250	0.250
Dimensions (w x h x d)	mm	86 x 31 x 86	86 x 31 x 86	86 x 31 x 86	86 x 31 x 86	146 x 37 x 86
Remarks						

Triax GAD series of tv/radio outlets

The universal outlets from Triax provides you with easy, quick and dependable solutions for modern installations. The outlets are suited for cable TV as well as SAT-IF distribution.

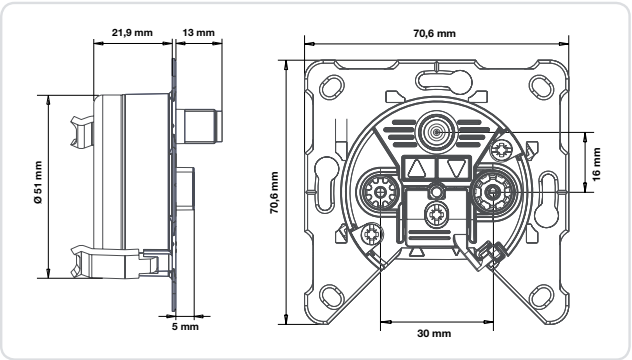
- Quick and easy fixation, only a few steps to perform during mounting
- Fits many different frames due to new geometry of ring
- Easily fits round frames, too
- Claw fixations for exact mounting
- Easy exchange with pushbutton technique
- 2- and 3- socket solutions



GAD outlet

Technical data GAD outlets

TYPE Art. No.- excl. cover and frame 1 pcs		GAD 204 terminated 302204	GAD 210 loop-through 302210	GAD 214 loop-through 302214	GAD 220 loop-through 302220	GAD 313F loop-through 302313
Outputs		TV-radio	TV-radio	TV-radio	TV-radio	TV-radio/SAT
Frequency range						
Return	MHz					
TV	MHz	5-2150	5-2150	5-2150	5-2150	5-862
Radio	MHz	5-2150	5-2150	5-2150	5-2150	5 - 118
DAB	MHz					
SAT	MHz					950-2150
Tap loss						
Return	dB					
TV	dB	4.0	10.0	15.0	20.0	13.0
Radio	dB	4.0	10.0	15.0	20.0	17.0
SAT	dB					12.0
In - out	dB		2.5	1.0	0.8	1.0-2.0
Connectors						
TV		IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
SAT						F-female
DC through		TV	no	no	no	SAT
Standards CE						
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (mechanical)	mm	Ø70.6	Ø70.6	Ø70.6	Ø70.6	Ø70.6
Remarks						



GAD outlet housing

Technical data GAD outlets

TYPE Art. No. - excl. cover and frame	1 pcs	GAD 269 terminated 023269	GAD 274 terminated 023274
Outputs		TV-radio/DAB SAT	TV-radio/DAB 2 x SAT
Frequency range			
Return	MHz		
TV	MHz	47-68/125-450	47-68/125-450
Radio	MHz	87.5 - 108	87.5 - 108
DAB	MHz	111-125	111-125
SAT	MHz	950-2150	950-2150
Tap loss			
Return	dB		
TV	dB	2.5/1.8-3.0	2.0/1.5
Radio	dB	1.8	1.5
DAB	dB	1.8	1.5
SAT	dB	3.0	2.0
Connectors			
TV		IEC-male	IEC-male
Radio		IEC-female	IEC-female
SAT		F-female	F-female
DC through			
Standards CE			
Impedance	Ohm	75	75
Weight	kg		
Dimensions (mechanical)	mm	Ø60	Ø60
Remarks			

Triax GRID-style outlets

A flexible “combine-yourself” range for domestic and system applications

- Single outlets for full frequency range with IEC or F-connector
- Diplex - TV/radio outlets with IEC-connector
- Triplexed - TV/radio/SAT outlets with IEC and F-connector
- Quad - TV/radio/SAT 1/SAT 2 outlets with IEC and F-connector
- The system also includes CAT 5E, RJ 11, twin RCA and twin loudspeaker units - please ask our sales department for more information

GRID-style outlet

Technical data GRID-style in outlets

TYPE **Art. No. (white insert)** **Art. No. (black insert)**		**Single IEC *female*** **304250** **304251**	**Single IEC *male*** **304252** **304253**	**Single F *female*** **304254** **304255**	**Cover plate** **304256** **304257**
Outputs		TV-radio	TV-radio	TV-radio	-
Frequency range TV out	MHz	5-862	5-862	5-2300	-
Tap loss TV out	dB	< 0.3	< 0.3	< 1.6	-
Connectors TV		IEC-female	IEC-male	F-female	-
DC through (In-SAT)	V/mA	Yes	Yes	Yes	
Fits 15 mm patress		Yes	Yes	Yes	Yes
Impedance	Ohm	75	75	75	
Weight	kg				
Dimensions (w x h x d)	mm	25 x 50	25 x 50	25 x 50	25 x 50
Remarks					

Triax GRID-style outlets

A flexible “combine-yourself” range for domestic and system applications

- Grid versions in polycarbonate, brushed/polished stainless and flat styles
- White or black polycarbonate moulding

Technical data GRID-style in outlets

TYPE Art. No. (white insert) Art. No. (black insert)		GRID Diplexed 304258 304259	GRID Diplexed 304260 304261	GRID Triplexed 304262 304263	GRID Quad 304264 304265
Outputs		TV-radio	TV-SAT	TV-radio SAT	TV-radio SAT
Frequency range					
TV	MHz	47-68/254-862	47-68/254-862	47-68/254-862	47-68/254-862
Radio	MHz	87.5 - 230		87.5 - 230	87.5 - 230
SAT I/SAT II	MHz		950-2150	950-2150	2 x 950-2150
Return	MHz				
Tap loss					
TV	dB	< 1.5/< 2.0	< 2.0/< 2.5	< 2.0/< 2.0	< 2.5/< 2.5
Radio	dB	< 2.0		< 3.0	< 3.0
SAT I / SAT II	dB		< 3.0	< 3.0	< 3.0/< 1.5
Return	dB				
Connectors					
TV		IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female
SAT				F-female	F-female
Return					F-female
DC through (in-SAT)	V/mA	Yes (TV)	Yes (SAT)	Yes (SAT)	Yes (SAT 1/SAT 2)
Fits 15 mm patress		Yes	Yes	Yes	Yes
Impedance	Ohm	75	75	75	75
Weight	kg				
Dimensions (w x h x d)	mm	50 x 50	50 x 50	50 x 50	50 x 50
Remarks					

Accessories for TOU outlets

Covers for TOU standard outlets - 2 holes

TYPE Art. No.	Cover - white 303680	Cover - off white 303681	Cover - UK white 303690
Size mm	76 x 76	76 x 76	86 x 86
Packing size	10 pcs.	10 pcs.	10 pcs.




UK design

Covers for TOU multimedia outlets - 3 holes

TYPE Art. No.	Cover - white 303685	Cover - off-white 303686
Size mm	76 x 76	76 x 76
Packing size	10 pcs.	10 pcs.


Covers for TOU satellite outlets - 3 holes

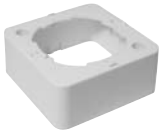
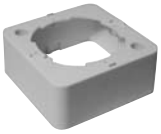
TYPE Art. No.	Cover - white 303682	Cover - off-white 303683	Cover - UK white 303692
Size mm	76 x 76	76 x 76	86 x 86
Packing size	10 pcs.	10 pcs.	10 pcs.




UK design

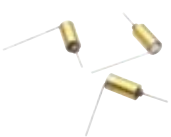
Surface mount for all TOU outlets

TYPE Art. No.	Frame - white 303698	Frame - off white 303699
Size mm	76 x 76	76 x 76
Packing size	10 pcs.	10 pcs.

RF terminator

TYPE		R75 - 75Ω terminator	R1000 - 75Ω terminator
Art. No.	5 pcs	342503	342504
Remarks		TD-outlets	TOU-outlets




Accessories for TD outlets

Covers for TD outlets

TYPE	0 holes cover 50 x 50 mm	2 holes cover 50 x 77 mm	3 holes cover 50 x 77 mm
Art. No. (white)	485968	302012	302013
Art. No. (grey)	485994	303012	303013
Art. No. (anthracite)		304012	304013
Size mm	50 x 50	50 x 77	50 x 77
Packing size	10 pcs.	10 pcs.	10 pcs.
Remarks	TD 200	TD 26x	TD 2xx

Frames for TD outlets

TYPE	Frame 50 50 x 50 mm	Frame 50 50 x 77 mm	Frame 63 63 x 90 mm
Art. No. (white)	302025	302026	302036
Art. No. (grey)	303025	303026	303036
Art. No. (metalic)	304025	304026	
Size mm	50 x 5 x 50	50 x 5 x 77	50 x 5 x 77
Packing size	10 pcs.	10 pcs.	10 pcs.
Remarks	TD 200	TD 26x	TD 2xx

Surface mount for TD outlets

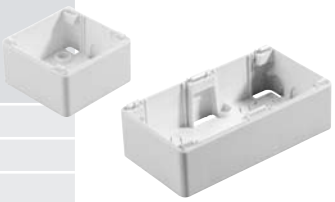
TYPE	Frame 50 50 x 50 mm	Frame 50 50 x 77 mm
Art. No. (white)	302045	302046
Art. No. (grey)	303045	303046
Art. No. (anthracite)		
Size mm	50 x 25 x 50	50 x 25 x 77
Packing size	10 pcs.	10 pcs.
Remarks	TD 200	TD 26x

Frames for OPUS 66 outlets

TYPE	OPUS 66 132 x 66 mm	OPUS 66 132 x 66 mm
Art. No. (white)	153147	153145
Art. No. (grey)	153146	153144
Size mm	132 x 25 x 66	132 x 25 x 66
Packing size	10 pcs.	10 pcs.
Remarks	horisontal mounting	vertical mounting

Surface mount for OPUS outlets

TYPE	OPUS 66 66 x 66 mm	OPUS 66 132 x 66 mm
Art. No. (white)	153141	153143
Art. No. (grey)	153140	153142
Size mm	66 x 25 x 66	132 x 25 x 66
Packing size	10 pcs.	10 pcs.
Remarks	single OPUS	double OPUS



OPUS telephone connection

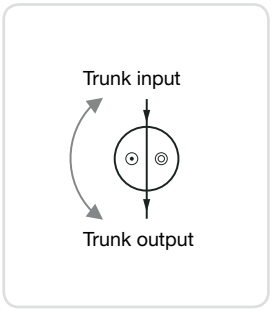
TYPE	OPUS phone 66 x 66 mm
Art. No. (white)	302780
Art. No. (grey)	303780
Size mm	66 x 66
Packing size	1 pcs.

Triax outlets

Attenuation in outlets

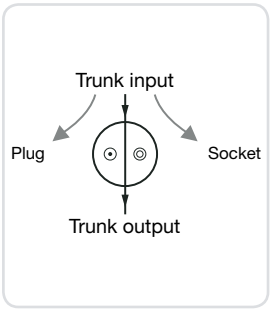
Throughpass attenuation

Attenuation between trunk input and trunk output



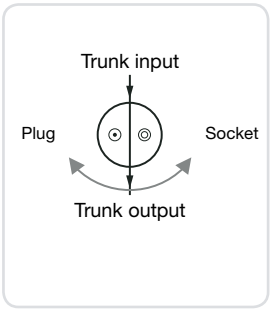
Connection attenuation

Attenuation between trunk input and plug or socket output



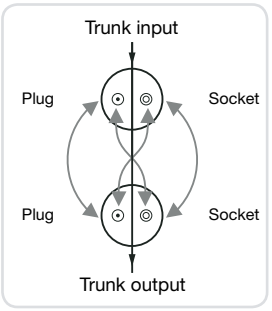
Internal coupling attenuation

Attenuation between plug output and socket output



EN coupling attenuation

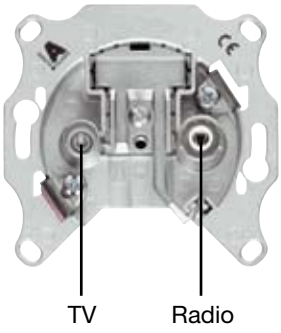
(2 outlet method)
Attenuation between the outputs of two antenna sockets



Socket types

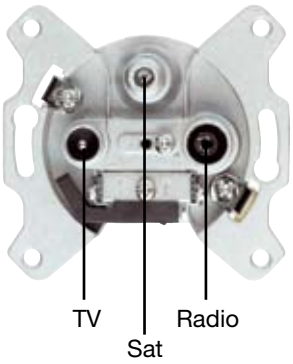
Double antenna outlet sockets

Universal sockets, suitable for satellite, terrestrial and broadband cable/CATV



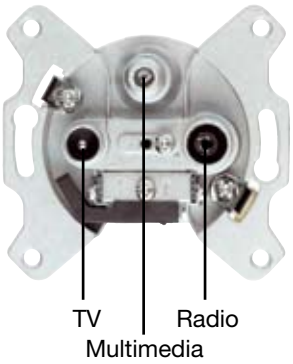
Triple antenna outlet sockets - sat

For individual satellite and SMATV installations.



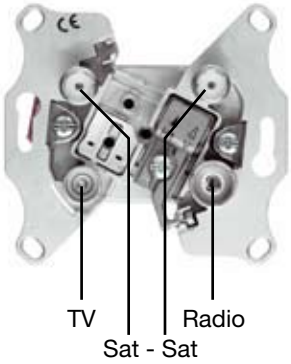
Triple antenna outlet sockets - multimedia

For individual multimedia and SMATV installations.



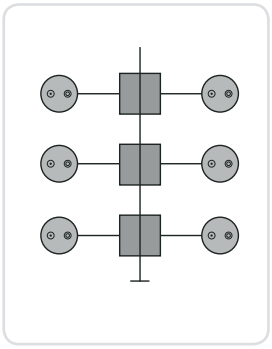
Quadro antenna outlet sockets

For use in some multiswitch installations
(star or tree structure)

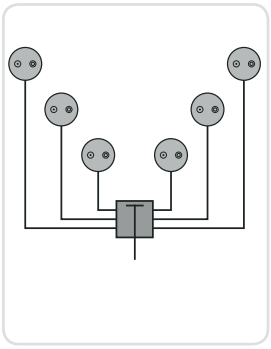


Network structures

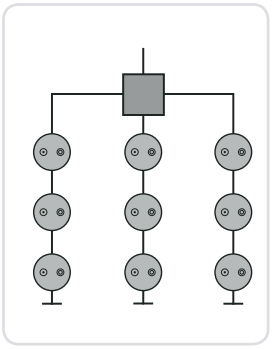
Floor star



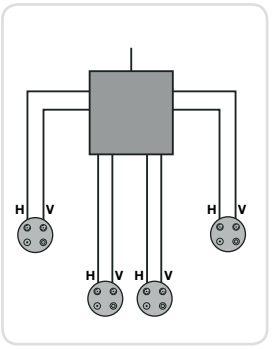
Star network



Tree network



Tree and star network



Antenna systems >> **Camera/Link systems**	
Camera systems	234 - 235
DDU system	236 - 237
Wireless A/V system	238
Digital links	239
Remote extender	240

Triax camera systems - black/white

Features:

- Solid aluminium housing
- Weather resistant camera for indoor or outdoor use
- Camera has built-in microphone for audio monitoring
- Easy plug-and-play installation takes only minutes
- Modulator cameras available in PAL I and PAL G

Camera system housing

Technical specifications for black/white cameras

TYPE			TCB 003	TCB 015
Art. No.			**364003**	**364015**
Type			B/W	B/W
TV system			PAL-I	PAL-G
Modulator type			DSB-UHF	DSB-UHF
UHF output channel		Ch.	21-69 1)	21-69 1)
UHF output level		dBµV	85 ±5	85 ±5
Output power		dBm	NA	NA
Modulation			NA	NA
Receiver sensitivity		dBm	NA	NA
Receiver noise figure		dB	NA	NA
Output frequency range		MHz	470-862	470-862
Transmission frequency		GHz	NA	NA
Operational range (free field)		m	NA	NA
Audio carrier		MHz	6.5	5.5
Integrated mic.			Yes	Yes
S/N ratio		dB	> 48	> 48
Image sensor			1/4 inch CMOS	1/4 inch CMOS
Lens			F 2.0/3.6 mm 90^0 wide angle	F 2.0/3.6 mm 90^0 wide angle
Resolution		lines	260	260
Number of pixels		pixels	352 x 288	352 x 288
Min. illumination		LUX	0.5	0.5
Built-in light			11 IR Leds	11 IR leds
Auto iris electronics		sec	1/60 ~ 1/6000	1/60 ~ 1/6000
Operation conditions			Weatherproof outdoor (aluminium housing)	
Power consumption		mA	250	250
Operating voltage		VDC	12	12
Power inserter/supply incl.			Yes	Yes
Power inserter				
Insertion loss	VHF/UHF in/out	dB	4	4
	VHF/UHF+in/out	dB	20	20
	In/out	dB	0.1	0.1
Max. current		A	0.8	0.8
Dimensions (camera only)		mm	105 x 50 x 115	105 x 50 x 115

1) Modulator UHF channel settable via 2 digit rotary switch (channels 21 to 69)

Camera system housing

Technical specifications for colour cameras

TYPE			TCB 007	TCB 008	TCB 017
Art. No.			**364007**	**364008**	**364017**
Type			Colour	Colour	Colour
TV system			PAL-G	PAL-I	A/V [1]
Modulator type			DSB-UHF	DSB-UHF	NA
UHF output channel			21-69 [2]	21-69 [2]	NA
UHF output level		dBµV	85 ±5	85 ±5	NA
Output power		dBm	NA	NA	NA
Modulation			NA	NA	NA
Receiver sensitivity		dBm	NA	NA	NA
Receiver noise figure		dB	NA	NA	NA
Output frequency range		MHz	470-862	470-862	NA
Transmission frequency		GHz	NA	NA	NA
Operational range (free field)		m	NA	NA	NA
Audio carrier		MHz	5.5	6.5	NA
Integrated mic.			Yes	Yes	Yes
S/N ratio		dB	> 48	> 48	> 48
Image sensor			1/3 inch CMOS	1/3 inch CMOS	1/3 inch CMOS
Lens			F 1.8/6.0 mm 64⁰ wide angle	F 1.8/6.0 mm 64⁰ wide angle	F 1.8/6.0 mm 64⁰ wide angle
Resolution		lines	380	380	380
Number of pixels		pixels	628 x 582	628 x 582	628 x 582
Min. illumination		LUX	3	3	3
Built-in light			NA	NA	NA
Auto iris electronics		sec	1/60 ~ 1/5000	1/60 ~ 1/5000	1/60 ~ 1/5000
Operation conditions				Weatherproof outdoor (aluminium housing)	
Power consumption		mA	120	120	120
Operating voltage		VDC	12	12	12
Power inserter/supply incl.			Yes	Yes	Yes
Power inserter					
Insertion loss	VHF/UHF in/out	dB	4	4	NA
	VHF/UHF+in/out	dB	20	20	NA
	In/out	dB	0.1	0.1	NA
Max. current		A	0.8	0.8	NA
Dimensions (camera only)		mm	105 x 50 x 115	105 x 50 x 115	105 x 50 x 115

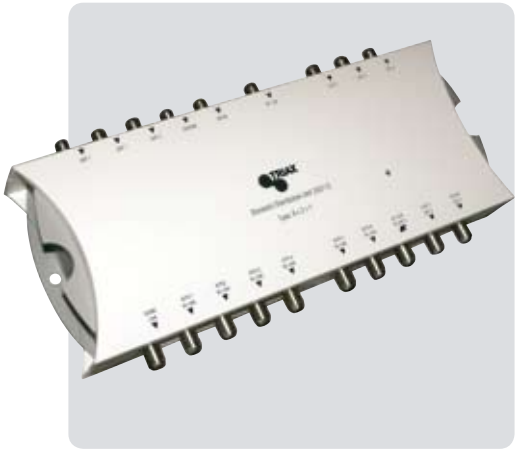
1) A/V = Audio/video via RCA/phono cable (included)
2) Modulator UHF channel settable via 2 digit rotary switch (channels 21 to 69)

Triax domestic distribution unit (DDU)

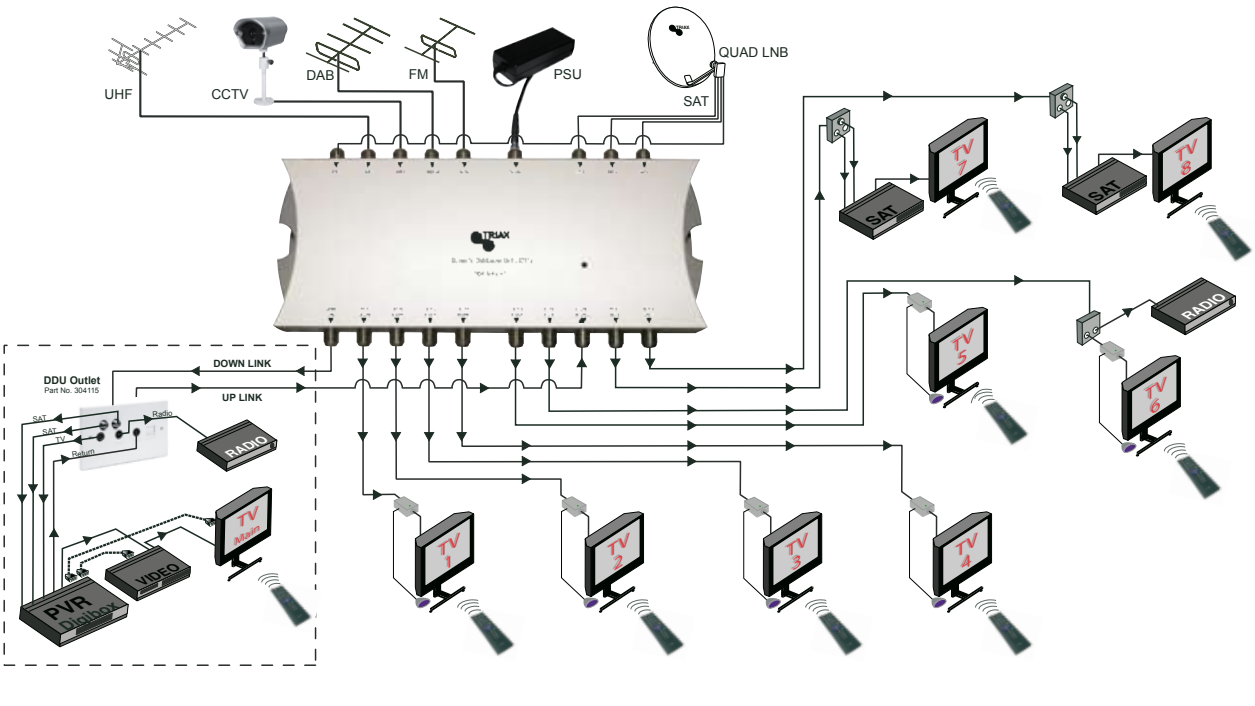
You can build home distribution systems
- or you can save time and material costs

The DDU is an amplifier unit for the distribution of radio, satellite and terrestrial television signals around a domestic property. The unit is usually located remotely from the main area of receiving equipment.

The unit will receive BIII/DAB, BI/FM,UHF (x2) and four IF satellite feeds from a Quad LNB. The unit then distributes the above to the main TV in the lounge and 8 outlets within the property.
All 8 outlets carry the services from the digibox as well as radio and UHF signals, and output 7 and 8 have satellite IF straight from the Quad LNB. There is another IF feed which supports the second input into the Sky+ receiver via the uplink path. The Sky+ receiver can be controlled by the Digital Link return path on output 1 to 6.



DDU 112 unit



Technical data - Triax domestic distribution unit

TYPE Art. No.			DDU 112 333112			
Inputs to downlink			BI/FM	BIII/DAB	2 x UHF	SAT 1
Frequency range		MHz	47–108	174–230	470-862	950-2300
Gain		dB	10	10	8	8
Linearity		dB	± 2	± 2	± 2	± 2
Noise figure		dB	4	4	8	3,5
Output voltage, 60 dB IMD		dBµV	93	93	93	
Output voltage, 35 dB IMD		dBµV				100
Return loss	input	dB	> 10	> 10	> 10	> 10
	output	dB	> 10	> 10	> 10	> 10
Sat input to uplink, out 7 & out 8			SAT 2	SAT 3	SAT 4	
Frequency range		MHz	950-2300	950-2300	950-2300	
Gain		dB	10	8	8	
Linearity		dB	± 2	± 2	± 2	
Noise figure		dB	3,5	3,5	3,5	
Output voltage, 35 dB IMD		dBµV	100	100	100	
Return loss	input	dB	> 10	> 10	> 10	
	output	dB	> 10	> 10	> 10	
Uplink to outputs			UHF-forw	LINK-ret		
Frequency range		MHz	470-862	5-30		
Gain		dB	6	6		
Linearity		dB	± 2	± 2		
Noise figure		dB	4	3,5		
Output voltage, 60 dB IMD		dBµV	93	93		
Return loss	input	dB	> 10	> 10		
	output	dB	> 10	> 10		
Inputs to outputs R/TV1…4			BI/FM	BIII/DAB		
Frequency range		MHz	47–108	174–230		
Gain		dB	6	6		
Linearity		dB	± 2	± 2		
Noise figure		dB	4	4		
Output voltage, 60 dB IMD		dBµV	93	93		
Output voltage, 35 dB IMD		dBµV				
Return loss	input	dB	> 10	> 10		
	output	dB	> 10	> 10		
Inputs to outputs R/TV 5…8			BI/FM	BIII/DAB		
Frequency range		MHz	47–108	174–230		
Gain		dB	10	10		
Linearity		dB	± 2	± 2		
Noise figure		dB	4	4		
Output voltage, 60 dB IMD		dBµV	93	93		
Output voltage, 35 dB IMD		dBµV				
Return loss	input	dB	> 10	> 10		
	output	dB	> 10	> 10		
Impedance		Ohm	75			
Shielding efficiency		dB	60			
Power consumption		V/mA	12/190-330			
Polarity			- to ground			
Dimensions, product		mm	288 x 121 x 43			
Weight, gross		kg	0.9			
Connectors			F type			
DC plug			F type			
Remarks						
Digital link line power supply output (automtically switched OFF when used as line power input)			9V DC @ 20 mA	(overload protected.)		
Automatic masthead line power facility			12 VDC/50 mA	(overload protected.)		
DC power bypass for LNB			Yes			
Power On LED, (green)			Yes			

Triax TWS - 2.4 GHz Wireless A/V System

General Applications:

- Watch the movie you rent on any TV in house without moving your DVD, VCR, PVR player or running messy cables.
- Watch cable or satellite programs on any TV in house.
- Listen to stereo-quality music from your receiver on any powered speakers inside or outside the house.
- Use multi-receivers for broadcasting to numerous TV sets in other rooms.
- Show computer images or MediaCenter PC output on a remote TV. (Requires TV-out on PC graphic card)
- And many more uses!

Technical data - Triax digital links

TYPE		**TWS 220 T/R**
Art. No.		**305390**
Transmitter :		
Operating frequency band	GHz	2,400 – 2,483.5
Transmit power output	dBm	10
Modulation (video and audio)		FM
Video input level	Vpp @ 75 Ohm	1
Audio input level (stereo)	Vpp @ 600 Ohm	1
Antenna		External, omnidirectional
IR-remote IR output		940 nm with on/off keying
Power consumption	VDC/mA	7.5 / 300
Dimensions	mm	90 x 74 x 20
Weight	g	110
Receiver :		
Operating frequency band	GHz	2.400 - 2.4835
Sensitivity	dBm	-80
Video output level	Vpp @ 75 Ohm	1 ±0.2
Audio output level (stereo)	Vpp @ 600 Ohm	1 ± 0.2
Antenna		External, omnidirectional
IR-remote modulation		ASK
IR transmit frequency	MHz	433,92
IR frequency Input	kHz	32 - 38
Power consumption	VDC/mA	7.5 / 300
Dimensions	mm	90 x 74 x 20
Weight	g	110
System :		
Channel customize switch (4 channels available)	MHz	2414, 2432, 2450, 2464
Operational range (outdoor free field line of sight)	m	Up to 100
Operational range (typical indoor)	m	10-30
Remote control range (outdoor free field line of sight)	m	Up to 50
Operational temperature	°C	10 - 50
Colour		Silver/Black
Minimum distance to other transmitters	m	3
Included in carton:		
2 x Power supply		230 VAC to 7.5 VDC, 300 mA
1 x transmitter, 1 x receiver		See specifications above
1 x IR extender cable for transmitter		For IR remote control (3 IR ‘eyes’)
2 x 3.5 mm minijack to R+L-audio+video (RCA phono)		From transmitter and receiver
2 x RCA to SCART		For transmitter and receiver cable to SCART
1 x 3.5 mm minijack to RCA phono		For use with PC audio output

NOTE: Operational range of a 2.4 GHz transmitter is always dependent upon and may be limited by building walls, concrete walls, in-house obstacles, other transmitting sources and electrical radiation from home appliances. You should observe a minimum distance of 3 meters to other transmitters (wireless router, etc.)

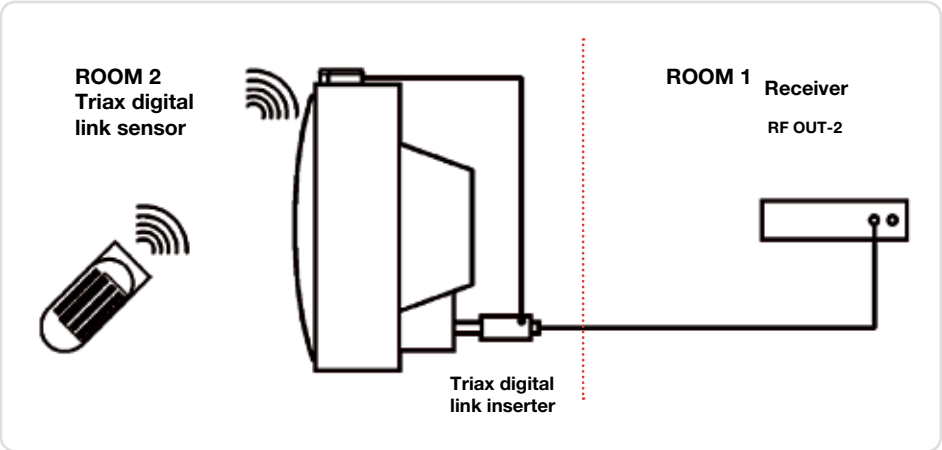
Triax digital links

The Triax digital link is compatible with many different digital satellite receivers with an output marked RF-OUT 2 that provides a second TV output together with a 9 volt DC supply. The Triax digital link will allow control of your digital satellite receiver whilst viewing in other rooms in the home.

- Silver and anthracite colour styles
- Competitive pricing
- Attractive design
- Easy to install

Technical data - Triax digital links

TYPE **Art. No. (silver w. blue lens)** **Art. No. (anthracite w. blue lens)**		**Digital link** **339690** **339691**
Input signal frequency carrier	kHz	37.9
Output signal frequency carrier	kHz	On - off keyed
Line power requirment	VDC/mA	9 / 10
Sensor lead	cm	100
Connectors - output - input		 IEC male IEC female
Temperature range	°C	0...+40



Triax TRE series - IR remote extender set

General Applications:

- Remote control your TV Set, VCR, STB, PVR and other audio/video and Hi-Fi equipment from another room via existing coax cables
- Uses existing wall sockets and coax installation to transmit IR signal
- Very easy installation. Just plug into wall socket in both rooms (both wall sockets must be interconnected, and support 11 MHz, to work)
- Receiver and re-transmitter IR-eyes with 2 meter cable each
- Unit has very low insertion loss from wall outlet.

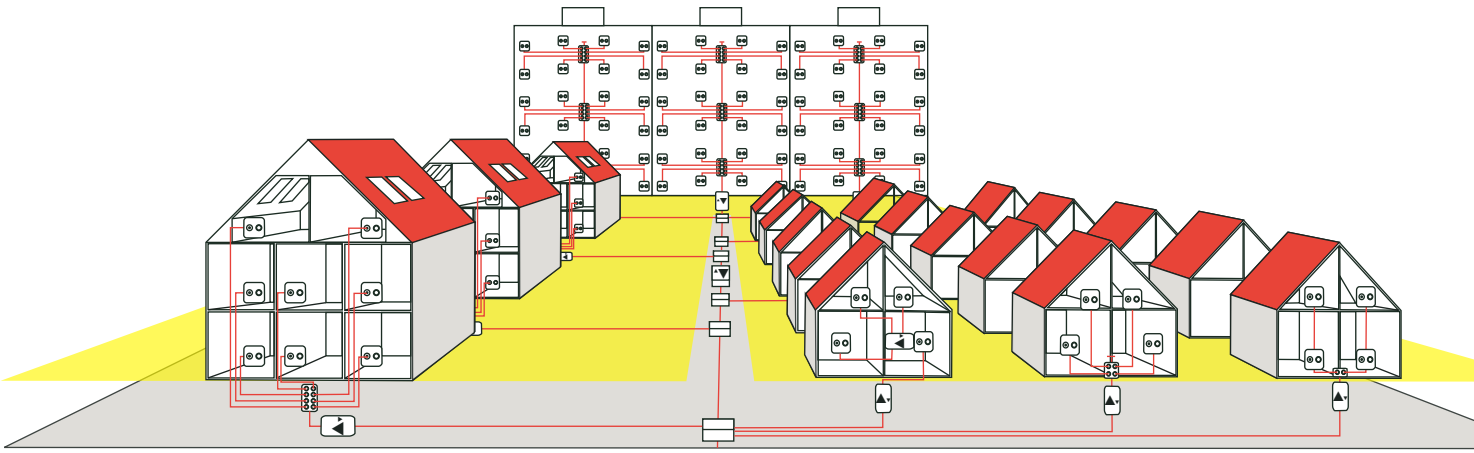
Technical data - Triax digital links

TYPE		TRE 270 T/R
Art. No.		**300675**
Re-emitter		
VHF/UHF attenuation	dB	0.5
Control signals :		
Infrared frequency input	kHz	35-41
Modulation level	dBm	0 (0-10 adjustable)
Connectors		
on back, for outlet	IEC	male
on front, for TV/radio	IEC	female
Dimension		
Size	mm	70 x 38 x 23
Weight	g	120
Remote-eye cable length	m	2.0
Receiver		
VHF/UHF attenuation	dB	0.5
Control signals :		
Input	MHz	11 (ASK)
Minimum level	dBµV	< 50
Infrared output	kHz	37 ±1
Connectors		
on back, for outlet	IEC	male
on front, for TV/radio	IEC	female
Dimension		
Size	mm	70 x 38 x 23
Weight	g	130
Remote-eye cable length	m	2.0
Included in carton:		
2 x Power supply		230 VAC to 12 VDC, 100 mA
1 x Re-emitter, 1 x receiver		See specifications above
2 x Fasten strips		For fastening IR-remote eyes in a good position
1 x User guide		

Also available:
300677 TRE 272 R set with 2 x receiver units. Allows you to install receivers in more rooms.
Requires one TRE 270 T/R to be installed already.

NOTE:
The TRE 270 T/R converts the 38 kHz IR signals from the remote control(s) into an 11MHz signal, that can be transmitted over the coax cabling in your house. It is important to note that for this to work there must be no obstructions in the coax cable signal path between the two ends, such as amplifiers and/or outlet sockets with blocking filters in the 11 kHz range. TRE 270 T/R only transmits IR signals. The A/V signals (picture and sound) has to be 'transferred' by other means such as cables, modulated signals or via wireless units.

Antenna systems >> **Technical appendix**	
Terrestrial antennas	242
Basic technical requirements	243
Technical data in the catalogue	244
Planning and installation	245 - 246
Earthing and equipotential	247
Frequency range of waves	247
TV standards	247
Channels and frequencies	248 - 249
Colour and broadcasting	250
Signal level: mV to dBµV	251
Frequency for radio/TV channels	251



Introduction

Radio antennas

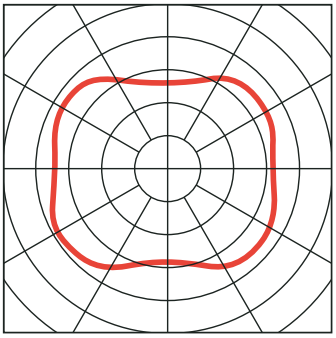
Stereo signals can be received using any FM antenna. Because, however, a higher signal level and greater freedom from reflection are needed for clear stereo reception than for mono reception, it is usually necessary to use a directional antenna.

Television antennas for DVB-T

DVB-T reception is possible with any antenna that is suitable for the related frequency band and polarization. In the catalogue all antennas suitable for the reception of DVB-T signals in VHF III and UHF IV/V bands are marked with the DVB logo.

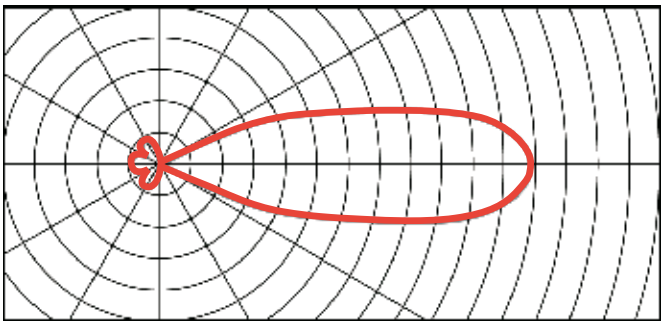
Omnidirectional reception

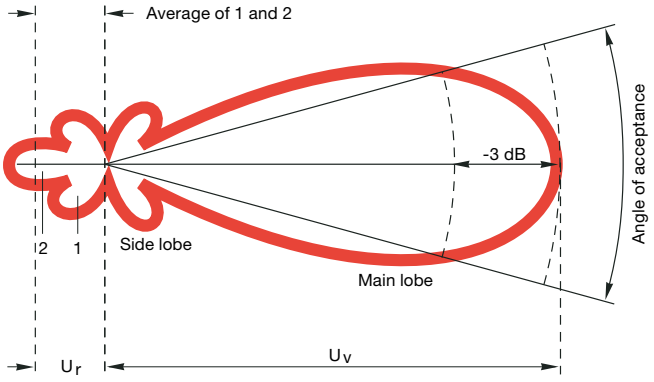
The omnidirectional radio antenna has approximately the same sensitivity for all directions and can only be recommended for well supplied reception areas.



Directional reception

The directional antenna receives signals from one main direction better than omnidirectional antennas, but has poorer reception of signals from other directions.
A directional antenna is absolutely necessary for areas where signals are weak, or in areas where a particular weak transmitter is to be received.





Radiation pattern – The most important terms

Gain
Ratio of an antenna's reception power in its main receiving direction to receive power of a λ/2 dipole at the same installation site (logarithmic measure expressed in dB)

Angle of acceptance
Angular aperture of the major lobe between the points where the gain is lower by 3 dB than its maximum value

Major lobe
Section of the radiation pattern in the direction of the maximum gain

Side lobe
Lateral and rearward lobe-shaped sections of the radiation pattern that have a lower gain than in the main receiving direction

Front to back ratio*
Ratio of the voltage Uv in the main receiving direction to an average Ur generated on the basis of the voltages of the side lobe 2 in the back direction (180°) and of the larger side lobe 1 in the rear sector (90°-270°) (logarithmic measure expressed in dB)

* Corresponding to a definition by the Technical Commission of the "Receiving Antennas" association in ZVEI

DVB Digital Video Broadcasting

Antennas are suitable for the reception of digital terrestrial signals (DVB-T)

1. Basic technical requirements

All equipment and components in this catalogue meet, unless otherwise stated, the European standards for “Cable networks for television signals, sound signals and interactive services” from the standardization organization CENELEC, which have been adopted in national versions.

EN 50083-1 Safety requirements
EN 50083-1/A1
EN 50083-1/A2
EN 50083-2 Electromagnetic compatibility (EMC) of equipment

The equipment conforms to the uniform European “EMC directive” in accordance with legal requirements. For the majority of the product groups in this catalogue, EN 50083-2 is relevant. In relation to the “Low voltage directive”, EN 60065 is the basis to which reference is made in EN 50083-1 “Safety requirements”.
The CE marking for products in relation to EMC and the low voltage directive is based on these standards.

In addition, CENELEC committee TC 209 has ratified European standards for equipment and system requirements for “Cable networks for television signals, sound signals and interactive services”.

EN 50083-3 Active broadband equipment for coaxial cable networks
EN 50083-4 Passive broadband equipment for coaxial cable networks
EN 50083-5 Headend equipment
EN 50083-6 Optical equipment
EN 50083-7 System requirements
EN 50083-8 Electromagnetic compatibility of cable networks
EN 50083-9 Interfaces for CATV/SMATV headends and similar professional equipment for DVB/MPEG-2 transport streams
EN 50083-10 System performance for return paths

The system and equipment requirements are matched to each other in such a way that the minimum requirements for signal quality at the subscriber’s outlet can be met with a minimum of technical effort. In addition, requirements that result from use of both analogue and digital signal transmission have also been taken into account. The EN 50083 standards provide the network operator, planner and installer with concrete guidelines for network design and selection of appropriate network components. Hirschmann network components are developed to these standards and are marked in the catalogue by the relevant EN standard. The equipment standards (EN 50083 Parts 3...6) include fulfillment of the safety and EMC requirements (EN 50083 Parts 1 + 2).
The legally required CE marking for antenna and telecommunication products refers to adherence to electromagnetic compatibility (EMC) limits and, from 1 Jan. 1997, to adherence to the low voltage directive.
The CE marking does thus not imply fulfilment of the product and system requirements according to EN 50083- 3...-10.
For this reason Triax indicates compliance with these basic requirements on equipment (EN 50083-3...6) by explicitly noting the corresponding EN standard in the catalogue and in the operating instructions.

1.1 Marking of components for TV cable networks

With the CE marking Triax confirms the compliance of its products with the applicable EU directives (currently EMC and low voltage directives) as well as with the standards EN 50083-1, EN 50083-2 and EN 60065. For receivers the standards EN 55013, EN 55020 and EN 61000 are applied.
The CE marking is placed on the product, on the packaging and/or included in the operating instructions.

To prevent interference between TV cable networks and radio services, it is necessary to use components with sufficient shielding. Due to the varying conditions in the European countries, the shielding rate was defined in the European standard EN 50083-2 in two stages, the high quality class A and class B with reduced shielding rate values.

For example, the high radio density present in many parts of the world makes the usage of class A equipment necessary to prevent interactions, particularly with safety-relevant radio services such as air traffic control. As a differentiation in the appearance of the equipment for trade and installers is not possible, Triax and the other companies in the Fachverband Empfangsantennen- und Breitbandverteiltechnik im Zentralverband Elektrotechnik- und Elektroindustrie (ZVEI) e. V. mark the products with the protected trademark-symbol shown. In this way the higher quality of the equipment is made clear.
(See 3.3 Shielding rate)

For compliance with the legal EMC requirements for TV cable networks, we expressly recommend the usage of class A components, including connecting cables so marked for terminal equipment.

Protection class 2 according to IEC 60417-5172 for components with power connection 230 V ~.

2. Technical data in the catalogue

2.1. Characteristic impedance

Unless otherwise expressly mentioned, all technical data in the catalogue refer to a 75Ω impedance for the RF connections.

2.2. Operating temperature

All passive units in the catalogue can be used within an operating temperature range of – 20 °C to + 60 °C.
The mains-operated units meet the requirements of the EN 60065 standard within the temperature range from – 20 °C to + 50 °C.
Operability of these units is nevertheless also maintained fully in the temperature range from –20 °C to + 60 °C.
Individual units that deviate with regard to the above operating temperature range are specifically mentioned.

2.3. Mains voltage

All mains-operated units in the catalogue already meet the requirements of the IEC 60038 standard, with a rated voltage of 230 V~ +6% /–10%.

2.4. Wind load

For antenna locations, safety regulations according to EN 50083-1 differentiate between two heights above ground (up to 20 m and above 20 m).
They specify different dynamic pressure values for each height, q = 800 N/m^2, and q = 1100 N/m^2 respectively.
The wind load values (horizontal and vertical) specified in this catalogue were determined using a dynamic pressure of q = 800 N/m2. If a value for q = 1100 N/m2 is needed, the value in the catalogue has to be multiplied by 1.37.

2.5. Permissible output level for active electronic equipment

Specification of the permissible output level is made according to EN 50083-3 “Active broadband equipment for coaxial cable networks” for a signal-to-noise ratio of:

- IMD = 60 dB for amplifiers for AM, QAM and FM signals (in SMATV/MATV, broadband cable, CATV installations)
- IMD = 35 dB for amplifiers for FM signals only (satellite IF transmission)

Now that this measurement method is standard throughout Europe, this important parameter has become transparent and comparable. With the aid of this information, the network planner and installer are able to determine the optimum amplifier gain (refer also to the planning instructions) to maintain the required minimum signal-to-noise ratios for a given number of channels.
This procedure provides considerable advantages wherever new networks with a minimum number of amplifiers (cost advantage) are planned or where overriding regulations apply for certain parts of the network.

For example the permissible output level for a house connection amplifier to a house connection point is explicitly specified at CTB/CSO ≥ 66 dB.
This means that the required signal quality (CTB/CSO ≥ 57 dB according to EN 50083-7) can be maintained up to the subscriber’s connection. Other permissible output levels are also given on the one hand for the CENELEC spacing (EN 50083-3) and on the other hand for full adjacent channel load of TV bands.

Maintaining the latter control limits allows for any channel load with analogue and digital TV signals (worst case: complete channel load with analogue and digital TV channels).
Assigning only digital TV channels in the frequency range < 606 MHz makes it possible to raise the output level of the house connection amplifier by up to 2 dB.

3. Planning and installation instructions

3.1. Permissible output level for house connection amplifiers, multiple band amplifiers, and postamplifiers

It is always recommended to carry out these calculations on a Windows PC using:

- AND by CDS Germany (www.cdsgmbh.de)
- CACAO by PTE-software (www.ptesoftware.dk)

The following explanations can be an additional help for solving problems and for understanding the underlying relationships.

The permissible output level is dependent on:

- The required signal-to-noise ratio CTB, CSO
- The number of TV channels to be transmitted
- The frequency distribution of the channels

The signals of the FM radio band can be treated as a single TV channel, if their levels are 6-8 dB below the level of the TV channels. The 1st selection criterion is the number of TV channels to be transmitted.

3.1.1 Maximum number of TV channels: 10 (MATV systems)

- Determine the permissible output level from the technical data: for IMD2 (60dB 2nd order intermodulation products acc. to EN 50083-5), for IMR3 (60dB 3rd order intermodulation products acc. to EN 50083-5)
- Reduce the IMR3 value according to the number of channels

The smaller of the two output levels (with respect to IMD2, IMR3) is the permissible output level (dB(µV)) for a signal-to-interference ratio of IMD=60 dB.

Number of channel loads	Correction to the catalog value in dB
2	0
3	– 2
4	– 3
5	– 4
6	– 5
7	– 5.5
8	– 6
10	– 7

Table1: Level reduction as a function of the number of channels loaded

3.1.2 More than 10 TV channels (broadband cable, MATV, CATV)

In order to obtain optimal gain from amplifiers with many channels loaded, it is necessary to use the permissible output levels specifically defined for each such case (for a CSO and CTB ratio of 60 dB) and a channel raster as close as possible to a defined one.

3.1.3 Approximate calculation for the permissible output level:

a) *Permissible output level dependent on required CSO and CTB values that are different from catalogue values:*

CSO

Question: “How high is the permissible output level for a CSO value Δ a dB above the catalogue value (CSO = 60 dB)?”

n_{a1} = output level in dB(µV) for CSO = 60 dB (catalogue value)
n_{a2} = output level in dB(µV) for CSO = (60 + Δ a) dB

$$n_{a2} = n_{a1} - \Delta a$$

i. e. on an increase in the CSO requirement by Δ a dB, the permissible output level is reduced by Δ a dB.

CTB

Question: “How high is the permissible output level for a CTB value Δ a dB above the catalogue value (CTB = 60 dB)?”

n_{a3} = output level in dB(µV) for CTB = 60 dB (catalogue value)
n_{a4} = output level in dB(µV) for CTB = (60 + Δ) dB

$$n_{a4} = n_{a3} - \Delta a/2$$

i. e. on an increase in the CTB requirement by d a dB, the permissible output level is reduced by Δ a/2 dB.

Example figures for HEF 845 with the CENELEC spacing

n_{a1} = output level in dB(µV) for CSO = 60 dB = 110 dB(µV)
n_{a2} = output level in dB(µV) for CSO = 69 dB = 101 dB(µV)
n_{a3} = output level in dB(µV) for CTB = 60 dB = 110 dB(µV)
n_{a4} = output level in dB(µV) for CTB = 72 db = 104 dB(µV)

In total for CSO = 69 dB and CTB = 72 dB a permissible output level of 101 dB(µV) is to be observed.

b) *Permissible output level for channel loads deviating from catalogue specifications*

The individual Triax operating instructions list the maximum permissible output level for a signal-to-interference ratio of 60 dB for three different channel spacings:

- up to 450 MHz: 36 TV + 24 FM channels,
- up to 606 MHz: 29 TV channels (“CENELEC raster“)
- up to 862 MHz: 42 TV channels (“CENELEC raster“) Refer to “Channel spacing” table

These conditions are very critical with respect to the development of non-linear distortion (CTB, CSO). For small deviations of the actual channel spacing from the standard ones, it is not necessary to reduce the output level shown in the operating instructions. For larger deviations, the following rules of thumb can help to obtain a rough approximation for the adjustment:

1. Select the catalog values corresponding to the highest channel frequency.
2. For a channel pattern with twice the number of channels specified in the catalog, reduce the output level by **about 3 dB.**

3. Planning and installation instructions

- continued from last page

If the frequency band contains only **one half of the number of channels** (with constant channel spacing), it is possible to raise the output level by 3 dB. If the configuration lies somewhere in between these extremes, it is possible to make a rough interpolation.

c) ***Maximum output level for frequency pre-compensation (line equalizer)***

A frequency pre-compensation value for example of 10 dB using a line equalizer permits driving the amplifier approximately 2 dB higher. This value can also be treated as output reserve. It should be noted, however, that the signal-to-interference ratio at low frequencies will deteriorate by the amount of the compensation attenuation. For extreme cases optimization by a planning specialist is therefore required.

d) ***Permissible output level when cascading amplifiers***

For cascades, reduce the output level by 3 dB each time you double the number of cascaded amplifiers.

3.2. Radiated interference power and max. operating level

The radiated interference power of an antenna system according to EN 50083-2 may not exceed:

- 20 dB(pW) = 39 dB(µV) at 75Ω in the frequency range 30-950 MHz
- 43 dB(pW) = 62 dB(µV) at 75Ω in the frequency range 950-2500 MHz

Thus, in conjunction with the shielding rate specified for the equipment, the maximum operating level is as follows:
Maximum operating level =

- Shielding rate + 39 dB(µV) (in the 30-950 MHz frequency range)
- Shielding rate + 62 dB(µV) (in the 950-2500 MHz frequency range)

3.3. Shielding rate

The passive Triax components in this catalog meet as a minimum the shielding rates required by EN 50083-2, class B:

- 5-470 MHz 75 dB min
- 470-950 MHz 65 dB min
- 950-3000 MHz 50 dB min

Class A components meet the increased requirements of EN 50083-2

- 5-300 MHz 85 dB min
- 300-470 MHz 80 dB min
- 470-950 MHz 75 dB min
- 950-3000 MHz 55 dB min

For active units, the class A marking also documents compliance with EN 50083-2.

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3.4. Signal-to-noise ratio, noise factor

The signal-to-noise ratio is the ratio of the used signal power to the noise power expressed in decibels. The noise factor defines by how much the signal-to noise ratio at the output of an active unit (e. g. amplifier) is less than the signal-to-noise ratio at the input.
The thermal noise level on a 75 Ω resistor amounts

- for a bandwidth of 5 MHz (TV channel) and
- for a temperature of 293 K to approximately 2 dB(µV).

The signal-to-noise ratio of the received signal is the decisive factor for the video quality of a TV set (see below).
The signal-to-noise ratio at the output of an individual amplifier (for ideal, i.e. noise-free input signal) can be determined as follows:

Operating level at the output

- gain
- noise factor
- noise level

Example:
An amplifier with the following output parameters:
94 dB(µV) operating level, 21 dB gain, and 7 dB noise factor.
The signal-to-noise ratio at the output of an individual amplifier would then be:

94	dBµV
– 21	dB
– 7	dB
– 2	dBµV
64	dB

3.5. Signal-to-noise ratio, noise, picture quality

Signal-to-noise ratio	Noise	Picture quality
> 46 dB	invisible	very good
37 dB	visible, but not interfering	good
30 dB	clearly visible, interfering	unsatisfactory
< 26 dB	dominant compared to required signal	unusable

4. Earthing and equipotential bonding cables

EN 50083-1 specifies the following earthing and equipential bonding cables for antenna systems:

Earthing cables:

Material	Cross-section	Ø	Condition	Example
Copper	> 16 mm²	> 4.6 mm	bare or insulated	Koka
Aluminium	> 25 mm²	> 5.7 mm	bare (indoors only) or insulated	
Aluminium	> 50 mm²	> 8.0 mm	(wrought) alloy	
Steel wire	-	8.0 mm	galvanized	-
Steel strip	2.5 x 20 mm	-	galvanized	-
Cable types: single conductor or multi-conductor, but no fine wires				

Equipotential bonding cables:

Material	Cross-section	Ø	Condition	Example
Copper	4 mm²	2.3 mm	bare or insulated	Koka

Frequency ranges of radio waves

Frequency range	Int. abb.	Abb.	Modulation Picture/ sound	Channel width	Channels	Frequency	Wave-length	Polarisation
Long wave	LF	L	AM	9 kHz	2-4	150 - 285 kHz	2000 - 1050 m	V
Medium wave	MF	M	AM	9 kHz		510 - 1605 kHz	590 - 187 m	V
Short wave	HF	K	AM	9 kHz		3,95 - 26,1 MHz	76 - 11,5 m	V
Band I	VHF	F I	AM FM	7 MHz	2-4	47 - 68 MHz	6,35 - 4,4 m	H/V
Band II (radio)	VHF	UKW	FM	300 kHz	2-70	87,5 - 108 MHz	3,4 - 2,8 m	H
S-channels	VHF	USB	AM FM	7 MHz	s2 - s10	111 - 174 MHz	2,7 - 1,7 m	-[1)]
Band III	VHF	F III	AM FM	7 MHz	5-12	174 - 230 MHz	1,7 - 1,3 m	H/V
S-channels	VHF	OSB	AM FM	7 MHz	s11 - s20	230 - 300 MHz	1,3 - 1,0 m	-[1)]
S-channels	UHF	ESB	AM FM	8 MHz	s21 - s38	302 - 446 MHz	99 - 68 cm	-[1)]
Band IV	UHF	F IV	AM FM	8 MHz	21-39	470 - 622 MHz	64 - 68 cm	H/V
Band V	UHF	F V	AM FM	8 MHz	40-60	622 - 790 MHz	48 - 38 cm	H/V

1) in wideband installation

5. TV standards

Standard	No. of lines	Channel width (MHz)	Video band-width (MHz)	Video/audio seperation (MHz)	Vestigial side-band (MHz)	Video modulation	Audio modulation
B (CCIR)	625	7	5	+ 5.5 (+5.742)	0.75	negative	FM, FM[1]
D (OIRT)	625	8	6	+ 6.5	0.75	negative	FM
G (CCIR)	625	8	5	+ 5.5 (+5.742)	0.75	negative	FM, FM[1]
H (B)	625	8	5	+ 5.5	1.25	negative	FM
I (GB)	625	8	5.5	+ 6.0	1.25	negative	FM
K (OIRT)	625	8	6	+ 6.5	0.75	negative	FM
K1 (CCIR)	625	8	6	+ 6.5	1.25	negative	FM
L (F)	625	8	6	+ 6.5	1.25	positive	AM
M (FCC)	525	6	4.2	+ 4.5	0.75	negative	FM
N (South America)	625	6	4.2	+ 4.5	0.75	negative	FM

1) Second audio carrier for dual or stereo operation

6. Frequency ranges and channel allocation

	Channel MHz	Frequency wave - MHz	Picture carrier MHz	1st sound
Return/data communication		4 to 30		
Return-TV	R 1	14,75-21,75		
	R 2	21,75-28,75		
Band I	2	47 to 54	48,25	53,75
	3	54 to 61	55,25	60,75
	4	61 to 68	62,25	67,75
Data channel		70 to 75		
Pilot frequency		80,15		
Band II	2-70	87,5 - 108		
Digital-sound 1st channel	S 2	111 - 118		
	S 3	118 - 125		
Lower S-channels	S 4	125 - 132	126,25	131,75
	S 5	132 - 139	133,25	138,75
	S 6	139 - 146	140,25	145,75
USB	S 7	146 - 153	147,25	152,75
	S 8	153 - 160	154,25	159,75
	S 9	160 - 167	161,25	166,75
	S10	167 - 174	168,25	173,75
Band III	5	174 - 181	175,25	180,75
	6	181 - 188	182,25	187,75
	7	188 - 195	189,25	194,75
	8	195 - 202	196,25	201,75
	9	202 - 209	203,25	208,75
	10	209 - 216	203,25	208,75
	11	216 - 223	217,25	222,75
	12	223 - 230	224,25	229,75
Upper S-channels	S 11	230 - 237	231,25	236,75
	S 12	237 - 244	238,25	243,75
	S 13	244 - 251	245,25	250,75
	S 14	251 - 258	252,25	257,75
	S 15	258 - 265	259,25	264,75
	S 16	265 - 272	266,25	271,75
	S 17	272 - 279	273,25	278,75
Pilot frequency	S 18	279 - 286		
	S 19	286 - 293	287,25	
	S 20	293 - 300	294,25	299,75
S-channels	S 21	302 - 310	303,25	308,75
	S 22	310 - 318	311,25	316,75
	S 23	318 - 326	319,25	324,75
	S 24	326 - 334	327,25	332,75
8 MHz	S 25	334 - 342	335,25	340,75
	S 26	342 - 350	343,25	348,75
	S 27	350 - 358	351,25	356,75
	S 28	358 - 366	359,25	364,75
	S 29	366 - 374	367,25	372,75
	S 30	374 - 382	375,25	380,75
	S 31	382 - 390	383,25	388,75
	S 32	390 - 398	391,25	396,75
	S 33	398 - 406	399,25	404,75
	S 34	406 - 414	407,25	412,75
	S 35	414 - 422	415,25	420,75
	S 36	422 - 430	423,25	428,75
	S 37	430 - 438	431,25	436,75
	S 38	438 - 446	439,25	444,75

	Channel MHz	Frequency wave - MHz	Picture carrier MHz	1st sound
Band F IV	21	470 - 478	471,25	476,75
	22	478 - 486	476,25	484,75
	23	486 - 494	487,25	492,75
	24	494 - 502	495,25	500,75
	25	502 - 510	503,25	508,75
	26	510 - 518	511,25	516,75
	27	518 - 526	519,25	524,75
	28	526 - 534	527,25	532,75
	29	534 - 542	535,25	540,75
	30	542 - 550	543,25	548,75
	31	550 - 558	551,25	556,75
	32	558 - 566	559,25	564,75
	33	566 - 574	567,25	572,75
	34	574 - 582	575,25	580,75
	35	582 - 590	583,25	588,75
	36	590 - 598	591,25	596,75
	37	598 - 606	599,25	604,75
	38	606 - 614	607,25	612,75
	39	614 - 622	615,25	618,75
F V	40	622 - 630	623,25	626,75
	41	630 - 638	631,25	636,75
	42	638 - 646	639,25	644,75
	43	646 - 654	647,25	652,75
	44	654 - 662	655,25	660,75
	45	662 - 670	663,25	668,75
	46	670 - 678	671,25	676,75
	47	678 - 686	679,25	684,75
	48	686 - 694	687,25	692,75
	49	694 - 702	695,25	700,25
	50	702 - 710	703,25	708,75
	51	710 - 718	711,25	716,75
	52	718 - 726	719,25	724,75
	53	726 - 734	727,25	732,75
	54	734 - 742	735,25	740,75
	55	742 - 750	743,25	748,75
	56	750 - 758	751,25	756,75
	57	758 - 766	759,25	764,75
	58	766 - 744	767,25	772,75
	59	774 - 782	775,25	780,75
	60	782 - 790	783,25	788,75
	61	790 - 798	791,25	796,75
	62	798 - 806	799,25	804,75
	63	806 - 814	807,25	812,75
	64	814 - 822	815,25	820,75
	65	822 - 830	823,25	828,75
	66	830 - 838	831,25	836,75
	67	838 - 846	839,25	844,75
	68	846 - 854	847,25	852,75
	69	854 - 862	855,25	860,75

Digital-TV			Channel centre (MHz)
S-channel range Channel width 8 MHz	S 21 D	302 - 310	D 306
	S 22 D	310 - 318	D 314
	S 23 D	318 - 326	D 322
	S 24 D	326 - 334	D 330
	S 25 D	334 - 342	D 338
	S 26 D	342 - 350	D 346
	S 27 D	350 - 358	D 354
	S 28 D	358 - 366	D 362
	S 29 D	366 - 374	D 370
	S 30 D	374 - 382	D 378
	S 31 D	382 - 390	D 386
	S 32 D	390 - 398	D 394
	S 33 D	398 - 406	D 402
	S 34 D	406 - 414	D 410
	S 35 D	414 - 422	D 418
	S 36 D	422 - 430	D 426
	S 37 D	430 - 438	D 434
	S 38 D	438 - 446	D 442

6. Channels and frequencies

Channel		Channel limits (MHz)	Video carrier (MHz)	Audio carrier (MHz)
Standard B, Italy				
VHF I	A	52.5-59.5	53.75	59.25
	B	61-68	62.25	67.75
VHF II	C	81-88	82.25	87.75
VHF III	D	174-181	175.25	180.75
	E	182.5- 189.5	183.75	189.25
	F	191-198	192.25	197.75
	G	200-207	201.25	206.75
	H	209-216	210.25	215.75
	H 1	216-223	217.25	222.75
	H 2	223-230	224.25	229.75
Standard D, OIRT				
VHF I	R I	48.5-56.5	49.75	56.25
	R II	58-66	59.25	65.75
	R III	76-84	77.25	83.75
(VHF II)	R IV	84-92	85.25	91.75
	R V	92-100	93.25	99.75
Spec. chanel	s1	110-118	111.25	117.75
	s2	118-126	119.23	125.75
	s3	126-134	127.25	133.75
	s4	134-142	135.25	141.75
	s5	142-150	143.25	149.75
	s6	150-158	151.25	157.75
	s7	158-166	159.25	165.75
	s8	166-174	167.25	173.75
(VHF III)	R VI	174-182	175.25	181.75
	R VII	182-190	183.25	189.75
	R VIII	190-198	191.25	197.75
	R IX	198-206	199.25	205.75
	R X	206-214	207.25	213.75
	R XI	214-222	215.25	221.75
	R XII	222-230	223.25	229.75
	s9	230-238	231.25	237.75
	s10	238-246	239.25	245.75
	s11	246-254	247.25	253.75
	s12	254-262	255.25	261.75
Spec. chanel	s13	262-270	263.25	269.75
	s14	270-278	271.25	277.75
	s15	278-286	279.25	285.75
	s16	286-294	287.25	293.75
	s17	294-302	295.25	301.75
	s18	302-310	303.25	309.75
	s19	310-318	311.25	317.75
	s20	318-326	319.25	325.75
	s21	326-334	327.25	333.75
	s22	334-342	335.25	341.75
	s23	342-350	343.25	349.75
	..	.....	.....	.....
	...	.....	.....	.....
	s38	462-470	463.25	469.75

Channel		Channel limits (MHz)	Video carrier (MHz)	Audio carrier (MHz)
Standard D, China				
VHF I	1	48.5-56.5	49.75	56.25
	2	56.5-64.5	57.75	64.25
	3	64.5-72.5	65.75	72.25
	4	76.0-84.0	77.25	83.75
	5	84.0-92.0	85.25	91.75
VHF III	6	167-175	168.25	174.75
	7	175-183	176.25	182.75
	8	183-191	184.25	190.75
	9	191-199	192.25	198.75
	10	199-207	200.25	206.75
	11	207-215	208.25	214.75
	12	215-223	216.25	222.75
Standard I, Ireland				
VHF I	I A	44.5-52.5	45.75	51.75
	I B	52.5-60.5	53.75	59.75
	I C	60.5-68, 5	61.75	67.75
VHF III	I D	174-182	175.25	181.25
	I E	182-190	183.25	189.25
	I F	190-198	191.25	197.25
	I G	198-206	199.25	205.25
	I H	206-214	207.25	213.25
	I J	214-222	215.25	221.25
Standard L, France				
VHF I	A	41.00-49.00	47.75	41.25
	B	49.00-57.00	55.75	49.25
	C	57.00-65.00	63.75	57.25
	C 1	53.75-61.75	60.50	54.00
VHF III	5	174.75-182.75	176.00	182.50
	6	182.75-190.75	184.00	190.50
	7	190.75-198.75	192.00	198.50
	8	198.75-206.75	200.00	206.50
	9	206.75-214.75	208.00	214.50
	10	214.75-222.75	216.00	222.50
Standard K1, (France)				
VHF III	4	174-182	175.25	181.75
	5	182-190	183.25	189.75
	6	190-198	191.25	197.75
	7	198-206	199.25	205.75
	8	206-214	207.25	213.75
	9	214-222	215.25	221.75

7. Colour and broadcasting systems by country

Country	TV	Colour system	Stereo	Subtitles
Albania	B/G	PAL		
Argentina	N	PAL-N		
Australia	B/G	PAL	FM-FM	Teletext
Austria	B/G	PAL	FM-FM	Teletext
Azores (Portugal)	B	PAL		
Bahamas	M	NTSC		
Bahrain	B	PAL		
Barbados	M	NTSC		
Belgium	B/G	PAL	Nicam	Teletext
Bermuda	M	NTSC		
Brazil	M	PAL-M	MTS	
Bulgaria	D	SECAM		
Canada	M	NTSC	MTS	CC
Canary Is	B	PAL		
China	D	PAL		
Colombia	M	NTSC		
Cyprus	B	PAL		
Czechsolvakia	D/K	SECAM/PAL		
Denmark	B	PAL	Nicam	Teletext
Egypt	B	SECAM		
Faroe Islands (DK)	B	PAL		
Finland	B/G	PAL	Nicam	Teletext
France	E/L	SECAM		Teletext
Gambia	I	PAL		
Germany	B/G	PAL	FM-FM	Teletext
Germany (prev East)	B/G	SECAM/PAL		
Gibraltar	B	PAL		
Greece	B/G	PAL		
Hong Kong	I	PAL	Nicam	
Hungary	B/G & D/K	PAL	Nicam (Budapest)	
Iceland	B	PAL		
India	B	PAL		
Indonesia	B	PAL		
Iran	H	SECAM		
Ireland	I	PAL	Nicam	Teletext
Israel	B/G	PAL	Nicam	Teletext
Italy	B/G	PAL	FM/FM	Teletext
Jamaica	N	SECAM		
Japan	M	NTSC	Matrix	
Jordan	B	PAL		
Kenya	B	PAL		
Korea	M	NTSC		
Luxembourg	B/G	PAL	NICAM	Teletext
Madeira	B	PAL		
Madagascar	B	SECAM		
Malaysia	B	PAL		
Malta	B/G	PAL		
Mauritius	B	SECAM		
Mexico	M	NTSC	MTS	CC
Monaco	L/G	SECAM/PAL		
Morocco	B	SECAM		

Country	TV	Colour system	Stereo	Subtitles
Netherlands	B/G	PAL	FM-FM	Teletext
New Zealand	B/G	PAL	Nicam	Teletext
North Korea	D/K	SECAM		
Norway	B/G	PAL	Nicam	
Pakistan	B	PAL		
Paraguay	N	PAL		
Peru	M	NTSC		
Philipines	M	NTSC		
Poland	D/K	PAL		Teletext
Portugal	B/G	PAL	Nicam	Teletext
Romania	G	PAL		
Russia	D/K	SECAM		
Saudi Arabia	B	SECAM		
Seychelles	I	PAL		
Singapore	B	PAL		
South Africa	I	PAL		
South Korea	M	NTSC		
Spain	B/G	PAL	Nicam	Teletext
Sri Lanka	B/G	PAL		
Sweden	B/G	PAL	Nicam	Teletext
Switzerland	B/G	PAL	FM-FM	Teletext
Tahiti	KI	SECAM		
Taiwan	M	NTSC		
Thailand	B	PAL		
Trinidad	M	NTSC		
Tunisia	B	SECAM		
Turkey	B	PAL	-	Teletext
United Arab Emirates	B/G	PAL		
United Kingdom	I	PAL	Nicam	Teletext
Uruguay	N	PAL	MTS	
USA	M	NTSC	MTS	CC
Venezuela	M	NTSC		
Yugoslavia	B/H	PAL		
Zimbabwe	B	PAL		

8. Signal level - mV to dBµV

Signal level - mV to dBµV

mV v/75 Ω	dBµV	mV v/75 Ω	dBµV	mV v/75 Ω	dBµV
0,100	40	3,55	71	125	102
0,112	41	4,00	72	140	103
0,125	42	4,50	73	160	104
0,140	43	5,00	74	180	105
0,160	44	5,60	75	200	106
0,180	45	6,30	76	225	107
0,200	46	7,00	77	250	108
0,225	47	8,00	78	280	109
0,250	48	9,00	79	315	110
0,280	49	10,0	80	355	111
0,315	50	11,2	81	400	112
0,355	51	12,5	82	450	113
0,400	52	14,0	83	500	114
0,450	53	16,0	84	560	115
0,500	54	18,0	85	630	116
0,560	55	20,0	86	700	117
0,630	56	22,5	87	800	118
0,700	57	25,0	88	900	119
0,800	58	28,0	89	1000	120
0,900	59	31,5	90	1120	121
1,00	60	35,5	91	1250	122
1,12	61	40,0	92	1400	123
1,25	62	45,0	93	1600	124
1,40	63	50,0	94	1800	125
1,60	64	56,0	95	2000	126
1,80	65	63,0	96	2250	127
2,00	66	70,0	97	2500	128
2,25	67	80,0	98	2800	129
2,50	68	90,0	99		
2,80	69	100	100		
3,15	70	112	101		

Voltage ratio in dB

*) Factor -dB	dB	*) Factor +dB
1,0	0,0	1,0
0,95	0,5	1,06
0,89	1,0	1,12
0,84	1,5	1,19
0,8	2,0	1,25
0,75	2,5	1,33
0,71	3,0	1,41
0,67	3,5	1,5
0,63	4,0	1,6
0,60	4,5	1,67
0,56	5,0	1,78
0,53	5,5	1,88
0,50	6,0	2,0
0,47	6,5	2,12
0,45	7,0	2,24
0,42	7,5	2,37
0,4	8,0	2,5
0,38	8,5	2,66
0,35	9,0	2,82
0,33	9,5	3,00
0,32	10	3,16
0,28	11	3,55
0,25	12	4,00
0,22	13	4,5
0,2	14	5,00
0,18	15	5,62
0,16	16	6,3
0,14	17	7,1

Voltage ratio in dB

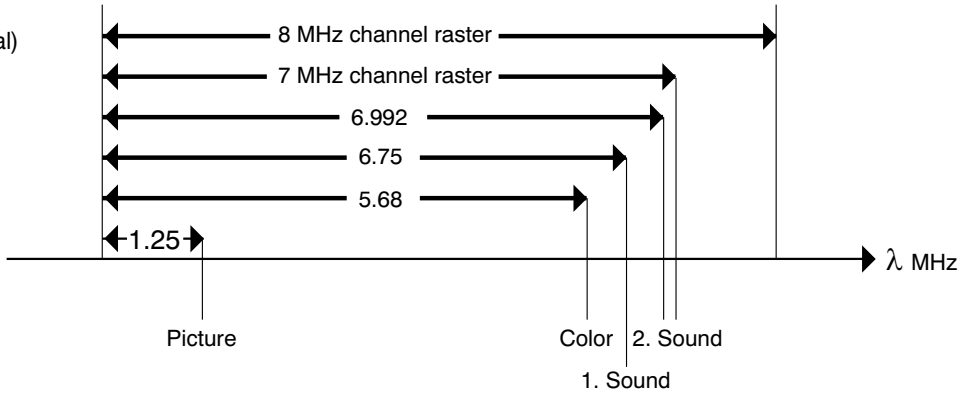
*) Factor -dB	dB	*) Factor +dB
0,125	18	8,0
0,11	19	8,9
0,10	20	10,0
0,089	21	10,0
0,08	22	12,5
0,071	23	14,1
0,063	24	16,0
0,056	25	17,8
0,050	26	20,0
0,045	27	22,4
0,04	28	25,0
0,035	29	28,2
0,032	30	31,6
0,028	31	35,5
0,025	32	40
0,022	33	45
0,020	34	50
0,018	35	56
0,016	36	63
0,014	37	71
0,0125	38	80
0,011	39	89
0,01	40	100
0,0056	45	178
0,0032	50	316
0,0018	55	562
0,001	60	1000
–	–	–

*) ***The numbers are dB value calculated to times.***
Signal level is often stated in dBµV which is to be understood as the number of dB the signal exceeds 1µV.

9. Frequencies for radio and TV channels

Frequencies of a TV-signal (Norm B, G/Pal)

7 MHz raster: FI, USB, F III, OSB
8 MHz raster: ESB, F IV, F V



Contents from A to Z

00

150030 1.1/7.3 Black Double shielded 100 m Plastic roll 203
150031 1.1/7.3 Black Double shielded 500 m drum 203
338365 102 FF/M 193
338366 102 MM/F 193
152015 2 x 0.5 power cable - grey 212
152010 2 x 0.5 power cable - white 212
152003 2 x 0.75 power cable - grey 212
152004 2 x 0.75 power cable - white 212
338106 203 B 2 Splitter 193
345111 2TV Plus 164
338125 309, 3 Splitter 193
140030 38 mm x 1.5 m Mast 62
140111 38 mm x 2 m Mast 62
140031 38 mm x 3 m Mast 62
140113 38 mm x 3 m Mast 62
140112 38 mm x 4 m Mast 62
140110 38 mm x 6 m Mast 62
338130 407 4 Splitter 193
338131 407 DC1, 4 splitter 193
140025 42 mm x 2 m Mast for composition 62
140115 42 mm x 3 m Mast 62
140114 42 mm x 6 m Mast 62
140028 50 mm x 2 m Mast for composition 62
140029 50 mm x 3 m Mast for composition 62
140126 50 mm x 3 m Mast 62
140121 50 mm x 3 m Mast 63
140008 50 mm x 4 m Mast 62
140120 50 mm x 6 m Mast 62
140122 50 mm x 6 m Mast 63
342101 5020 attenuators 194
336106 601/60 B power supply 197
336121 602/60 B power supply 197
336350 651/350 power supply 197
312250 7000 FXX, 4 x UHF 52
312264 70XX FYY, BIII/21-40 52
312263 70XX FYY, BIII/41-60 52
311122 71234 B Combiner 56
311125 7132 G Combiner 56
315103 720/ BIII 59
315114 721/ UHF 59
315115 741/ UHF 59
312150 75 XY 52
311304 7508 BIII, ch. 8 55
311301 750X BI 55
311303 750x BIII 55
311140 75132 Combiner 56
316110 753343 attenuators 194
325830 8000/1 BI amp. 47
325857 8000/1K BI channel 47
325835 8000/2A BII 47
325838 8000/3 BIII 47
325856 8000/3K BIII channel 47
325800 80065 UHF amp. 48
325820 80065K amp. Ch. 21-46 48
325821 80065K amp. Ch. 47-68 48
325808 8100/3 BIII 47
325804 81065 UHF amp. with limiter 48
325824 81065K amp. Ch. 21-46 with limiter 48
325825 81065K amp. Ch. 47-68 with limiter 48
315122 821/ UHF 59
315123 841/ UHF 59

A

326850 A 334350/2360 A1 43
326878 A 45/3153 43
326880 A 45/XX 43
326861 A 5053/7 A1 43
326905 A XX A1, ch. 5-6, BIII 46
326907 A XX A1, ch. 7-8 BIII 46
326909 A XX A1, ch. 9-11, BIII 46
326911 A XX A1, ch.12, BIII 46
326980 A XXYY A2 multichannel 46
326840 A XXYY/00 A1 43
326859 A XXYY/Z A1 43
326976 A88108 A1, FM 46
322230 Accessory Box 153
104579 Aerial 10el, ch. 5-12 12
100582 Aerial 13el, ch. 5-11 12
100022 Aerial 2el, ch. 2 foldable reflector 8
100032 Aerial 2el,ch 3 foldable reflector 8
100033 Aerial 3el,ch 3 foldable reflector 8
104663 Aerial 4el, ch. 5-12 12
103861 Aerial 4el, ch. 5-12 with F-connector 12
106663 Aerial 4el, ch. 5-12,vertical 12
100044 Aerial 4el,ch 4 9
104665 Aerial 6el, ch. 5-12 12
103862 Aerial 6el, ch. 5-12 with F-connector 12
100279 Aerial, 10el, ch.6 14
100329 Aerial, 10el, ch. 7 14
100379 Aerial, 10el, ch. 8 15
100429 Aerial, 10el, ch. 9 15
100479 Aerial, 10el, ch.10 15
100229 Aerial, 10el, ch.5 14
100529 Aerial, 10el,ch. 11 15
100282 Aerial, 13el, ch.6 14
100482 Aerial, 13el, ch 10 15
100332 Aerial, 13el, ch. 7 14
100382 Aerial, 13el, ch. 8 15
100432 Aerial, 13el, ch. 9 15
100532 Aerial, 13el, ch.11 15
100232 Aerial, 13el, ch.5 14
104602 Aerial, 3el, ch. 5-6 13
104622 Aerial, 3el, ch. 7-8 13
104603 Aerial, 4el, ch. 5-6 13
104623 Aerial, 4el, ch. 7-8 13
104643 Aerial, 4el, ch. 9-11 13
100604 Aerial, 5el, ch. 5-6 13
100624 Aerial, 5el, ch. 7-8 13
100644 Aerial, 5el, ch. 9-11 13
100305 Aerial, 6el, ch. 7 14
100255 Aerial, 6el, ch.6 14
100405 Aerial, 6el, ch. 9 15
100355 Aerial, 6el, ch. 8 15
100455 Aerial, 6el, ch. 10 15
100205 Aerial, 6el, ch. 5 14
100307 Aerial, 8el, ch. 7 14
100257 Aerial, 8el, ch. 6 14
100357 Aerial, 8el, ch. 8 15
100407 Aerial, 8el, ch. 9 15
100457 Aerial, 8el, ch. 10 15
100207 Aerial, 8el, ch. 5 14
100014 Aerial,2el, ch. 3 8
100012 Aerial,3el, ch. 2-4 8
100013 Aerial,3el, ch. 2-4, foldable reflektor 8
300467 ALPS, Universal Quad LNB 92
300468 ALPS, Universal Quattro LNB 92
300464 ALPS, Universal Single LNB 92
300462 ALPS, Universal Twin LNB 92
346182 APS 007 power inserter 195
324121 ARM 404 multiband-amp 4in1out 120
324122 ARM 455 multiband-amp 5in1out 120
324123 ARM 486 multiband-amp 6in1out 120
153070 Arrow T25 Stitcher 74
324596 ASA 02 PSU 230VAC, 15V/1,5ADC 119
324587 ASC 011, Chassis for 10 modules 119
324599 ASL 030,HF bridges 75 Ohm/IEC 119
324598 ASR 075, 75 Ohm/IEC termination 119
324593 ASU 040,ch21-69,att 0-18dB,40dB gain 119
324594 ASU 050,ch21-69,att0-18dB,50dB gain 119
324590 ASV 137,E2-E4,att.0-18dB,37dB gain 119
324591 ASV 237,87,5-108 MHz,att 0-18dB,37dbgain 119
324592 ASV 337,E5-E12,att0-18dB,37dB gain 119
346413 ATM 4-12T 171
346617 ATM 6-12T 171
346812 ATM 8-12T 171
346002 ATS 2 166
346003 ATS 3 166
346010 ATS 33 166
346004 ATS 4 166
346006 ATS 6 166
346008 ATS 8 166
346112 ATT 1-12 167
346116 ATT 1-16 167
346120 ATT 1-20 167
346124 ATT 1-24 167
346130 ATT 1-30 167
346106 ATT 1-6 167
346108 ATT 1-8 167
346210 ATT 2-10 168
346212 ATT 2-12 168
346216 ATT 2-16 168
346220 ATT 2-20 168
346224 ATT 2-24 168
346208 ATT 2-8 168
346310 ATT 3-10 169
346312 ATT 3-12 169
346316 ATT 3-16 169
346320 ATT 3-20 169
346412 ATT 4-12 170
346416 ATT 4-16 170
346420 ATT 4-20 170
346512 ATT 5-12 170
346616 ATT 6-16 170

B

300724 Basic - 3dg DuoBlock, Black 89
300722 Basic - 6dg DuoBlock, Black 89
300723 Basic - FlexiBlock, Black 89
128601 Basic 60, Bulk, Ral 7035 84
128602 Basic 60, Bulk, Ral 7035, (with south bracket) 84
128701 Basic 75, Bulk, Ral 7035 84
128801 Basic 85, Bulk, Ral 7035 84
300729 Basic multiblock for 4xLNB excl. LNB & switch 89
108011 BB grid ch. 21-69 23
108013 BB grid ch. 21-69, 2 pcs. per pack 23
108010 BB minigrid ch. 21-69, 4 pcs. per pack 23
132015 Bottom clamp - 30-50 mm 69
132018 Bottom clamp - 60 mm 69

C

300738 Cable 1 m A/V Nicam for TDH 111
300749 Cable 1,5 m A/V in-out for TDH 111
300746 Cable 2,0m video/ monitor TDH 111
153082 Cable clips, black, FC 11-13 (pack with 100 pcs) 73
153083 Cable clips, black, FC 13-15 (pack with 100 pcs) 73
153084 Cable clips, black, FC 15-17 (pack with 100 pcs) 73
153081 Cable clips, black, FC 9-11 (pack with 100 pcs) 73
153004 Cable clips, Natural 6/25 (pack with 100 pcs) 73
153008 Cable clips, Natural 7/25 (pack with 100 pcs) 73
153010 Cable clips, Natural 7/35 (pack with 100 pcs) 73
153013 Cable clips, Natural, 2x4mm (pack with 100 pcs) 73
153001 Cable clips, Natural, 3x5mm (pack with 100 pcs) 73
153003 Cable clips, Natural, 5/20 (pack with 100 pcs) 73
153080 Cable clpis, black, FC 7-9 (pack with 100 pcs) 73
153090 Cable duct - 16x16 white 72
153092 Cable duct - 25x16 white 72
153057 Cable grommet - black 74
760056 Cable grommet - grey 74
550000 Cable guards - 16 mm 72
550001 Cable guards - 19 mm 72
550002 Cable guards - 23 mm 72
133053 Cable guards - Ø10-12 mm 72
133054 Cable guards - Ø10-12 mm 72
150110 Cable Stand 205
153601 Cable stripper for RG 11 cable 210
153602 Cable stripper for RG 6 cable 210
153634 Cable support tool 210
140135 Camping mast - indoor 63
153540 CC-SP 01 cable assembly kit 211
153542 CC-SP 02 cable assembly kit 211
153544 CC-SP 04 cable assembly kit 211
133225 Centre mount 27
301379 Ch. 10 - 11 TDH Channel filter 110
301380 Ch. 12 - S 11 TDH Channel filter 110
301321 Ch. 21 - 22 TDH Channel filter 110
301323 Ch. 23 - 24 TDH Channel filter 110
301325 Ch. 25 - 26 TDH Channel filter 110
301327 Ch. 27 - 28 TDH Channel filter 110
301329 Ch. 29 - 30 TDH Channel filter 110
301331 Ch. 31 - 32 TDH Channel filter 110
301333 Ch. 33 - 34 TDH Channel filter 110
301335 Ch. 35 - 36 TDH Channel filter 110
301337 Ch. 37 - 38 TDH Channel filter 110
301339 Ch. 39 - 40 TDH Channel filter 110
301341 Ch. 41 - 42 TDH Channel filter 110
301343 Ch. 43 - 44 TDH Channel filter 110
301345 Ch. 45 - 46 TDH Channel filter 110
301347 Ch. 47 - 48 TDH Channel filter 110
301349 Ch. 49 - 50 TDH Channel filter 110
301351 Ch. 51 - 52 TDH Channel filter 110
301353 Ch. 53 - 54 TDH Channel filter 110
301355 Ch. 55 - 56 TDH Channel filter 110
301357 Ch. 57 - 58 TDH Channel filter 110
301359 Ch. 59 - 60 TDH Channel filter 110
301377 Ch. 6 - 7 TDH Channel filter 110
301361 Ch. 61 - 62 TDH Channel filter 110
301363 Ch. 63 - 64 TDH Channel filter 110
301365 Ch. 65 - 66 TDH Channel filter 110
301367 Ch. 67 - 68 TDH Channel filter 110
301378 Ch. 8 - 9 TDH Channel filter 110
130000 Chimney bracket set - 2-parts 70
140032 Chimney bracket set - 38-50 mm 70
130004 Chimney bracket set - double 70
130002 Chimney bracket set - single 70
130006 Chimney bracket set with 2 m mast 70
130107 Clamp 68
133100 Clamp woth bolts 68
153071 Clips galv. (pack with 1000 pcs.) 74
133011 Clips large 71
153069 Clips White (pack with 1000 pcs.) 74
300104 CM 01 Combi FM/UHF - PAL G 117
300108 CM 01 Combi UHF - AU/NZ 117
300107 CM 01 Combi VHF - AU/NZ 117
300102 CM 01 Type UHF 117
300116 CM 01 Type UHF + amplifier 117
300101 CM 01 Type VHF 117
490899 CM02U UHF Modulator 116
490898 CM02V VHF Modulator 116
153051 Coax coupling - grey 211
153055 Coax coupling - white 211
153043 Coax Female angle 209
153022 Coax Female Angle - diecast housing 209
153035 Coax Female angle Grey 209
150180 Coax KOKA 100 198
150181 Coax KOKA 100 198
150182 Coax KOKA 100 198
150193 Coax KOKA 100 198
150186 Coax KOKA 100 black 202
150187 Coax KOKA 100 black 202
150120 Coax KOKA 6 199
150121 Coax KOKA 6 199
150122 Coax KOKA 6 199
150131 Coax KOKA 6 199
150144 Coax KOKA 6 CCS 199
150149 Coax KOKA 6 CCS black 202
150160 Coax KOKA 80 198
150161 Coax KOKA 80 198
150162 Coax KOKA 80 198
150173 Coax KOKA 80 198
150166 Coax KOKA 80 black 202
150167 Coax KOKA 80 black 202

Contents from A to Z

153042	Coax Male angle	209
153021	Coax Male Angle - diecast housing	209
153032	Coax Male angle Grey	209
150074	Coax Multi 4 coloured cable 100 m rolls	204
150075	Coax Multi 5 coloured cable 100 m rolls	201
150079	Coax Multi 9 coloured cable 100 m rolls	204
150078	Coax Multi 9 coloured cable 50 m rolls	204
153017	Coax plastic cover - diecast housing	209
150054	Coax QX4S Black 100m	200
150052	Coax QX4S Grey 100m	200
150021	Coax QX4S Grey 200 m rolls	200
150053	Coax QX4S White 100m	200
150022	Coax QX4S White 200 m rolls	200
150055	Coax QX5 Grey 100m	200
150056	Coax QX5 White 100m	200
153038	Coax RZ20 Female	209
153033	Coax RZ20 Male	209
108681	Combi 1/6, ch. 2-4 + UHF	25
108936	Combi 12, BIII, UHF	25
108937	Combi 12, BIII, UHF	25
108692	Combi 13, ch. 2-12/ 21-69	25
108684	Combi 2/10, ch 3-4 + UHF	25
108682	Combi 2/10, ch. 2 + UHF	25
108694	Combi 20, ch. 5-11/ 21-69	26
108687	Combi 27, ch. 5-12, UHF, Windowmount	26
108688	Combi 27,ch. 5-12 +UHF, Mastmount	26
108696	Combi 57, ch. 5-11/ 21-69	26
153605	Crimp Tool	210
153609	Crimp tool for RG 11 crimp connectors	210
153607	Crimp tool for RG 6 crimp connectors	210
153603	Crimp tool universal RG6/RG11	210
D		
342000	D7020 A1 attenuators	194
126310	DAP 600, 60 cm, Ral 1013	85
126311	DAP 601, 60 cm, Ral 7016	85
126313	DAP 700, 70 cm, Ral 1013	85
126314	DAP 701, 70 cm, Ral 7016	85
126318	DAP 800, 85 cm, Ral 1013	85
126319	DAP 801, 85 cm, Ral 7016	85
126316	DAP 900, 95 cm, Ral 1013	85
126317	DAP 901, 95 cm, Ral 7016	85
126309	DAP-6dg FlexiBlock	89
317570	DCF 3153/15 A2	52
317402	DCF XXYY /15A4	53
317401	DCF XXYY/ 15A3	53
317400	DCF XXYY/15A2	53
333112	DDU 112 domestic distributio unit	237
133220	Deck mount	27
300745	Decoder Cable Sub-D to Phono	111
300742	Decoder cable Sub-D to Scard	111
108310	Digi 10el, ch. 21-37	16
108311	Digi 10el, ch. 21-69	16
108808	Digi 10el, ch. 21-69 with combiner	16
108319	Digi 10el, ch. 21-69 with wallmount	16
108340	Digi 14el, ch. 21-37	17
108341	Digi 14el, ch. 21-69	17
108612	Digi 14el, ch. 21-69 with combiner	17
108360	Digi 18 el, ch. 21-37	17
108361	Digi 18el, ch. 21-69	17
108970	Digi 343, ch. 21-69 with F-connector	17
108200	Digi 6el, ch. 21-69	16
108800	Digi 6el, ch. 21-69 with combiner	16
108201	Digi 6el, ch. 21-69 with wallmount	16
300506	DiSEqC 2x1 - position,hi-iso	94
300503	DiSEqC 2x1 - priority	94
300510	DiSEqC 2x1 diode - high end DiSEqC	93
300511	DiSEqC 2x1 diode - MFD 21DT DiSEqC	93
300502	DiSEqC 2x1- position	94
300508	DiSEqC 2x1 relais - high end DiSEqC	93
300504	DiSEqC 4x1 - matrix	94
300509	DiSEqC 4x1 diode - high end DiSEqC	93
133245	Double mast clamp	68
E		
131092	EXA 192 wall mount - alu	97
131094	EXA 194 wall mount - alu	97
140380	Expansion bolts 10x80 mm	73
140370	Expansion bolts 8x100 mm	73
F		
317229	F 3153/00 A2	54
317228	F 3153/00 A3	54
317236	F 334350/00 A2	54
317237	F 334350/00 A3	54
317233	F 334350/2360 A1	54
317240	F XXYY/00 A1	53
317241	F XXYY/00 A2	53
317242	F XXYY/00 A3	53
153596	F. Con Male-Male, bag with 5 pcs	209
153592	F-angle connector, bag with 5 pcs	209
153220	F-Compression CX3-4.9	208
153221	F-Compression CX3-5,1	208
153222	F-Compression CX3-7,5	208
153073	F-Con 6,8 mm - 100 pcs. Bags	208
153053	F-Con 6,8mm - 5 pcs. Bags	208
153074	F-Con 7,2 mm - 100 pcs. Bags	208
153052	F-Con 7,2 mm - 5 pcs. Bags	208
153593	F-con Female-Female	209
153072	F-con. 5mm - 100 pcs. Bags (QX 4)	208
153049	F-con. Minicable (ø 3,6)	208
153048	F-con.5mm - 5 pcs. Bags (QX 4)	208
153712	F-conn. 10dB attenuator	194
153713	F-conn. 20dB attenuator	194
153710	F-conn. 3dB attenuator	194
153711	F-conn. 6dB attenuator	194
153608	F-connector Wrench (Hexagonal)	210
153204	F-Crimp 3.7/6.4	208
153201	F-Crimp 4.9/8.4	208
153203	F-Crimp 5.1/8.4	208
153211	F-Crimp 5.1/8.8	208
153240	F-Crimp 5.3/8.4	208
153231	F-crimp 7.6/11.7	208
153230	F-Crimp for RG 11 (25 pcs.)	208
153200	F-Crimp For RG 6 (100 pcs.)	208
153202	F-Crimp with rubber gasket for RG 6 (100)	208
153612	F-Female	209
100184	FM 5 el. stereo	10
108951	FM indoor Aerial	30
100189	FM Omni with mast bracket	11
100192	FM Omni with window bracket	11
100160	FM, 1 element folded dipole	10
100161	FM, 2 elements, folded dipole	10
100162	FM, 3 elements, folded dipole	10
100163	FM, 4 elements, folded dipole	10
100164	FM, 5 elements, folded dipole	10
100197	FM, 8 elements Stereo	11
100170	FM-1 DAB aerial	11
100171	FM-5 DAB aerial	11
100193	FM-Zigma aerial	11
153054	F-R75 Terminator, bag with 10 pcs	209
153606	F-Tool	210
303481	FV 01 outlet	223
303482	FV 02 outlet	223
G		
302204	GAD 204 outlet - terminated	226
302210	GAD 210 outlet - loop through	226
302214	GAD 214 outlet - loop through	226
302220	GAD 220 outlet - loop through	226
23236	GAD 269 outlet - termineted	227
23274	GAD 274 outlet - terminated	227
302313	GAD 313F outlet - loop through	226
133090	G-bolt ½" - 120 mm	68
133100	G-bolt ½" - 200 mm	68
133101	G-bolt ½" - 300 mm	68
133102	G-bolt ½" - 400 mm	68
133086	G-bolt ½" - dish	68
850035	G-bolt ½" - nuts	68
304256	Grid cover plate	228
304257	Grid cover plate	228
304258	Grid diplexed	229
304259	Grid diplexed	229
304260	Grid diplexed	229
304261	Grid diplexed	229
304264	Grid quad	229
304265	Grid quad	229
304254	Grid single F female	228
304255	Grid single F female	228
304250	Grid single IEC female	228
304251	Grid single IEC female	228
304252	Grid single IEC male	228
304253	Grid single IEC male	228
304262	Grid triplexed	229
304263	Grid triplexed	229
153572	Ground isolator 5--1000MHz	211
153571	Ground isolator 5--2400MHz	211
153597	Grounding Block F-F	208
153599	Grounding Block F-F - HiQ	208
109812	GSM 900 6el 890-960mHz,mast bracket	29
109807	GSM 900 6el 890-960mHz,mast/win. bracket	29
H		
322039	HDA 3038 LA1 (Line powered)	150
322045	HDA 3038 LA2 (Line powered)	150
322027	HDA 3038 LP1 (Line powered)	150
322033	HDA 3038 LP2 (Line powered)	150
322042	HDA 3038 MA1 (Mains powered)	150
322048	HDA 3038 MA2 (Mains powered)	150
322030	HDA 3038 MP1 (Mains powered)	150
322036	HDA 3038 MP2 (Mains powered)	150
153411	HDMI 2.0 cable	206
322015	HEA 38 LA1 (Line powered)	151
322021	HEA 38 LA2 (Line powered)	151
322003	HEA 38 LP1 (Line powered)	151
322009	HEA 38 LP2 (Line powered)	151
322018	HEA 38 MA1 (Mains powered)	151
322024	HEA 38 MA2 (Mains powered)	151
322006	HEA 38 MP1 (Mains powered)	151
322012	HEA 38 MP2 (Mains powered)	151
323068	HEF 845 distribution amplifier	157
323071	HEF 845C distribution amplifier	157
323074	HEF 845CL distribution amplifier	157
324602	HFA 602 Distribution Amplifier, 22 dB	155
324603	HFA 603 Distribution Amplifier, 30 dB	155
324604	HFA 604 Distribution Amplifier, 40 dB	155
322109	HNA D - LPE (Line powered, E2000)	148
322103	HNA D - LPS (Line powered, SC/APC)	148
322112	HNA D - MPE (Mains powered, E2000)	148
322106	HNA D - MPS (Mains powered, SC/APC)	148
322121	HNA E - LPE (Mains powered, E2000)	148
322115	HNA E - LPS (Line powered, SC/APC)	148
322124	HNA E - MPE (Mains powered, E2000)	148
322118	HNA E - MPS (Mains powered, SC/APC)	148
303491	HT 01 outlet	223
303492	HT 02 outlet	223
303493	HT 03 outlet	223
322063	HTA 3038 LA1 (Line powered)	149
322069	HTA 3038 LA2 (Line powered)	149
322051	HTA 3038 LP1 (Line powered)	149
322057	HTA 3038 LP2 (Line powered)	149
322066	HTA 3038 MA1 (Mains powered)	149
322072	HTA 3038 MA2 (Mains powered)	149
322054	HTA 3038 MP1 (Mains powered)	149
322060	HTA 3038 MP2 (Mains powered)	149
347413	HTM 4-12T	178
347617	HTM 6-12T	178
347810	HTM 8-12T	178
347912	HTS-12	172
347916	HTS-16	172
347002	HTS-2	172
347012	HTS-2 DC	172
347003	HTS-3	172
347013	HTS-3 DC	172
347004	HTS-4	172
347014	HTS-4 DC	172
347006	HTS-6	172
347016	HTS-6 DC	172
347008	HTS-8	172
347018	HTS-8 DC	172
347112	HTT 1-12	173
347116	HTT 1-16	173
347120	HTT 1-20	173
347124	HTT 1-24	173
347106	HTT 1-6	173
347108	HTT 1-8	173
347210	HTT 2-10	174
347212	HTT 2-12	174
347220	HTT 2-20	174
347208	HTT 2-8	174
347310	HTT 3-10	175
347312	HTT 3-12	175
347316	HTT 3-16	175
347320	HTT 3-20	175
347412	HTT 4-12	176
347416	HTT 4-16	176
347420	HTT 4-20	176
347424	HTT 4-24	176
347616	HTT 6-16	177
347620	HTT 6-20	177
347624	HTT 6-24	177
347816	HTT 8-16	177
347820	HTT 8-20	177
347824	HTT 8-24	177
347216	HTT2-16	174
I		
153611	IEC Female	209
153614	IEC Female	209
153613	IEC Male	209
153610	IEC Male	209
153723	IEC-conn. 12dB attenuator	194
153724	IEC-conn. 18dB attenuator	194
153725	IEC-conn. 24dB attenuator	194
153720	IEC-conn. 3dB attenuator	194
153721	IEC-conn. 6dB attenuator	194
153722	IEC-conn. 9dB attenuator	194
153031	IEC-Crimp Female	208
153030	IEC-Crimp Male	208
339212	IFA 212 distribution amplifier	160
339213	IFA 213 distribution amplifier	160
339218	IFA 218 distribution amplifier	160
339219	IFA 219 distribution amplifier	160
339220	IFA 220 distribution amplifier	160
339402	IFB 402 booster amplifier	162
339403	IFB 403 booster amplifier	162
339404	IFB 404 booster amplifier	162
339405	IFB 405 booster amplifier	162
323028	IFE 12QM distribution amplifier	159
323031	IFE 16Q distribution amplifier	159
323022	IFE 20 distribution amplifier	159
323025	IFE 30 distribution amplifier	159
323010	IFE 820A distribution amplifier	158
323016	IFE 830A distribution amplifier	158
323037	IFE 834C distribution amplifier	158
339102	IFM 102 multiband amplifier	122
339103	IFM 103 multiband amplifier	122
339104	IFM 104 multiband amplifier	122
339120	IFM 120 multiband amplifier	121
339130	IFM 130 multiband amplifier	121
339135	IFM 135 multiband amplifier	121
339501	IFP 501 power supply	196
339502	IFP 502 power supply	196
339503	IFP 503 power supply	196

Contents from A to Z

339504	IFP 504 power supply	196
339505	IFP 505 power supply	196
339529	IFP 529 power inserter	195
339434	IIB 434 booster amplifier	163
339435	IIB 435 booster amplifier	163
339445	IIB 445 booster amplifier	163
132213	Index - black	71
132212	Index - red	71
132210	Index R79 - big	71
132211	Index R79 - small	71
111000	Indoor Aerial, 47-860 MHz	30
J		
130010	Jaw bracket - universal	68
322200	JXP-OT200	153
322201	JXP-OT201	153
322202	JXP-OT202	153
322203	JXP-OT203	153
322204	JXP-OT204	153
322205	JXP-OT205	153
322206	JXP-OT206	153
322207	JXP-OT207	153
322208	JXP-OT208	153
322209	JXP-OT209	153
322210	JXP-OT210	153
322211	JXP-OT211	153
322212	JXP-OT212	153
322213	JXP-OT213	153
322214	JXP-OT214	153
322215	JXP-OT215	153
322216	JXP-OT216	153
322217	JXP-OT217	153
322218	JXP-OT218	153
322219	JXP-OT219	153
322220	JXP-OT220	153
322221	JXP-OT221	153
322222	JXP-OT222	153
322223	JXP-OT223	153
322224	JXP-OT224	153
322225	JXP-OT225	153
322226	JXP-OT226	153
KL		
132020	Kip bracket - 34 cm	68
108680	Log-periodic UHF ch. 21-69	24
108678	Log-periodic UHF ch. 21-69, mini	24
108679	Log-periodic VHF/UHF ch. 5-12/21-69	24
MN		
324617	MA 617 Return-path amplifier	156
322248	MA6510 return-path amplifier	154
133262	Mast bracket - 15x15 - Ø60	69
133252	Mast bracket - 18x18 - Ø60	69
132005	Mast bracket - 38 mm left	66
132004	Mast bracket - 38 mm right	66
132003	Mast bracket - 38 mm straight	66
140041	Mast bracket - 38 mm straight	68
132102	Mast bracket - 42 mm universal	66
132008	Mast bracket - 50 mm left	66
132007	Mast bracket - 50 mm right	66
132006	Mast bracket - 50 mm straight	66
133224	Mast bracket (ø 25-38)	28
133223	Mast bracket (ø 38 - 60)	28
140051	Mast bracket for TD 110	96
140050	Mast bracket for Unique	96
133223	Mast bracket Ø38-60 mm	68
140210	Mast top 28 mm	63
140213	Mast top 38 mm	63
140214	Mast top 42 mm	63
140215	Mast top 50 mm	63
322240	MCA 100 / 423 MHz	152
322242	MCA 100 / 519 MHz	152
322244	MCA 100 / 639 MHz	152
324681	MD 3047 Filter (2 pcs.box)	156
324683	MD 6587 Filter (2 pcs.box)	156
324684	MD 6587T Filter and testpoint (2 pcs.box)	156
322250	MDA 3047	154
322252	MDA 4254	154
322254	MDA 5573	154
322256	MDA 6080	154
322258	MDA 6587	154
322246	MDIB 100	154
251000	MDU Lock Box/ 8	126
251005	MDU Lock Box/16	126
251010	MDU Lock Box/32	126
322260	MEX 600/06	153
322262	MEX 602/06	153
322264	MEX 604/06	153
322266	MEX 606/06	153
322280	MEX 800/08	153
322282	MEX 802/08	153
322284	MEX 804/08	153
322286	MEX 806/08	153
340302	MFA 302, UHF	32
340304	MFA 304, UHF	32
340307	MFA 307, UHF	32
340308	MFA 308, UHF	32
340309	MFA 309, UHF	32
340310	MFA 310, UHF	32
340311	MFA 311, UHF	33
340312	MFA 312	33
340313	MFA 313	33
340314	MFA 314	33
340320	MFA 320	33
340321	MFA 321	33
340322	MFA 322	34
340323	MFA 323	34
340324	MFA 324	34
340325	MFA 325	34
340327	MFA 327	34
340331	MFA 331	34
340402	MFA 402 (MFA 302 + IFP 501)	36
340404	MFA 404 (MFA 304 + IFP 502)	36
340407	MFA 407 (MFA 307 + IFP 502)	36
340409	MFA 409 (MFA 309 + IFP 502)	36
340410	MFA 410 (MFA 310 + IFP 502)	36
340411	MFA 411 (MFA 311 + IFP 502)	36
340412	MFA 412 (MFA 312 + IFP 502)	36
340413	MFA 413 (MFA 313 + IFP 502)	36
340414	MFA 414 (MFA 314 + IFP 502)	36
340420	MFA 420 (MFA 320 x IFP 502)	36
340507	MFA 507 (MFA 307 + IFP 503 24V)	36
340511	MFA 511 (MFA 311 + IFP 503 24V)	36
340513	MFA 513 (MFA 313 + IFP 503 24V)	36
340514	MFA 514 (MFA 314 + IFP 503 24V)	36
340606	MFA 606	35
340608	MFA 608	35
340615	MFA 615	35
340625	MFA 625	35
340651	MFA 651	35
340101	MFC 101	49
340102	MFC 102	49
340103	MFC 103	49
340104	MFC 104	49
340105	MFC 105	49
340106	MFC 106	49
340120	MFC 120 DAB K11/12/13, TV/FM	50
340121	MFC 121 DAB K12/13, TV/FM	50
340151	MFC 151 SAT, VHF/UHF	50
150000	Mini cable, Double shielded 100 m Plastic roll	201
322232	ML01, Link Module (Interstage)	154
322234	ML02, Link Module (Retur)	154
300743	Modulator cable 1,5m w/scart	111
300748	Modulator cable 15 cm.	111
140116	Mounting pipes - 30-50 mm	67
140012	Mounting pipes - double angle	67
140009	Mounting pipes - double straight	67
140117	Mounting pipes - MF 38 - 30-50 mm	67
140010	Mounting pipes - single angle	67
140011	Mounting pipes - single angle long	67
140005	Mounting pipes - single straight	67
140118	Mounting pipes - SR 2530-2B	67
153633	Mounting tool for F-Con	210
322293	MRT 300, E2000	152
322292	MRT 300, SC/APC	152
322291	MRT 300L, E2000	152
322290	MRT 300L, SC/APC	152
322295	MRT 400, E2000	152
322294	MRT 400, SC/APC	152
322297	MRT 50X, E2000	152
322296	MRT 50X, SC/APC	152
322270	MS 100 out A-B: 0 - no Pass	154
322271	MS 101 out A-B: No Pass - 0	154
322276	MS 110 Tap Module out A-B: 10,0/10,0-1,1/10	154
322277	MS 114 Tap Module out A-B: 14,0/14,0-0,7/0	154
322278	MS 118 Tap Module out A-B: 18,0/17,8-0,4/0	154
322274	MS 206 Tap Module out A-B: 5,6/5,8-2,2/2,4	154
322273	MS 404 Splitter Module out A-B: 3,5/3,8-3,3/3,7	154
490884	Nicam encoder for TCM-08	116
336154	NT 130/241 power supply	196
336150	NT 50/241 power supply	196
O		
153147	Opus frame 132x66	231
153146	Opus frame 132x66	231
153145	Opus frame 132x66	231
153144	Opus frame 132x66	231
302780	Opus phone connection	231
303780	Opus phone connection	231
153143	Opus surface mount 132x66	231
153142	Opus surface mount 132x66	231
153141	Opus surface mount 66x66	231
153140	Opus surface mount 66x66	231
PQ		
336362	P601/100 power supply	197
336363	P602/100 power supply	197
300708	Para Protection for LNB (Fits TD and Basic)	95
300707	Para Protection for LNB (Fits Unique)	95
153580	PC11-Ff adaptor	153
342601	PG 11 adaptor (stacking combiners)	59
342601	PG11 adaptor	48
153581	PG11 male to 3512 female (PG 3512)	153
130020	Phone mast bracket	68
140128	Pipe holder for bottom pipe	63
133220	Plastic base	28
129421	Plastic parts for TD-dish, Black	89
129420	Plastic parts for TD-dish, Ral 7030	89
129422	Plastic parts for TD-dish, Ral 7035	89
712290	PLT 2S, black	74
153067	PLT 2smo 4,8x188,ø48, Black	74
153068	PLT 3H, 7,6x290,ø76	74
712296	PLT 3H, Black	74
153066	PLT 4smo, 4,8x368,ø102, Black	74
153616	Power coupling	212
153310	Power plug - female	212
153300	Power plug - male	212
153320	Power point 2-way - grey	212
153322	Power point 3-way - grey	212
153340	Power point 4-way - grey	212
150007	QX5S Grey Double shielded 100m on cardboard	200
150008	QX5S White Double shielded 100m on cardboard	200
R		
342504	R1000 - 75 Ohm terminator	209
342503	R75 - 75 Ohm terminator	209
133221	Railing mount	27
124225	Region 1 perf. single packed	86
124351	Region 1 solid single packed	86
124226	Region 2 perf. single packed	86
124313	Region 2 solid single packed	86
153400	RF 1.5 fly leads	205
153404	RF 10.0 fly leads	205
153401	RF 2.5 fly leads	205
153402	RF 5.0 fly leads	205
153403	RF 7.5 fly leads	205
150098	RG11 LZW Double shielded 250 m roll	203
150062	RG11 LZW Double shielded 500 m drum	203
150099	RG11 LZW Double shielded 500 m roll	203
133015	Rigging screw - 1/4”	69
132203	Roof cover - black	71
132202	Roof cover - red - ral 8012	71
300769	RS 232 cable	111
364025	RTF75-DC Terminator	209
S		
301371	S 1 - 2 TDH Channel filter	110
301376	S 10 - Ch. 5 TDH Channel filter	110
301381	S 12 - 13 TDH Channel filter	110
301382	S 14 - 15 TDH Channel filter	110
301383	S 16 - 17 TDH Channel filter	110
301384	S 18 - 19 TDH Channel filter	110
301372	S 2 - 3 TDH Channel filter	110
301385	S 20 - 21 TDH Channel filter	110
301386	S 22 - 23 TDH Channel filter	110
301387	S 24 - 25 TDH Channel filter	110
301388	S 26 - 27 TDH Channel filter	110
301389	S 28 - 29 TDH Channel filter	110
301390	S 30 - 31 TDH Channel filter	110
301391	S 32 - 33 TDH Channel filter	110
301392	S 34 - 35 TDH Channel filter	110
301393	S 36 - 37 TDH Channel filter	110
301394	S 38 - 39 TDH Channel filter	110
301373	S 4 - 5 TDH Channel filter	110
301395	S 40 - 41 TDH Channel filter	110
301374	S 6 - 7 TDH Channel filter	110
338300	S 7200 2-splitter	193
301375	S 8 - 9 TDH Channel filter	110
300401	SAT line amplifier	142
333221	SCA 2021 amp, ch. 21	45
333222	SCA 2022 amp, ch. 22	45
333223	SCA 2023 amp, ch. 23	45
333224	SCA 2024 amp, ch. 24	45
333225	SCA 2025 amp, ch. 25	45
333226	SCA 2026 amp, ch. 26	45
333227	SCA 2027 amp, ch. 27	45
333228	SCA 2028 amp, ch. 28	45
333229	SCA 2029 amp, ch. 29	45
333230	SCA 2030 amp, ch. 30	45
333231	SCA 2031 amp, ch. 31	45
333232	SCA 2032 amp, ch. 32	45
333233	SCA 2033 amp, ch. 33	45
333234	SCA 2034 amp, ch. 34	45
333235	SCA 2035 amp, ch. 35	45
333236	SCA 2036 amp, ch. 36	45
333237	SCA 2037 amp, ch. 37	45
333238	SCA 2038 amp, ch. 38	45
333239	SCA 2039 amp, ch. 39	45
333240	SCA 2040 amp, ch. 40	45
333241	SCA 2041 amp, ch. 41	45
333242	SCA 2042 amp, ch. 42	45
333243	SCA 2043 amp, ch. 43	45
333244	SCA 2044 amp, ch. 44	45
333245	SCA 2045 amp, ch. 45	45
333246	SCA 2046 amp, ch. 46	45
333247	SCA 2047 amp, ch. 47	45
333248	SCA 2048 amp, ch. 48	45
333249	SCA 2049 amp, ch. 49	45
333250	SCA 2050 amp, ch. 50	45
333251	SCA 2051 amp, ch. 51	45
333252	SCA 2052 amp, ch. 52	45
333253	SCA 2053 amp, ch. 53	45
333254	SCA 2054 amp, ch. 54	45
333255	SCA 2055 amp, ch. 55	45

Contents from A to Z

333256	SCA 2056 amp, ch. 56	45
333257	SCA 2057 amp, ch. 57	45
333258	SCA 2058 amp, ch. 58	45
333259	SCA 2059 amp, ch. 59	45
333260	SCA 2060 amp, ch. 60	45
333263	SCA 2063 amp, ch. 63	45
333264	SCA 2064 amp, ch. 64	45
333265	SCA 2065 amp, ch. 65	45
333266	SCA 2066 amp, ch. 66	45
333267	SCA 2067 amp, ch. 67	45
333268	SCA 2068 amp, ch. 68	45
333269	SCA 2069 amp, ch. 69	45
333220	SCA 439-443 MHz amp	45
331421	SCF 21/15A3 comb, K21	57
331422	SCF 22/15A3 comb, K22	57
331423	SCF 23/15A3 comb, K23	57
331424	SCF 24/15A3 comb, K24	57
331425	SCF 25/15A3 comb, K25	57
331426	SCF 26/15A3 comb, K26	57
331427	SCF 27/15A3 comb, K27	57
331428	SCF 28/15A3 comb, K28	57
331429	SCF 29/15A3 comb, K29	57
331430	SCF 30/15A3 comb, K30	57
331431	SCF 31/15A3 comb, K31	57
331432	SCF 32/15A3 comb, K32	57
331433	SCF 33/15A3 comb, K33	57
331434	SCF 34/15A3 comb, K34	57
331435	SCF 35/15A3 comb, K35	57
331436	SCF 36/15A3 comb, K36	57
331437	SCF 37/15A3 comb, K37	57
331438	SCF 38/15A3 comb, K38	57
331439	SCF 39/15A3 comb, K39	57
331440	SCF 40/15A3 comb, K40	57
331441	SCF 41/15A3 comb, K41	57
331442	SCF 42/15A3 comb, K42	57
331443	SCF 43/15A3 comb, K43	57
331444	SCF 44/15A3 comb, K44	57
331445	SCF 45/15A3 comb, K45	57
331446	SCF 46/15A3 comb, K46	57
331447	SCF 47/15A3 comb, K47	57
331448	SCF 48/15A3 comb, K48	57
331449	SCF 49/15A3 comb, K49	57
331450	SCF 50/15A3 comb, K50	57
331451	SCF 51/15A3 comb, K51	57
331452	SCF 52/15A3 comb, K52	57
331453	SCF 53/15A3 comb, K53	57
331454	SCF 54/15A3 comb, K54	57
331455	SCF 55/15A3 comb, K55	57
331456	SCF 56/15A3 comb, K56	57
331457	SCF 57/15A3 comb, K57	57
331458	SCF 58/15A3 comb, K58	57
331459	SCF 59/15A3 comb, K59	57
331460	SCF 60/15A3 comb, K60	57
331462	SCF 62/15A3 comb, K62	57
331463	SCF 63/15A3 comb, K63	57
331464	SCF 64/15A3 comb, K64	57
331465	SCF 65/15A3 comb, K65	57
331466	SCF 66/15A3 comb, K66	57
317403	SCF XX/15 A2	55
317405	SCF XX/15 A4	55
737040	Screw set for electronics (10 pcs.)	125
140360	Screw, 10 x50 mm, bag with 100 pcs	73
140361	Screw, 10x 80 mm, bag with 50 pcs	73
140340	Screw, 6 x 50 mm, bag with 200 pcs	73
140350	Screw, 8 x 50 mm, bag with 200 pcs	73
140351	Screw, 8 x 80 mm, bag with 200 pcs	73
153580	Screw, 8x 100 mm, bag with 50 pcs	73
314021	SCS F7000/21 mast filter ch. 21	58
314022	SCS F7000/22 mast filter ch. 22	58
314023	SCS F7000/23 mast filter ch. 23	58
314024	SCS F7000/24 mast filter ch. 24	58
314025	SCS F7000/25 mast filter ch. 25	58
314026	SCS F7000/26 mast filter ch. 26	58
314027	SCS F7000/27 mast filter ch. 27	58
314028	SCS F7000/28 mast filter ch. 28	58
314029	SCS F7000/29 mast filter ch. 29	58
314030	SCS F7000/30 mast filter ch. 30	58
314031	SCS F7000/31 mast filter ch. 31	58
314032	SCS F7000/32 mast filter ch. 32	58
314033	SCS F7000/33 mast filter ch. 33	58
314034	SCS F7000/34 mast filter ch. 34	58
314035	SCS F7000/35 mast filter ch. 35	58
314036	SCS F7000/36 mast filter ch. 36	58
314037	SCS F7000/37 mast filter ch. 37	58
314038	SCS F7000/38 mast filter ch. 38	58
314039	SCS F7000/39 mast filter ch. 39	58
314040	SCS F7000/40 mast filter ch. 40	58
314041	SCS F7000/41 mast filter ch. 41	58
314042	SCS F7000/42 mast filter ch. 42	58
314043	SCS F7000/43 mast filter ch. 43	58
314044	SCS F7000/44 mast filter ch. 44	58
314045	SCS F7000/45 mast filter ch. 45	58
314047	SCS F7000/47 mast filter ch. 47	58
314048	SCS F7000/48 mast filter ch. 48	58
314049	SCS F7000/49 mast filter ch. 49	58
314050	SCS F7000/50 mast filter ch. 50	58
314051	SCS F7000/51 mast filter ch. 51	58
314052	SCS F7000/52 mast filter ch. 52	58
314053	SCS F7000/53 mast filter ch. 53	58
314054	SCS F7000/54 mast filter ch. 54	58
314055	SCS F7000/55 mast filter ch. 55	58
314056	SCS F7000/56 mast filter ch. 56	58
314057	SCS F7000/57 mast filter ch. 57	58
314058	SCS F7000/58 mast filter ch. 58	58
314059	SCS F7000/59 mast filter ch. 59	58
314060	SCS F7000/60 mast filter ch. 60	58
314061	SCS F7000/61 mast filter ch. 61	58
314062	SCS F7000/62 mast filter ch. 62	58
314063	SCS F7000/63 mast filter ch. 63	58
314064	SCS F7000/64 mast filter ch. 64	58
314065	SCS F7000/65 mast filter ch. 65	58
314066	SCS F7000/66 mast filter ch. 66	58
314067	SCS F7000/67 mast filter ch. 67	58
314068	SCS F7000/68 mast filter ch. 68	58
314069	SCS F7000/69 mast filter ch. 69	58
364100	SCT 100 - IF/IF converter	123
153061	Self-vulcanized tape, black, roll with 10m	74
130001	Single wireset - spare parts	70
452090	Spare RF connection cable 20 cm	111
452091	Spare RF connection cable 35 cm	111
153065	SST 21, Black	74
133010	Stay ring - 30-50 mm	69
140034	Steel band	70
133007	Steel wire - galvanized - Ø 3	69
133105	Steel wire - galvanized - Ø 5	69
133020	Steel wire - galvanized - Ø 5	69
133002	Steel wire - galvanized - Ø 5	69
133005	Steel wire - PVC covered - Ø 1.2-2.3	69
348002	STS 2	179
348003	STS 3	179
348004	STS 4	179
348006	STS 6	179
348008	STS 8	179
348110	STT 1-10	180
348112	STT 1-12	180
348116	STT 1-16	180
348120	STT 1-20	180
348124	STT 1-24	180
348108	STT 1-8	180
348210	STT 2-10	181
348212	STT 2-12	181
348216	STT 2-16	181
348220	STT 2-20	181
348412	STT 4-12	182
348416	STT 4-16	182
348420	STT 4-20	182
348424	STT 4-24	182
348430	STT 4-30	182
348616	STT 6-16	183
348620	STT 6-20	183
348624	STT 6-24	183
348816	STT 8-16	183
348820	STT 8-20	183

T

333430	TA 13 A	38
333433	TA 13 B	38
333436	TA 13 C/D	38
333439	TA 13 E	38
333400	TA 13 W	38
333500	TA 13 W-1 W	38
333417	TA 21 W/3 way	41
333450	TA 24 BB cascade	41
333466	TA 24 W/24 W	41
333431	TA 25 A	39
333434	TA 25 B	39
333437	TA 25 C/D	39
333401	TA 25 W	39
333501	TA 25 W/1 W	41
333501	TA 25 W-1W	39
333451	TA 30 BB cascade/2 way	41
333432	TA 34 A	40
333435	TA 34 B	40
333438	TA 34 C/D	40
333402	TA 34 W	40
330502	TA 4013- 30R	37
330487	TA 4013- 322R BB AMP	37
330550	TA 415-22	164
330551	TA 415-22R	164
330521	TA 4213- 3R	37
330541	TA 4312- 3R	37
330542	TA 4312-2R	37
330610	TA 65-3 R	42
330606	TA 65-3 R - DK 1	42
330603	TA 65-3 R - DK/DE 1	42
330601	TA 65-3 R - DK/SE 1	42
330604	TA 65-3 R - DK/SE 3	42
330605	TA 65-3 R - DK/SE 4	42
333416	TA 9 W/3 way	41
153060	Tape, grey, roll with 10 m	74
333582	TC 1221	55
331381	TC 335	56
331382	TC 335DC	56
331383	TC 356	56
364003	TCB 003 Camera - BW	234
364007	TCB 007 Camera - colour	235
364008	TCB 008 Camera - colour	235
364015	TCB 015 Camera - BW	234
364017	TCB 017 Camera - colour	235
737029	TCC - brackets for TCM08 (TMF512) cabinet	125
708020	TCC - Fan 230V	124
848616	TCC - Key for cabinet door	124
708017	TCC - protection grid for fan	124
251496	TCC - shelf for 19” cabinet - not painted	125
708028	TCC - termostat	124
737030	TCC - wheels, 4 pcs. with lock	125
251493	TCC 19” cabinet with glass door	124
251494	TCC 19” cabinet with steel door	124
490600	TCH 600, BASIC UNIT	112
490678	TCH TV channel converter 7 MHz	113
490677	TCH TV Channel converter 8 MHz	113
300110	TCM-08 Basic Unit without booster	116
300111	TCM-08A Basic Unit with booster	116
490615	TCMA 615 DSB, VHF, mono	113
490616	TCMA 616 DSB, UHF, mono	113
490617	TCMA 617 DSB, VHF, stereo	113
490618	TCMA 618 DSB, UHF, stereo	113
490673	TCMA 673 VSB, mono ch. 2-69 S/N >54db	113
490674	TCMA 674 VSB, stereo ch. 2-69 S/N > 54db	113
490611	TCSA 611 DSB, VHF, mono	114
490612	TCSA 612 DSB, UHF, mono	114
490613	TCSA 613 DSB, VHF, stereo	114
490614	TCSA 614 DSB, UHF, stereo	114
490648	TCSA 621 DSB VHF, mono (MHz 27/32)	114
490649	TCSA 622 DSB UHF, mono (MHz 27/32)	114
302450	TD 200 outlet - terminated	222
303455	TD 201R outlet - terminated	222
302456	TD 201T outlet - terminated	222
302412	TD 212B outlet - loop through	219
303412	TD 212B outlet - loop through	219
302415	TD 250 SAT outlet - terminated	220
303415	TD 250 SAT outlet - terminated	220
302465	TD 250 SAT outlet - terminated	220
303465	TD 250 SAT outlet - terminated	220
302416	TD 252 SAT outlet - terminated	220
303416	TD 252 SAT outlet - terminated	220
302466	TD 252 SAT outlet - terminated	220
303466	TD 252 SAT outlet - terminated	220
302510	TD 260D outlet - terminated	219
303510	TD 260D outlet - terminated	219
302460	TD 260D outlet - terminated	219
303460	TD 260D outlet - terminated	219
302511	TD 263D outlet - loop through	219
303511	TD 263D outlet - loop through	219
302461	TD 263D outlet - loop through	219
303461	TD 263D outlet - loop through	219
302422	TD 272 D outlet - terminated	221
303422	TD 272 D outlet - terminated	221
302428	TD 278 D outlet - loop through	221
303428	TD 278 D outlet - loop through	221
302430	TD 280 DAB outlet - terminated	219
302131	TD 301 outlet - terminated	224
303131	TD 301 outlet - terminated	224
302134	TD 304 outlet - loop through	224
303134	TD 304 outlet - loop through	224
302132	TD 312 outlet - loop through	224
303132	TD 312 outlet - loop through	224
302152	TD 352 outlet - SAT	224
303152	TD 352 outlet - SAT	224
302172	TD 372 outlet - multimedia	224
303172	TD 372 outlet - multimedia	224
121696	TD 64 SP bulk, Ral 7016 (25 pcs/pll)	83
121695	TD 64 SP bulk, Ral 7035 (25 pcs/pll)	83
121796	TD 78 SP bulk, Ral 7016 (25 pcs/pll)	83
121795	TD 78 SP bulk, Ral 7035 (25 pcs/pll)	83
300719	TD- FlexiBlock	88
300728	TD multiblock for 3xLNB without LNB & switch	89
300727	TD multiblock for 4xLNB without LNB & switch	89
300730	TD multiblock, 2xLNB, MFD 21 switch	89
300725	TD multiblock, 4xLNB, MFD 41 switch	89
300716	TD-3dg DuoBlock, Black	88
300715	TD-6dg DuoBlock, Black	88
300717	TD-6dg DuoBlock, Grey	88
123961	TDA 110, Single EUROLINE, Ral 7016	81
123960	TDA 110, Single EUROLINE, Ral 7035	81
123962	TDA 110, Single EUROLINE, Ral 8012	81
123908	TDA 110, Single packed, Ral 7035	79
123560	TDA 54, Single EUROLINE, Ral 7035	81
123648	TDA 64 Bulk, Ral 7035, (100 pcs/pll)	83
123647	TDA 64 Bulk, Ral 8012, (100 pcs/pll)	83
123666	TDA 64, Bulk w/single, Ral 7035, (100 pcs/pll)	83
123661	TDA 64, Single EUROLINE, Ral 7016	81
123660	TDA 64, Single EUROLINE, Ral 7035	81
123662	TDA 64, Single EUROLINE, Ral 8012	81
123612	TDA 64, Single packed, Ral 7016	79
123618	TDA 64, Single packed, Ral 7035	79
123614	TDA 64, Single packed, Ral 8012	79
123748	TDA 78 Bulk, Ral 7035, (100 pcs/pll)	83
123747	TDA 78 Bulk, Ral 8012, (100 pcs/pll)	83
123754	TDA 78, Bulk w/single, Ral 7016, (100 pcs/pll)	83
123749	TDA 78, Bulk w/single, Ral 7035, (100 pcs/pll)	83

Contents from A to Z

T

123761	TDA 78, Single EUROLINE, Ral 7016	81
123760	TDA 78, Single EUROLINE, Ral 7035	81
123762	TDA 78, Single EUROLINE, Ral 8012	81
123712	TDA 78, Single packed, Ral 7016	79
123718	TDA 78, Single packed, Ral 7035	79
123714	TDA 78, Single packed, Ral 8012	79
123846	TDA 88 Bulk, Ral 7016, (100 pcs/pll)	83
123868	TDA 88, Bulk w/single, Ral 7016, (100 pcs/pll)	83
123867	TDA 88, Bulk w/single, Ral 7035, (100 pcs/pll)	83
123869	TDA 88, Bulk w/single, Ral 8012, (100 pcs/pll)	83
123861	TDA 88, Single EUROLINE, Ral 7016	81
123860	TDA 88, Single EUROLINE, Ral 7035	81
123862	TDA 88, Single EUROLINE, Ral 8012	81
123812	TDA 88, Single packed, Ral 7016	79
123818	TDA 88, Single packed, Ral 7035	79
123814	TDA 88, Single packed, Ral 8012	79
485968	TD-cover - 0 holes	231
485994	TD-cover - 0 holes	231
302012	TD-cover - 2 holes	231
303012	TD-cover - 2 holes	231
304012	TD-cover - 2 holes	231
302013	TD-cover - 3 holes	231
303013	TD-cover - 3 holes	231
304013	TD-cover - 3 holes	231
300736	TDE 78 multiblock, 3xLNB no LNB & switch	88
300737	TDE 78 multiblock, 3xLNB no LNB & switch	88
300734	TDE 88/110 multiblock, 2xLNB no LNB & switch	88
300735	TDE 88/110 multiblock, 3xLNB no LNB & switch	88
302025	TD-frame 50x50	231
303025	TD-frame 50x50	231
304025	TD-frame 50x50	231
302026	TD-frame 50x77	231
303026	TD-frame 50x77	231
304026	TD-frame 50x77	231
302036	TD-frame 63x90	231
303036	TD-frame 63x90	231
490790	TDH 700 Main unit	100
301700	TDH 700 Stand-alone controller	100
490791	TDH 701 Sub-unit	100
490702	TDH 702 Master DVB-S mono module CI	101
490703	TDH 703 Master DVB-S stereo module CI	101
490704	TDH 704 Slave DVB-S/T mono	103
490705	TDH 705 Slave DVB-S/T stereo	103
490712	TDH 712 Master DVB-T mono module CI	102
490713	TDH 713 Master DVB-T stereo module CI	102
490714	TDH 714 Master DVB-T mono module FTA	102
490715	TDH 715 Master DVB-T stereo module FTA	102
490722	TDH 722 Master DVB-S mono module FTA	101
490723	TDH 723 Master DVB-S stereo module FTA	101
490725	TDH 725 AV VSB modulator mono, PAL I/Secam	108
490726	TDH 726 AV VSB modulator stereo, PAL I/Secam	108
490730	TDH 730 DVB-C QAM TDT 306-858 MHz	104
490731	TDH 731 DVB-C QAM TDT 120-306 MHz	104
490732	TDH 732 DVB-C QAM NIT 306-858 MHz	104
490733	TDH 733 DVB-C QAM NIT 120-306 MHz	104
490742	TDH 742 Master DVB-S mono module CI	101
490743	TDH 743 Master DVB-S stereo module CI	101
490744	TDH 744 Slave DVB-S/T mono	103
490745	TDH 745 Slave DVB-S/T stereo	103
490746	TDH 746 Master DVB-S mono module FTA	101
490747	TDH 747 Master DVB-S stereo module FTA	101
490762	TDH 762 Master DVB-T mono module CI	102
490763	TDH 763 Master DVB-T stereo module CI	102
490764	TDH 764 Master DVB-T mono module FTA	102
490765	TDH 765 Master DVB-T stereo module FTA	102
490766	TDH 766 AV VSB modulator mono, PAL I/Secam	108
490767	TDH 767 AV VSB modulator stereo, PAL I/Secam	108
490775	TDH 775 TV Ch. converter, analogue	106
490776	TDH 776 TV Ch. Converter, analogue	106
490778	TDH 778 TV Ch. Converter, digital	106
300765	TDH Access - GSM	109
300766	TDH Access - N-port box for internet	109
300764	TDH Access - standard phone modem	109
590726	TDH AV VSB modulator Nicam	108
590767	TDH AV VSB modulator Nicam	108
591626	TDH AV VSB modulator stereo, PAL I	108
490738	TDH DVB S/FM Modulator CI	105
490737	TDH DVB S/FM Modulator FTA	105
490739	TDH DVB Slave FM Modulator	105
490772	TDH FM Amplifier	107
490736	TDH FM Modulator	105
590703	TDH Master DVB-S Nicam module CI	101
590743	TDH Master DVB-S Nicam module CI	101
590747	TDH Master DVB-S Nicam module FTA	101
590723	TDH Master DVB-S Nicam module FTA	101
590763	TDH Master DVB-T Nicam module CI	102
590715	TDH Master DVB-T Nicam module FTA	102
590765	TDH Master DVB-T Nicam module FTA	102
590745	TDH Slave DVB-S/T Nicam	103
301791	TDH Stand-alone unit	100
346094	TDP-4 delivery point	184
346097	TDP-7 delivery point	184
122926	TDS 110, Bulk w/single, Ral 7016, (50 pcs/pll)	83
122924	TDS 110, Bulk w/single, Ral 7030, (50 pcs/pll)	83
122904	TDS 110, Bulk w/single, Ral 7035, (50 pcs/pll)	83
121961	TDS 110, Single EUROLINE, Ral 7016	80
121960	TDS 110, Single EUROLINE, Ral 7035	80
121962	TDS 110, Single EUROLINE, Ral 8012	80
122901	TDS 110, Single pack, Ral 7030	82
122912	TDS 110, Single packed, Ral 7016	78
122908	TDS 110, Single packed, Ral 7035	78
122910	TDS 110, Single packed, Ral 8012	78
122525	TDS 54 Bulk, Ral 7016, (200 pcs/pll)	83
122526	TDS 54 Bulk, Ral 7035, (200 pcs/pll)	83
122547	TDS 54 Bulk, Ral 8012, (200 pcs/pll)	83
122568	TDS 54, Bulk w/single, Ral 7016, (200 pcs/pll)	83
122567	TDS 54, Bulk w/single, Ral 7035, (200 pcs/pll)	83
122569	TDS 54, Bulk w/single, Ral 8012, (200 pcs/pll)	83
121560	TDS 54, Single EUROLINE, Ral 7035	80
122501	TDS 54, Single pack, Ral 7030	82
122512	TDS 54, Single packed, Ral 7016	78
122510	TDS 54, Single packed, Ral 7030	78
122518	TDS 54, Single packed, Ral 7035	78
122625	TDS 64 Bulk, Ral 7016, (100 pcs/pll)	83
122624	TDS 64 Bulk, Ral 7030, (100 pcs/pll)	83
122617	TDS 64 Bulk, Ral 7035, (100 pcs/pll)	83
122647	TDS 64 Bulk, Ral 8012, (100 pcs/pll)	83
122668	TDS 64, Bulk w/single, Ral 7016, (100 pcs/pll)	83
122672	TDS 64, Bulk w/single, Ral 7030, (100 pcs/pll)	83
122667	TDS 64, Bulk w/single, Ral 7035, (100 pcs/pll)	83
122669	TDS 64, Bulk w/single, Ral 8012, (100 pcs/pll)	83
121661	TDS 64, Single EUROLINE, Ral 7016	80
121660	TDS 64, Single EUROLINE, Ral 7035	80
121662	TDS 64, Single EUROLINE, Ral 8012	80
122601	TDS 64, Single pack, Ral 7030	82
122612	TDS 64, Single packed, Ral 7016	78
122610	TDS 64, Single packed, Ral 7030	78
122618	TDS 64, Single packed, Ral 7035	78
122725	TDS 78 Bulk, Ral 7016, (100 pcs/pll)	83
122724	TDS 78 Bulk, Ral 7030, (100 pcs/pll)	83
122717	TDS 78 Bulk, Ral 7035, (100 pcs/pll)	83
122754	TDS 78, Bulk w/single, Ral 7016, (100 pcs/pll)	83
122737	TDS 78, Bulk w/single, Ral 7030, (100 pcs/pll)	83
122749	TDS 78, Bulk w/single, Ral 7035, (100 pcs/pll)	83
122764	TDS 78, Bulk w/single, Ral 8012, (100 pcs/pll)	83
121761	TDS 78, Single EUROLINE, Ral 7016	80
121760	TDS 78, Single EUROLINE, Ral 7035	80
121762	TDS 78, Single EUROLINE, Ral 8012	80
122701	TDS 78, Single pack, Ral 7030	82
122712	TDS 78, Single packed, Ral 7016	78
122710	TDS 78, Single packed, Ral 7030	78
122718	TDS 78, Single packed, Ral 7035	78
122825	TDS 88 Bulk, Ral 7016, (100 pcs/pll)	83
122824	TDS 88 Bulk, Ral 7030, (100 pcs/pll)	83
122826	TDS 88 Bulk, Ral 7035, (100 pcs/pll)	83
122847	TDS 88 Bulk, Ral 8012, (100 pcs/pll)	83
122868	TDS 88, Bulk w/single, Ral 7016, (100 pcs/pll)	83
122823	TDS 88, Bulk w/single, Ral 7030, (100 pcs/pll)	83
122867	TDS 88, Bulk w/single, Ral 7035, (100 pcs/pll)	83
122869	TDS 88, Bulk w/single, Ral 8012, (100 pcs/pll)	83
121861	TDS 88, Single EUROLINE, Ral 7016	80
121860	TDS 88, Single EUROLINE, Ral 7035	80
121862	TDS 88, Single EUROLINE, Ral 8012	80
122801	TDS 88, Single pack, Ral 7030	82
122812	TDS 88, Single packed, Ral 7016	78
122810	TDS 88, Single packed, Ral 7030	78
122818	TDS 88, Single packed, Ral 7035	78
302045	TD-surface mount 50x50	231
303045	TD-surface mount 50x50	231
302046	TD-surface mount 50x77	231
303046	TD-surface mount 50x77	231
334220	TFS 220 DAB/TV-FM	192
334221	TFS 221 DAB/TV-FM	192
334202	TFS 715-2	192
334203	TFS 715-3	192
334204	TFS 715-4	192
133009	Thimble - 3 mm	69
133008	Thimble - 5 mm	69
80225	TLS 102	185
80226	TLS 103	185
80263	TLS 103S	185
80236	TLS 108	185
80237	TLS 112	185
80238	TLS 116	185
80261	TLT 204	186
80243	TLT 208	186
80228	TLT 211	186
80234	TLT 214	186
80229	TLT 217	186
80230	TLT 220	186
80244	TLT 223	187
80245	TLT 226	187
80246	TLT 226	187
80247	TLT 232	187
80248	TLT 235	187
80249	TLT 408	188
80231	TLT 411	188
80235	TLT 414	188
80232	TLT 417	188
80233	TLT 420	188
80251	TLT 423	189
80252	TLT 426	189
80253	TLT 429	189
80254	TLT 432	189
80255	TLT 435	189
80242	TLT 811	190
80239	TLT 814	190
80240	TLT 817	190
80241	TLT 820	190
80256	TLT 823	191
80257	TLT 826	191
80258	TLT 829	191
80259	TLT 832	191
80260	TLT 835	191
333326	TMA 12/2-U	44
333324	TMA 18 W-U	44
333571	TMA 24W-20W-U	44
333570	TMA 24W-2W-U	44
333325	TMA 28 W-U	44
324575	TMB 10A multiband amplifier	118
324576	TMB 10B multiband amplifier	118
324577	TMB 10S multiband amplifier	118
324571	TMB 6 multiband amplifier	118
122674	TMB 64, Ral 7016, 5 pcs. Carton box, pr.unit	83
122627	TMB 64, Ral 7035, 5 pcs. Carton box, pr.unit	83
122236	TMB 78, Ral 7016, 5 pcs. Carton box, pr.unit	83
123732	TMB 78, Ral 7016, 5 pcs. Carton box, pr.unit	83
122733	TMB 78, Ral 7035, 5 pcs. Carton box, pr.unit	83
123731	TMB 78, Ral 7035, 5 pcs. Carton box, pr.unit	83
122832	TMB 88, Ral 7016, 3 pcs. Carton box, pr. unit	83
123832	TMB 88, Ral 7016, 3 pcs. Carton box, pr.unit	83
122831	TMB 88, Ral 7035, 3 pcs. Carton box, pr. unit	83
123831	TMB 88, Ral 7035, 3 pcs. Carton box, pr.unit	83
311169	TMC 2528 group combiner ch.2-25, ch.28-69	51
311167	TMC 2831 group combiner ch.2-28, ch.31-69	51
311164	TMC 3335 group combiner ch.2-33, ch.35-69	51
311162	TMC 3537 group combiner ch.2-35, ch.37-69	51
311153	TMC 3739 group combiner ch.2-37, ch.39-69	51
311166	TMC 3941 group combiner ch.2-39, ch.41-69	51
311154	TMC 4648 group combiner ch.2-46, ch.48-69	51
311168	TMC 5052 group combiner ch.2-50, ch.52-69	51
311157	TMC 5153 group combiner ch.2-51, ch.53-69	51
311155	TMC 5355 group combiner ch.2-53, ch.55-69	51
333383	TMC 69, SAT	55
251512	TMF 512 - 19" open rack cabinet	125
251514	TMF 512 1/2 size additional frame	125
251513	TMF 512 additional frame	125
305352	TMM 2B DiSEqC	146
305353	TMM 3B DiSEqC	146
305301	TMM 4 way mounting plate	146
305344	TMM 4 IN earth bond bar	146
305345	TMM 5 IN earth bond bar	146
305346	TMM 4 OUT earth bond bar	146
305347	TMM 6 OUT earth bond bar	146
305348	TMM 8 OUT earth bond bar	146
305300	TMM 44AMP - launch	142
305354	TMM 4B DiSEqC	146
305320	TMM 4x10 splitter	140
305322	TMM 4x12 switch	144
305326	TMM 4x16 switch	144
305324	TMM 4x4 switch	144
305328	TMM 4x8 switch	144
305335	TMM 55AMP - distribution	142
305319	TMM 5x10 splitter	140
305312	TMM 5x12 switch	145
305317	TMM 5x12T switch	145
305316	TMM 5x16 switch	145
305314	TMM 5x4 switch	145
305318	TMM 5x8 switch	145
305302	TMM 6 way mounting plate	146
305349	TMM 75 terminator	146
305308	TMM CL connector	146
305307	TMM DCL-DC link lead	146
305009	TMM F-F male quick connector	146
305304	TMM frame coupler (2 pack)	146
305303	TMM link	146
305309	TMM LK connection lead (5 pack)	146
305350	TMM RPL remote power lead	146
305306	TMM TDA - ter-distribution	142
305315	TMM Ter-launch	142
301622	TMP 5x12	136
301624	TMP 5x16	136
301626	TMP 5x24	136
301628	TMP 5x32	136
301620	TMP 5x8	136
301652	TMP 8x24	135
301654	TMP 8x32	135
301632	TMP 9x12	133
301634	TMP 9x16	133
301636	TMP 9x24	133
301638	TMP 9x32	133
301630	TMP 9x8	133
305311	TMP PSI power inserter	143
301501	TMS 17 Amplifier ext. PSU	141
301504	TMS 17 PSU incl. Mounting bracket	143
301512	TMS 17x12C	130
301612	TMS 17x12T	131
301516	TMS 17x16C	130
301616	TMS 17x16T	131

Contents from A to Z

T

301506	TMS 17x6C	130
301606	TMS 17x6T	131
301508	TMS 17x8C	130
301608	TMS 17x8T	131
300275	TMS 2 Amplifier ext. PSU	141
300274	TMS 2x4C	139
300278	TMS 2x8C	139
300309	TMS 5 PSU	143
300311	TMS 5 PSU / UK	143
300319	TMS 510 splitter	140
300315	TMS 55 Amplifier ext. PSU	141
300308	TMS 55 PSI	143
300310	TMS 55 PSU	143
300313	TMS 55 Tap -12dB	140
300333	TMS 55 Tap -15dB	140
300343	TMS 55 Tap -20dB	140
300353	TMS 55 Tap -24dB	140
300363	TMS 55 Tap -6S	140
300312	TMS 5x12	137
300322	TMS 5x12p	138
300332	TMS 5x12p/UK	138
300317	TMS 5x16	137
300327	TMS 5x16p	138
300337	TMS 5x16p/UK	138
300314	TMS 5x4	137
300324	TMS 5x4p	138
300334	TMS 5x4p/UK	138
300316	TMS 5x6	137
300326	TMS 5x6p	138
300336	TMS 5x6p/UK	138
300318	TMS 5x8	137
300328	TMS 5x8p	138
300338	TMS 5x8p/UK	138
300425	TMS 8 Amplifier ext. PSU	141
300365	TMS 9 Amplifier ext. PSU	141
300372	TMS 9x12 C	132
300342	TMS 9x12p	134
300352	TMS 9x12p/UK	134
300376	TMS 9x16 C	132
300347	TMS 9x16p	134
300357	TMS 9x16p/UK	134
300364	TMS 9x4C	132
300344	TMS 9x4p	134
300354	TMS 9x4p/UK	134
300366	TMS 9x6C	132
300346	TMS 9x6p	134
300356	TMS 9x6p/UK	134
300368	TMS 9x8C	132
300348	TMS 9x8p	134
300358	TMS 9x8p/UK	134
305340	TMS PSU 18V	143
305310	TMS PSU 18V / UK	143
324900	TNH 600 Power supply	115
324990	TNH 600 V headend	115
324904	TNH data cable	115
153632	Torque Wrench Spanner	210
303661	TOU - 01S outlet - terminated	218
303662	TOU - 01S outlet - terminated - 5 pcs	218
303621	TOU - 1 outlet - terminated	214
303630	TOU - 10 outlet - loop through	215
302637	TOU - 10DL outlet - loop through	216
302687	TOU - 10DL outlet - loop through - 5 pcs	216
302632	TOU - 10DT outlet - terminated	217
302682	TOU - 10DT outlet - terminated - 5 pcs	217
303670	TOU - 10S outlet - terminated	218
302638	TOU - 13DL outlet - loop through	216
302688	TOU - 13DL outlet - loop through - 5 pcs	216
303614	TOU - 14 outlet - loop through	215
303674	TOU - 14S outlet - terminated	218
300675	TOU - 14S outlet - terminated - 5 pcs	218
302639	TOU - 17DL outlet - loop through	216
302689	TOU - 17DL outlet - loop through - 5 pcs	216
303320	TOU - 1DC outlet - terminated	214
303664	TOU - 1FB outlet - terminated	214
303619	TOU - 1FI outlet - terminated	214
303629	TOU - 20 outlet - loop through	215
303323	TOU - 23 outlet - loop through	215
303624	TOU - 4 outlet - loop through	214
302630	TOU - 4DT outlet - terminated	217
302680	TOU - 4DT outlet - terminated - 5 pcs	217
303627	TOU - 7 outlet - loop through	215
302686	TOU - 8DL outlet - loop through- 5 pcs	216
302636	TOU - 8DL outlet - loop through	216
302631	TOU - 8DT outlet - terminated	217
302681	TOU - 8DT outlet - terminated - 5 pcs	217
303681	TOU Cover plate 2 hole Off White 80x80mm	230
303680	TOU Cover plate 2 hole White 80x80mm	230
303690	TOU Cover plate 2 hole white 86x86 UK	230
303683	TOU Cover plate 3 hole Off White 80x80mm	230
303682	TOU Cover plate 3 hole White 80x80 mm	230
303692	TOU Cover plate 3 hole white 86x86 UK	230
303686	TOU Cover plate MM 3 hole Offwhite 80x80	230
303685	TOU Cover plate MM 3 hole White 80x80mm	230
304115	TOU DDU - UK	225
304101	TOU diplex - UK	225
304112	TOU Quad - UK	225
304102	TOU Triplexed - UK	225
304118	TOU-DC diplex - UK	225
303699	TOU-F1 Frame 80x80x22mm, Off White	230
303698	TOU-F1 Frame 80x80x22mm, White	230
332303	TP 3851 power supply	197
332304	TP 3852 power supply	197
347001	TPI - 01 Power inserter with F-Con.	156
347001	TPI 01 DC power inserter	195
300675	TRE 270 T/R IR remote extender set	240
590205	Triatan 18-05 cable assembly	211
153542	Triatan 18-10 cable assembly	211
127100	Triax 2561 Stand	96
339691	Triax digital link - anthracite	239
339690	Triax digital link - silver	239
111010	Triax DVB-T 300i - active indoor antenna	30
300053	TRIAX Satselecet DISEqC motor	95
126382	Triax TDE 110, RAL 7016	77
126380	Triax TDE 110, RAL 7035	77
126381	Triax TDE 110, RAL 8012	77
123792	Triax TDE 78, RAL 7016	77
123790	Triax TDE 78, RAL 7035	77
123791	Triax TDE 78, RAL 8012	77
126387	Triax TDE 88, RAL 7016	77
126385	Triax TDE 88, RAL 7035	77
126386	Triax TDE 88, RAL 8012	77
300349	Triax TMB 002 mono-block LNB	91
300436	Triax TQD002 Universal quad LNB	91
300438	Triax TQT002 Universal quattro LNB	91
300430	Triax TSI003 Universal single LNB	90
300432	Triax TSI004 Universal single LNB	90
300429	Triax TSI005 Universal Hi-gain single LNB	90
300435	Triax TTW002 Universal twin LNB	91
126391	TRIAX Unique Bulk, Ral 7030, (100 pcs/pll)	87
126390	TRIAX Unique Multi Reception Dish,Ral 7030	87
416014	TRP Line power supply	156
332323	TS 315-2DC	192
343912	TTM 12	178
343916	TTM 16	178
140007	Tube 50mm/ 95 cm	96
340110	TV/SAT diecast housing	50
305390	TWS 220 T/R wireles link	238
345100	Type 02	164

U

140035	U-clamp	68
109690	UFO 45 Digital, UHF, IFP501	27
109694	UFO Home Digital, UHF, 5 V., Mast bracket	27
109695	UFO Home Digital, VHF/UHF, 5 V., Mast bracket	27
109683	UFO Marine Digital, IFP529, center mount	27
109680	UFO Marine Digital, IFP529, universal mount	27
109699	UFO Mobil Digital, 12 V., Centre mount	28
109698	UFO Mobil Digital, 12 V., Mast bracket	28
109681	UFO Mobil Digital, 230V., Mast bracket	28
109697	UFO Mobil Digital, 5 V., Centre mount	28
109696	UFO Mobil Digital, 5 V., Mast bracket	28
133222	Universal mount	28
300709	Universal roof/wall bracket	96
108754	UNIX 100el, ch. 21-40	22
108755	UNIX 100el, ch. 21-50	22
107768	UNIX 100el, ch. 21-50 with F-connector	22
107756	UNIX 100el, ch. 21-60/69 with F-connector	22
108756	UNIX 100el, ch. 21-69	22
107769	UNIX 100el, ch. 21-69 with F-connector	22
107750	UNIX 32el, ch. 21-69 with F-connector	20
108750	UNIX 32el, ch.21-69	20
108751	UNIX 52el, ch 21-40	21
107770	UNIX 52el, ch. 21-40 with F-connector	21
108752	UNIX 52el, ch. 21-50	21
107766	UNIX 52el, ch. 21-50 with F-connector	21
108753	UNIX 52el, ch. 21-69	21
107767	UNIX 52el, ch. 21-69 with F-connector	21
107776	UNIX 52el, ch. 21-69 with F-connector	21
453160	USB cable for TDH 0,5 m.	111
453161	USB cable for TDH 1,0 m.	111
300768	USB/RS 232 cable	111

VW

153600	VA 20F attenuators	194
140037	Wall bracket - 2 legs 25-50 cm	64
140036	Wall bracket - 2 legs 7.5 cm	64
140047	Wall bracket - 2+3 legs 25-50 cm	64
140048	Wall bracket - 2+3 legs 25-50 cm	64
140045	Wall bracket - 3 legs	64
140044	Wall bracket - extra leg	64
131020	Wall bracket 2 Legs, 15 cm	65
131030	Wall bracket 2 Legs, 25 cm	65
131040	Wall bracket 2 Legs, 35 cm	65
131050	Wall bracket 2 Legs, 45 cm	65
131010	Wall bracket 2 Legs, 5 cm	65
131021	Wall bracket 3 Legs, 15 cm	65
131031	Wall bracket 3 Legs, 25 cm	65
131041	Wall bracket 3 Legs, 35 cm	65
131051	Wall bracket 3 Legs, 45 cm	65
131061	Wall bracket 3 Legs, 55 cm	65
131071	Wall bracket 3 Legs, 65 cm	65
131081	Wall bracket 3 Legs, 75 cm	65
140040	Wall bracket GF 110-170 wall bracket set	66
140038	Wall bracket GF 125 wall bracket set	66
140039	Wall bracket GF 175 wall bracket set	66
140033	Wall bracket GF 85 wall bracket set	66
128050	Wall Bracket Type “J”	96
128070	Wall Bracket Type “S”	96
128080	Wall Bracket Type “U”	96
160922	Wall cabinet 11S 10	127
160622	Wall cabinet 11S 6	127
160822	Wall cabinet 11S 8	127
130009	Window bracket - type MT	64
130016	Window bracket - type MT short	64
133025	Wirelock - 3 mm	69
133021	Wirelock - 5 mm	69

XYZ

107310	YAGI 10el, ch. 21-37 with F-connector	18
107317	YAGI 10el, ch. 21-69 with F-connector	18
107347	YAGI 15el, ch. 21-47 with F-connector	18
107350	YAGI 15el, ch. 21-69 with F-connector	18
107348	YAGI 15el, ch. 28-56 with F-connector	18
107349	YAGI 15el, ch. 36-69 with F-connector	18
108269	YAGI 18el, ch. 21-23 w/ support beam	19
107269	YAGI 18el, ch. 21-23 with F-connector	19
107368	YAGI 18el, ch. 21-69 with F-connector	19
108268	YAGI 18el, ch. 24-26 w/ support beam	19
108265	YAGI 18el, ch. 27-30 w/ support beam	19
108266	YAGI 18el, ch. 31-34 w/ support beam	19
108257	YAGI 18el, ch. 35-38 w/ support beam	19
108264	YAGI 18el, ch. 39-43 w/ support beam	19
108262	YAGI 18el, ch. 44-49 w/ support beam	19
108267	YAGI 18el, ch. 50-55 w/ support beam	19
108263	YAGI 18el, ch. 56-62 w/ support beam	19
108259	YAGI 18el, ch. 63-69 w/ support beam	19
107205	YAGI 6el, ch. 21-69 with F-connector	18

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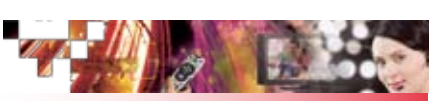

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General sales and delivery conditions

1. APPLICATION

All sales of the seller's products are made according to the following conditions which have preference to any stipulations laid down in the buyer's order/ acceptance, including buyer's general conditions, unless otherwise stated in a written agreement, and in that case with an exact indication of the points from which these sales and delivery conditions are deviating.

2. QUOTATION AND ORDER CONFIRMATION

Quotations made by the seller are open for 30 days from the date of the offer, unless otherwise specified.

3. PRODUCT INFORMATION

Information and Technical data on seller's products stated in catalogues, leaflets and other written material are only to be considered as approxIMDte and not binding on seller, unless a written agreement explicitly states otherwise.

All drawings and technical specifications handed over to buyer prior to or after entering into an agreement remain seller's property. No material must be used or copied by the buyer without the seller's written permission, neither must it be reproduced, handed over nor brought to the knowledge of a third party for another purpose than the performance of the agreement made. Failing an agreement, all documentation handed over should be returned to seller, and also in that case no copying or general use of the material can be made, nor must it be brought to the knowledge of a third party.

The seller is not responsible for the buyer's selection of the product, including compatibility of the product, its use and results, unless the contract explicitly refers to these.

The seller undertakes no responsibility for the buyer's selection of potential supplementary equipment and service requested for use with the product as well as application and results of same.

The seller reserves the right to modify his products without notice as far as such modifications do not cause major restrictions of the applications.

4. PRICE ALTERATIONS

The seller reserves the right to alter prices in case of major changes of rates of exchange, increased prices for raw materials, political events or other conditions which the seller cannot control, unless a written agreement states that the seller is not entitled to make such reservation.

5. PASSING THE RISK

The risk for the product is passed upon delivery, unless otherwise agreed in writing.
Such agreements are made in accordance with Incoterms 90 terminology.

6. TIME OF DELIVERY; DELAYS

The agreed time of delivery is only approx imdte and subject to full approval of the contents of the agreement, for instance accepted drawings.

The seller is never responsible for delays, unless such delays are owing to gross negligence on his part.The seller is never responsible for operational losses, loss of profit, loss on goods kept in stock, loss caused by delayed building activities or other contract work or any other direct or indirect loss or direct or indirect costs caused by delayed deliveries.

If delays should occur, and if, at the buyer's request, the seller cannot state a delivery period, the buyer has the right to cancel the order and demand reimbursement of potential (pre)payment, provided that the products have not been made especially to the customer's specifications.

Above statement defines the seller's maximum responsibility in relation to delays.

7. PAYMENT, RETENTION OF OWNERSHIP UNTIL PAYMENT IS MADE

The seller reserves for himself the right of ownership until the agreed price has been paid.

In that case it is the buyer's duty to take out an insurance on the goods against any damage from the date of the passing of the risk until the agreed price has been paid. The insurance should cover full and new value of the goods in question.

Until close to the date of delivery, the seller has a right to demand, and the customer is bound to give a banker's guarantee payable on demand in an acknowledged bank for the total purchase sum including costs and outlays. As far as mounting and servicing is concerned, the seller is justified to demand at any time, and the buyer is liable to give a banker's guarantee payable on demand in an acknowledged bank for the agreed payment or partial payment, including costs and outlays, if any.

For delivery of products that should form part of another product, the seller is entitled to demand at any time, and the buyer is liable to give a banker's guarantee payable on demand in an acknowledged bank for an amount corresponding to the purchase sum for the parts entered at the time in question, but not yet paid. If the buyer does not give such a banker's guarantee on request, the seller is entitled to consider the agreement(s) non-fulfilled, wholly or partly, and the seller is entitled to claim delivery of products that have not been used and not paid. The buyer is thus unable to work with or otherwise use such products.

Payment has to be made at the time stated in the quotation or the order confirmation. If the buyer does not pay in due time, the seller reserves for himself the right to charge 2% interest on late payments for each new month. The same interest is charged if a respite has been granted.
The buyer is not entitled to keep back payments or to set off against asserted claims that have not been accepted by the seller. If the buyer does not want to receive the lot at the time agreed, he is obliged to pay as if delivery had been made according to the agreement.

8. PACKING

Disposable packing has been included in the price and will not be refunded in case of a possible returning.

Multi-way packing will be charged and credited to the customer in case of prompt and safe return, carriage-paid.

The buyer shall reimburse the seller for any costs or charges for which the seller becomes legally liable in respect of the removal and disposal of packaging materials.

9. TOOLS

Applied tools which have been debited to the buyer wholly or in part, according to agreement, remain in the seller's warehouse, but are not delivered. The seller takes care of the proper maintenance of these tools. If such tools are not used for 3 years, the seller is no longer bound to keep and maintain them.

No liability rests with the seller for tools lent by the buyer, if they have not been used for 2 years and not been demanded by then.

10. PROPERTY/INCORPOREAL RIGHTS

The buyer does not acquire property and/or inventor's rights / other incorporeal rights to any computer programmes used for the product, nor any drawings, design, technical solutions etc. whether individually made for the buyer on his account or not, since the buyer is only entitled to use such material in relation to the agreed application of the product.

11. RESPONSIBILITY FOR VIOLATION OF PATENT AND OTHER INCORPOREAL RIGHTS

If there should be a risk, or if it is asserted that the product infringes a patent or another incorporeal right, the buyer accepts that, at his own option, the seller is either allowed by the proper party to continued use or he changes or replaces the product, so that it no longer gives rise to an infringement.

If none of these alternatives can be achieved on terms that the seller finds reasonable, he can claim that the buyer refrains from using the product against an allowance from the seller corresponding to the value of the product after depreciation with equal amounts every year compared to the technical and economical life of the product.

The size of such an allowance is not dependent on the question whether the product is integrated into another product or a building etc., and it is not influenced by the loss which it and/or discontinuance of use might cause the buyer.

In case of resale of the product, the buyer is liable to include an identical stipulation in the agreement between buyer and buyer's customer, including instruct the customer to include an identical stipulation for the customer's possible resale.

The seller's maximum responsibilities as to any potential infringement of the patent or another incorporeal right are defined above.

12. COMPLAINTS

Immediately on receipt and prior to taking the products into use, the buyer should inspect the goods supplied to ensure that there are no shortcomings and that the correct quantity has been supplied.

Complaints of defects which have been found or should have been found at a general inspection must be made at once and not later than 8 days after receipt of the products. If the complaint is not made within the time limit stated, the buyer loses his right to put forward a claim.

Complaints of discrepancies in quantity and damages to the product should be made immediately to the carrier, if any, and to the seller. Otherwise, the buyer loses his right to complain of such faults.

13. RESPONSIBILITY FOR SHORTCOMINGS

Provided that the agreed terms of payment are kept, and that complaints are made in due time, the seller will remedy any shortcomings that turn up during a period from 12 months from the delivery date. The responsibility does not comprise deficiencies caused by factors arisen after the risk has passed over to the buyer.

Remedy is only made by adjustment, repair or replacement of (parts of) the product or its components according to the seller's option. Wages paid for dismounting and mounting will not be refunded. If dismounting and mounting should affect more than the product, such work and costs are irrelevant to the seller as well.
The buyer has to send the seller a written complaint with details of the deficiency without undue delay. The complaint should be made immediately, if there is reason to believe that damages might be involved. If the buyer does not advise the seller of a deficiency within the time limit stated, the buyer will lose his right to make a claim.

Return of repaired parts or return of the product is paid by the seller who takes over replaced parts, if any. Unless otherwise agreed, the buyer will pay such additional costs that may arise if the product is situated at another place than the destination stated in the agreement, or, failing such information, the place of delivery.

If the product has been changed or someone else than the seller or a repair man appointed by the seller has tried to repair the product, or if the product has been subject to damages or used for unfit purposes, or if installation, operation and maintenance are not in compliance with the seller's stipulations, the seller can refuse to remedy the deficiency free of charge.

Deficiencies caused by conditions for which the buyer or someone else is responsible, or which are not announced until after expiration of the remedying period, are not the seller's business.

The seller's responsibility does not include deficiencies arisen in materials provided by the customer or by a co-producer/supplier appointed by the customer or in constructions ordered or specified by him. If the seller does not meet his obligations within a reasonable time, the buyer can claim a proportional reduction of the purchase sum, but not more than 15% of the agreed purchase sum. In case of a vital deficiency, the buyer can cancel the agreement by a written notice to the seller, at the same time demanding compensation for his loss, i.e. max. 15% of the agreed purchase sum.

Above conditions are the seller's maximum obligations concerning shortcomings.
So the seller is neither responsible for direct nor indirect losses, including operational losses, loss of profit as well as costs or damages etc.

14. LIABILITY FOR CAUSING DAMAGES (PRODUCT LIABILITY)

The seller is responsible for personal injuries according to the legislation concerning product liability.

The seller is not responsible for damages to real and personal property which occurs while the product is in the buyer's possession. Nor is the seller responsible for damages to products made by the buyer or products comprising such parts. Furthermore, the seller is only responsible for damages to real and personal property, if it can be proved that the damage is caused by mistakes or negligence made by the seller or others whom the seller is responsible for.

The seller is not responsible for operational losses, loss of profit or other indirect losses.

If a product liability towards a third party has been imposed on the seller, the buyer is committed to indemnify the seller to the same degree as the seller's responsibility stated in the three previous paragraphs.
These limitations of the seller's responsibility are not valid, if the seller has shown gross negligence.

If the third party claims compensation from one of the parties in accordance with this point, he should advise the other party immediately.

The buyer is bound to let the court or arbitration tribunal bring an action against him which deals with claims made against the seller for damages assertedly caused by the product.

15. FORCE MAJEURE

The seller's obligations are suspended and can be dropped when missing fulfilment is owing to conditions beyond the seller's control.

16. CONSUMERS' PURCHASES IN DENMARK

For consumers' purchases in Denmark the stipulations laid down in the Sale of Goods Act take precedence over these sales and delivery terms.

17. VENUE AND LAW

Any dispute arising out of the contract shall be settled before a Danish court. The venue is „SØ- og Handelsretten" in Copenhagen. However, the seller is entitled to demand arbitration according to the general rules of the Danish court. The Court of Arbitration is set up in Copenhagen. Settlement through arbitration does not exclude the possibility of an injunction or that other preliminary remedies can be carried through at the relevant revenue.

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