



Competence in
Communication
Technologies

Product Catalogue 2022



Legend

The labels and abbreviations used in this product overview have the following meanings:



New 2022

The article is newly listed in 2022.



Class A

The Class A symbol is marking products, which fulfil the requirements on shielding effectiveness and transfer impedance, which are specified in standard EN 50083-2, EN 50117 and EN 60966-2.



Class A + 10 dB

Products with a higher screening factor than required by the respective standard are marked with an addition to the Class A certification (in the example +10 dB)



4G protected

Higher shielding to protect against interference of LTE services



Vodafone Kabel Deutschland

Listed at „Vodafone Kabel Deutschland“ (You find the exact types in the lists of your cable network operator).

PU

Packing unit

High-speed networks for internet, TV and telephony



by axing group

HFC Broadband Solutions from AXING and DEV Systemtechnik provide low-cost, multi-gigabit-capable broadband network solutions from a single source – from signal supply to in-house delivery.

Strong team – strong performance

AXING and DEV have developed and implemented future-proof and competitive end-to-end solutions as an alternative to FTTH – for data, TV, radio and telephony, from signal supply to in-house

distribution. We deliver not only the hardware, but also the matching software tools, remote monitoring options, as well as measuring and planning services. More Information can be found on a separate website: <https://hfc-broadbandsolutions.com/en/>

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Type	Part No.	Product description	GTIN	PU
Antennas				
SAT antennas premium-line				
	SAA 110-01 SAA11001	Aluminium satellite antenna 110 x 99 cm ✓ Grey ✓ Powder-coated ✓ Fast and easy to mount ✓ Completely pre-assembled ✓ Suitable for multifeed reception	7611682004281	1
	SAA 110-02 SAA11002	Same as SAA 110-01, but anthracite	7611682004298	1
	SAA 110-03 SAA11003	Same as SAA 110-01, but brick-red	7611682004304	1
Type	SAA 110-01	SAA 110-02	SAA 110-03	
Electrical data				
Frequency range	10.75/11.75/12.75 GHz			
Antenna gain	39.8...40.9 dB			
Full width at half maximum	< 1.8°			
Mechanical data				
Reflector dimensions	110 x 99 cm			
Reflector colour	grey	anthracite	brick-red	
Reflector material	Aluminium			
Elevation range	5...70°			
Diameter of feed	40 mm			
Mast diameter	32...76 mm			
Wind load at max. wind speed [20/40/60 m/s]	30 kg/119 kg/268 kg			
Back part material	Zinc coated steel, including plastic coupler			
Screw sets material	Stainless steel			
General				
Weight	9.400 kg			
	SAA 85-01 SAA08501	Aluminium satellite antenna 85 cm ✓ Grey ✓ Powder-coated ✓ Fast and easy to mount ✓ Completely pre-assembled ✓ Suitable for multifeed reception	7611682001952	1
	SAA 85-02 SAA08502	Same as SAA 85-01, but anthracite	7611682001969	1
	SAA 85-03 SAA08503	Same as SAA 85-01, but brick-red	7611682001976	1
Type	SAA 85-01	SAA 85-02	SAA 85-03	
Electrical data				
Frequency range	10.75/11.75/12.75 GHz			
Antenna gain	38.12...39.53 dB			
Full width at half maximum	< 2.2°			
Mechanical data				
Reflector dimensions	85 x 85 cm			
Reflector colour	grey	anthracite	brick-red	
Reflector material	Aluminium			
Elevation range	15...50°			
Diameter of feed	40 mm			
Mast diameter	32...76 mm			
Wind load at max. wind speed [20/40/60 m/s]	21.3 kg/85.4 kg/192.1 kg			
Back part material	Zinc coated steel, including plastic coupler			
Screw sets material	Dacromet			
General				
Weight	6.000 kg			



	Type Part No.	Product description	GTIN	PU
SAT antennas premium-line				
	SAA 80-01 SAA08001	Aluminium satellite antenna 85 x 75 cm <ul style="list-style-type: none"> ✓ Grey ✓ Powder-coated ✓ Fast and easy to mount ✓ Suitable for multifeed reception 	7611682006537	1
	SAA 80-02 SAA08002	Same as SAA 80-01, but anthracite	7611682006544	1
	SAA 80-03 SAA08003	Same as SAA 80-01, but brick-red	7611682006551	1
Type	SAA 80-01	SAA 80-02	SAA 80-03	
Electrical data				
Frequency range	10.75/11.75/12.75 GHz			
Antenna gain	37 dB			
Full width at half maximum	< 2.2°			
Mechanical data				
Reflector dimensions	85 x 75 cm			
Reflector colour	grey	anthracite	brick-red	
Reflector material	Aluminium			
Elevation range	16...50°			
Diameter of feed	40 mm			
Mast diameter	32...60 mm			
Wind load up to 20 m mounting high	325 Nm			
General				
Weight	1.494 kg			




Type	Part No.	Product description	GTIN	PU
LNBs				
	SCO 2-10 SCO00210	Wideband-LNB DVB-S/S2 ✓ For uses with wideband-capable single-cable multiswitches ✓ Input frequency range 10.7 ... 12.75 GHz ✓ Output frequency range 300 ... 2350 MHz ✓ Oscillator frequency 10.4 GHz	7611682007176	1
	SCO 4-10 SCO00410	Quattro LNB DVB-S/S2 ✓ For use with multiswitches ✓ Input frequency range 10.7 ... 12.75 GHz ✓ Output frequency range 950 ... 2150 MHz ✓ Oscillator frequency 9,75 GHz 10,6 GHz	7611682007183	1
	SCO 4-11 SCO00411	Quad LNB DVB-S/S2 ✓ For connection of 4 end devices ✓ Input frequency range 10.7 ... 12.75 GHz ✓ Output frequency range 950 ... 2150 MHz ✓ Oscillator frequency 9,75 GHz 10,6 GHz	7611682007190	1
Type		SCO 2-10	SCO 4-10	SCO 4-11
Electrical data				
Input frequency range		10.7 ... 11.7 GHz (low-band) 11.7 ... 12.75 GHz (high-band)	10.7 ... 11.7 GHz (low-band) 11.7 ... 12.75 GHz (high-band)	10.7...11.7 GHz (low-band) 11.7...12.75 GHz (high-band)
Gain			55 dB	
Oscillator frequency		10.4 GHz	9.75 GHz (low-band) 10.6 GHz (high-band)	9.75 GHz (low-band) 10.6 GHz (high-band)
Impedance			75 Ω	
Output frequency range		300 ... 2350 MHz	950.....2150 MHz	950 ... 2,150 MHz
Noise figure		1.0 dB	0.5 dB	0.5 dB
Cross polarisation isolation			-	
Connectors				
Connector type		2 × F-female	4 × F-female	4 × F-female
General				
Operating voltage		10.0 ... 19.0 V	11.5 ... 19.0 V	11.5...19.0 V
Current consumption		105 mA (max.)	220 mA	200 mA
Operating temperature range		-40 ... +60 °C	-40...+60 °C	-40 ... +60 °C
Mechanical data				
Diameter of feed			40 mm	
General				
Weight		0.1475 kg	0.2775 kg	0.2775 kg




Accessories

	SZU 85-01 SZU08501	40 mm LNB holder for multifeed ✓ For SZU 85-02 and SZU 85-06	7611682002270	1
	SZU 85-02 SZU08502	Multifeed bar ±5° ✓ For SAA 80/85-0x and SAA 110-0x ✓ As well as SCO 2-00/4-0x, OCO 1-00/2-00	7611682002287	1
	SZU 85-06 SZU08506	Same as SZU 85-02, but ±12°	4026423971921	1
Type		SZU 85-01	SZU 85-02	SZU 85-06
Mechanical data				
Diameter of feed		40 mm	-	-
Orbital distance		-	± 5°	± 12°
General				
Weight		0.066 kg	0.066 kg	0.078 kg

Type	Part No.	Product description	GTIN	PU				
	SZU 85-03 SZU08503	Rafter fastener <ul style="list-style-type: none"> ✓ For SAA 80/85-xx ✓ Steel, hot-dip galvanised ✓ Mast diameter 48 mm ✓ Mast length 900 mm 	4026423970917	1				
	SZU 85-07 SZU08507	Same as SZU 85-03, but for SAA 110-xx, mast diameter 60 mm	4026423972140	1				
	SZU 85-09 SZU08509	Same as SZU 85-03, but for SAA 85-xx, mast length 1300 mm	7611682006865	1				
	SZU 85-05 SZU08505	Wall bracket <ul style="list-style-type: none"> ✓ For SAA 80/85-xx ✓ Steel, hot-dip galvanised ✓ Wall distance 500 mm 	4026423970788	1				
	SZU 85-08 SZU08508	Wall bracket <ul style="list-style-type: none"> ✓ Hot-galvanised steel wall bracket for permanently fastening of satellite antennas up to Ø 160 cm (e.g. SAA 110-0x) ✓ Can be used as 75 cm wall bracket or 120 cm stand (bracket tube can be split and rotated in 1/3 length) ✓ Wall plate 30 × 30 cm with slotted holes for exact alignment 	4026423972133	1				
	SZU 85-04 SZU08504	Mast fitting kit <ul style="list-style-type: none"> ✓ Aluminium cover plate ✓ Gasket strip ✓ Mast cap for the insertion ✓ Cover flange ✓ Max mast diameter 50 mm 	4026423972065	1				
	SZU 85-10 SZU08510	Mast cap for cable entry <ul style="list-style-type: none"> ✓ Cables are inserted via the mast top ✓ Suitable for up to 18 cables with a diameter of 4...8 mm ✓ Bending radius of the coaxial cable is maintained ✓ Watertight sealing of antenna masts ✓ UV-resistant PE plastic 	7611682008210	1				
	QSF 401-00 QSF40100	Flat roof stand <ul style="list-style-type: none"> ✓ Robust flat-roof and terrace stand ✓ For mounting SAT antennas up to Ø 110 cm ✓ Is weighted down with 4 or 8 cement plates (50 x 50 cm) (not included in delivery) ✓ High-quality steel, hot-dip zinc-coated ✓ Mast angle 10° adjustable ✓ Loadable up to 1600 Nm 	4026423971426	1				
Type	SZU 85-03	SZU 85-07	SZU 85-09	SZU 85-05	SZU 85-08	SZU 85-04	SZU 85-10	QSF 401-00
Mechanical data								
Mast diameter	48 mm	60 mm	48 mm	48 mm	76 mm	50 mm	42...50 mm	60 mm
Mast length	900 mm	900 mm	1300 mm	240 mm	500/1200 mm	-	-	1000 mm
Wall distance	-	-	-	500 mm	750 mm	-	-	-
Gaps between rafters	500...950 mm	500...950 mm	500...950 mm	-	-	-	-	-
Dimensions base plate	-	-	-	-	-	-	-	1000 × 1000 mm
General								
Dimensions (W × H × D) appr.	-	-	-	-	-	-	-	1000 × 1000 × 1000 mm
Weight	6.500 kg	12.80 kg	-	2.600 kg	10.40 kg	1.000 kg	-	-

	Type Part No.	Product description	GTIN	PU
SAT window cable				
	SAK 25-01 SAK02501	F female-female window leading ✓ Very flexible, to lead through a window or door frame	7611682002348	1
	SAK 25-02 SAK02502	F female-female window leading ✓ Very flexible, to lead through a window or door frame ✓ With water protection sleeve for outdoor connection ✓ F female gold-plated	7611682090253	1
Type	SAK 25-01		SAK 25-02	
Connectors				
Connector type	F-female F-female			
Mechanical data				
Cable length	0.25 m			
General				
Weight	0.026 kg		0.020 kg	
	SFK 250-02 SFK25002	F male-male flat cable 3 mm ✓ 2.50 m ✓ Simple installation underneath carpet, parquet or laminate ✓ Very flexible, to lead through a window or door frame ✓ Gold-plated F connector male ✓ With water protection sleeve for outdoor connection directly at LNB	7611682000078	1
	SFK 500-02 SFK50002	Same as SFK 250-02, but 5.00 m	7611682000085	1
	SFK 750-02 SFK75002	Same as SFK 250-02, but 7.,50 m	7611682000092	1
	SFK 999-02 SFK99902	Same as SFK 250-02, but 10.00 m	7611682000108	1
	Type	SFK 250-02	SFK 500-02	SFK 750-02
Connectors				
Connector type	F-male, screw type F-male, screw type			
Return loss	>14 dB			
Mechanical data				
Cable length	2.5 m	5.0 m	7.5 m	10.0 m
Braiding opt. coverage	64 x 0.10 mm –			
Jacket material diameter	PVC, 3 x 8 mm			
General				
Weight	0.134 kg	0.222 kg	0.364 kg	0.418 kg


Type	Part No.	Product description	GTIN	PU
TERR antennas				
	TAA 3-20 TAA00320	DVB-T/T2 FM DAB+ antenna with LTE filter (class 3) <ul style="list-style-type: none"> ✓ Suitable for DVB-T/T2, FM and DAB+ reception ✓ Motorcar supply cable/adapter ✓ With integrated amplifier ✓ RED-compliant class 3 ✓ Included accessory: Coaxial cable, F-angle adapter, F/F adapter, F quickfix connector and IEC connector, Plug-in power supply unit, Motorcar supply cable/adapter, DC power coupler, Indoor stand, Mast clamp, Mounting screws 	7611682007381	1
Type	TAA 3-20			
Frequency range	85...774 MHz			
Output				
Verstärkung	22 dB			
Noise figure	≤ 5.5 dB			
Connector	F-female			
General				
Remote voltage	5...12 VDC			
Current consumption	<50 mA			
Operating temperature range	-20...+65°C			
Dimensions (W × H × D) appr.	370 x 260 x 49 mm			
Weight	1.900 kg			
IP code	IP35			
RED compliance	Class 3			
External accessories				
Plug-in power supply	230 V~ 50 Hz/3W 12V=0.2A			
	TZA 6-00 TZA00600	Telescopic indoor antenna <ul style="list-style-type: none"> ✓ For all TV and radio channels ✓ Suitable for DVB-T/T2 and DAB+ ✓ Passive, no power supply necessary 	7611682070064	1
Type	TZA 6-00			
Frequency range	Band I, II, III, IV, V			
Output				
Connector	ICE			
Mechanical data				
Cable length	1.5 m			
General				
Weight	0.308 kg			
	SPU 6-02 SPU00602	DVB-T/CATV antenna relay <ul style="list-style-type: none"> ✓ To switch between a DVB-T and a CATV signal ✓ Switching signal 5 V/35 mA ✓ Including DC blocker SZU 14-01 	7611682001099	1
Type	SPU 6-02			
Application	DVB-T			
Screening factor acc. to EN 50083-2	> 75 dB			
Frequency range	5...1006 MHz			
Through loss	≤ 1 dB			
Trunk line				
Isolation internal	≤ 45 dB			
Connectors				
Connector type	IEC-female/IEC-male			
General				
Weight	0.102 kg			



Type	Part No.	Product description	GTIN	PU
Measuring devices				
DVB-TV Meter				
  	MG 1-00 MG00100	DVB-TV Meter <ul style="list-style-type: none"> ✓ Easy start thanks to DVB-T2 and SAT wizard, intuitive operation ✓ Ideal for use by installers, electricians and on the construction site ✓ 7-inch high-resolution touch display (800 × 480 px) ✓ Including display of the TV picture by MPEG4 decoder (H.264) ✓ Very good legibility even in poor lighting conditions ✓ Measuring ranges DVB-T/T2/T2 Lite, DVB-C/-C2 and DVB-S/-S2 (incl. UNICABLE I and II as well as Wideband) ✓ Extendable to DVB-S2x with software extension MGS 1-00 ✓ Frequency range SAT 200 ... 2400 MHz (Wideband) ✓ Frequency range DVB-T/T2/CATV 5 ... 1005 MHz ✓ Import of an individual frequency plan possible ✓ Level measuring range 20 ... 120 dBμV ✓ Measurements: level (also analogue), BER, MER, packet error (PER), link margin, constellation diagram ✓ Including spectrum analyser with full-band display or stepwise adjustment of the span ✓ DiSEqC Version 1.2 ✓ Supply voltages 13/18 V for SAT, 5/13/18/24 V for DVB-T2 and CATV ✓ Network interface RJ45 (10/100baseT), USB ✓ Compact design, stable housing with robust bumpers ✓ Built-in lithium-ion battery with 94 Wh for up to 5 hours operating time (depending on the use and a remote power supply for LNB or antenna) ✓ Incl. F/F-adapter, charging unit, USB flash drive and carrying bag MGZ 1-00 ✓ User-friendly generation of measurement protocols thanks to the AXING-MCombiner software tool included in delivery 	7611682007916	1
	MGS 1-00 MGS00100	Software extension for MG 1-00 <ul style="list-style-type: none"> ✓ For measuring DVB-S2X modulated satellite signals ✓ Should be installed at the factory and for this reason should be ordered as well ✓ For upgrading, the measuring device must be reprogrammed at AXING 	–	1
	MGK 1-00 MGK00100	Meter calibration for DVB-TV meter MG 1-00 <ul style="list-style-type: none"> ✓ Meters must be calibrated at regular intervals. ✓ The measuring device must be sent to the factory for this and is checked and recalibrated 	–	1
Type	MG 1-00	MGS 1-00	MGK 1-00	
Input				
Frequency range	5 ... 1005 MHz @ CATV / TERR 200 ... 2400 MHz @ SAT	-	-	
LNB-Type	C Ku Ku WIDEBAND (LO adjustable)	-	-	
Level measurement				
Range	20 ... 120 dBμV	-	-	
Units	dBμV dBmV dBm	-	-	
Accuracy	± 2 dB ± 0.05 dB/°C	-	-	
Resolution	0.1 dB	-	-	
Standards	DVB-T/T2/T2Lite DVB-C/C2 BG DK I L MN DAB FM carrier @ CATV / TERR DVB-S/S2/S2X* PAL SECAM NTSC carrier @ SAT	-	-	
Digital measurements				
Packet errors and link margin (LKM)	Yes	-	-	
Modulation Error Rate (MER)	15 ... 35 dB @ DVB-T 15 ... 35 dB @ DVB-T2/T2lite 20 ... 40 dB @ DVB-C (J83.A) 25 ... 35 dB @ DVB-C2 0 ... 20 dB @ DVB-S 0 ... 20 dB @ DVB-S2 0 ... 20 dB @ DVB-S2X*	-	-	
Sensitivity	35 dBμV @ DVB-T 35 dBμV @ DVB-T2/T2lite < 55 dBμV @ DVB-C (J83.A) < 55 dBμV @ DVB-C2 47 dBμV @ DVB-S 47 dBμV @ DVB-S2 47 dBμV @ DVB-S2X*	-	-	


	Type Part No.	Product description	GTIN	PU
Bandwidth	6 7 8 MHz @ DVB-T 1.7 5 6 7 8 MHz @ DVB-T2/ T2lite 6 8 MHz @ DVB-C2	-	-	
Mode	PLP and data slice, simple or multiple @ DVB-C2	-	-	
FFT	2k 8k @ DVB-T 1k 2k 4k 8k 16k 32k + Band Extension @ DVB-T2/T2lite	-	-	
Modulation type	QPSK, 16 - 64QAM @ DVB-T QPSK, 16 - 256QAM @ DVB-T2/ T2lite 16, 32, 64, 128, 256QAM @ DVB-C (J83.A) 16, 64, 256, 1024, 4096QAM @ DVB-C2 QPSK @ DVB-S QPSK, 8PSK, 16, 32APSK @ DVB-S2 QPSK, 8PSK, 8, 16, 32APSK-L @ DVB-S2X*	-	-	
Symbol rate	1 ... 7.224 MS/s @ DVB-C (J83.A) 1 ... 50 MS/s @ DVB-S 1 ... 50 MS/s @ DVB-S2 1 ... 50 MS/s @ DVB-S2X*	-	-	
HP/LP – PLP – Data Slice	HP/LP @ DVB-T PLP @ DVB-T2/T2lite PLP + Data Slice @ DVB-C2	-	-	
Multistream	Stream selection 0 ... 255 (ISI) PLS descrambling (Gold code) @ DVB-S2 Stream selection 0 ... 255 (ISI) PLS descrambling (Gold code) @ DVB-S2X*	-	-	
Spectrum analysis				
Span	1 MHz to full span in 1, 2, 5 steps	-	-	
Sweep	100 ... 1000 ms	-	-	
Filters	1.6 kHz 3.2 kHz 8 kHz 16 kHz 32 kHz 80 kHz 160 kHz 320 kHz 800 kHz 1.6 MHz 3.2 MHz	-	-	
Attenuation	0 ... 55 dB, in 5 dB steps (auto- matic)	-	-	
Display range / dynamic	60 dB (10 dB/div)	-	-	
Remote supply/control				
Supply	5/13/18/24 V 500 mA max. (300 mA @ 24V) @ DVB-T/T2 13 / 18V 500 mA max. @ DVB-S/S2	-	-	
DiSEqC	DiSEqC 2.1 Dish Rotor Control committed & uncommitted Switches	-	-	
DCSS	Max. 8 user bands @ EN 50494 (UNICABLE I) Max. 32 user bands @ EN 50607 (UNICABLE II)	-	-	
Audio/Video				
Audiocodex	MPEG-1 MPEG-2 AAC HE AAC Dolby® Digital Dolby® Digital Plus	-	-	
Videocodex	MPEG-2 SD und MPEG-4 HD (H.264)	-	-	
Service tables	SDT LCN	-	-	
Antenna check mode				
Memory	10 places/stations @ DVB-T/T2 30 satellites, with European data- base loaded @ DVB-S/S2	-	-	
Check	4** channels @ DVB-T/T2 4** transponders @ DVB-S/S2	-	-	
Interfaces				
Ethernet connectors (LAN)	1 × RJ 45	-	-	
Ethernet standards	10/100 BaseT	-	-	
USB	USB-A / V1.1 (Full Speed)	-	-	

	Type Part No.	Product description	GTIN	PU
Connectors				
RF Input		F-male (F-female/F-female adaptor mounted) 75 Ohms	-	-
Max. permitted voltage		50 VDC, 33 Veff / 50 Hz	-	-
Analogue video input		Jack 3.5 mm 4 contacts	-	-
Level		Video 1 Vpp max. / Audio 10 kOhm	-	-
Standards		PAL SECAM NTSC	-	-
Power supply		Jack 5.5 mm (max 1 A)	-	-
General				
Display		Color LCD TFT 7 inches 16:9 backlight (500 cd/m ²) resolution 800 x 480 capacitive touch screen	-	-
Operating voltage		15 VDC	-	-
Battery		Lithium Ion with 94 Wh (non-removable)***	-	-
Charging time		6:45 h:min 80% 9:30 h:min 100%	-	-
Operating time		CATV/TERR: 5 h SAT: 3 h (depending on use case)	-	-
Operating temperature range		-5 ... +40 °C	-	-
Storage temperature range		-10 ... +60 °C	-	-
EMC and safety		NF-EN 61326-1 NF-EN 61326-2 NF-EN 61010-1	-	-
Dimensions (W × H × D) appr.		280 x 300 x 70 mm	-	-
Weight		1.350 kg	-	-
External accessories				
Plug-in power supply		110/230 VAC 15 VDC / 1 A	-	-
General				
Comments		* DVB-S2X only with software extension MGS 1-00 ** Can be changed by the user *** From serial number #6000 upwards	-	-

Accessories for DVB-TV Meter

	MGZ 1-00 MGZ00100	✓ Carrying bag for MG 1-00 Replacement for the carrying bag supplied with the MG 1-00	7611682007923	1	
	MGZ 1-01 MGZ00101	Rain and sun protection kit for MG 1-00 ✓ Rain cover for working even in the rain ✓ Glare protection for mounting above the display ✓ Belt clip	7611682007930	1	
	MGZ 2-00 MGZ00200	Car charger for MG 1-00 ✓ For charging the device in the car ✓ DC/DC converter 12V to 15V/1A ✓ With adapter for car cigarette lighter and hollow plug 5.5 mm	7611682007947	1	
	MGZ 3-00 MGZ00300	Measuring cable and adapter set for MG 1-00 ✓ Includes a 2.0 m measuring cable and the following laboratory adapters: ✓ CFA 13-01 Adapter IEC-female to F-female ✓ CFA 14-01 Adapter IEC-male to F-female ✓ CFA 15-00 Adapter IEC-male to F-male, Quickfix ✓ CFA 16-00 Adapter IEC-female to F-male, Quickfix ✓ CFA 17-00 Adapter F-male, Quickfix to IEC-female	7611682007954	1	
	MGZ 2-01 MGZ00201	Power bank for MG 1-00 ✓ Capacity 88.8 Wh / 24,000 mAh ✓ Maximum charging power 60 W, supports various fast-charging technologies ✓ Can be charged via USB or notebook power supply unit ✓ Operating voltage 5 to 24 volts ✓ Charge level indicator, voltage indicator ✓ Connections (input and output): USB-C, USB-A, DC ✓ Adapter set with hollow DC plugs included in delivery ✓ Also suitable for notebook, smartphone, tablet, drone ✓ Wireless charging 10 W / inductive charging function for smartphones	7611682008265	1	
	Type	MGZ 1-00	MGZ 1-01	MGZ 2-00	MGZ 3-00
General					
Dimensions (W × H × D) appr.	-	-	-	-	122 × 122 × 28 mm
Weight	-	-	-	-	0.82 kg

Type	Part No.	Product description	GTIN	PU
Signal tester				
	SZU 17-01 SZU01701	SAT signal tester ✓ Enables to find new satellites and align satellite dishes ✓ With acoustic signal ✓ Display type LED chain	7611682160178	1
	SZU 17-02 SZU01702	Same as SZU 17-01, but LCD display	7611682001914	1
Type	SZU 17-01		SZU 17-02	
Frequency range	950...2200 MHz			
Display	22 kHz		22 kHz H/V	
Measurement range	60...105 dBµV		-	
Through loss	-		< 10dB	
RF connectors				
Type	F-female			
General				
Weight	0.074 kg		0.100 kg	
	BZU 10-02 BZU01002	CATV signal tester digital ✓ Easy-to-use, small level tester for digital CATV systems ✓ Displays the average level of a single channel within 254...294 MHz or 398...438 MHz ✓ Alternatively, display of the sum total level over the entire bandwidth ✓ Including: Patch cable (F/F, 30 cm) and Adapter (IEC female/F-female)	7611682007824	1
	Type	BZU 10-02		
Input				
Frequency range	254...294 MHz (D258...D290 S15...S19) @ VHF selective 398...438 MHz (D402...D434 S33...S37) @ UHF selective 5...2700 MHz @ broadband			
Impedance	75 Ω			
Return loss	> 10 dB			
Level measurement				
Range	60...105 dBµV selectiv 80...125 dBµV broadband			
Resolution	-			
Connectors				
RF Input	F-female			
General				
Operating voltage	9 VDC (PP3) *			
Power consumption	630 mW (max.)			
Current consumption	70 mA (max.)			
Current consumption in standby	10 µA (max.)			
Dimensions (W × H × D) appr.	60 x 120 x 26 mm			
Comments	* 9 V battery not included in delivery			

Type Part No.	Product description	GTIN	PU
 TZU 22-01 TZU02201	Signal tester DVB-T/T2 analogue digital <ul style="list-style-type: none"> ✓ With LED indication ✓ To adjust TV and Radio (FM) antennas ✓ Input level adjustable ✓ Can either be operated with a PP3 (9 volt) battery, an external DC power supply (not included in delivery) or can be remote power fed from a DVB-T receiver. 	7611682082203	1
Type	TZU 22-01		
Frequency range	47...862 MHz		
Input level adjustment range	20 dB		
RF connectors			
Type	F-female		
General			
Operating voltage	5...12 VDC		
Remote voltage	5 VDC		
Current consumption	25 mA		
Connector DC	3.5 mm jack plug		
Weight	0.094 kg		

Type Part No. Product description GTIN PU


Multiswitches


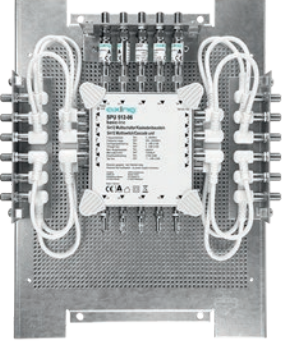
1 SAT position | basic-line





SPU 58-06 SPU05806	Multiswitch stand-alone/cascade unit 5 in 8 basic-line <ul style="list-style-type: none"> ✓ For up to 8 subscribers ✓ Subscriber ports SAT active, terrestrial passive ✓ Suitable for return path ✓ Receiver-fed multiswitch – no power supply necessary ✓ Cascadable - Cascade outputs must be terminated with DC-isolated 75 Ohm terminating resistors (e.g. CFA 11-00, not included in the scope of delivery) 	7611682005332	1
SPU 512-06 SPU51206	Same as SPU 58-06, but 5 in 12, for up to 12 subscribers	7611682005349	1
SPU 516-06 SPU51606	Same as SPU 58-06, but 5 in 16, for up to 16 subscribers	7611682005356	1
SPU 524-06 SPU52406	Same as SPU 58-06, but 5 in 24, for up to 24 subscribers	7611682005363	1
SPU 532-06 SPU53206	Same as SPU 58-06, but 5 in 32, for up to 32 subscribers	7611682005370	1



Type	SPU 58-06	SPU 512-06	SPU 516-06	SPU 524-06	SPU 532-06
Inputs					
Number	5				
Frequency range	5...862 MHz 950...2400 MHz				
Max. LNB current	1500 mA				
Isolation V H.	>30 dB				
Isolation TERR SAT	30 dB				
Subscriber ports					
Number	8	12	16	24	32
Switch commands	13/18 V, 0/22 kHz				
Tap loss TERR	23 dB ±2 dB	27 dB ±3 dB	27 dB ±3 dB	33 dB ±3 dB	33 dB ±3 dB
Tap loss SAT	-1...-3 dB ±2 dB	-1...-2 dB ±2 dB	-1...-2 dB ±2 dB	2...-1 dB ±2 dB	2...-1 dB ±2 dB
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	102 dBµV				
Current consumption per port (without LNB supply)	< 35 mA				
Trunk outputs					
Number	5				
Through loss TERR	2 dB ±1 dB	2...3 dB ±1 dB	2...3 dB ±1 dB	2 dB ±2 dB	2 dB ±2 dB
Through loss SAT	2 dB ±1 dB	2...4 dB ±1 dB	2...4 dB ±1 dB	2...6 dB ±2 dB	2...6 dB ±2 dB
Connectors					
Connector type	F				
General					
Equipotential bonding connection	4 mm²				
Operating temperature range (acc. to EN 60065)	-20...+50°C				
Dimensions (W × H × D) appr.	137 x 112 x 63 mm	137 x 150 x 63 mm	137 x 150 x 63 mm	137 x 240 x 63 mm	137 x 240 x 63 mm
Weight	0.400 kg	0.500 kg	0.520 kg	0.710 kg	0.750 kg
IP code	IP20				



	Type Part No.	Product description	GTIN	PU
	SPU 56-05 SPU05605	Multiswitch 5 in 6 basic-line ✓ Up to 6 subscribers ✓ Active satellite path, passive terrestrial path ✓ Suitable for return path ✓ Suitable for Quad LNB ✓ Switching power supply	7611682130577	1
	SPU 58-05 SPU05805	Same as SPU 56-05, but 5 in 8, for up to 8 subscribers	7611682130591	1
	SPU 512-05 SPU51205	Same as SPU 56-05, but 5 in 12, for up to 12 subscribers	7611682135138	1
	SPU 516-05 SPU51605	Same as SPU 56-05, but 5 in 16, for up to 16 subscribers	7611682135176	1
Type	SPU 56-05	SPU 58-05	SPU 512-05	SPU 516-05
Inputs				
Number	5			
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz			
Isolation V H.	25 dB			
Isolation SAT inputs SAT inputs	30 dB			
Isolation TERR SAT	50 dB			
Subscriber ports				
Number	6	8	12	16
Tap loss TERR	20 dB			
Tap loss SAT	8...2 dB	9...3 dB	10...6 dB	10...6 dB
Isolation	35 dB			
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	90 dBμV			
Connectors				
Connector type	F			
General				
Switching power supply	90...250 V~ 47-63 Hz 18 V=0.5 A			
Power consumption	4.4 W	4.7 W	5.0 W	5.3 W
Equipotential bonding connection	4 mm ²			
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Dimensions (W × H × D) appr.	275 × 125 × 50 mm	275 × 125 × 50 mm	355 × 125 × 50 mm	355 × 125 × 50 mm
Weight	0.638 kg	0.640 kg	0.790 kg	0.805 kg
IP code	IP20			

Type	Part No.	Product description	GTIN	PU
1 SAT position Complete packages				
 	SZU 58-06 SZU05806	Complete multiswitch package 5 in 8 completely pre-assembled <ul style="list-style-type: none"> ✓ For up to 8 subscribers ✓ Minimum installation time due to ready-to-operate, pre-installed system ✓ Service- and assembly-friendly ✓ With overvoltage protection and equipotential bonding at the inputs ✓ With equipotential bonding at subscriber outputs ✓ Consisting of: <ul style="list-style-type: none"> ✓ 1 x QMP 3045 Perforated mounting plate ✓ 1 x SPU 58-06 Multiswitch 5 in 8 ✓ 1 x QEW 5-06 Earthing angle ✓ 2 x QEW 4-06 Earthing angle ✓ 5 x CFA 11-00 Terminating resistor ✓ 8 x SAK 21-02 Patch cable ✓ Optionally available with power supply unit SZU 99-06 	7611682007695	1
	SZU 512-06 SZU51206	Same as SZU 58-06, but for up to 12 subscribers	7611682007701	1
	SZU 516-06 SZU51606	Same as SZU 58-06, but for up to 16 subscribers	7611682007718	1
	Type	SZU 58-06	SZU 512-06	SZU 516-06
Inputs				
Number	5			
Frequency range	5...862 MHz 950...2400 MHz			
Max. LNB current	1500 mA			
Isolation V H.	>30 dB			
Isolation TERR SAT	30 dB			
Subscriber ports				
Number	8	12	16	
Switch commands	13/18 V, 0/22 kHz			
Tap loss SAT	-1...-3 dB ±2 dB	-1...-2 dB ±2 dB	-1...-2 dB ±2 dB	
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	102 dBµV			
Current consumption per port (without LNB supply)	< 35 mA			
Trunk outputs				
Number	5			
Through loss TERR	2 dB ±1 dB	2...3 dB ±1 dB	2...3 dB ±1 dB	
Through loss SAT	2 dB ±1 dB	2...4 dB ±1 dB	2...4 dB ±1 dB	
Connectors				
Connector type	F			
General				
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Dimensions (W × H × D) appr.	300 x 400 x 170 mm			
IP code	IP20			


	Type Part No.	Product description	GTIN	PU	
1 SAT position premium-line					
 <p>KLASSE A CLASS</p>	SPU 54-09 SPU05409	Active multiswitch 5 in 4 premium-line ✓ For up to 4 subscribers ✓ Active satellite, passive terrestrial path ✓ Suitable for return path ✓ Suitable for Quad LNB ✓ Switching power supply unit (detachable up to 10 m)	7611682000467	1	
	SPU 56-09 SPU05609	Active multiswitch 5 in 6 premium-line ✓ For up to 6 subscribers ✓ Active satellite and terrestrial path ✓ Terrestrial adjustable, switchable to passive ✓ Cascadable ✓ Suitable for return path ✓ Suitable for Quad LNB ✓ Switching power supply unit (detachable up to 10 m)	7611682000474	1	
	SPU 58-09 SPU05809	Same as SPU 56-09, but 5 in 8, for up to 8 subscribers	7611682001464	1	
	SPU 510-09 SPU51009	Same as SPU 56-09, but 5 in 10, for up to 10 subscribers	7611682000481	1	
	SPU 516-09 SPU51609	Same as SPU 56-09, but 5 in 16, for up to 16 subscribers	7611682000498	1	
	Type	SPU 54-09	SPU 56-09	SPU 58-09	SPU 510-09
Inputs					
Number	5				
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz				
Attenuator adjustment range TERR, switchable to passive	-	20 dB	20 dB	20 dB	20 dB
Subscriber ports					
Number	4	6	8	10	16
Switch commands	13/18 V, 0/22 kHz				
Gain SAT	-3...3 dB	-3...2 dB	-6...0 dB	-6...0 dB	-6...0 dB
Gain TERR active	-	-5...-2 dB	-5...0 dB	-5...0 dB	-5...0 dB
Gain TERR passive	-20 dB	-22...-27 dB	-23...-25 dB	-23...-25 dB	-23...-25 dB
Isolation	>26 dB				
Switching isolation	>26 dB				
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	94 dB μ V				
Current consumption per port (without LNB supply)	25 mA				
Trunk outputs					
Number	-	5	5	5	5
Gain TERR active	-	12...20 dB	13...18 dB	13...18 dB	13...18 dB
Gain TERR passive	-	-5 dB	-5 dB	-5 dB	-5 dB
Gain SAT	-	13 dB	11 dB	11 dB	11 dB
Max. output level TERR (3rd order EN 50083-3, 60 dB KMA)	-	103 dB μ V	103 dB μ V	103 dB μ V	103 dB μ V
Max. output level trunk SAT (3rd order EN 50083-3, 35 dB KMA, 2 sender test method)	-	113 dB μ V	113 dB μ V	113 dB μ V	113 dB μ V
Isolation	-	>26 dB	>26 dB	>26 dB	>26 dB
Rejection (SAT TERR)	-	>40 dB	>40 dB	>40 dB	>40 dB
Connectors					
Connector type	F				
General					
Switching power supply	90...250 V~ 47-63 Hz 18 V=/0.7A				
Power indicator	LED				
Power consumption without LNB supply (TERR passive active)	3.4 W -	4.6 6.7 W	4.6 6.7 W	4.6 6.7 W	4.6 6.7 W
Power consumption in Stand-by (TERR passive active)	0.9 W -	2.4 4.5 W	2.4 4.5 W	2.4 4.5 W	2.4 4.5 W
Equipotential bonding connection	4 mm ²				
Operating temperature range (acc. to EN 60065)	-20...+50°C				
Dimensions (W x H x D) appr.	195 x 145 x 85 mm	195 x 145 x 85 mm	195 x 190 x 85 mm	195 x 190 x 85 mm	195 x 255 x 85 mm
Weight	0.705 kg	0.775 kg	0.825 kg	0.880 kg	1.080 kg
IP code	IP20				

	Type Part No.	Product description	GTIN	PU	
 <p>KLASSE A CLASS</p>	SPU 556-09 SPU55609	Cascade unit 5 in 6 premium-line ✓ For up to 6 subscribers ✓ Passive satellite and terrestrial path ✓ For cascadable 5 in x SAT systems ✓ Optimized for the use with SPU 5xx-09 ✓ Suitable for return path	7611682000535	1	
	SPU 558-09 SPU55809	Same as SPU 556-09, but 5 in 8, for up to 8 subscribers	7611682000528	1	
	SPU 5512-09 SPU551209	Same as SPU 556-09, but 5 in 12, for up to 12 subscribers	7611682000511	1	
	SPU 5518-09 SPU551809	Same as SPU 556-09, but 5 in 18, for up to 18 subscribers	7611682000504	1	
	SPU 5518-19 SPU551819	Same as SPU 5518-09, but SAT active	7611682004526	1	
Type	SPU 556-09	SPU 558-09	SPU 5512-09	SPU 5518-09	SPU 5518-19
Inputs					
Number	5				
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz				
Subscriber ports					
Number	6	8	12	18	18
Tap loss TERR	20 dB	20 dB	25 dB	28 dB	23...29 dB
Tap loss SAT	19...16 dB	19...16 dB	19...16 dB	20...17 dB	20...17 dB
Tap loss SAT active	-	-	-	-	6...2 dB
Isolation	>26 dB				
Switching isolation	>26 dB				
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	-	-	-	-	98 dBµV
Current consumption per port (without LNB supply)	-	-	-	-	40 mA
Trunk outputs					
Number	5				
Through loss TERR	4 dB	4 dB	4 dB	6 dB	6 dB
Through loss SAT	2 dB	2.5 dB	3.5 dB	3...6 dB	3...6 dB
Isolation	>30 dB				
Rejection (SAT TERR)	>40 dB				
Connectors					
Connector type	F				
General					
Operating temperature range (acc. to EN 60065)	-20...+50°C				
Dimensions (W × H × D) appr.	170 × 130 × 40 mm	170 × 150 × 40 mm	170 × 190 × 40 mm	170 × 255 × 40 mm	170 × 255 × 40 mm
Weight	0.448 kg	0.522 kg	0.675 kg	0.850 kg	0.850 kg


Type Part No.	Product description	GTIN	PU
 	SVS 550-09 SVS55009 Headamplifier 5 in 5 premium-line ✓ For use with SPU 5xx-09 systems ✓ 4 × SAT 950...2200 MHz 1 × TERR 5...862 MHz ✓ 4 × SAT 950...2200 MHz Gain 21...27 dB ✓ 1 × TERR 5...862 MHz Gain 15 dB ✓ Built-in attenuators 0...15 dB ✓ Switching power supply unit (detachable up to 10 m) ✓ 5 termination resistors CFA 11-00 included	7611682002621	1
Type	SVS 550-09		
Inputs			
Number	5		
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz		
Attenuator adjustment range	0...15 dB		
Gain TERR	15 dB		
Gain SAT	21...27 dB		
Gain return path (passive)	-2 dB		
Isolation SAT inputs SAT inputs	40 dB		
Isolation TERR SAT	40 dB		
Trunk outputs			
Number	5		
Max. output level TERR (3rd order EN 50083-3, 60 dB KMA)	109 dB μ V		
Max. output level trunk SAT (3rd order EN 50083-3, 35 dB KMA, 2 sender test method)	114 dB μ V		
Isolation TERR SAT	40 dB		
Isolation SAT SAT	40 dB		
Connectors			
Connector type	F		
General			
Switching power supply	90...250 V~ 47...63 Hz 18 V=0.7 A		
Power consumption	10 W		
Equipotential bonding connection	4 mm ²		
Operating temperature range (acc. to EN 60065)	-20...+50°C		
Dimensions (W × H × D) appr.	195 × 145 × 85 mm		
Weight	0.725 kg		
IP code	IP20		


Type	Part No.	Product description	GTIN	PU
 	SVE 5502-09	2-way SAT splitter 5 in 5 premium-line	7611682003307	1
	SVE550209	<ul style="list-style-type: none"> ✓ For use with 5xx-09 systems ✓ 4 × SAT (Wideband) 300...2400 MHz 1 × TERR 5...862 MHz ✓ DC power pass from SAT outputs to SAT inputs (isolated with diodes) 		
	SVE 5504-09	Same as SVE 5504-09, but 4-way SAT splitter	7611682003314	1
	SVE550409			
Type	SVE 5502-09		SVE 5504-09	
Inputs				
Number	5			
Frequency range	5...862 MHz @ TERR 300...2400 MHz @ SAT			
Isolation SAT inputs SAT inputs	35 dB			
Isolation TERR SAT	40 dB		35 dB	
Distribution				
Distribution loss	≤ 4.5 dB @ 5...862 MHz ≤ 5.5 dB @ 950...2200 MHz		≤ 8.5 dB @ 5...862 MHz ≤ 9.5 dB @ 950...2200 MHz	
Trunk outputs				
DC power pass	Yes			
Isolation TERR SAT	40 dB			
Isolation SAT SAT	35 dB			
Isolation TERR TERR	20 dB			
Connectors				
Connector type	F			
General				
Weight	0.636 kg		0.950 kg	

2 SAT positions | basic-line

Type	Part No.	Product description	GTIN	PU
	SPU 98-06 SPU09806	Multiswitch stand-alone/cascade unit 9 in 8 basic-line ✓ For up to 8 subscribers ✓ Subscriber ports SAT active, terrestrial passive ✓ Suitable for return path ✓ Powered by ext. power supply SZU 99-06 (not included in delivery) or via the SAT-IF trunk lines ✓ Cascadable - Cascade outputs must be terminated with DC-isolated 75 Ohm terminating resistors (e.g. CFA 11-00, not included in delivery)	7611682005387	1
	SPU 912-06 SPU91206	Same as SPU 98-06, but 9 in 12, for up to 12 subscribers	7611682005394	1
	SPU 916-06 SPU91606	Same as SPU 98-06, but 9 in 16, for up to 16 subscribers	7611682005400	1
	SPU 924-06 SPU92406	Same as SPU 98-06, but 9 in 24, for up to 24 subscribers	7611682005417	1
	SPU 932-06 SPU93206	Same as SPU 98-06, but 9 in 32, for up to 32 subscribers	7611682005424	1

Type	SPU 98-06	SPU 912-06	SPU 916-06	SPU 924-06	SPU 932-06
Inputs					
Number	9				
Frequency range	5...862 MHz 950...2400 MHz				
Max. LNB current	1500 mA				
Subscriber ports					
Number	8	12	16	24	32
Switch commands	13/18 V, 0/22 kHz, DiSEqC 1.0				
Tap loss TERR	24 dB ±2 dB	28 dB ±3 dB	28 dB ±3 dB	32 dB ±3 dB	32 dB ±3 dB
Tap loss SAT	2...0 dB ±2 dB	2...1 dB ±2 dB	2...1 dB ±2 dB	2...0 dB ±2 dB	2...0 dB ±2 dB
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	102 dBµV				
Current consumption per port (without LNB supply)	< 35 mA				
Trunk outputs					
Number	9				
Through loss TERR	2...3dB ±1.5 dB	4...5 dB ±1.5 dB	4...5 dB ±1.5 dB	4...6 dB ±1 dB	4...6 dB ±1 dB
Through loss SAT	1...2 dB ±1.5dB	1.5...3 dB ±1.5 dB	1.5...3 dB ±1.5 dB	2...6 dB ±1.5 dB	2...6 dB ±1.5 dB
Connectors					
Connector type	F				
General					
Current consumption	10 mA				
Equipotential bonding connection	4 mm ²				
Operating temperature range (acc. to EN 60065)	-20...+50°C				
Dimensions (W x H x D) appr.	202 x 128 x 63 mm	202 x 189 x 63 mm	202 x 189 x 63 mm	202 x 306 x 63 mm	202 x 306 x 63 mm
Weight	0.685 kg	0.810 kg	0.830 kg	1.160 kg	1.190 kg
IP code	IP20				

Type	Part No.	Product description	GTIN	PU
2 SAT positions premium-line				
	SPU 96-09 SPU09609	Active multiswitch 9 in 6 premium-line ✓ For up to 6 subscribers ✓ Active satellite and terrestrial path ✓ Terrestrial adjustable, switchable to passive ✓ Cascadable ✓ Suitable for return path ✓ Suitable for Quad LNB ✓ Switching power supply unit (detachable up to 10 m)	7611682130966	1
	SPU 910-09 SPU91009	Same as SPU 96-09, but 9 in 10, for up to 10 subscribers	7611682130980	1
	SPU 916-09 SPU91609	Same as SPU 96-09, but 9 in 16, for up to 16 subscribers	7611682139167	1
Type	SPU 96-09	SPU 910-09	SPU 916-09	
Inputs				
Number	9			
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz			
Attenuator adjustment range TERR, switchable to passive	20 dB			
Subscriber ports				
Number	6	10	16	
Switch commands	13/18 V, 0/22 kHz, DiSEqC 2.0			
Gain SAT	-6...0 dB	-7...-0 dB	-8...-2 dB	
Gain TERR active	-6...-3 dB	-7...-5 dB	-10...-8 dB	
Gain TERR passive	-22...-29 dB	-24...-30 dB	-26...-34 dB	
Isolation	>26 dB			
Switching isolation	>26 dB			
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	94 dBμV			
Current consumption per port (without LNB supply)	25 mA			
Trunk outputs				
Number	9			
Gain TERR active	11...17 dB	11...17 dB	11...16 dB	
Gain TERR passive	-6...-9 dB	-6...-9 dB	-6...-10 dB	
Gain SAT	12 dB	11 dB	10 dB	
Max. output level TERR (3rd order EN 50083-3, 60 dB KMA)	103 dBμV			
Max. output level trunk SAT (3rd order EN 50083-3, 35 dB KMA, 2 sender test method)	113 dBμV	112 dBμV	111 dBμV	
Isolation	>26 dB			
Rejection (SAT TERR)	>40 dB			
Connectors				
Connector type	F			
General				
Switching power supply	90...250 V~ 47-63 Hz 18 V= / 1.2 A			
Power indicator	LED			
Power consumption without LNB supply (TERR passive active)	5.9 7.8 W			
Power consumption in Stand-by (TERR passive active)	2.3 4.1 W			
Equipotential bonding connection	4 mm ²			
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Dimensions (W × H × D) appr.	255 × 145 × 85 mm	255 × 180 × 85 mm	255 × 255 × 85 mm	
Weight	1.030 kg	1.210 kg	1.460 kg	
IP code	IP20			

	Type Part No.	Product description				GTIN	PU
 <p>KLASSE A CLASS</p>	SPU 996-09 SPU99609	Cascade unit 9 in 6 premium-line ✓ For up to 6 subscribers ✓ Passive satellite and terrestrial path ✓ For cascadable 9 in x SAT systems ✓ Optimized for the use with SPU 9xx-09 ✓ Suitable for return path				7611682139952	1
	SPU 998-09 SPU99809	Same as SPU 996-09, but 9 in 8, for up to 8 subscribers				7611682139969	1
	SPU 9912-09 SPU991209	Same as SPU 996-09, but 9 in 12, for up to 12 subscribers				7611682139983	1
	SPU 9918-09 SPU991809	Same as SPU 996-09, but 9 in 18, for up to 18 subscribers				7611682139129	1
	SPU 9918-19 SPU991819	Same as SPU 9918-09, but SAT active				7611682004533	1
Type	SPU 996-09	SPU 998-09	SPU 9912-09	SPU 9918-09	SPU 9918-19		
Inputs							
Number	9						
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz						
Subscriber ports							
Number	6	8	12	18	18		
Tap loss TERR	20 dB	22 dB	25 dB	28 dB	25...29 dB		
Tap loss SAT	19...16 dB	19...16 dB	19...16 dB	21...18 dB	-		
Tap loss SAT active	-	-	-	-	6...3dB		
Isolation	>26 dB						
Switching isolation	>26 dB						
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	-	-	-	-	98 dBμV		
Current consumption per port (without LNB supply)	-	-	-	-	55 mA		
Trunk outputs							
Number	9						
Through loss TERR	5 dB	5 dB	5 dB	6 dB	7 dB		
Through loss SAT	2...5 dB	2...5 dB	3...6 dB	3...7 dB	3...7 dB		
Isolation	>30 dB						
Rejection (SAT TERR)	>40 dB						
Connectors							
Connector type	F						
General							
Operating temperature range (acc. to EN 60065)	-20...+50°C						
Dimensions (W × H × D) appr.	230 × 125 × 40 mm	230 × 145 × 40 mm	230 × 180 × 40 mm	230 × 255 × 40 mm	230 × 255 × 40 mm		
Weight	0.606 kg	0.700 kg	0.870 kg	1.135 kg	0.980 kg		

Type Part No. Product description GTIN PU




SVS 990-09
SVS99009

Headamplifier | 9 in 9 | premium-line
 ✓ For use with SPU 9xx-09 systems
 ✓ 8 × SAT 950...2200 MHz | Gain 21...27 dB
 ✓ 1 × TERR 5...862 MHz | Gain 15 dB
 ✓ Built-in attenuators 0...15 dB
 ✓ Switching power supply unit (detachable up to 10 m)
 ✓ 9 termination resistors CFA 11-00 included

7611682002850 1

Type	SVS 990-09
Inputs	
Number	9
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz
Attenuator adjustment range	0...15 dB
Gain TERR	15 dB
Gain SAT	21...27 dB
Gain return path (passive)	-2 dB
Isolation SAT inputs SAT inputs	40 dB
Isolation TERR SAT	40 dB
Trunk outputs	
Number	9
Max. output level TERR (3rd order EN 50083-3, 60 dB KMA)	109 dB μ V
Max. output level trunk SAT (3rd order EN 50083-3, 35 dB KMA, 2 sender test method)	114 dB μ V
Isolation TERR SAT	40 dB
Isolation SAT SAT	40 dB
Connectors	
Connector type	F
General	
Switching power supply	90...250 V~ 47...63 Hz 18 V=/1.2 A
Power consumption	14 W
Equipotential bonding connection	4 mm ²
Operating temperature range (acc. to EN 60065)	-20...+50°C
Dimensions (W × H × D) appr.	255 × 145 × 85 mm
Weight	1.340 kg
IP code	IP20

3 SAT positions | basic-line

Type Part No.	Product description	GTIN	PU
 <p>KLASSE A CLASS</p>	SPU 1308-06 SPU130806 <ul style="list-style-type: none"> ✓ Multiswitch stand-alone/cascade unit 13 in 8 basic-line ✓ For up to 8 subscribers ✓ Subscriber ports SAT active, terrestrial passive ✓ Suitable for return path ✓ Powered by ext. power supply SZU 99-06 (not included in delivery) or via the SAT-IF trunk lines ✓ Cascadable - Cascade outputs must be terminated with DC-isolated 75 Ohm terminating resistors (e.g. CFA 11-00, not included in delivery) 	7611682005431	1
	SPU 1312-06 SPU131206 <ul style="list-style-type: none"> Same as SPU 1308-06, but 13 in 12, for up to 12 subscribers 	7611682005448	1
	SPU 1316-06 SPU131606 <ul style="list-style-type: none"> Same as SPU 1308-06, but 13 in 16, for up to 16 subscribers 	7611682005455	1
	SPU 1324-06 SPU132406 <ul style="list-style-type: none"> Same as SPU 1308-06, but 13 in 24, for up to 24 subscribers 	7611682005462	1
	SPU 1332-06 SPU133206 <ul style="list-style-type: none"> Same as SPU 1308-06, but 13 in 32, for up to 32 subscribers 	7611682005479	1

Type	SPU 1308-06	SPU 1312-06	SPU 1316-06	SPU 1324-06	SPU 1332-06
Inputs					
Number	13				
Frequency range	5...862 MHz 950...2400 MHz				
Max. LNB current	1500 mA				
Isolation V H.	>30 dB				
Isolation TERR SAT	30 dB				
Subscriber ports					
Number	8	12	16	24	32
Switch commands	13/18 V, 0/22 kHz, DiSEqC 1.0				
Tap loss TERR	24 dB ±3 dB	28 dB ±3 dB	28 dB ±3 dB	32 dB ±3 dB	32 dB ±3 dB
Tap loss SAT	2...0 dB ±2 dB	3...0 dB ±2 dB	3...0 dB ±2 dB	2...0 dB ±2 dB	2...0 dB ±2 dB
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	102 dBµV				
Current consumption per port (without LNB supply)	< 35 mA				
Trunk outputs					
Number	13				
Through loss TERR	2...5 dB ±1.5 dB	2...5 dB ±1.5 dB	2...5 dB ±1.5 dB	3...5 dB ±1.5 dB	3...5 dB ±1.5 dB
Through loss SAT	1...3 dB ±1.5 dB	1...3 dB ±1.5 dB	1...3 dB ±1.5 dB	2.5...5 dB ±1.5 dB	2.5...5 dB ±1.5 dB
Connectors					
Connector type	F				
General					
Equipotential bonding connection	4 mm ²				
Operating temperature range (acc. to EN 60065)	-20...+50°C				
Dimensions (W × H × D) appr.	291 x 128 x 63 mm	291 x 189 x 63 mm	291 x 189 x 63 mm	291 x 308 x 63 mm	291 x 308 x 63 mm
Weight	0.700 kg	0.910 kg	0.930 kg	1.410 kg	1.440 kg
IP code	IP20				


Type Part No. Product description GTIN PU

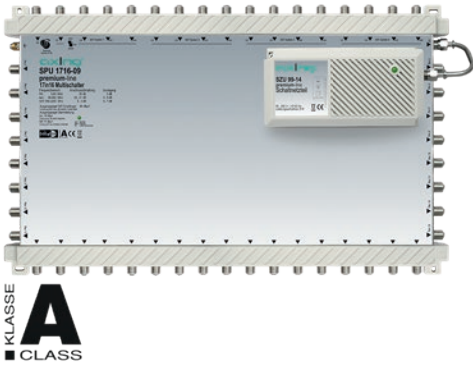
4 SAT positions | basic-line




SPU 1708-06 SPU170806	Multiswitch stand-alone/cascade unit 17 in 8 basic-line <ul style="list-style-type: none"> ✓ For up to 8 subscribers ✓ Subscriber ports SAT active, terrestrial passive ✓ Suitable for return path ✓ Powered by ext. power supply SZU 99-06 (not included in delivery) or via the SAT-IF trunk lines ✓ Cascadable - Cascade outputs must be terminated with DC-isolated 75 Ohm terminating resistors (e.g. CFA 11-00, not included in delivery) 	7611682005486	1
SPU 1712-06 SPU171206	Same as SPU 1708-06, but 17 in 12, for up to 12 subscribers	7611682005493	1
SPU 1716-06 SPU171606	Same as SPU 1708-06, but 17 in 16, for up to 16 subscribers	7611682005509	1
SPU 1724-06 SPU172406	Same as SPU 1708-06, but 17 in 24, for up to 24 subscribers	7611682005516	1
SPU 1732-06 SPU173206	Same as SPU 1708-06, but 17 in 32, for up to 32 subscribers	7611682005523	1

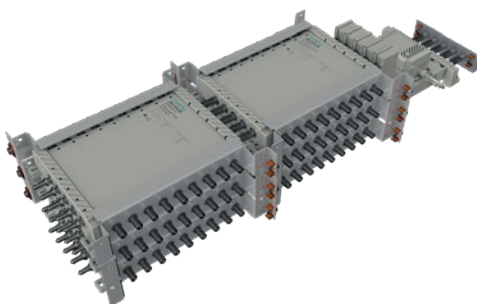
Type	SPU 1708-06	SPU 1712-06	SPU 1716-06	SPU 1724-06	SPU 1732-06
Inputs					
Number	17				
Frequency range	5...862 MHz 950...2400 MHz				
Max. LNB current	1500 mA				
Subscriber ports					
Number	8	12	16	24	32
Switch commands	13/18 V, 0/22 kHz, DiSEqC 1.0				
Tap loss TERR	24 dB ±2 dB	28 dB ±3 dB	28 dB ±3 dB	32 dB ±3 dB	32 dB ±3 dB
Tap loss SAT	2...0 dB ±2 dB	3...0 dB ±2 dB	3...0 dB ±2 dB	2...0 dB ±2 dB	2...0 dB ±2 dB
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	102 dBµV				
Current consumption per port (without LNB supply)	< 35 mA				
Trunk outputs					
Number	17				
Through loss TERR	3 dB ±1.5 dB	2...5 dB ±1.5 dB	2...5 dB ±1.5 dB	3...5 dB ±1.5 dB	3...5 dB ±1.5 dB
Through loss SAT	1...3 dB ±1.5 dB	1...3 dB ±1.5 dB	1...3 dB ±1.5 dB	2.5...5 dB ±1.5 dB	2.5...5 dB ±1.5 dB
Connectors					
Connector type	-				
General					
Current consumption	10 mA				
Equipotential bonding connection	4 mm²				
Operating temperature range (acc. to EN 60065)	-20...+50°C				
Dimensions (W × H × D) appr.	291 x 128 x 63 mm	291 x 189 x 63 mm	291 x 189 x 63 mm	291 x 308 x 63 mm	291 x 308 x 63 mm
Weight	0.730 kg	0.910 kg	0.870 kg	1.420 kg	1.450 kg
IP code	IP20				

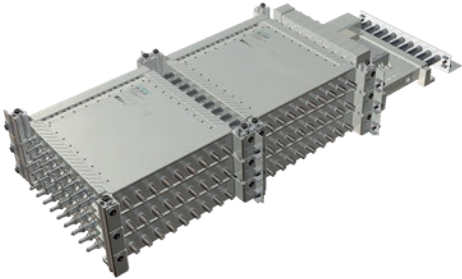
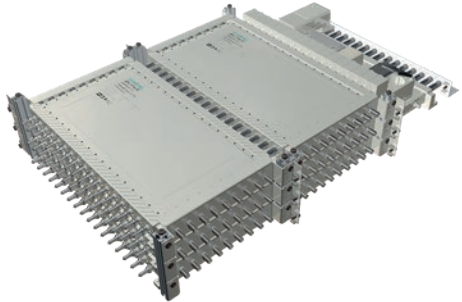
Type Part No.	Product description	GTIN	PU
4 SAT positions premium-line			
 SPU 1708-09 SPU170809	Active standalone multiswitch 17 in 8 premium-line <ul style="list-style-type: none"> ✓ For up to 8 subscribers ✓ Active satellite and terrestrial path ✓ Terrestrial adjustable and switchable to passive ✓ Switching power supply unit (detachable up to 10 m) ✓ Suitable for Quad LNB ✓ Suitable for return path 	7611682001730	1
<div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> KLASSE A CLASS </div> </div>			
Type	SPU 1708-09		
Inputs			
Number	17		
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz		
Attenuator adjustment range TERR, switchable to passive	20 dB		
Subscriber ports			
Number	8		
Switch commands	13/18 V, 0/22 kHz, DiSEqC 2.0		
Gain SAT	-10...-4 dB		
Gain TERR active	-0...-3 dB		
Gain TERR passive	-22...-28 dB		
Isolation	>26 dB		
Switching isolation	>26 dB		
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	94 dBμV		
Trunk outputs			
Rejection (SAT TERR)	>40 dB		
Connectors			
Connector type	F		
General			
Switching power supply	90...250 V~ 47...63 Hz 18 V=/2 A		
Power indicator	LED		
Power consumption without LNB supply (TERR passive active)	8.3 10.2 W		
Power consumption in Stand-by (TERR passive active)	2.2 4.0 W		
Equipotential bonding connection	4 mm ²		
Operating temperature range (acc. to EN 60065)	-20...+50°C		
Dimensions (W × H × D) appr.	407 (432)* x 170 x 85 mm		
Weight	1.680 kg		
IP code	IP20		
Comments	* incl. DC bridge		


Type	Part No.	Product description	GTIN	PU
 <p>KLASSE A CLASS</p>	SPU 1716-09 SPU171609	Active multiswitch 17 in 16 premium-line <ul style="list-style-type: none"> ✓ For up to 16 subscribers ✓ Active satellite and terrestrial path ✓ Terrestrial adjustable and switchable to passive ✓ Switching power supply unit (detachable up to 10 m) ✓ Suitable for Quad LNB ✓ Suitable for return path 	7611682001754	1
	SPU 1710-09 SPU171009	Cascade unit 17 in 10 premium-line <ul style="list-style-type: none"> ✓ For up to 10 subscribers ✓ Passive satellite and terrestrial path ✓ For cascadable 17 in x SAT systems ✓ Optimized for the use with SPU 1716-09 ✓ Suitable for return path 	7611682001747	1
	SPU 1718-19 SPU171819	Same as SPU 1710-09, but 17 in 18, for up to 18 subscribers, SAT active	7611682003451	1
Type	SPU 1716-09	SPU 1710-09	SPU 1718-19	
Inputs				
Number		17		
Frequency range		5...65 MHz 85...862 MHz 950...2200 MHz		
Attenuator adjustment range TERR, switchable to passive	20 dB	-	-	
Subscriber ports				
Number	16	10	18	
Switch commands		13/18 V, 0/22 kHz, DiSEqC 2.0		
Gain SAT	-9...-3 dB	-	-	
Gain TERR active	-8...-6 dB	-	-	
Gain TERR passive	-27...-35 dB	-	-	
Tap loss TERR	-	23 dB	25...31 dB	
Tap loss SAT	-	23...20 dB	-	
Tap loss SAT active	-	-	6...3 dB	
Isolation		>26 dB		
Switching isolation		>26 dB		
Max. output level SAT (3rd order SAT EN 50083-3 35dB KMA, 2 sender test method)	94 dB μ V	-	102 dB μ V	
Current consumption per port (without LNB supply)	25 mA	-	-	
Trunk outputs				
Number		17		
Gain TERR active	11...17 dB	-	-	
Gain TERR passive	-6...-9 dB	-	-	
Gain SAT	12 dB	-	-	
Max. output level TERR (3rd order EN 50083-3, 60 dB KMA)	103 dB μ V	-	-	
Max. output level trunk SAT (3rd order EN 50083-3, 35 dB KMA, 2 sender test method)	111 dB μ V	-	-	
Through loss TERR	-	5 dB	3...5 dB	
Through loss SAT	-	2...5 dB	3...7 dB	
Isolation		>26 dB		
Rejection (SAT TERR)		>40 dB		
Connectors				
Connector type		F		
General				
Switching power supply	90...250 V~ 47-63 Hz 18 V= /2 A	-	-	
Power indicator	LED	-	-	
Power consumption without LNB supply (TERR passive active)	8.3 10.2 W	-	-	
Power consumption in Stand-by (TERR passive active)	2.2 4.0 W	-	-	
Equipotential bonding connection		4 mm ²		
Operating temperature range (acc. to EN 60065)		-20...+50°C		
Dimensions (W x H x D) appr.	407 (432)* x 255 x 85 mm	407 x 170 x 40 mm	407 x 255 x 40 mm	
Weight	2.420 kg	1.420 kg	2.050 kg	
IP code		IP20		
Comments	* incl. DC bridge	-	-	

Type Part No.	Product description	GTIN	PU
 SVS 1717-09 SVS171709	Headamplifier 17 in 17 ✓ For use with SPU 17xx-09 systems ✓ 16 × SAT 950...2200 MHz Gain 21...27 dB ✓ 1 × TERR 5...862 MHz Gain 15 dB ✓ Built-in attenuators 0...15 dB ✓ Switching power supply unit (detachable up to 10 m) ✓ 17 termination resistors CFA 11-00 included	7611682003321	1
	<div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> KLASSE A CLASS </div> </div>		
Type SVS 1717-09			
Inputs			
Number	17		
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz		
Attenuator adjustment range	0...15 dB		
Gain TERR	15 dB		
Gain SAT	21...27 dB		
Gain return path (passive)	-2 dB		
Isolation SAT inputs SAT inputs	40 dB		
Isolation TERR SAT	40 dB		
Trunk outputs			
Number	17		
Max. output level TERR (3rd order EN 50083-3, 60 dB KMA)	109 dBμV		
Max. output level trunk SAT (3rd order EN 50083-3, 35 dB KMA, 2 sender test method)	114 dBμV		
Isolation TERR SAT	40 dB		
Isolation SAT SAT	40 dB		
Connectors			
Connector type	F		
General			
Switching power supply	90...250 V~ 47...63 Hz 18 V=/2 A		
Power consumption	22 W		
Equipotential bonding connection	4 mm ²		
Operating temperature range (acc. to EN 60065)	-20...+50°C		
Dimensions (W × H × D) appr.	407 (432)* × 145 × 85 mm		
Weight	1.600 kg		
IP code	IP20		
Comments	* incl. DC bridge		

Stackable multiswitch system mini

	SZU 521-00 SZU52100	Stackable multiswitch system Mini ✓ For compact mounting and safe connection of 2 × SPU 5518-09/-19 multi-switches and 1 × SVS 550-09 head amplifier (multi-switch and head amplifier not included in delivery) ✓ 1 × 2-times stacked, for distributing the signals of one satellite position to 36 subscribers ✓ Consisting of: ✓ 5 × SVE 2-09 input splitter ✓ 4 × SZU 89-09 mounting rail 2-way ✓ 4 × QEW 9-90 earthing bracket for subscriber outputs incl. CFA 17-99 ✓ 8 × M5 × 6 screw ✓ 5 × CFA 11-00 terminating resistor	7611682005035	1
	SZU 522-00 SZU52200	Same as 521-00, but 2 x 2-times stacked for 2 satellites, 72 subscribers	7611682005097	1
	SZU 531-00 SZU53100	Same as 521-00, but 1 x 3-times stacked, 2 satellites, 54 subscribers	7611682005066	1
	SZU 532-00 SZU53200	Same as 521-00, but 2 x 3-times stacked, 2 satellites, 108 subscribers	7611682005127	1
	Type		SZU 521-00 SZU 522-00 SZU 531-00 SZU 532-00	
SAT positions		1		
Subscriber ports				
Number	36	72	54	108

	Type Part No.	Product description	GTIN	PU
	SZU 921-00 SZU92100	Stackable multiswitch system Mini ✓ For compact mounting and safe connection of 2 × SPU 9918-09/-19 multi-switches and 1 × SVS 990-09 head amplifier (multi-switch and head amplifier not included in delivery) ✓ 1 x 2-times stacked, for distributing the signals of two satellite positions to 36 subscribers ✓ Consisting of: ✓ 9 × SVE 2-09 input splitter ✓ 4 × SZU 89-09 mounting rail 2-way ✓ 4 × QEW 9-90 earthing bracket for subscriber outputs incl. CFA 17-99 ✓ 8 × M5 × 6 screw ✓ 9 × CFA 11-00 terminating resistor	7611682005042	1
	SZU 922-00 SZU92200	Same as 921-00, but 2 x 2-times stacked for 2 satellites, 72 subscribers	7611682005103	1
	SZU 931-00 SZU93100	Same as 921-00, but 1 x 3-times stacked, 2 satellites, 54 subscribers	7611682005073	1
	SZU 932-00 SZU93200	Same as 921-00, but 2 x 3-times stacked, 2 satellites, 108 subscribers	7611682005134	1
Type	SZU 921-00	SZU 922-00	SZU 931-00	SZU 932-00
SAT positions	2			
Subscriber ports				
Number	36	72	54	108
	SZU 1721-00 SZU172100	Stackable multiswitch system Mini ✓ For compact mounting and safe connection of 2 × SPU 1718-19 multi-switches and 1 × SVS 1717-09 head amplifier (multi-switch and head amplifier not included in delivery) ✓ 1 x 2-times stacked, for distributing the signals of four satellite positions to 36 subscribers ✓ Consisting of: ✓ 17 × SVE 2-09 input splitter ✓ 4 × SZU 89-09 mounting rail 2-way ✓ 4 × QEW 9-90 earthing bracket for subscriber outputs incl. CFA 17-99 ✓ 8 × M5 × 6 screw ✓ 17 × CFA 11-00 terminating resistor	7611682005059	1
	SZU 1722-00 SZU172200	Same as 1721-00, but 2 x 2-times stacked for 2 satellites, 72 subscribers	7611682005110	1
	SZU 1731-00 SZU173100	Same as 1721-00, but 1 x 3-times stacked, 2 satellites, 54 subscribers	7611682005080	1
	SZU 1732-00 SZU173200	Same as 1721-00, but 2 x 3-times stacked, 2 satellites, 108 subscribers	7611682005141	1
Type	SZU 1721-00	SZU 1722-00	SZU 1731-00	SZU 1732-00
SAT positions	4			
Subscriber ports				
Number	36	72	54	108

Type Part No.	Product description	GTIN	PU
Single cable multiswitches 4 user bands			
 <p>SES 522-06 SES52206</p>	<p>SES 522-06 5 in 2 × 2 premium-line SES52206</p> <ul style="list-style-type: none"> ✓ 1 SAT position with quattro LNB ✓ 2 SAT positions with wideband LNBS ✓ With terrestrial feed-in ✓ Cascadable ✓ 2 outputs and 4 user bands ✓ Single cable I and II compatible (according to EN 50607 and EN 50494) ✓ Interference-free, no interference across flats when using programmable SSD 6-xx antenna wall outlets ✓ Receiver-fed if one Quattro LNB is used ✓ If more than one LNB is used, ext. power supply SZU 99-06 needed (not included in delivery) 	7611682006070	1
Type	SES 522-06		
Inputs			
Number	5		
Frequency range	5...862 MHz @ TERR 250...2350 MHz @ SAT		
LNB voltage	12 V		
Max. LNB current	500 mA per LNB 1000 mA total		
Level	60... 90 dBμV		
Isolation V H.	30 dB		
Subscriber ports			
Number	2		
Supported standards	EN 50494, EN 50607		
Tap loss TERR	17 dB		
Frequency range (SAT)	950...2150 MHz		
User bands	4		
User band frequencies	1331/1382/1433/1484 MHz		
Output level SAT (SCR/CSS)	91 dBμV ±2 dB		
Current consumption from STB (SCR/CSS)	180 mA		
Trunk outputs			
Number	5		
Through loss TERR	2 dB ±2.0 dB		
Through loss SAT	2 dB ±2.0 dB		
Connectors			
Connector type	F		
Return loss	≥ 10 dB		
General			
Equipotential bonding connection	4 mm ²		
Operating temperature range (acc. to EN 60065)	-20...70°C		
Dimensions (W × H × D) appr.	140 x 111 x 63 mm		
Weight	0.318 kg		

Type Part No.	Product description	GTIN	PU
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SES 984-06
SES98406

- Single cable multiswitch II (SCR) | 9 in 8 x 4 | premium-line**
- ✓ 2 SAT positions with quattro LNB
 - ✓ 4 SAT positions with wideband LNBs (EN 50607 only)
 - ✓ 2 out of 4 SAT positions with wideband LNBs (EN 50494)
 - ✓ With terrestrial feed-in
 - ✓ Cascadable
 - ✓ 8 outputs with 4 user bands each
 - ✓ Single cable I and II compatible (according to EN 50607 and EN 50494)
 - ✓ Interference-free, no interference across flats when using programmable SSD 6-xx antenna wall outlets
 - ✓ Alternatively up to 8 legacy outputs (not with wideband LNBs or SSD 6-xx)
 - ✓ Ext. power supply SZU 99-06 needed (not included in delivery)

7611682006100 1

Type	SES 984-06
Inputs	
Number	9
Frequency range	5...862 MHz @ TERR 250...2350 MHz @ SAT
LNB voltage	12 V
Max. LNB current	500 mA per LNB 1000 mA total
Level	60... 90 dB μ V
Isolation V H.	30 dB
Subscriber ports	
Number	8
Supported standards	EN 50494, EN 50607
Tap loss TERR	22 dB
Frequency range (SAT)	950...2150 MHz
User bands	8 x 4
User band frequencies	1331/1382/1433/1484 MHz
Output level SAT (SCR/CSS)	83/82 dB μ V*
Output level SAT (Legacy)	83/82 dB μ V*
Current consumption from STB (SCR/CSS)	180 mA
Current consumption from STB (Legacy)	60 mA
Trunk outputs	
Number	9
Through loss TERR	2 dB \pm 2.0 dB
Through loss SAT	5 dB \pm 2.0 dB
Connectors	
Connector type	F
Return loss	\geq 10 dB
General	
Equipotential bonding connection	4 mm ²
Operating temperature range (acc. to EN 60065)	-20...70°C
Dimensions (W x H x D) appr.	205 x 310 x 63 mm
Weight	1.05 kg
Comments	*AGC

Type Part No.	Product description	GTIN	PU																																																																																																																																											
Single cable multiswitches 16 user bands																																																																																																																																														
 <p>KLASSE A CLASS</p> <p>NEU 22</p>	SES 5216-06 SES521606	Single cable multiswitch II (SCR) 5 in 2 × 16 premium-line ✓ 1 SAT position with quattro LNB ✓ 2 SAT positions with wideband LNBS ✓ With terrestrial feed-in ✓ Cascadable ✓ 2 outputs and 16 user bands ✓ Single cable I and II compatible (customised user band configuration possible) ✓ No interference across flats when using programmable SSD 6-xx antenna wall outlets ✓ Alternatively up to 2 legacy outputs (not with wideband LNBS or SSD 6-00) ✓ Supply via external power supply unit SZU 99-06 (not included in delivery), for cascades up to 3 × SES 5216-06 usually only one power supply unit is needed	7611682007831 1																																																																																																																																											
	SES 5416-06 SES541606	Same as SES 5216-06, but 4 outputs	7611682007848 1																																																																																																																																											
	SES 5816-06 SES581606	Same as SES 5216-06, but 4 outputs	7611682008654 1																																																																																																																																											
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LNB current	-			Level	60... 90 dBµV			Isolation V H.	25 dB			Subscriber ports				Number	2	4	8	Supported standards	EN 50494, EN 50607			Tap loss TERR	15 dB ±2 dB	21 dB ±2 dB	25 dB ±2 dB	Frequency range (SAT)	950...2150 MHz			User bands	2 × 16	4 × 16	8 × 16	User band frequencies	975/1025/1075/1125/1175/1225/1275/1325 MHz @ EN 50494/50607* 1375/1425/1475/1525/1575/1625/1675/1725 MHz @ EN 50607*			Output level SAT (SCR/CSS)	98 dBµV ±2 dB**	94 dBµV ±2 dB**	94 dBµV ±3 dB**	Output level SAT (Legacy)	85 dBµV ±2 dB	82 dBµV ±2 dB	78 dBµV ±4 dB	Current consumption from STB (SCR/CSS)	180 mA			Current consumption from STB (Legacy)	60 mA			Trunk outputs				Number	5			Through loss TERR	2 dB ±1.0 dB	< 2 dB	< 2 dB	Through loss SAT	2 dB ±2.0 dB			Connectors				Connector type	F			Return loss	≥ 10 dB	10 dB	10 dB	General				Operating voltage	18 VDC			Current consumption	max. 250 mA	500 mA	900 mA	Connector DC	F-female			Maximum supply current	1 A***	-	-	Equipotential bonding connection	4 mm ²			Operating temperature range (acc. to EN 60065)	-20 ... 50 °C	-20 ... 45 °C	-20 ... 40 °C	Dimensions (W × H × D) appr.	140 x 100 x 40 mm	140 x 140 x 40 mm	250 x 142 x 60 mm	Comments	* Customised user band configuration possible. ** Automatic Gain Control (AGC) *** The LNBS, the SES 5216-06 and any connected cascade units are supplied via the DC input.	* Customised user band configuration possible. ** Automatic Gain Control (AGC) *** The LNBS, the SES 5216-06 and any connected cascade units are supplied via the DC input.
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Comments	* Customised user band configuration possible. ** Automatic Gain Control (AGC) *** The LNBS, the SES 5216-06 and any connected cascade units are supplied via the DC input.	* Customised user band configuration possible. ** Automatic Gain Control (AGC) *** The LNBS, the SES 5216-06 and any connected cascade units are supplied via the DC input.	* Customised user band configuration possible. ** Automatic Gain Control (AGC) *** The LNBS, the SES 5216-06 and any connected cascade units are supplied via the DC input.																																																																																																																																											


Type Part No. Product description GTIN PU

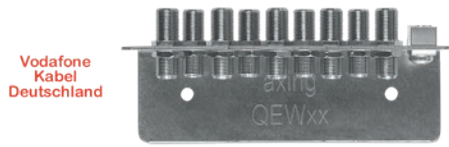
DiSEqC switches






SPU 21-01 SPU02101	DiSEqC switch indoor ✓ 2 in 1 ✓ Cascadable ✓ With sliding switch to determine between "Option", Tone Burst / "Position" and 22 kHz / "Band"	7611682130218	1
SPU 21-02 SPU02102	DiSEqC switch outdoor ✓ 2 in 1 ✓ DC power pass ✓ Outdoor types in weather-proof housing (easy to mount with cable binders)	7611682131215	1
SPU 41-02 SPU04102	DiSEqC switch outdoor ✓ 4 in 1 ✓ DC power pass ✓ Outdoor types in weather-proof housing (easy to mount with cable binders)	7611682131413	1

Type	SPU 21-01	SPU 21-02	SPU 41-02
Inputs			
Number	2	2	4
Frequency range	5...65 MHz 85...862 MHz 950...2200 MHz	950...2200 MHz	950...2200 MHz
Isolation SAT inputs SAT inputs	≥ 25 dB	≥ 20 dB	≥ 30 dB
Subscriber ports			
Number		1	
Switch commands	Band (22kHz) Position (Tone Burst) Option	Position	Position Option
Supported DiSEqC level		1.0 2.0	
Tap loss SAT	≤ 2 dB	typ. 4 dB	typ. 4 dB
Connectors			
Connector type		F	
General			
Operating temperature range (acc. to EN 60065)		-20...+50°C	
Dimensions (W × H × D) appr.	110 × 80 × 35 mm	70 × 120 × 30 mm	110 × 120 × 30 mm
Weight	0.142 kg	0.100 kg	0.150 kg

	Type Part No.	Product description	GTIN	PU
	SPU 81-00 SPU08100	DiSEqC switch outdoor ✓ 8 in 1 ✓ DC power pass ✓ Outdoor types in weather-proof housing (easy to mount with cable binders) ✓ Suitable to control a DiSEqC motor	7611682000597	1
	SPU 81-02 SPU08102	DiSEqC switch outdoor ✓ 2 × 8 in 1 ✓ DC power pass ✓ Outdoor types in weather-proof housing (easy to mount with cable binders) ✓ Suitable to control a DiSEqC motor	7611682000603	1
Type	SPU 81-00		SPU 81-02	
Inputs				
Number	8		2 × 8	
Frequency range	950...2200 MHz			
Isolation SAT inputs SAT inputs	≥ 30 dB			
Subscriber ports				
Number	1		2	
Switch commands	Position + Option + Uncommitted_1 DiSEqC 1.2 "drive to position x" (6Bh)			
Supported DiSEqC level	1.1 2.1 1.2 2.2			
Tap loss SAT	typ. 2.5 dB			
Connectors				
Connector type	F			
General				
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Dimensions (W × H × D) appr.	150 × 110 × 30		155 × 110 × 50	
Weight	0.256 kg		0.454 kg	

Type	Part No.	Product description	GTIN	PU					
Earthing and equipotential bonding									
Earthing angles Vodafone Kabel Deutschland									
	QEW 5-50 QEW00550	Earthing angle Vodafone Kabel Deutschland approved ✓ 5-way, two-rowed ✓ Earthing and Equipotential bonding acc. to EN 60728-11 ✓ For CATV cabinets ✓ With premium-line double F-sockets CFA 26-02 ✓ Screening factor >105 dB	7611682006421	1					
	QEW 6-50 QEW00650	Same as QEW 5-50, but 6-way	7611682006438	1					
	QEW 7-50 QEW00750	Same as QEW 5-50, but 7-way	7611682006445	1					
	QEW 8-50 QEW00850	Same as QEW 5-50, but 8-way	7611682006469	1					
	QEW 9-50 QEW00950	Same as QEW 5-50, but 9-way	7611682006452	1					
	QEW 11-50 QEW01150	Same as QEW 5-50, but 11-way	7611682006476	1					
	QEW 13-50 QEW01350	Same as QEW 5-50, but 13-way	7611682006483	1					
	QEW 17-50 QEW01750	Same as QEW 5-50, but 17-way	7611682006490	1					
	QEW 25-50 QEW02550	Same as QEW 5-50, but 25-way	7611682006506	1					
	Type	QEW 5-50	QEW 6-50	QEW 7-50	QEW 8-50	QEW 9-50	QEW 11-50	QEW 13-50	QEW 17-50
Application	CATV								
Screening factor acc. to EN 50083-2	> 105 dB								
Frequency range	5...2200 MHz								
Through loss	< 0.1 dB								
Connectors									
Connector type	F								
Number	5	6	7	8	9	11	13	17	25
Return loss	>28 dB								
General									
Material	surface treated								
Dimensions (W × H × D) appr.	72 × 50 × 55 mm	82 × 50 × 55 mm	92 × 50 × 55 mm	102 × 50 × 55 mm	125 × 50 × 55 mm	137 × 50 × 55 mm	159 × 50 × 55 mm	202 × 50 × 55 mm	217 × 70 × 55 mm
Weight	0.114 kg	0.132 kg	0.148 kg	0.166 kg	0.194 kg	0.228 kg	0.264 kg	0.332 kg	0.458 kg



	Type Part No.	Product description						GTIN	PU
Earthing angles single-rowed									
	QEW 3-12 QEW00312	Earthing angle single-rowed quickfix ✓ 3-way ✓ Earthing and equipotential bonding acc. to EN 60728-11 ✓ For AXING multiswitches SPU xxx-09 at subscriber outputs ✓ With premium-line double F-sockets CFA 26-02 and quickfix adapter CFA 4-01						7611682004434	1
	QEW 4-12 QEW00412	Same as QEW 3-12, but 4-way						7611682004441	1
	QEW 5-12 QEW00512	Same as QEW 3-12, but 5-way						4026423990793	1
	QEW 6-12 QEW00612	Same as QEW 3-12, but 6-way						7611682004458	1
	QEW 9-12 QEW00912	Same as QEW 3-12, but 9-way						4026423990816	1
	QEW 9-22 QEW00922	Same as QEW 3-12, but 9-way for SPU 9x-05						4026423990946	1
	QEW 17-12 QEW01712	Same as QEW 3-12, but 17-way for SPU 17xx-09						4026423990847	1
	Type	QEW 3-12	QEW 4-12	QEW 5-12	QEW 6-12	QEW 9-12	QEW 9-22	QEW 17-12	
Application	SPU xxx-09	SPU xxx-09	SPU xxx-09	SPU xxx-09	SPU xxx-09	SPU 9xx-05	SPU 17xx-09		
Screening factor acc. to EN 50083-2	> 90 dB								
Frequency range	5...2500 MHz								
Connectors									
Connector type	F								
Number	3	4	5	6	9	9	17		
Return loss	20 dB -1.5dB/Okt.								
General									
Material	surface treated								
Weight	0.174 kg	0.230 kg	0.218 kg	0.295 kg	0.348 kg	0.348 kg	0.650 kg		
	QEW 4-06 QEW00406	Earthing angle single-rowed ✓ 4-way ✓ Earthing and equipotential bonding acc. to EN 60728-11 ✓ For AXING multiswitches SPU xx8-06, SES 544-06 and SES 984-06 at subscriber outputs (patch cable SAK 21/41-02 required) ✓ With premium-line double F-sockets CFA 26-02						7611682006735	1
	QEW 6-06 QEW00606	Same as QEW 4-06, but 6-way						7611682006742	1
	QEW 8-06 QEW00806	Same as QEW 4-06, but 8-way						7611682006759	1
	QEW 12-06 QEW01206	Same as QEW 4-06, but 12-way						7611682006766	1
	QEW 16-06 QEW01606	Same as QEW 4-06, but 16-way						7611682006773	1
Type	QEW 4-06	QEW 6-06	QEW 8-06	QEW 12-06	QEW 16-06				
Application	SPU xx8-06 / SES 544-06 / SES 984-06	SPU xx12-06	SPU x16-06	SPU xx24-06	SPU x32-06				
Screening factor acc. to EN 50083-2	> 90 dB								
Connectors									
Connector type	F								
Number	4	6	8	12	16				
Return loss	20 dB -1.5dB/Okt.								
General									
Material	surface treated								
Weight	0.156 kg	0.214 kg	0.268 kg	0.38 kg	0.486 kg				




Type	Part No.	Product description	GTIN	PU	
Earthing angles single-rowed surge protection					
	QEW 4-20 QEW00420	Earthing angle single-rowed surge protection ✓ 4-way ✓ Earthing and equipotential bonding acc. to EN 60728-11 ✓ For AXING multiswitches SPU 5xx-05 at input ✓ Incl. surge protection devices SZU 6-02 ✓ With premium-line double F-sockets CFA 26-02 and quickfix adapter CFA 4-01	4026423990960	1	
	QEW 5-10 QEW00510	Same as QEW 4-20, but 5-way for SPU 5xx-09	4026423971778	1	
	QEW 9-10 QEW00910	Same as QEW 4-20, but 9-way for SPU 9x-09	4026423971785	1	
	QEW 9-20 QEW00920	Same as QEW 4-20, but 9-way for SPU 9x-05	4026423990922	1	
	QEW 17-10 QEW01710	Same as QEW 4-20, but 17-way for SPU 17xx-09	4026423990762	1	
	Type	QEW 4-20	QEW 5-10	QEW 9-10	QEW 9-20
Application	SPU xxx-05	SPU 5xx-09 / SVS 5x-09	SPU 9xx-09 / SVS 9xx-09	SPU 9xx-05	SPU 17xx-09 / SVS 17x-09
Screening factor acc. to EN 50083-2					> 90 dB
Frequency range					5...2500 MHz
Through loss					≤ 0.5 dB
DC power pass					yes
Max. through current					0.5 A @ 30 VDC
Impulse discharge current					5 kA @ 8/20 µs
Connectors					
Connector type					F
Number	4	5	9	9	17
Return loss					20 dB -1.5dB/Okt.
General					
Material					surface treated
Dimensions (W × H × D) appr.	-	141 × 40 × 85 mm	232 × 40 × 85 mm	-	1710 × 40 × 85 mm
Weight	0.226 kg	0.314 kg	0.568 kg	0.564 kg	0.915 kg


Type Part No.	Product description	GTIN	PU
QEW 5-06 QEW00506	Earthing angle single-rowed surge protection ✓ 5-way ✓ Earthing and equipotential bonding acc. to EN 60728-11 ✓ For AXING multiswitches SPU/SES 5xx-06 at input ✓ Incl. surge protection devices SZU 6-02 ✓ With premium-line double F-sockets CFA 26-02 and quickfix adapter CFA 4-01	7611682006674	1
QEW 9-06 QEW00906	Same as QEW 5-06, but 9-way, two-rowed	7611682006681	1
QEW 13-06 QEW01306	Same as QEW 5-06, but 13-way, two-rowed	7611682006698	1
QEW 17-06 QEW01706	Same as QEW 5-06, but 17-way, two-rowed	7611682006704	1
QEW 513-06 QEW51306	Earthing angle single-rowed surge protection ✓ 5-way ✓ Earthing and equipotential bonding acc. to EN 60728-11 ✓ For AXING headamplifiers SVS 550-06 and SVS 1313-06 (for SVS 1313-06 an additional QEW 917-06 is required) ✓ Incl. surge protection devices SZU 6-02 ✓ With premium-line double F-sockets CFA 26-02 and quickfix adapter CFA 4-01	7611682006711	1



Type	QEW 5-06	QEW 9-06	QEW 13-06	QEW 17-06	QEW 513-06
Application	SPU 5xx-06 / SES 5xx-06	SPU 9xx-06 / SES 9xx-06	SPU 13xx-06	SPU 17xx-06	SVS 550-06 / SVS 1313-06
Screening factor acc. to EN 50083-2	> 90 dB				
Frequency range	5...2500 MHz				
Through loss	≤ 0.5 dB				
DC power pass	yes				
Max. through current	0.5 A @ 30 VDC				
Impulse discharge current	5 KA @ 8/20 μs				
Connectors					
Connector type	F				
Number	5	9	13	17	5
Return loss	20 dB -1.5dB/Okt.				
General					
Material	surface treated				
Weight	0.352 kg	0.494 kg	0.752 kg	0.904 kg	0.3 kg

	Type Part No.	Product description	GTIN	PU
Surge protection				
 	SZU 6-01 SZU00601	Surge protection device IEC-male IEC-female ✓ For terrestrial, CATV and satellite TV networks ✓ Complies with EN 61643-21	7611682160611	1
	SZU 6-02 SZU00602	Same as SZU 6-01, but F-male F-female	7611682160628	1
Type	SZU 6-01		SZU 6-02	
Screening factor acc. to EN 50083-2	Class A			
Frequency range	5...2400 MHz			
Through loss	0.8 dB @ 5...1000 MHz 1.2 dB @ 1000...2400 MHz			
Max. through current	0.5 A @ 30 VDC			
DC breakdown voltage	230 ± 42 V @ 100 V/s			
Impulse spark-over voltage	≤ 800 V @ 1 kV/μs			
Alternating discharge current	5 A @ 50Hz/1s			
Impulse discharge current	5 kA @ 8/20 μs			
Impedance	75 Ω			
Connectors				
Connector type	IEC-male (input) IEC-female (output)		F-male (input) F-female (output)	
Return loss	12 dB		20 dB -1.5dB/Okt.	
General				
Dimensions (W × H)	Ø 13 x 58 mm		Ø 14 x 46 mm	
Weight	0.019 kg			

Earth connection blocks				
	CFA 7-00 CFA00700	Earth connection block single F F wall mounting ✓ 1 × female to female	7611682280074	100
	CFA 9-00 CFA00900	Earth connection block double F F wall mounting ✓ 2 × female to female	7611682280098	100
Type	CFA 7-00		CFA 9-00	
Connectors				
Connector type	F-female			
General				
Equipotential bonding connection	4 mm ²			
Weight	0.023 kg		0.040 kg	
 	CFA 7-01 CFA00701	✓ Earth connection block single F F wall mounting 1 × female to female ✓ High return loss	7611682280715	100
	CFA 9-01 CFA00901	Same as CFA 9-00, but high return loss	7611682280913	100
Type	CFA 7-01		CFA 9-01	
Connectors				
Connector type	F-female			
Return loss	>30 dB			
General				
Equipotential bonding connection	4 mm ²			
Weight	0.313 kg		0.046 kg	

Type Part No.	Product description	GTIN	PU
CHP – Compact High Performance Headends			
DVB headends			
 KLASSE A CLASS	MK 16-00 MK01600	DVB headend 16 × DVB-S/S2/S2x/T/T2/C into 16 × DVB-C/T ✓ 16 independent multituner inputs ✓ Transmodulates 16 × DVB-S/S2/S2x/T/T2/C into 16 × DVB-C or DVB-T ✓ Output modulation configurable ✓ Remux Crossmultiplex ✓ NIT editing option (software extension required) ✓ PID Filtering (software extension required) ✓ Interface for CASimulcrypt Server (software extension required) ✓ Class A according to EN 50083-2 ✓ Web-based configuration, remote maintenance (SMARTPortal) ✓ Supports SNMPv1 and SNMPv2c ✓ Can be used for wall mounting or as a 19" unit	7611682005974 1
	MK 16-06 MK01606	Same as MK 16-00, but additionally decryption of encrypted programs via six CA modules possible	7611682005981 1
Type	MK 16-00	MK 16-06	
Inputs			
Number of tuners	16 × DVB-S/S2/S2X/T/T2/C		
Connector	16 × F-female		
Frequency range	900...2150 MHz @ DVB-S/S2/S2X 50...898 MHz @ DVB-C 50...898 MHz @ DVB-T/T2		
Channel bandwidth	5/6/7/8 MHz @ DVB-T/T2		
Input level	43...84 dBμV @ DVB-S/S2/S2X 49...84 dBμV @ DVB-C 39...84 dBμV @ DVB-T/T2		
LNB voltage	13/17 V; 22 kHz on/off; DiSEqC 1.0		
Max. LNB current	250 mA per input 1000 mA per device		
CI slots	-		6
Input modulation			
Type	QPSK/8PSK/8APSK/16APSK/32APSK @ DVB-S/S2/S2X QAM16, QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T QPSK, QAM16, QAM64, QAM256 @ DVB-T2		
Compliance	DVB-S = EN 300 421 DVB-S2 = EN 302 307-1V1.4.1 DVB-S2X = EN 302 307-2V1.1.1 DVB-C = EN 300 429/ITU-TJ.83 Annex A/C DVB-T = EN 300 744 DVB-T2 = ETSI EN 302 755		
Supported input transport streams	MPEG-2 ISO/IEC 13818 MPEG-4 ISO/IEC 14496		
Error correction	auto		
Symbol rate	1.5 ... 45 MS/s (<40MSymbol/s in 32APSK) @ DVB-S 1 ... 7.2 Mbaud @ DVB-C		
Transportstreams			
Modifiable program information	Program name, SID remapping, PID remapping, PID filtering* TSID, ONID		
LCN	Yes		
NIT handling @ DVB-C	auto off manual*		
Encryption	DVB-CSA*, DVB-CISSA*, ATIS-IDSA*, AES-ECB*, AES-CBC*		
Output			
Number of channels	16 × DVB-C/DVB-T		
Frequency range	109...1006 MHz @ DVB-C 109...862 MHz @ DVB-T		
Channels selectable	S2...K87 @ DVB-C S2...K69 @ DVB-T		
Channel bandwidth	7/8 MHz @ DVB-T		
Possible frequency shift	-4 ... +4 MHz (0,5 MHz steps)		
Connector	1 × F-female		
Test port	1 × F-female (-30 dB)		
Impedance	75 Ω		
Output level adjustable	80...100 dBμV @ DVB-C 77...98 dBμV @ DVB-T		
Output modulation			

Type Part No.	Product description	GTIN	PU
Compliance	DVB-T (EN 300 744) DVB-C (EN 300 429/ITU-TJ.83 AnnexA/C)		
Type	QAM16, QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T		
MER	≥ 40 dB @ DVB-C ≥ 36 dB @ DVB-T		
Bit rate, max	50.87 Mbps @ DVB-C 31.668 Mbps @ DVB-T		
FFT	2K mode @ DVB-T		
FEC	1/2, 2/3, 3/4, 5/6, 7/8 @ DVB-T		
Guard interval	1/4, 1/8, 1/16, 1/32		
Symbol rate	1 ... 7.5 MBaud/s		
Interfaces			
Control/CAS	1 × RJ-45		
Compliance Control/CAS	IEEE 802.3, 100 Base-T		
Supported configuration protocols	HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**		
General			
Operating voltage	100...240 VAC/50...60 Hz		
Power consumption	60 W		
Equipotential bonding connection	4 mm ²		
Operating temperature range (acc. to EN 60065)	-10°C...+50°C		
Dimensions (W × H × D) appr.	480 × 253 × 47 mm		
Weight	2.900 kg		3.150 kg
Comments	* with software extension only ** encrypted, cloud-based application for configuration, monitoring and remote maintenance		

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Type Part No.	Product description	GTIN	PU
MK 8-00N MK00800N	DVB headend ✓ 8 independent tuner inputs ✓ Transmodulates 8 × DVB-S/S2/S2X into 8 × DVB-C or DVB-T ✓ Output modulation configurable ✓ Remux Crossmultiplex ✓ NIT editing option (software extension required) ✓ PID Filtering (software extension required) ✓ Interface for CASimulcrypt Server (software extension required) ✓ Class A according to EN 50083-2 ✓ Web-based configuration, remote maintenance (SMARTPortal) ✓ Supports SNMPv1 and SNMPv2c ✓ Can be used for wall mounting or as a 19" unit	7611682008463	1
MK 8-03N MK00803N	Same as MK 8-00N, but additionally decryption of encrypted programs via three CA modules possible	7611682008470	1
MK 12-00N MK01200N	Same as MK 8-00N, but 12 independent inputs	7611682008487	1
MK 12-03N MK01203N	Same as MK 12-00N, but additionally decryption of encrypted programs via three CA modules possible	7611682008494	1





Type	MK 8-00N	MK 8-03N	MK 12-00N	MK 12-03N
Inputs				
Number of tuners	8 × DVB-S/S2/S2X	8 × DVB-S/S2/S2X	12 × DVB-S/S2/S2X	12 × DVB-S/S2/S2X
Connector	8 × F-female	8 × F-female	12 × F-female	12 × F-female
Frequency range	900 ... 2150 MHz @ DVB-S/S2/S2X			
Input level	43 ... 84 dBµV @ DVB-S/S2/S2X			
LNB voltage	13/17 V; 22 kHz on/off; DiSEqC 1.0			
Max. LNB current	250 mA per input 1000 mA per device			
CI slots	-	3	-	3
Input modulation				
Type	QPSK/8PSK/8APSK/16APSK/32APSK @ DVB-S/S2/S2X			
Compliance	DVB-S = EN 300 421 DVB-S2 = EN 302 307-1 v1.4.1 DVB-S2X = EN 302 307-2 v1.1.1			
Supported input transport streams	MPEG-2 ISO/IEC 13818 MPEG-4 ISO/IEC 14496			
Error correction	auto			
Symbol rate	1.5 ... 45 MS/s (< 40 MSymbol/s in 32-APSK)			
Transportstreams				
Modifiable program information	Program name, SID remapping, PID remapping, PID filtering* TSID, ONID			
LCN	Yes			
NIT handling @ DVB-C	auto off manual*			
Encryption	DVB-CSA*, DVB-CISSA*, ATIS-IDSA*, AES-ECB*, AES-CBC*			
Output				
Number of channels	8 × DVB-C/DVB-T	8 × DVB-C/DVB-T	12 × DVB-C/DVB-T	12 × DVB-C/DVB-T
Frequency range	109 ... 1006 MHz @ DVB-C 109 ... 862 MHz @ DVB-T			
Channels selectable	S2...K87 @ DVB-C S2...K69 @ DVB-T			
Channel bandwidth	7/8 MHz @ DVB-T			
Possible frequency shift	-4 ... +4 MHz (0,5 MHz steps)			
Connector	1 × F-female			
Impedance	75 Ω			
Output level adjustable	70 ... 90 dBµV @ DVB-C/DVB-T			
Output modulation				
Compliance	DVB-T (EN 300 744) DVB-C (EN 300 429/ITU-TJ.83 Annex A/C)			
Type	QAM16, QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T			
MER	≥ 40 dB @ DVB-C ≥ 36 dB @ DVB-T			
Bit rate, max	50.87 Mbps @ DVB-C 31.668 Mbps @ DVB-T			
FFT	8K mode @ DVB-T	8K mode @ DVB-T	2K mode @ DVB-T	2K mode @ DVB-T
FEC	1/2, 2/3, 3/4, 5/6, 7/8 @ DVB-T			
Guard interval	1/4, 1/8, 1/16, 1/32 @ DVB-T			
Symbol rate	1 ... 7.5 MBaud/s			
Interfaces				

Type	Part No.	Product description	GTIN	PU
Control/CAS		1 × RJ-45		
Compliance Control/CAS		IEEE 802.3, 100 Base-T		
Supported configuration protocols		HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**		
General				
Operating voltage		100 ... 240 VAC/50 ... 60 Hz		
Power consumption	50 W	50 W	55 W	60 W
Equipotential bonding connection		4 mm ²		
Operating temperature range (acc. to EN 60065)		-10°C...+50°C		
Dimensions (W × H × D) appr.		436 × 253 × 47 mm		
Weight	2.350 kg	2.600 kg	2.750 kg	3.000 kg
Comments		* with software extension only ** encrypted, cloud-based application for configuration, monitoring and remote maintenance		


Type	Part No.	Product description	GTIN	PU
DVB-T2 headends				
  	MK 8-20 MK00820	DVB headend ✓ 8 independent multituner inputs ✓ Transmodulates 8 × DVB-S/S2/S2X/T/T2/C into 8 × DVB-T2 ✓ Output modulation configurable ✓ Remux Crossmultiplex ✓ PID Filtering (software extension required) ✓ Interface for CASimulcrypt Server (software extension required) ✓ Class A according to EN 50083-2 ✓ Web-based configuration, remote maintenance (SMARTPortal) ✓ Supports SNMPv1 and SNMPv2c ✓ Can be used for wall mounting or as a 19" unit	7611682008500	1
	MK 8-26 MK00826	Same as MK 8-20, but additionally decryption of encrypted programs via six CA modules possible	7611682008517	1
Type		MK 8-20		MK 8-26
Inputs				
Number of tuners		8 × DVB-S/S2/S2X/T/T2/C		
Connector		8 × F-female		
Frequency range		900...2150 MHz @ DVB-S/S2/S2X 50...898 MHz @ DVB-C 50...898 MHz @ DVB-T/T2		
Channel bandwidth		6/7/8 MHz @ DVB-T/T2		
Input level		43...84 dBμV @ DVB-S/S2/S2X 49...84 dBμV @ DVB-C 39...84 dBμV @ DVB-T/T2		
LNB voltage		13/17 V; 22 kHz on/off; DiSEqC 1.0		
Max. LNB current		250 mA per input 1000 mA per device		
CI slots		-		6
Input modulation				
Type		QPSK/8PSK/8APSK/16APSK/32APSK @ DVB-S/S2/S2X QAM16, QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T QPSK, QAM16, QAM64, QAM256 @ DVB-T2		
Compliance		DVB-S = EN 300 421 DVB-S2 = EN 302 307-1V1.4.1 DVB-S2X = EN 302 307-2V1.1.1 DVB-C = EN 300 429/ITU-TJ.83 Annex A/C DVB-T = EN 300 744 DVB-T2 = ETSI EN 302 755		
Supported input transport streams		MPEG-2 ISO/IEC 13818 MPEG-4 ISO/IEC 14496		
Error correction		auto		
Symbol rate		1.5 ... 45 MS/s (<40MSymbol/s in 32APSK) @ DVB-S 1 ... 7.2 Mbaud @ DVB-C		
Transportstreams				
Modifiable program information		Program name, SID remapping, PID remapping, PID filtering* TSID, ONID		
Encryption		DVB-CSA*, DVB-CISSA*, ATIS-IDSA*, AES-ECB*, AES-CBC*		
Output				
Number of channels		8 × DVB-T2		
Frequency range		109 ... 862 MHz		
Channels selectable		S2...K69 @ DVB-T2		
Channel bandwidth		7/8 MHz		7/8 MHz
Possible frequency shift		-4 ... +4 MHz (0,5 MHz steps)		
Connector		1 × F-female		
Test port		-		
Impedance		75 Ω		
Output level adjustable		78 ... 98 dBμV @ DVB-T2		
Output modulation				
Compliance		DVB-T2 (EN 302 755, mode A (single PLP)) EN 50083-9 ETSI TS 101 154 ETSI EN300 429 ETSI EN 300 744		
Type		QPSK, QAM16, QAM64, QAM256		
MER		≥ 43 dB		
Bit rate, max		47.7 Mbps		
FFT		1K, 2K, 4K, 8K, 8Kext, 16K, 16Kext mode @ 8 ch. 32K, 32Kext mode @ 4 ch. only		
FEC		1/2, 3/5, 2/3, 3/4, 4/5, 5/6		

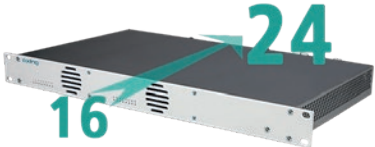

Type Part No.	Product description	GTIN	PU
Guard interval	1/128, 1/32, 1/16, 19/256, 1/8, 19/128, 1/4		
Interfaces			
Control/CAS	1 × RJ-45		
Compliance Control/CAS	IEEE 802.3, 100 Base-T		
Supported configuration protocols	HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**		
General			
Operating voltage	100 ... 240 VAC/50 ... 60 Hz		
Power consumption	50 W		
Equipotential bonding connection	4 mm ²		
Operating temperature range (acc. to EN 60065)	-10°C...+50°C		
Dimensions (W × H × D) appr.	480 × 253 × 47 mm		
Weight	2.550 kg	2.650 kg	
Comments	* with software extension only ** encrypted, cloud-based application for configuration, monitoring and remote maintenance		


Front panels




	MKZ 1-00 MKZ00100	Front panel for 19" usage ✓ For conversion of MK 8-20/MK 16-00 from wall-mount to 19" chassis	7611682005998	1
	MKZ 1-01 MKZ00101	Front panel for 19" usage 6 × CI ✓ For conversion of MK 8-26/MK 16-06 from wall-mount to 19" chassis ✓ With cut-outs for CI slots	7611682006001	1
	MKZ 1-02 MKZ00102	Front panel for 19" usage ✓ For conversion of MK 8-00N/MK 12-00N from wall-mount to 19" chassis	7611682008524	1
	MKZ 1-03 MKZ00103	Front panel for 19" usage 3 × CI ✓ For conversion of MK 8-03N/MK 12-03N from wall-mount to 19" chassis ✓ With cut-outs for CI slots	7611682008531	1
Type	MKZ 1-00	MKZ 1-01	MKZ 1-02	MKZ 1-03
General				
Dimensions (W × H × D) appr.	482 × 44 × 3 mm			
Weight	0.158 kg			


	Type Part No.	Product description	GTIN	PU
Software extensions				
	MKS 1-00 MKS00100	Software extension to edit a NIT ✓ For MK headends ✓ Reading, editing and uploading the Network Information Table ✓ Activation by means of a license file (specify serial number of the headend when purchasing) ✓ If necessary, assistance from our technical support	–	1
	MKS 1-01 MKS00101	Software extension for PID filtering ✓ For MK and MIP headends ✓ For filtering out individual elementary streams from the transport stream ✓ Reassignment of the Service ID ✓ Activation by means of a license file (specify serial number of the headend when purchasing) ✓ If necessary, assistance from our technical support	–	1
	MKS 1-02 MKS00102	Software extension for CASimulcrypt ✓ For MK, MIE and MIP headends ✓ Offers the possibility to encrypt programmes ✓ Requires the installation and configuration of a CAS server ✓ Activation by means of a license file (specify serial number of the headend when purchasing)	–	1
	MKS 8-16 MKS00816	Software extension from 8 to 16 output modulators ✓ For MK 8-00 and MK 8-06 ✓ Distribution of programs from 8 input channels to 16 output channels in cross-multiplex mode ✓ Ideal for transmodulation into DVB-T ✓ Activation by means of a license file (specify serial number of the headend when purchasing) ✓ If necessary, assistance from our technical support	–	1
 	MKS 12-16 MKS01216	Software extension from 12 to 16 output modulators ✓ For MK 12-00N and MK 12-03N ✓ Distribution of programs from 12 input channels to 16 output channels in cross-multiplex mode ✓ Ideal for transmodulation into DVB-T ✓ Activation by means of a license file (specify serial number of the headend when purchasing) ✓ If necessary, assistance from our technical support	–	1

Type	Part No.	Product description	GTIN	PU
FM/DAB+/UIM				
	SKF 82-00 SKF08200	Multituner FM octo 19 unit AAC-LC + RDS <ul style="list-style-type: none"> ✓ Eight independent multituner inputs ✓ Transmodulates 4 × DVB-S/S2/S2x/T/T2/C into 16 FM radio output signals (expandable to 24 FM output signals with SKS 1-24 (must be installed ex works)) ✓ Supports AAC-LC and DVB-SI to RDS ✓ Web-based configuration Remote maintenance ✓ 19", 1RU, build-in power supply 	7611682008234	1
Type	SKF 82-00			
Inputs				
Number of tuners	8 × DVB-S/S2/S2x/T/T2/C			
Connector	8 × F-female			
Frequency range	900...2150 MHz @ DVB-S/S2/S2X 50...898 MHz @ DVB-C 50...898 MHz @ DVB-T/T2			
Channel bandwidth	5/6/7/8 MHz @ DVB-T/T2			
Input level	43...84 dBμV @ DVB-S/S2/S2X 49...84 dBμV @ DVB-C 39...84 dBμV @ DVB-T/T2			
LNB voltage	13/17 V; 22 kHz on/off; DiSEqC 1.0			
Max. LNB current	250 mA per input 1000 mA per device			
Input modulation				
Type	QPSK/8PSK/ 8APSK/16APSK/32APSK @ DVB-S/S2/S2X QAM16, QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T QPSK, QAM16, QAM64, QAM256 @ DVB-T2			
Compliance	DVB-S = EN 300 421 DVB-S2 = EN 302 307-1V1.4.1 DVB-S2X = EN 302 307-2V1.1.1 DVB-C = EN 300 429/ITU-TJ.83 Annex A/C DVB-T = EN 300 744 DVB-T2 = ETSI EN 302 755			
Supported input transport streams	MPEG-4 ISO/IEC 14496-3 AAC-Profile Level 2 (AAC-LC)			
Error correction	auto			
Symbol rate	1.5...45 MS/s (<40MSymbol/s in 32APSK) @ DVB-S/S2/S2X 1...7.2 Mbaud @ DVB-C			
Output				
Number of channels	16* × FM-Stereo			
Frequency range	87.5...108 MHz			
Connector	1 × F-female			
Impedance	75 Ω			
Output level adjustable	65...85 dBμV			
Output modulation				
Type	FM			
Data service	RDS (service name converted from DVB-SI data)			
Interfaces				
Configuration interface	1 × RJ-45			
Compliance configuration interface	IEEE 802.3, 100 Base-T			
General				
Operating voltage	100...240 VAC/50...60 Hz			
Power consumption	50 W			
Operating temperature range (acc. to EN 60065)	-10 °C ... +50 °C			
Dimensions (W × H × D) appr.	480 × 253 × 47 mm			
Weight	4.50 kg			
Comments	*24 × FM stereo with software extension SKS 1-24 (must be ordered with the purchase of the unit and cannot be subsequently extended by the customer)			



	Type Part No.	Product description	GTIN	PU
	SKS 1-00 SKS00100	Software extension for AAC-LC decoding ✓ For SKF 40-00M and SKF 41-00M ✓ For decoding the Advanced Audio Coding (LC) ✓ Reduces the available channels to 8	–	1
	SKS 1-24 SKS00124	Software extension for SKF 82-00 ✓ Expands the SKF 82-00 from 16 to 24 FM output signals ✓ Must be installed ex works and therefore also ordered	–	1
	DCC 1-00 DCC00100	DAB+ Channel Converter ✓ For feeding terrestrially received DAB/DAB+ signals into CATV cable systems ✓ Converts one input channel into an freely selectable output channel (5A to 13F) ✓ Multiple DCC 1-00s enable the merging of multiple, distributed DAB channels, thus saves bandwidth in the CATV spectrum ✓ Cleans the frequency band using a SAW filter ✓ Incl. power supply unit	7611682007794	1
Type		DCC 1-00		
Inputs				
Connector	IEC-female			
Frequency range	174.928...239.200 MHz			
Inputs				
Channels selectable	5A...13F			
Inputs				
Channel bandwidth	1.6 MHz			
Level	48...80 dBµV			
Output				
Frequency range	174.928...239.200 MHz			
Channels selectable	5A...13F			
Channel bandwidth	1.6 MHz			
Output level	92...112 dBµV			
Connector	F-female			
General				
Current consumption	500 mA @ 15 VDC			
Operating temperature range	-0° C...+50°C			
Dimensions (W × H × D) appr.	130 × 110 × 40 mm			


Type	Part No.	Product description	GTIN	PU
	UIM 1-00 UIM00100	Universal input modulator <ul style="list-style-type: none"> ✓ For feeding videos and IP streams into cable networks (DVB-C/ DVB-T). ✓ Signal feed via HDMI (computer/set-top box/cameras), via Ethernet/Internet (YouTube live streaming or similar IP streams) or USB (AVI, MOV, MPEG etc.) ✓ To supplement head-ends, enables a TV channel for information or events (online church services, fitness videos, YouTube live streams) ✓ For use in hotels, retirement homes or in the housing industry ✓ Configuration in the web browser, remote maintenance possible ✓ Incl. power supply unit 	7611682008135	1
Type	UIM 1-00			
Inputs				
Number	1 × IP 1 × HDMI 1 × USB			
Supported protocols	IPTV: IPv4/v6, TCP, UDP, HTTP, HLS, RTP, RTSP, RTMP, IGMP (Multicast) USB: MPEG-TS, MPEG4, AVI, MOV, MPEG, MKV HDMI: 1080p @ 60 Hz PCM Stereo			
Output				
Number of channels	1 × DVB-C 1 × DVB-T			
Frequency range	100 ... 950 MHz			
Channel bandwidth	6, 7, 8 MHz			
Output level adjustable	70 ... 100 dBμV			
Video resolution	1080p @ 60 Hz			
Output modulation				
Type	64QAM, 128QAM, 256QAM @ DVB-C QPSK, 16QAM, 64QAM @ DVB-T			
Supported output formats	H.264 (MPEG-4)			
MER	Typ. 35 dB			
FFT	2K, 8K @ DVB-T			
FEC	1/2, 3/5, 2/3, 3/4, 5/6, 7/8 @ DVB-T			
Guard interval	1/4, 1/8, 1/16, 1/32 @ DVB-T			
Symbol rate	5 ... 8 MBaud/s			
Interfaces				
IPTV input	1 x RJ45			
Compliance IPTV interface	IEEE 802.3, 10/100 Base-T			
Configuration interface	1 x RJ45			
Compliance configuration interface	IEEE 802.3, 10/100 Base-T			
General				
Operating voltage	12 VDC			
Current consumption	830 mA			
Operating temperature range	5 °C ... 40 °C			
Operating humidity (non-condensing)	80% @ 30 °C			
Dimensions (W × H × D) appr.	128 × 125 × 44 mm			
Weight	0.450 kg			
External accessories				
Plug-in power supply	100...240 VAC / 50...60 Hz 12 VDC / 2 A			


Type	Part No.	Product description	GTIN	PU
Encoders premium-line				
		HKM 40-02 HKM04002 HDMI DVB-C/T encoder/modulator ✓ 4 x HDMI into 1 or 2 x DVB-C/T ✓ H.264 ✓ Converts the HDMI resolution 1080p@50/60 Hz to DVB-compliant 1080p@25/30 Hz ✓ Class A according to EN 50083-2 ✓ Web-based configuration, remote maintenance (SMARTPortal) ✓ Built in power supply ✓ Can be used for wall mounting or as a 19" unit, 1 RU (with HKZ 1-00)	7611682006650	1
Type	HKM 40-02			
Inputs				
Number	4 x HDMI			
Supported protocols	HDCP 1.x			
Video resolution	1080p@50 Hz 1080p@60 Hz			
Max. bit rate per channel	16 Mbit/s			
Audio Encoder	MPEG-1 audio layer II			
Video Encoder	H.264 (MPEG-4)			
Output				
Number of channels	1 oder 2 x DVB-C/DVB-T			
Frequency range	45.....862 MHz			
Channels selectable	E2.....E69			
Connector	1 x F-female			
Test port	1 x F-female (-30 dB)			
Impedance	75 Ω			
Output level adjustable	90...105 dBμV @ 1 channel 87...102 dBμV @ 2 channels			
Video resolution	1080p@25 Hz 1080p@30 Hz			
Output modulation				
Type	16QAM, 32QAM, 64QAM, 128QAM, 256-QAM @ DVB-C 16QAM, 64QAM @ DVB-T			
MER	≥ 40 dB @ DVB-C ≥ 36 dB @ DVB-T			
Bit rate, max	50.87 Mbps @ DVB-C 31.668 Mbps @ DVB-T			
FFT	2K, 8K mode @ DVB-T			
FEC	1/2, 2/3, 3/4, 5/6, 7/8 @ DVB-T			
Guard interval	1/4, 1/8, 1/16, 1/32			
Symbol rate	1...7.5 MBaud/s			
Interfaces				
Configuration interface	1 x RJ-45			
Compliance configuration interface	IEEE 802.3, 100 Base-T			
Supported configuration protocols	HTTP, AXING SMARTPortal*			
General				
Operating voltage	100...240 VAC/50...60 Hz			
Power consumption	50 W			
Operating temperature range (acc. to EN 60065)	-10°C...+50°C			
Dimensions (W x H x D) appr.	480 x 253 x 47 mm			
Weight	2.350 kg			
Comments	* encrypted, cloud-based application for configuration, monitoring and remote maintenance			
	HKZ 1-00 HKZ00100 Front panel for 19" usage ✓ For conversion of HKM from wall-mount to 19" chassis	7611682006209	1	
Type	HKZ 1-00			
General				
Dimensions (W x H x D) appr.	482 x 44 x 3 mm			
Weight	0.100 kg			

Type	Part No.	Product description	GTIN	PU
IPQAM				
 <p>KLASSE A CLASS</p>	MIE 8-00 MIE00800	IPQAM ✓ Modular system, includes 1 module ✓ Two redundant IPTV inputs (900 Mbps) ✓ Supports SPTS and MPTS (also mixed) ✓ Transmodulates max. 512 input streams in 8 × DVB-C (J.83 Annex A/C) or 6 × DVB-T output channels ✓ Re-Multiplexing and PID Filtering ✓ Program duplication ✓ Device redundancy configurable (software extension required) ✓ OTA upgrade e.g. for Set Top Boxes possible ✓ Interface for CASimulcrypt Server (software extension required) ✓ Class A according to EN 50083-2 ✓ Web-based configuration, suitable for AXING SMARTPortal ✓ Supports SNMPv1 and SNMPv2c ✓ 2 × redundant power supply units ✓ 19" housing, 1RU	7611682007299	1
	MIE 16-00 MIE01600	Same as MIE 8-00, 16 × DVB-C (J.83 Annex A/C) or 12 × DVB-T output channels	7611682007213	1
	MIE 32-00 MIE03200	Same as MIE 16-00, but includes 2 modules, thereby 2 × 512 input streams in 2 × 16 DVB-C (J.83 Annex A/C) or 2 × 12 DVB-T output channels	7611682007220	1
Type	MIE 8-00	MIE 16-00	MIE 32-00	
IPTV input				
Supported input transport streams	SPTS, MPTS (CBR/VBR)			
Max. number (out of SPTS or MPTS)	512	512	2 × 512	
Supported protocols	IP V4; UDP; RTP; IGMP v2, v3			
Total net data rate	1 × 900 Mbps	1 × 900 Mbps	2 × 900 Mbps	
Transportstreams				
Modifiable program information	Program name, SID remapping, PID filtering, TSID, ONID			
PCR correction	automatic adaptive PCR-correction, <500 ns			
LCN	Yes			
NIT handling @ DVB-C	auto manual off			
EPG regeneration	Yes			
Encryption	DVB-CSA* DVB-CISSA* ATIS-IDSA* AES-ECB* AES-CBC*			
Output				
Number of channels	1 × 8 @ DVB-C 1 × 6 @ DVB-T	1 × 16 DVB-C 1 × 12 DVB-T	2 × 16 DVB-C 2 × 12 DVB-T	
Frequency range	109...1006 MHz @ DVB-C 109...862 MHz @ DVB-T			
Channels selectable	S2...K87 @ DVB-C S2...K69 @ DVB-T			
Channel bandwidth	7/8 MHz @ DVB-T			
Possible frequency shift	-			
Connector	1 × F-female	1 × F-female	2 × F-female	
Test port	1 × F-female (-30 dB)	1 × F-female (-30 dB)	2 × F-female (-30 dB)	
Impedance	75 Ω			
Output level adjustable	80...105 dBμV @ DVB-C 77...102 dBμV @ DVB-T			
Output modulation				
Compliance	EN 50083-9 ETSI TS 101 154 ETSI EN300 429 ETSI EN 300 744 ITU-T J.83A/C			
Type	QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T			
Supported output formats	MPEG-2/H.262, MPEG-4/H.264 and HEVC/H.265			
MER	≥ 40 dB @ DVB-C ≥ 36 dB @ DVB-T			
BER	≥9x10-9			
Roll off	15 %			
Shoulder attenuation	≥ 56 dB			
C/N	≥45 dB			
Reflection	>14 dB			
Bit rate, max	50.87 Mbps @ DVB-C 31.668 Mbps @ DVB-T			
FFT	2K mode @ DVB-T			
FEC	1/2, 2/3, 3/4, 5/6, 7/8 @ DVB-T			
Guard interval	1/4, 1/8, 1/16, 1/32 @ DVB-T			
Symbol rate	1...7.5 MBaud/s			



	Type Part No.	Product description		GTIN	PU
Interfaces					
IPTV input		1 x RJ45	1 x RJ45		2 x RJ45
CAS/IPTV (redundant)		1 x RJ45	1 x RJ45		2 x RJ45
Compliance IPTV/CAS interfaces		IEEE 802.3, 1000 Base-T (GigE)			
Control/CAS		1 x RJ-45	1 x RJ-45		2 x RJ-45
Compliance Control/CAS		IEEE 802.3, 10/100 Base-T			
Software control and upgrading		Via Remote Access			
Supported configuration protocols		HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**			
General					
Operating voltage		100...240 VAC/50...60 Hz 48 VDC			
Switching power supply		2 (redundant)			
Power consumption		30 W	30 W		60 W
Equipotential bonding connection		4 mm ²			
Operating temperature range (acc. to EN 60065)		-10°C...+50°C			
Storage temperature range (acc. to EN 60065)		-20 °C...+80 °C			
Dimensions (W x H x D) appr.		480 x 43 x 275 mm			
Weight		3.150 kg	3.150 kg		3.670 kg
Comments		* with software extension MKS 1-02 only ** encrypted, cloud-based application for configuration, monitoring and remote maintenance			


	Type Part No.	Product description	GTIN	PU
 	MIM 16-00 MIM01600	Extension module for MIE 8-00 or MIE 16-00 ✓ Extension to additional 512 input streams and additional 16 DVB-C or 12 DVB-T output channels	7611682007275	1
	Type MIM 16-00			
IPTV input				
Supported input transport streams	SPTS, MPTS (CBR/VBR)			
Max. number (out of SPTS or MPTS)	512			
Supported protocols	IP V4; UDP; RTP; IGMP v2, v3			
Total net data rate	1 × 900 Mbps			
Transportstreams				
Modifiable program information	Program name, SID remapping, PID filtering, TSID, ONID			
PCR correction	automatic, adaptive, <500 ns			
LCN	Yes			
NIT handling @ DVB-C	auto manual off			
EPG regeneration	Yes			
Encryption	DVB-CSA* DVB-CISSA* ATIS-IDSA* AES-ECB* AES-CBC*			
Output				
Number of channels	1 × 16 DVB-C 1 × 12 DVB-T			
Frequency range	109...1006 MHz @ DVB-C 109...862 MHz @ DVB-T			
Channels selectable	S2...K87 @ DVB-C S2...K69 @ DVB-T			
Channel bandwidth	7/8 MHz @ DVB-T			
Possible frequency shift	-			
Connector	1 × F-female			
Test port	1 × F-female (-30 dB)			
Impedance	75 Ω			
Output level adjustable	80...105 dBμV @ DVB-C 77...102 dBμV @ DVB-T			
Output modulation				
Compliance	EN 50083-9 ETSI TS 101 154 ETSI EN300 429 ETSI EN 300 744 ITU-T J.83A/C			
Type	QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T			
Supported output formats	MPEG-2/H.262, MPEG-4/H.264 and HEVC/H.265			
MER	≥ 40 dB @ DVB-C ≥ 36 dB @ DVB-T			
BER	≥9x10-9			
Roll off	15 %			
Shoulder attenuation	≥ 56 dB			
C/N	≥45 dB			
Reflection	>14 dB			
Bit rate, max	50.87 Mbps @ DVB-C 31.668 Mbps @ DVB-T			
FFT	2K mode @ DVB-T			
FEC	1/2, 2/3, 3/4, 5/6, 7/8 @ DVB-T			
Guard interval	1/4, 1/8, 1/16, 1/32 @ DVB-T			
Symbol rate	1...7.5 MBaud/s			
Interfaces				
IPTV input	1 × RJ45			
CAS/IPTV (redundant)	1 x RJ45			
Compliance IPTV/CAS interfaces	IEEE 802.3, 1000 Base-T (GigE)			
Control/CAS	1 × RJ-45			
Compliance Control/CAS	IEEE 802.3, 10/100 Base-T			
Software control and upgrading	Via Remote Access			
Supported configuration protocols	HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**			
General				
Operating temperature range (acc. to EN 60065)	-10°C...+50°C			


	Type Part No.	Product description	GTIN	PU
Storage temperature range (acc. to EN 60065)				-20 °C...+80 °C
Weight				0.516 kg
Comments				* with software extension MKS 1-02 only ** encrypted, cloud-based application for configuration, monitoring and remote maintenance
	MIS 8-16 MIS00816	Software extension for MIE 8-00 <ul style="list-style-type: none"> ✓ Extension from 8 to 16 x DVB-C (J.83 Annex A/C) or from 6 to 12 x DVB-T output channels ✓ Activation by means of a license file (specify serial number of the headend when purchasing) ✓ If necessary, assistance from our technical support 	–	1
	MIS 1-11 MIS00111	Software extension for MIE module redundancy <ul style="list-style-type: none"> ✓ A module with MIS 1-11 installed can monitor up to five other modules and act as a backup module for these modules. ✓ If certain configurable conditions occur (input error, output error, operating voltage error, etc.), then the system switches to the backup module. 	–	1
	MKS 1-02 MKS00102	Software extension for CASimulcrypt <ul style="list-style-type: none"> ✓ For MK, MIE and MIP headends ✓ Offers the possibility to encrypt programmes ✓ Requires the installation and configuration of a CAS server ✓ Activation by means of a license file (specify serial number of the headend when purchasing) 	–	1


	Type Part No.	Product description	GTIN	PU
IP to DVB-T2				
 <p>KLASSE A CLASS</p>	MIE 4-02 MIE00402	IP to DVB-T2 4K 47.7 Mbps ✓ Modular system, includes 1 module ✓ Two redundant IPTV inputs (900 Mbps) ✓ Supports SPTS and MPTS (also mixed) ✓ Transmodulates max. 512 input streams in 4 DVB-T2 output channels ✓ FFT max. 4k Bitrate max. 47.7 Mbps ✓ Re-Multiplexing and PID Filtering ✓ Program duplication ✓ Device redundancy configurable (software extension required) ✓ OTA upgrade e.g. for Set Top Boxes possible ✓ Interface for CASimulcrypt Server (software extension required) ✓ Class A according to EN 50083-2 ✓ Web-based configuration, suitable for AXING SMARTPortal ✓ Supports SNMPv1 and SNMPv2c ✓ 2 × redundant power supply units ✓ 19" housing, 1RU	7611682007237	1
	MIE 8-02 MIE00802	Same as MIE 4-02, but includes 2 modules, thereby 2 × 512 input streams in 2 × 4 DVB-T2 output channels	7611682007244	1
	MIE 3-02 MIE00302	IP to DVB-T2 8Kext 49.8 Mbps ✓ Modular system, includes 1 module ✓ Two redundant IPTV inputs (900 Mbps) ✓ Supports SPTS and MPTS (also mixed) ✓ Transmodulates max. 512 input streams in 3 DVB-T2 output channels ✓ FFT max. 8kext Bitrate max. 49.8 Mbps ✓ Re-Multiplexing and PID Filtering ✓ Program duplication ✓ Device redundancy configurable (software extension required) ✓ OTA upgrade e.g. for Set Top Boxes possible ✓ Interface for CASimulcrypt Server (software extension required) ✓ Class A according to EN 50083-2 ✓ Web-based configuration, suitable for AXING SMARTPortal ✓ Supports SNMPv1 and SNMPv2c ✓ 2 × redundant power supply units ✓ 19" housing, 1RU	7611682007497	1
	MIE 6-02 MIE00602	Same as MIE 3-02, but includes 2 modules, thereby 2 × 512 input streams in 2 × 3 DVB-T2 output channels	7611682007503	1
	Type	MIE 4-02	MIE 8-02	MIE 3-02
IPTV input				
Supported input transport streams	SPTS, MPTS (CBR/VBR)			
Max. number (out of SPTS or MPTS)	512	2 × 512	512	2 × 512
Supported protocols	IP V4; UDP; RTP; IGMP v2, v3			
Total net data rate	1 × 900 Mbps	2 × 900 Mbps	1 × 900 Mbps	2 × 900 Mbps
Transportstreams				
Modifiable program information	Program name, SID remapping, PID filtering, TSID, ONID			
PCR correction	automatic, adaptive, <500 ns			
LCN	Yes			
EPG regeneration	Yes			
Encryption	DVB-CSA* DVB-CISSA* ATIS-IDSA* AES-ECB* AES-CBC*			
Output				
Number of channels	1 × 4 × DVB-T2	2 × 4 × DVB-T2	1 × 3 × DVB-T2	2 × 3 × DVB-T2
Frequency range	109...862 MHz			
Channels selectable	S2...K69			
Channel bandwidth	7/8 MHz			
Net mode	MFN			
Possible frequency shift	-			
Connector	1 × F-female	2 × F-female	1 × F-female	2 × F-female
Test port	1 × F-female (−30 dB)	2 × F-female (−30 dB)	1 × F-female (−30 dB)	2 × F-female (−30 dB)
Impedance	75 Ω			
Output level adjustable	85...105 dBμV			
Output modulation				
Compliance	DVB-T2 (EN 302 755, mode A (single PLP)) EN 50083-9 ETSI TS 101 154 ETSI EN300 429 ETSI EN 300 744			
L1 post signalling	BPSK, QPSK, 16QAM, 64QAM			
Type	QPSK, QAM16, QAM64, QAM256			
Supported output formats	MPEG-2/H.262, MPEG-4/H.264 and HEVC/H.265			

Type Part No.	Product description			GTIN	PU
MER					≥ 43 dB
BER					≥9x10 ⁻⁹
Shoulder attenuation					≥ 56 dB
C/N					≥45 dB
Reflection					>14 dB
Bit rate, max	47.7 Mbps	47.7 Mbps	49.8 Mbps	49.8 Mbps	
FFT	1K, 2K, 4K mode	1K, 2K, 4K mode	1K, 2K, 4K, 8K, 8Kext mode	1K, 2K, 4K, 8K, 8Kext mode	
FEC type					BCH, LDPC
FEC length					16200, 64800
FEC					1/2, 3/5, 2/3, 3/4, 4/5, 5/6
Pilot pattern					PP1...PP8
Guard interval	1/4, 1/8, 1/16, 1/32	1/4, 1/8, 1/16, 1/32	1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128	1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128	
Interfaces					
IPTV input	1 x RJ45	2 x RJ45	1 x RJ45	2 x RJ45	
CAS/IPTV (redundant)	1 x RJ45	2 x RJ45	1 x RJ45	2 x RJ45	
Compliance IPTV/CAS interfaces					IEEE 802.3, 1000 Base-T (GigE)
Control/CAS	1 x RJ-45	2 x RJ-45	1 x RJ-45	2 x RJ-45	
Compliance Control/CAS					IEEE 802.3, 10/100 Base-T
Software control and upgrading					Via Remote Access
Supported configuration protocols					HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**
General					
Operating voltage					100...240 VAC/50...60 Hz 48 VDC
Switching power supply					2 (redundant)
Power consumption	30 W	60 W	30 W	60 W	
Equipotential bonding connection					4 mm ²
Operating temperature range (acc. to EN 60065)					-10°C...+50°C
Storage temperature range (acc. to EN 60065)					-20 °C...+80 °C
Dimensions (W × H × D) appr.					480 × 43 × 275 mm
Weight	3.150 kg	3.670 kg	3.150 kg	3.150 kg	
Comments					* with software extension MKS 1-02 only ** switchable to DVB-T by license key *** encrypted, cloud-based application for configuration, monitoring and remote maintenance


	Type Part No.	Product description	GTIN	PU
 	MIM 4-02 MIM00402	Extension modul for MIE 4-02 ✓ Extension to additional 512 input streams and additional 4 DVB-T2 output channels	7611682007282	1
	MIM 3-02 MIM00302	Extension modul for MIE 3-02 ✓ Extension to additional 512 input streams and additional 3 DVB-T2 output channels	7611682007510	1
Type	MIM 4-02		MIM 3-02	
IPTV input				
Supported input transport streams	SPTS, MPTS (CBR/VBR)			
Max. number (out of SPTS or MPTS)	512			
Supported protocols	IP V4; UDP; RTP; IGMP v2, v3			
Total net data rate	1 × 900 Mbps			
Transportstreams				
Modifiable program information	Program name, SID remapping, PID filtering, TSID, ONID			
PCR correction	automatic, adaptive, <500 ns			
LCN	Yes			
EPG regeneration	Yes			
Encryption	DVB-CSA* DVB-CISSA* ATIS-IDSA* AES-ECB* AES-CBC*			
Output				
Number of channels	1 × 4 × DVB-T2		1 × 3 × DVB-T2	
Frequency range	109...862 MHz			
Channels selectable	S2...K69			
Channel bandwidth	7/8 MHz			
Net mode	MFN			
Possible frequency shift	-			
Connector	1 × F-female			
Test port	1 × F-female (-30 dB)			
Impedance	75 Ω			
Output level adjustable	85...105 dBμV			
Output modulation				
Compliance	EN 50083-9 ETSI TS 101 154 ETSI EN300 429 ETSI EN 300 744 DVB-T2 acc. to EN 302 755, mode A (single PLP)			
L1 post signalling	BPSK, QPSK, 16QAM, 64QAM			
Type	QPSK, QAM16, QAM64, QAM256			
Supported output formats	MPEG-2/H.262, MPEG-4/H.264 and HEVC/H.265			
MER	≥ 43 dB			
BER	≥9x10 ⁻⁹			
Shoulder attenuation	≥ 56 dB			
C/N	≥45 dB			
Reflection	>14 dB			
Bit rate, max	47.7 Mbps		49.8 Mbps	
FFT	1K, 2K, 4K mode		1K, 2K, 4K, 8K, 8Kext mode	
FEC type	BCH, LDPC			
FEC length	16200, 64800			
FEC	1/2, 3/5, 2/3, 3/4, 4/5, 5/6			
Pilot pattern	PP1...PP8			
Guard interval	1/4, 1/8, 1/16, 1/32		1/4, 19/128, 1/8, 19/256, 1/16, 1/32, 1/128	
Interfaces				
IPTV input	1 × RJ45			
CAS/IPTV (redundant)	1 × RJ45			
Compliance IPTV/CAS interfaces	IEEE 802.3, 1000 Base-T (GigE)			
Control/CAS	1 × RJ-45			
Compliance Control/CAS	IEEE 802.3, 10/100 Base-T			
Software control and upgrading	Via Remote Access			
Supported configuration protocols	HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**			
General				
Operating temperature range (acc. to EN 60065)	-10°C...+50°C			
Storage temperature range (acc. to EN 60065)	-20 °C...+80 °C			
Weight	0.516 kg			

	Type Part No.	Product description	GTIN	PU
<p>Comments</p>		<p>* with software extension MKS 1-02 only ** switchable to DVB-T by license key *** encrypted, cloud-based application for configuration, monitoring and remote maintenance</p>		
	<p>MIS 1-11 MIS00111</p>	<p>Software extension for MIE module redundancy</p> <ul style="list-style-type: none"> ✓ A module with MIS 1-11 installed can monitor up to five other modules and act as a backup module for these modules. ✓ If certain configurable conditions occur (input error, output error, operating voltage error, etc.), then the system switches to the backup module. 	<p>–</p>	<p>1</p>
	<p>MKS 1-02 MKS00102</p>	<p>Software extension for CASimulcrypt</p> <ul style="list-style-type: none"> ✓ For MK, MIE and MIP headends ✓ Offers the possibility to encrypt programmes ✓ Requires the installation and configuration of a CAS server ✓ Activation by means of a license file (specify serial number of the headend when purchasing) 	<p>–</p>	<p>1</p>


	Type Part No.	Product description	GTIN	PU	
Streamers					
 KLASSE A CLASS	MIP 4-00L MIP00400L	Multituner IPTV quattro streamer FTA ✓ 4 independent multituner inputs ✓ Transmodulates 4 × DVB-S/S2/S2x/T/T2/C into 128 SPTS/4 MPTS ✓ GbE-interface with max. 900 Mbps ✓ Web-based configuration, remote maintenance (SMARTPortal) ✓ Supports SNMPv1 and SNMPv2c ✓ M3U playlist for the TV/radio programs of the transport stream ✓ Class A according to EN 50083-2 ✓ 19" housing, 1RU ✓ One power supply	7611682008197	1	
	MIP 8-00 MIP00800	Same as MIP 4-00L, but 8 × DVB-S/S2/S2x/T/T2/C into 512 SPTS/16 MPTS and two redundant power supplies (hot pluggable)	7611682006605	1	
	MIP 8-06 MIP00806	Same as MIP 8-00, but additionally decryption of encrypted programs via six CA modules possible	7611682006612	1	
	MIP 16-00 MIP01600	Same as MIP 8-00, but 16 × DVB-S/S2/S2x/T/T2/C into 512 SPTS/16 MPTS	7611682006629	1	
	MIP 16-06 MIP01606	Same as MIP 16-00, but additionally decryption of encrypted programs via six CA modules possible	7611682006636	1	
Type	MIP 4-00L	MIP 8-00	MIP 8-06	MIP 16-00	MIP 16-06
Inputs					
Number of tuners	4 × DVB-S/S2/S2x/T/T2/C	8 × DVB-S/S2/S2x/T/T2/C	8 × DVB-S/S2/S2x/T/T2/C	16 × DVB-S/S2/S2x/T/T2/C	16 × DVB-S/S2/S2x/T/T2/C
Connector	4 × F-female	8 × F-female	8 × F-female	16 × F-female	16 × F-female
Frequency range	900...2150 MHz @ DVB-S/S2/S2X 50...898 MHz @ DVB-C 50...898 MHz @ DVB-T/T2				
Input level	43...84 dBµV @ DVB-S/S2/S2X 49...84 dBµV @ DVB-C 39...84 dBµV @ DVB-T/T2				
LNB voltage	13/17 V; 22 kHz on/off; DiSEqC 1.0				
Max. LNB current	250 mA per input 1000 mA per device				
CI slots	-	-	6	-	6
Input modulation					
Type	QPSK, 8PSK, 8APSK, 16APSK, 32APSK @ DVB-S/S2/S2X QAM16, QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T QPSK, QAM16, QAM64, QAM256 @ DVB-T2				
Compliance	DVB-S = EN 300 421 DVB-S2 = EN 302 307-1V1.4.1 DVB-S2X = EN 302 307-2V1.1.1 DVB-C = EN 300 429/ITU-TJ.83 Annex A/C DVB-T = EN 300 744 DVB-T2 = ETSI EN 302 755				
Supported input transport streams	MPEG-2 ISO/IEC 13818 MPEG-4 ISO/IEC 14496				
Error correction	auto				
Symbol rate	1.5...45 MS/s (<40MSymbol/s in 32APSK) @ DVB-S 1...7.2 Mbaud @ DVB-C				
Transportstreams					
Modifiable program information	Program name, SID remapping, PID remapping, PID filtering* TSID, ONID				
LCN	Yes				
Encryption	DVB-CSA*, DVB-CISSA*, ATIS-IDSA*, AES-ECB*, AES-CBC*				
IPTV output					
Transportstreams SPTS MPTS	124 4	512 8	512 8	512 16	512 16
Total net data rate	900 Mbps				
Data rate per tuner	125 Mbps				
Supported transport protocols	UDP				
Supported application protocols	RTP				
Interfaces					
IPTV output	1 × RJ-45				
Compliance IPTV interface	IEEE 802.3, 1000 Base-T /1 GbE				
Configuration interface	1 × RJ-45				
Compliance configuration interface	IEEE 802.3, 100 Base-T				
Supported configuration protocols	HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**				

Type	Part No.	Product description	GTIN	PU																																																												
General																																																																
Operating voltage		100...240 VAC/50...60 Hz																																																														
Switching power supply	1	2 (redundant)	2 (redundant)	2 (redundant)																																																												
Power consumption		70 W																																																														
Operating temperature range (acc. to EN 60065)		-10°C...+50°C																																																														
Dimensions (W × H × D) appr.		480 × 47 × 253 mm																																																														
Weight	-	3.550 kg	3.750 kg	3.950 kg																																																												
Comments		* with software extension only ** encrypted, cloud-based application for configuration, monitoring and remote maintenance																																																														
	MKS 1-02 MKS00102	Software extension for CASimulcrypt ✓ For MK, MIE and MIP headends ✓ Offers the possibility to encrypt programmes ✓ Requires the installation and configuration of a CAS server ✓ Activation by means of a license file (specify serial number of the headend when purchasing)	-	1																																																												
<table border="1"> <thead> <tr> <th>Stream type</th> <th>IN PID</th> <th>OUT PID</th> <th>FIXED</th> <th>BLOCK</th> <th>SCRAMBLE</th> </tr> </thead> <tbody> <tr> <td>TS2</td> <td>44</td> <td>44</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>MPRE02 Video</td> <td>103</td> <td>103</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>MPRE01 Audio (sp)</td> <td>104</td> <td>104</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Private data</td> <td>108</td> <td>108</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Teletext (stb)</td> <td>109</td> <td>109</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>AC-3 Audio (sp)</td> <td>106</td> <td>106</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Subtitles (stb)</td> <td>110</td> <td>110</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>DSM-CC</td> <td>111</td> <td>111</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>DSM-CC</td> <td>112</td> <td>112</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>					Stream type	IN PID	OUT PID	FIXED	BLOCK	SCRAMBLE	TS2	44	44	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MPRE02 Video	103	103	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MPRE01 Audio (sp)	104	104	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Private data	108	108	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Teletext (stb)	109	109	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AC-3 Audio (sp)	106	106	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Subtitles (stb)	110	110	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DSM-CC	111	111	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DSM-CC	112	112	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Encoders

	HKI 41-34 HKI04134	H.264 IPTV Encoder ✓ H.264 coding ✓ 4 × HDMI in 4 × SPTS ✓ Web-based configuration, remote maintenance (SMARTPortal) ✓ Two redundant power supplies (hot pluggable)	7611682005868	1
	HKI 81-34 HKI08134	Same as HKI 41-34, but 8 × HDMI in 8 × SPTS	7611682005882	1
Type		HKI 41-34	HKI 81-34	
Inputs				
Connector		4 × HDMI	8 × HDMI	
Video resolution		1080p@60 Hz		
Max. bit rate per channel		16 Mbit/s		
Audio Encoder		AAC, AAC+, AAC++, MP3		
Video Encoder		H.264		
IPTV output				
Supported protocols		UDP, HTTP, RTSP, RTMP, ONVIF		
Interfaces				
IPTV output		4×RJ-45, IEEE 802.3, 10/100/1000 Base-T	8×RJ-45, IEEE 802.3, 10/100/1000 Base-T	
Configuration interface		1 × RJ-45		
Compliance configuration interface		IEEE 802.3, 10/100 Base-T		
Supported configuration protocols		HTTP, AXING SMARTPortal*		
General				
Operating voltage		2 × 100...240 VAC/50...60 Hz		
Switching power supply		-		
Power consumption		25 W	35 W	
Operating temperature range (acc. to EN 60065)		0°C...+45°C		
Dimensions (W × H × D) appr.		482 × 267 × 47 mm		
Weight		4.100 kg	4.150 kg	
Comments		* encrypted, cloud-based application for configuration, monitoring and remote maintenance		

Set-Top Boxes

	ISW ISW	Set-Top-Boxes for IPTVSolutions are available on request	-	1
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Type	Product description	GTIN	PU
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Part No.

GTIN

PU

Modular headends

	<p>SKS SKS</p>	<p>Modules and accessories for the SKS modular headend are available on request</p>	<p>–</p>	<p>1</p>
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Type
Part No.

Product description

GTIN

PU

Optical distribution | analogue

Optical distribution | SAT - SC/APC



OTX 51-00
OTX05100


Optical transmitter

- ✓ For optical transmission of satellite signals and 16 CATV channels
- ✓ Incoming RF signals are converted into optical signals
- ✓ Automatic gain control
- ✓ 1 optical output (SC/APC)
- ✓ 5 cascade RF outputs


7611682006919 1




Type	OTX 51-00
Inputs	
Number	5
Frequency range	87 ... 862 MHz @ DVB-C/T/T2 950 ... 2150 MHz @ DVB-S/S2/S2X
Number of channels (DVB-C/T/T2)	max. 16
Input level	74 ... 80 dBμV @ DVB-C/T/T2 69 ... 86 dBμV @ DVB-S/S2/S2X
AGC level dynamics	20 dB
Max. LNB current	250 mA per input @ 14 V
Test ports	2
Test port frequency range (TERR SAT HH)	87 ... 862 950 ... 2150 MHz
Trunk outputs	
Number	5
Thru loss	< 2 dB
Type	F-female
Return loss	10 dB
Output	
Number of optical outputs	1
Optical connector	SC/APC
Optical return loss	> 45 dB
Optical level	+7.5 dBm
Wavelength	1310 nm
Safety class	1M
General	
Operating voltage	184 ... 264 VAC/50 ... 60Hz
Power consumption	15 W
Operating temperature range	-5 ... +50°C
Dimensions (W × H × D) appr.	230 × 230 × 50 mm
Weight	1.880 kg







Type	Part No.	Product description	GTIN	PU
	ORX 14-00 ORX01400	Optical receiver Quad ✓ For receiving optical signals ✓ Converts optical signals into four independent subscriber outputs (SAT + TERR) ✓ For connection of four end devices (receivers) ✓ Power supply via receiver or external power supply unit (not included in delivery)	7611682008111	1
	ORX 14-01 ORX01401	Optical receiver Single cable /SCR/CSS) ✓ For receiving optical signals ✓ Converts optical signals into 2 outputs with 16 user bands each ✓ Single cable I and II compatible (according to EN 50607 and EN 50494) ✓ In addition, 2 legacy outputs are available ✓ Power supply via external power supply unit (not included)	7611682008128	1
Type	ORX 14-00		ORX 14-01	
Input				
Optical connector	SC/APC			
Optical level	-14 ... -8 dBm			
Wavelength	1290 ... 1580 nm			
Optical return loss	> 45 dB			
Subscriber ports				
Number	4			
Type	4 × LEGACY (SAT + TERR)		2 × SCR (TERR + 16 UB) 2 × LEGACY (TERR + SAT)	
Frequency range	87 ... 862 MHz @ DVB-C/T/T2 950 ... 2150 MHz @ DVB-S/S2/S2X		87 ... 862 MHz @ DVB-C/T/T2 950...2150 MHz @ DVB-S/S2/S2X	
User band frequencies	-		975/1025/1075/1125/1175/1225/1275/1325 MHz @ EN 50494/50607 1375/1425/1475/1525/1575/1625/1675/1725 MHz @ EN 50607	
Output level SAT (SCR/CSS)	-		82 dBμV ±2 dB	
Output level SAT (Legacy)	-		65 ... 80 dBμV	
RF connectors				
Type	F-female			
General				
Operating voltage	12 ... 18 VDC			
Power consumption	2.8 W		7.5 W	
Current consumption	155 mA @ 18 VDC 200 mA @ 12 DC		430 mA @ 18 VDC 620 mA @ 12 VDV	
Operating temperature range	-5 ... +50 °C		-5 ... +50 °C	
Dimensions (W × H × D) appr.	120 × 100 × 30 mm		160 × 100 × 30 mm	
Weight	0.300 kg		0.450 kg	

Type Part No.	Product description	GTIN	PU
 ORX 15-00 ORX01500	Optical receiver Quattro ✓ For the reception of optical signals ✓ Converts optical signals into SAT IF (with fixed satellite polarisation planes) and CATV signals ✓ To connect to a multiswitch ✓ Power supply via multiswitch	7611682006926	1
	Type ORX 15-00		
Input			
Optical connector	SC/APC		
Optical level	-14 ... -8 dBm		
Wavelength	1310 nm		
Optical return loss	> 45 dB		
Output			
Type	TERR VL VH HL HH		
Level @ 21 dB optical attenuation	82 dB μ V @ DVB-C/T/T2 88 dB μ V @ DVB-S/S2/S2X		
Frequency range	87 ... 862 MHz @ DVB-C/T/T2 950 ... 2150 MHz @ DVB-S/S2/S2X		
RF connectors			
Type	F female		
Return loss	10 dB		
General			
Operating voltage	14 ... 18 VDC		
Power consumption	3.3 W		
Current consumption	330 mA @ 18 VDC 380 mA @ 14 VDC		
Operating temperature range	-5 ... +50°C		
Dimensions (W x H x D) appr.	125 x 100 x 30 mm		
Weight	0.324 kg		

Optical distribution | Accessories


	OVE 2-03 OVE00203	Optical 2-way splitter ✓ For distribution of optical signals ✓ With SC/APC connectors female	7611682007008	1	
	OVE 3-03 OVE00303	Same as OVE 2-03, but 3-way	7611682007015	1	
	OVE 4-03 OVE00403	Same as OVE 2-03, but 4-way	7611682007022	1	
	OVE 8-03 OVE00803	Same as OVE 2-03, but 8-way	7611682007039	1	
	Type OVE 2-03 OVE 3-03 OVE 4-03 OVE 8-03				
Input					
Wavelength		1310...1550 nm \pm 40 nm			
Distribution					
Distribution loss		3.5 dB	5.7 dB	6.9 dB	10.0 dB
Directivity		> 55 dB			
Connectors					
Connector type		SC/APC female			
Return loss		55 dB			
General					
Operating temperature range		-40...+85°C			
Dimensions (W x H x D) appr.		148 x 115 x 21 mm			
Weight		0.408 kg	0.444 kg	0.406 kg	0.428 kg




	Type Part No.	Product description	GTIN	PU		
	OAK 1-03 OAK00103	Optic cable ✓ 1 m in polybag ✓ Assembled with SC / APC plugs ✓ Type single-mode ✓ Colour grey	7611682006940	1		
	OAK 5-03 OAK00503	Same as OAK 1-03, but 5 m	7611682006957	1		
	OAK 10-03 OAK01003	Same as OAK 1-03, but 10 m and steel armoured	7611682006964	1		
	OAK 50-03 OAK05003	Same as OAK 1-03, but 50 m and steel armoured	7611682006971	1		
	OAK 100-03 OAK10003	Same as OAK 1-03, but 100 m on wooden drum and steel armoured	7611682006988	1		
	OAK 500-03 OAK50003	Same as OAK 1-03, but 500 m on wooden drum and steel armoured	7611682006995	1		
Type	OAK 1-03	OAK 5-03	OAK 10-03	OAK 50-03	OAK 100-03	OAK 500-03
Through loss	0.3 dB/km					
Connectors						
Connector type	SC/APC male					
Mechanical data						
Cable length	1 m	5 m	10 m	50 m	100 m	500 m
Bending radius single multiple	>10 mm					
General						
Weight	0.017 kg	0.039 kg	0.137 kg	0.614 kg	1.232 kg	6.160 kg
	OZU 3-01 OZU00301	Optical attenuator 1 dB ✓ SC/APC connectors ✓ To attenuate the optical power level	7611682007251	1		
	OZU 3-03 OZU00303	Same as OZU 3-01, but 3 dB through loss	7611682007268	1		
	OZU 3-05 OZU00305	Same as OZU 3-01, but 5 dB through loss	7611682007053	1		
	OZU 3-10 OZU00310	Same as OZU 3-01, but 10 dB through loss	7611682007060	1		
	OZU 3-15 OZU00315	Same as OZU 3-01, but 15 dB through loss	7611682007077	1		
	OZU 3-20 OZU00320	Same as OZU 3-01, but 20 dB through loss	7611682007084	1		
Type	OZU 3-01	OZU 3-03	OZU 3-05	OZU 3-10	OZU 3-15	OZU 3-20
Through loss	1 dB	3 dB	5 dB	10 dB	15 dB	20 dB
Connectors						
Connector type	SC/APC male female					
General						
Weight	0.010 kg	0.010 kg	0.009 kg	0.009 kg	0.009 kg	0.009 kg
	OZU 1-03 OZU00103	Optical joint ✓ SC/APC connector ✓ female female	7611682007046	1		
	OZU 5-00 OZU00500	Optical adapter FC/PC to SC/APC ✓ FC/PC female SC/APC male ✓ For connecting an FC/PC cable to an device with female SC/APC connector	7611682007169	1		
Type	OZU 1-03		OZU 5-00			
Connectors						
Connector type	SC/APC female		FC/PC female SC/APC male			
General						
Weight	0.003 kg		0.05 kg			


	Type Part No.	Product description	GTIN	PU			
Optical distribution HFC							
 	ONX 1550-01 ONX155001	Micro Fibre Node 85...1218 MHz/5...65 MHz (1310 nm) ✓ For FTTH/FTTB applications/RFoG networks ✓ Low noise optical receiver ✓ Constant RF output level for the wide optical operating range, OLC function ✓ Adjustable interstage equalization ✓ Adjustable upstream attenuation ✓ DFB Laser (CW mode/Burst mode) ✓ Local power supply ✓ Al-die-cast housing ✓ Testports for up- and downstream	7611682006841	1			
	ONX 1550-02 ONX155002	Same as ONX 1550-01, but US 1610 nm	Auf Anfrage	1			
	ONX 1550-03 ONX155003	Same as ONX 1550-01, but FB laser	Auf Anfrage	1			
 	ONX 1550-11 ONX155011	Micro Fibre Node 102...1218 MHz/5...85 MHz (1310 nm) ✓ For FTTH/FTTB applications/RFoG networks ✓ Low noise optical receiver ✓ Constant RF output level for the wide optical operating range, OLC function ✓ Adjustable interstage equalization ✓ Adjustable upstream attenuation ✓ DFB Laser (CW mode/Burst mode) ✓ Local power supply ✓ Al-die-cast housing ✓ Testports for up- and downstream	Auf Anfrage	1			
	ONX 1550-12 ONX155012	Same as 1550-11, but US 1610 nm	Auf Anfrage	1			
 	ONX 1550-21 ONX155021	Micro Fibre Node ✓ For FTTH/FTTB applications/RFoG networks ✓ Low noise optical receiver ✓ Constant RF output level for the wide optical operating range, OLC function ✓ Adjustable interstage equalization ✓ Adjustable upstream attenuation ✓ DFB Laser (CW mode/Burst mode) ✓ Local power supply ✓ Al-die-cast housing ✓ Testports for up- and downstream	Auf Anfrage	1			
	ONX 1550-22 ONX155022	Same as ONX 1550-21, but 1610 nm	Auf Anfrage	1			
Type	ONX 1550-01	ONX 1550-02	ONX 1550-03	ONX 1550-11	ONX 1550-12	ONX 1550-21	ONX 1550-22
Input							
Optical connector	1 × SC/APC						
Optical return loss	≥ 40 dB						
Downstream							
Wavelength	1540...1560 nm						
Optical input level	-8...+1 dBm						
Optical OLC range	0...-6 dBm						
Frequency range	85...1218 MHz	85...1218 MHz	85...1218 MHz	102...1218 MHz	102...1218 MHz	258...1218 MHz	258...1218 MHz
Output level @ OMI 3.5% (flat)	96 dBμV						
CSO (Cenelec 42, OMI 3.5%)	> 60 dBc						
CTB (Cenelec 42, OMI 3.5%)	> 60 dBc						
Flatness	±1 dB						
Noise current density	7.4 pA/√Hz						
Equalization interstage: pluggable with jumpers	0/2/4/6 dB						
Return loss	≥ 18 dB (-1.5 dB/Octave)						
Test port	-20 dB						
Upstream							
Laser type	DFB	DFB	FP	DFB	DFB	DFB	DFB
Wavelength	1310 nm	1610 nm	1310 nm	1310 nm	1610 nm	1310 nm	1610 nm
Laser mode (switchable)	CW/Burst						
Optical output level	+3 ±1 dBm						
Laser switch-on time	≤ 1.3 μsec						
RF level for laser on off	67 dBμV 58 dBμV						

	Type Part No.	Product description				GTIN	PU
Frequency range	5...65 MHz	5...65 MHz	5...65 MHz	5...85 MHz	5...85 MHz	5...204 MHz	5...204 MHz
OMI @ 75 dBµV US input level				15 %			
Flatness				±1 dB			
Return loss				≥ 18 dB (-1.5 dB/Octave)			
Attenuation: adjustable in 2 dB steps				0...30 dB			
Test port				-20 dB			
RF connectors							
Type				F-female			
General							
Operating voltage				100...240 VAC			
Power consumption	6 W	6 W	6 W	7.8 W	7.8 W	7.8 W	7.8 W
Operating temperature range				0...50 °C			
Dimensions (W × H × D) appr.				195 x 90 x 55 mm			
Weight				0.750 kg			

Optical distribution | SAT - FC/PC

	OCO 2-00 OCO00200	Optical transmitter LNB set ✓ Transmits a satellite signal into an optical signal ✓ 1310 nm technology ✓ Incl. 12V power supply unit and optical transmitter ✓ Terrestrial input ✓ Two optical outputs	7611682003062	1
Type	OCO 2-00			
Frequency range	10.7...12.75 GHz @ SAT 88...108 MHz @ FM 174...240 MHz @ DAB 470...862 MHz @ DVB-T			
Input				
Input level range TERR	67 dBµV...97 dBµV			
Recommended DVB-T input level @6 multiplex carriers	70 dBµV			
Cross polarisation isolation	typ. 30 dB			
Output				
Noise figure	0.5 dB			
Number of optical outputs	2			
Optical connector	FC/PC			
Optical level	6.5...7.5 dBm			
Wavelength	1310 nm			
General				
Operating voltage	12 ...20 V=			
Current consumption	<500 mA			
Output voltage for remote supply	11.5V / <80 mA			
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Mechanical data				
Diameter of feed	40 mm			
General				
Weight	1.800 kg			

	Type Part No.	Product description	GTIN	PU
	OVE 2-01 OVE00201	Optical 2-way splitter ✓ For distribution of optical signals ✓ With FC/PC connectors female	7611682003109	1
	OVE 3-01 OVE00301	Same as OVE 2-01, but 3-way	7611682003116	1
	OVE 4-01 OVE00401	Same as OVE 2-01, but 4-way	7611682003123	1
	OVE 8-01 OVE00801	Same as OVE 2-01, but 8-way	7611682003130	1
Type	OVE 2-01	OVE 3-01	OVE 4-01	OVE 8-01
Input				
Wavelength	1310 nm + 1550 nm			
Distribution				
Method	Dual Window			
Distribution loss	4 dB	5.5 dB	7 dB	10.1 dB
Directivity	> 50 dB			
Connectors				
Connector type	FC/PC female			
General				
Operating temperature range	-20...+50°C			
Dimensions (W × H × D) appr.	148 × 115 × 21 mm			
Weight	0.226 kg	0.240 kg	0.258 kg	0.282 kg
	OVE 2-02 OVE00202	Optical 2-way splitter ✓ For distribution of optical signals ✓ With 1 m pigtails with FC/PC connectors male	7611682003628	1
	OVE 3-02 OVE00302	Same as OVE 2-02, but 3-way	7611682003635	1
	OVE 4-02 OVE00402	Same as OVE 2-02, but 4-way	7611682003642	1
	OVE 8-02 OVE00802	Same as OVE 2-02, but 8-way	7611682003659	1
Type	OVE 2-02	OVE 3-02	OVE 4-02	OVE 8-02
Input				
Wavelength	1310 nm + 1550 nm			
Distribution				
Method	PLC			
Distribution loss	4.3 dB	5.3 dB	7.6 dB	10.8 dB
Directivity	> 55 dB			
Connectors				
Connector type	FC PC male			
General				
Operating temperature range	-20...+50°C			
Dimensions (W × H × D) appr.	98 × 79 × 10 mm			
Weight	0.098 kg	0.098 kg	0.950 kg	0.095 kg
	OAK 10-01 OAK01001	Optic cable steel armoured ✓ 10 m in polybag ✓ FC/PC male ✓ Colour gray	7611682002973	1
	OAK 50-01 OAK05001	Same as OAK 10-01, but 50 m	7611682003000	1
	OAK 200-01 OAK20001	Same as OAK 10-01, but 200 m on wooden drum	7611682003024	1
Type	OAK 10-01	OAK 50-01	OAK 200-01	
Mechanical data				
Cable length	10.00 m	50.00 m	200.00 m	
General				
Weight	0.146 kg	0.602 kg	2.600 kg	

	Type Part No.	Product description	GTIN	PU			
	OAK 1-02 OAK00102	Optic cable ✓ 1 m in polybag ✓ FC/PC male ✓ Colour white	7611682003529	1			
	OAK 5-02 OAK00502	Same as OAK 1-02, but 5 m	7611682003536	1			
	OAK 10-02 OAK01002	Same as OAK 1-02, but 10 m	7611682003550	1			
	OAK 20-02 OAK02002	Same as OAK 1-02, but 20 m	7611682003567	1			
	OAK 100-02 OAK10002	Same as OAK 1-02, but 100 m on plastic drum	7611682003598	1			
	OAK 200-02 OAK20002	Same as OAK 1-02, but 200 m on plastic drum	7611682003604	1			
	OAK 500-02 OAK50002	Same as OAK 1-02, but 500 m on wooden drum	7611682003611	1			
Type	OAK 1-02	OAK 5-02	OAK 10-02	OAK 20-02	OAK 100-02	OAK 200-02	OAK 500-02
Mechanical data							
Cable length	1.00 m	5.00 m	10.00 m	20.00 m	100.00 m	200.00 m	500.00 m
General							
Weight	0.016 kg	0.044 kg	0.078 kg	0.115 kg	0.650 kg	3.300 kg	4.750 kg

Type Part No.	Product description	GTIN	PU
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Amplifiers

CATV | premium-line | 1006 MHz | VFKD

NEW
22

Vodafone
Kabel
Deutschland

KLASSE
A
CLASS



BVS 14-69N
BVS01469N

CATV amplifier 40 dB | 111 dB μ V CSO/CTB

7611682008296 1

- ✓ KDG 1 TS140: D(4.4)
- ✓ GaAs technology
- ✓ Downstream 85...1218 MHz
- ✓ Attenuation and equalization adjustable with PCB switches
- ✓ Interstage attenuation and equalization pluggable with jumpers
- ✓ Upstream 5...65 MHz
- ✓ Active/passive pluggable with jumpers
- ✓ Attenuation adjustable with PCB switch
- ✓ Interstage attenuation and equalization pluggable with jumpers
- ✓ Al-die-cast housing
- ✓ Test ports at in- and output

Type	BVS 14-69N
EMC	-
Classification according to KDG 1 TS 140	D(4.4)
Downstream	
Frequency range	85...1006 MHz
Gain	40 dB
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)	111 dB μ V
Max. output level 112 channels QAM (flat, BER<1x10 ⁻⁹)	106 dB μ V
Attenuation: adjustable in 1 dB steps	0...15 dB
Equalization: adjustable in 1 dB steps	0...15 dB
Attenuation interstage: pluggable with jumpers	0 2 4 6 dB
Equalization interstage: pluggable with jumpers	0 2 4 6 dB
Gain interstage: pluggable with jumpers	40 36 dB
Return loss	≥ 18 (-1.5 dB/Oct.)
Noise figure typ.	< 7dB
Upstream	
Frequency range	5...65 MHz
Gain	30 dB
Noise figure	< 7dB
Attenuation: adjustable in 1 dB steps	0...15 dB
Equalization interstage: pluggable with jumpers	0 3 6 9 dB
Attenuation interstage: pluggable with jumpers	0 6 dB
RF connectors	
Type	F-female
Test port at in-/output	-20 ±2.5 dB/-20 ±1.0 dB
General	
Switching power supply	100...240 VAC / 50...60 Hz
Power indicator	LED
Power consumption	14 W
Equipotential bonding connection	4 mm ²
Operating temperature range (acc. to EN 60065)	-20...+50°C
Dimensions (W × H × D) appr.	182 × 146 × 71 mm
Weight	1.123 kg
IP code	IP54

Type Part No.	Product description	GTIN	PU
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NEU 21

Vodafone Kabel Deutschland

KLASSE A CLASS



BVS 20-69N
BVS02069N

CATV amplifier 38 dB | 107 dBμV CSO/CTB




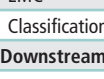
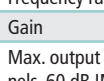
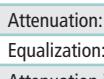
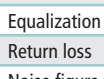
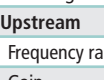
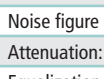
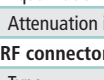
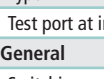
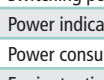
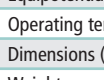
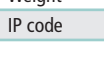






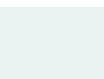
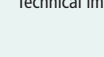
- ✓ KDG 1 TS 140: D(4.3)
- ✓ Downstream 85...1006 MHz
- ✓ Attenuation and equalization adjustable
- ✓ Interstage attenuation/equalization pluggable with jumpers
- ✓ Upstream 5...65 MHz
- ✓ Interstage attenuation/equalization pluggable with jumpers
- ✓ Al-die-cast housing
- ✓ Test ports at in- and output



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PU


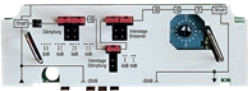
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Type	BVS 20-69N
EMC	according to EN 50083-2, class A
Classification according to KDG 1 TS 140	D(4.3)
Downstream	
Frequency range	85...1006 MHz
Gain	38 dB
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)	107 dBμV
Max. output level 112 channels QAM (flat, BER<1x10 ⁻⁹)	104 dBμV
Attenuation: adjustable in 1 dB steps	0...15 dB
Equalization: adjustable in 1 dB steps	0...15 dB
Attenuation interstage: pluggable with jumpers	0 2 4 6 dB
Equalization interstage: pluggable with jumpers	0 2 4 6 dB
Return loss	≥ 18 dB (-1.5 dB/Octave)
Noise figure typ.	≤ 5.5 dB
Upstream	
Frequency range	5...65 MHz
Gain	30 dB
Noise figure	≤ 7 dB
Attenuation: continuously adjustable	0...15 dB
Equalization interstage: pluggable with jumpers	0 3 6 9 dB
Attenuation interstage: pluggable with jumpers	0 6 dB
RF connectors	
Type	F-female
Test port at in-/output	-20 ±2.5 dB/-20 ±1.0 dB
General	
Switching power supply	100...240 VAC / 50...60 Hz
Power indicator	LED
Power consumption	10 W
Equipotential bonding connection	4 mm ²
Operating temperature range (acc. to EN 60065)	-20...+50°C
Dimensions (W × H × D) appr.	195 × 90 × 55 mm
Weight	0.480 kg
IP code	IP54

Type Part No.	Product description	GTIN	PU
                     	BVS 15-68 BVS01568 CATV amplifier 38 dB 100 dBμV CSO/CTB ✓ KDG 1 TS 140: C(4.2) ✓ Downstream 85...1006 MHz ✓ Attenuation and equalization adjustable ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Upstream 5...65 MHz ✓ Return path attenuation adjustable ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Al-die-cast/plastic housing ✓ Test ports at in- and output	7611682003710	1
Type	BVS 15-68		
EMC	according to EN 50083-2, class A		
Classification according to KDG 1 TS 140	C(4.2)		
Downstream			
Frequency range	85...1006 MHz		
Gain	38 dB		
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)	100 dB μ V		
Attenuation: continuously adjustable	0...20 dB		
Equalization: continuously adjustable	0...18 dB		
Attenuation interstage: pluggable with jumpers	0/6 dB		
Equalization interstage: pluggable with jumpers	0/2/4/6 dB		
Return loss	≥ 18 dB (-1.5 dB/Octave)		
Noise figure typ.	≤ 7 dB		
Upstream			
Frequency range	5...65 MHz		
Gain	30 dB		
Noise figure	≤ 7 dB		
Attenuation: continuously adjustable	0...20 dB		
Equalization interstage: pluggable with jumpers	0/3/6/9 dB		
Attenuation interstage: pluggable with jumpers	0/6 dB		
RF connectors			
Type	F-female		
Test port at in-/output	-20 \pm 2.5 dB/-20 \pm 1.0 dB		
General			
Switching power supply	100...240 VAC / 50...60 Hz		
Power indicator	LED		
Power consumption	5.5 W		
Equipotential bonding connection	4 mm ²		
Operating temperature range (acc. to EN 60065)	-20...+50°C		
Dimensions (W x H x D) appr.	200 x 90 x 50 mm		
Weight	0.474 kg		
IP code	IP20		


	Type Part No.	Product description	GTIN	PU
 	BVS 12-69N BVS01269N	CATV amplifier 20 dB 100 dBμV CSO/CTB <ul style="list-style-type: none"> ✓ KDG 1 TS 140: B(1.2) ✓ Downstream 85...1006 MHz ✓ Adjustable attenuator and equalizer ✓ Upstream 5...65 MHz ✓ Adjustable attenuator ✓ Al-die-cast/plastic housing 	7611682004816	1
	BVS 13-69N BVS01369N	CATV amplifier 30 dB 100 dBμV CSO/CTB <ul style="list-style-type: none"> ✓ KDG 1 TS 140: B(3.2) ✓ Downstream 85...1006 MHz ✓ Adjustable attenuator and equalizer ✓ Upstream 5...65 MHz ✓ Adjustable attenuator ✓ Al-die-cast/plastic housing 	7611682004823	1
Type	BVS 12-69N		BVS 13-69N	
EMC		according to EN 50083-2, class A		
Classification according to KDG 1 TS 140	B(1.2)		B(3.2)	
Downstream				
Frequency range		85...1006 MHz		
Gain	17...20 dB		27...30 dB	
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)	100/98 dB μ V*		100/98 dB μ V	
Attenuation: continuously adjustable		0...20 dB		
Equalization: continuously adjustable		0...18 dB		
Return loss		≥ 14 dB (-1.5 dB/Octave)		
Noise figure typ.		7 dB		
Upstream				
Frequency range		5...65 MHz		
Gain	17...20 dB		25...28 dB	
Attenuation: continuously adjustable		0...20 dB		
RF connectors				
Type		F-female		
General				
Power supply		230 VAC / 50 Hz		
Power indicator		LED		
Power consumption		6 W		
Equipotential bonding connection		4 mm ²		
Operating temperature range (acc. to EN 60065)		-20...+50°C		
Dimensions (W x H x D) appr.		192 x 89 x 40 mm		
Weight		0.360 kg		
IP code		IP20		
Comments		* @ 3dB slope, 100 dB μ V @ flat 0dB slope, 98 dB μ V		


Type Part No.	Product description	GTIN	PU																																																															
CATV amplifiers premium-line 1006 MHz																																																																		
 KLASSE A CLASS	BVS 13-68 BVS01368	CATV amplifier 30 dB 100 dBμV CSO/CTB ✓ Downstream 85...1006 MHz ✓ Attenuation and equalization adjustable ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Upstream 5...65 MHz ✓ Attenuation adjustable ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Al-die-cast/plastic housing ✓ Test ports at in- and output	7611682003703 1																																																															
	<table border="1"> <tr> <td>Type</td> <td>BVS 13-68</td> </tr> <tr> <td>EMC</td> <td>according to EN 50083-2, class A</td> </tr> <tr> <td>Classification according to KDG 1 TS 140</td> <td>C(3.2)</td> </tr> <tr> <td colspan="2">Downstream</td> </tr> <tr> <td>Frequency range</td> <td>85...1006 MHz</td> </tr> <tr> <td>Gain</td> <td>30 dB</td> </tr> <tr> <td>Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)</td> <td>100 dBμV</td> </tr> <tr> <td>Attenuation: continuously adjustable</td> <td>0...20 dB</td> </tr> <tr> <td>Equalization: continuously adjustable</td> <td>0...18 dB</td> </tr> <tr> <td>Attenuation interstage: pluggable with jumpers</td> <td>0/6 dB</td> </tr> <tr> <td>Equalization interstage: pluggable with jumpers</td> <td>0/2/4/6 dB</td> </tr> <tr> <td>Return loss</td> <td>≥ 18 dB (-1.5 dB/Octave)</td> </tr> <tr> <td>Noise figure typ.</td> <td>≤ 7 dB</td> </tr> <tr> <td colspan="2">Upstream</td> </tr> <tr> <td>Frequency range</td> <td>5...65 MHz</td> </tr> <tr> <td>Gain</td> <td>30 dB</td> </tr> <tr> <td>Noise figure</td> <td>≤ 7 dB</td> </tr> <tr> <td>Attenuation: continuously adjustable</td> <td>0...20 dB</td> </tr> <tr> <td>Equalization interstage: pluggable with jumpers</td> <td>0/3/6/9 dB</td> </tr> <tr> <td>Attenuation interstage: pluggable with jumpers</td> <td>0/6 dB</td> </tr> <tr> <td colspan="2">RF connectors</td> </tr> <tr> <td>Type</td> <td>F-female</td> </tr> <tr> <td>Test port at in-/output</td> <td>-20 \pm 2.5 dB/-20 \pm 1.0 dB</td> </tr> <tr> <td colspan="2">General</td> </tr> <tr> <td>Switching power supply</td> <td>100...240 VAC / 50...60 Hz</td> </tr> <tr> <td>Power indicator</td> <td>LED</td> </tr> <tr> <td>Power consumption</td> <td>5.5 W</td> </tr> <tr> <td>Equipotential bonding connection</td> <td>4 mm²</td> </tr> <tr> <td>Operating temperature range (acc. to EN 60065)</td> <td>-20...+50°C</td> </tr> <tr> <td>Dimensions (W x H x D) appr.</td> <td>200 x 90 x 50 mm</td> </tr> <tr> <td>Weight</td> <td>0.480 kg</td> </tr> <tr> <td>IP code</td> <td>IP20</td> </tr> </table>			Type	BVS 13-68	EMC	according to EN 50083-2, class A	Classification according to KDG 1 TS 140	C(3.2)	Downstream		Frequency range	85...1006 MHz	Gain	30 dB	Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)	100 dB μ V	Attenuation: continuously adjustable	0...20 dB	Equalization: continuously adjustable	0...18 dB	Attenuation interstage: pluggable with jumpers	0/6 dB	Equalization interstage: pluggable with jumpers	0/2/4/6 dB	Return loss	≥ 18 dB (-1.5 dB/Octave)	Noise figure typ.	≤ 7 dB	Upstream		Frequency range	5...65 MHz	Gain	30 dB	Noise figure	≤ 7 dB	Attenuation: continuously adjustable	0...20 dB	Equalization interstage: pluggable with jumpers	0/3/6/9 dB	Attenuation interstage: pluggable with jumpers	0/6 dB	RF connectors		Type	F-female	Test port at in-/output	-20 \pm 2.5 dB/-20 \pm 1.0 dB	General		Switching power supply	100...240 VAC / 50...60 Hz	Power indicator	LED	Power consumption	5.5 W	Equipotential bonding connection	4 mm ²	Operating temperature range (acc. to EN 60065)	-20...+50°C	Dimensions (W x H x D) appr.	200 x 90 x 50 mm	Weight	0.480 kg	IP code
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Weight	0.480 kg																																																																	
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	Type Part No.	Product description	GTIN	PU
 <p>KLASSE A CLASS</p>	BVS 20-00 BVS02000	CATV amplifier 36 dB 107 dBμV CSO/CTB <ul style="list-style-type: none"> ✓ Downstream 85...1006 MHz ✓ Attenuation and equalization adjustable PCB switches ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Upstream via pluggable return path module 5...65 MHz (not included in delivery) ✓ Al-die-cast housing ✓ Test ports at in- and output 	7611682001587	1
	BVS 20-46 BVS02046	CATV amplifier 30 dB 107 dBμV CSO/CTB <ul style="list-style-type: none"> ✓ Downstream 47/85...1006 MHz ✓ Attenuation and equalization adjustable PCB switches ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Upstream via pluggable return path module 5...65 MHz (not included in delivery) ✓ Al-die-cast housing ✓ Test ports at in- and output 	7611682003444	1
	BVS 20-47 BVS02047	CATV amplifier 36 dB 107 dBμV CSO/CTB <ul style="list-style-type: none"> ✓ Downstream 47/85...1006 MHz ✓ Attenuation and equalization adjustable PCB switches ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Upstream via pluggable return path module 5...65 MHz (not included in delivery) ✓ Al-die-cast housing ✓ Test ports at in- and output 	7611682003215	1
Type	BVS 20-00	BVS 20-46	BVS 20-47	
EMC	according to EN 50083-2, class A			
Downstream				
Frequency range	85...1006 MHz	47*/ 85... 1006 MHz	47*/ 85... 1006 MHz	
Gain	36 dB	30 dB	36 dB	
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)		107 dB μ V		
Attenuation: adjustable in 1 dB steps		0...15 dB		
Equalization: adjustable in 1 dB steps		0...15 dB		
Attenuation interstage: pluggable with jumpers		0 2 4 6 dB		
Equalization interstage: pluggable with jumpers		0 2 4 6 dB		
Return loss		≥ 18 dB (-1.5 dB/Octave)		
Noise figure typ.		≤ 6.5 dB		
RF connectors				
Type		F-female		
Test port at in-/output		-20 ±2.5 dB/-20 ±1.0 dB		
General				
Switching power supply		100...240 VAC / 50...60 Hz		
Power indicator		LED		
Power consumption		8 W		
Equipotential bonding connection		4 mm ²		
Operating temperature range (acc. to EN 60065)		-20...+50°C		
Dimensions (W × H × D) appr.		195 × 90 × 55 mm		
Weight		0.480 kg		
IP code		IP54		
Comments		* Without return path module	* Without return path module	
	BZU 20-65 BZU02065	Return path module, active <ul style="list-style-type: none"> ✓ 5...65 MHz ✓ Gain 30 dB ✓ For BVS 20-00, BVS 20-46, BVS 20-47 	7611682002164	1
	Type	BZU 20-65		
Upstream				
Frequency range	5...65 MHz			
Gain	30 dB			
Attenuation: adjustable in 1 dB steps	0...15 dB			
Equalization interstage: pluggable with jumpers	0/6 dB			
Attenuation interstage: pluggable with jumpers	0/3/6/9 dB			
Attenuation output pluggable	0/3/6/9 dB			
General				
Weight	0.028 kg			


	Type Part No.	Product description	GTIN	PU
	BZU 80-02 BZU08002	Cable simulator ✓ For BVS 14-66 ✓ 0...10 dB	7611682004069	1
Type	BZU 80-02			
Frequency range	5...1006 MHz			
Equalization	0...10 dB			
General				
Weight	0.005 kg			


CATV amplifier | premium-line | 1006 MHz | Remote power supply



	BVS 14-66 BVS01466	CATV amplifier 40 dB 111 dBμV CSO/CTB ✓ Remote power supply at input/output ✓ GaAs technology ✓ Downstream 85...1006 MHz ✓ Attenuation/equalization adjustable with PCB switches ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Cable simulator BZU 80-02 pluggable ✓ Upstream 5...65 MHz ✓ Active/passive pluggable with jumpers ✓ Attenuation adjustable with PCB switch ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Al-die-cast housing ✓ Test ports at in- and output	7611682004052	1
Type	BVS 14-66			
EMC	according to EN 50083-2, class A			
Downstream				
Frequency range	85...1006 MHz			
Gain	40 dB			
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)	111 dB μ V			
Attenuation: adjustable in 1 dB steps	0...15 dB			
Equalization: adjustable in 1 dB steps	0...15 dB			
Attenuation interstage: pluggable with jumpers	0 2 4 6 dB			
Equalization interstage: pluggable with jumpers	0 2 4 6 dB			
Return loss	≥ 18 dB (-1.5 dB/Octave)			
Noise figure typ.	< 7dB			
Upstream				
Frequency range	5...65 MHz			
Gain	30 dB			
Attenuation: adjustable in 1 dB steps	0...15 dB			
Equalization interstage: pluggable with jumpers	0 3 6 9 dB			
Attenuation interstage: pluggable with jumpers	0 6 dB			
RF connectors				
Type	CFA 12-00/CKA 12-00			
Test port at in-/output	-20 \pm 2.5 dB/-20 \pm 1.0 dB			
General				
Switching power supply	30...65 VAC / 50...60 Hz			
Power indicator	LED			
Power consumption	14 W			
Equipotential bonding connection	4 mm ²			
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Dimensions (W x H x D) appr.	182 x 146 x 71 mm			
Weight	1.123 kg			
IP code	IP54			



Type Part No.	Product description	GTIN	PU
	BVS 20-66 BVS02066	CATV amplifier 38 dB 107 dBμV CSO/CTB ✓ Remote power supply at input/output ✓ Downstream 85...1006 MHz ✓ Attenuation and equalization adjustable ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Upstream 5...65 MHz ✓ Interstage attenuation/equalization pluggable with jumpers ✓ Al-die-cast housing ✓ Test ports at in- and output	7611682003345 1
	Type BVS 20-66 EMC according to EN 50083-2, class A		
Downstream			
Frequency range	85...1006 MHz		
Gain	38 dB		
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)	107 dB μ V		
Attenuation: adjustable in 1 dB steps	0...15 dB		
Equalization: adjustable in 1 dB steps	0...15 dB		
Attenuation interstage: pluggable with jumpers	0 2 4 6 dB		
Equalization interstage: pluggable with jumpers	0 2 4 6 dB		
Return loss	≥ 18 dB (-1.5 dB/Octave)		
Noise figure typ.	≤ 5.5 dB		
Upstream			
Frequency range	5...65 MHz		
Gain	30 dB		
Noise figure	≤ 7 dB		
Attenuation: continuously adjustable	0...15 dB		
Equalization interstage: pluggable with jumpers	0 3 6 9 dB		
Attenuation interstage: pluggable with jumpers	0 6 dB		
RF connectors			
Type	F-female		
Test port at in-/output	-20 ± 2.5 dB / -20 ± 1.0 dB		
General			
Switching power supply	30...65 VAC / 50...60 Hz		
Power indicator	LED		
Power consumption	10 W		
Equipotential bonding connection	4 mm ²		
Operating temperature range (acc. to EN 60065)	$-20...+50^{\circ}\text{C}$		
Dimensions (W x H x D) appr.	195 x 90 x 55 mm		
Weight	0.480 kg		
IP code	IP54		



Type Part No.	Product description	GTIN	PU
CATV cabinets			
 KLASSE A CLASS	BZU 40-08 BZU04008	Cabinet CATV max. 8 subscribers pre-assembled ✓ 1 × BVS 13-69N CATV amplifier 30 dB 100 dB μ V CSO/CTB ✓ 1 × BVE 8-02P 8-way splitter 5...1218 MHz ✓ 1 × QEW 9-50 Earthing angle ✓ 1 × MAK 20-80 Patch cable ✓ 9 × MAK 30-80 Patch cable ✓ 1 × SZU 89-04 Double power socket ✓ 1 × QAS 4045 Mounting cabinet	7611682004694 1
	BZU 40-16 BZU04016	Cabinet CATV max. 16 subscribers pre-assembled ✓ 1 × BVS 20-69 CATV amplifier 38 dB 107 dB μ V CSO/CTB ✓ 2 × BVE 8-02P 8-way splitter 5...1218 MHz ✓ 1 × BVE 2-01P 2-way splitter 5...1218 MHz ✓ 1 × QEW 17-50 Earthing angle ✓ 19 × MAK 20-80 Patch cable ✓ 1 × MAK 30-80 Patch cable ✓ 1 × SZU 89-04 Double power socket ✓ 1 × QAS 4045 Mounting cabinet	7611682004700 1
Type	BZU 40-08	BZU 40-16	
EMC	according to EN 50083-2, class A		
Downstream			
Frequency range	85...1006 MHz		
Gain	27...30 dB		38 dB
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)	85 dB μ V		
Upstream			
Frequency range	5...65 MHz		
Gain	25...28 dB		30 dB
Connectors			
Connector type	F-female		
General			
Power supply	230 VAC / 50 Hz		
Power consumption	6 W		10 W
Dimensions (W × H × D) appr.	400 × 400 × 200 mm		
Weight	9.300 kg		9.100 kg



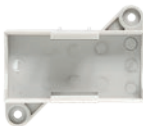
	Type Part No.	Product description	GTIN	PU
CATV amplifiers basic-line				
 <p>KLASSE A CLASS</p>	BVS 2-01 BVS00201	CATV amplifier 25 98 dBμV ✓ Downstream 47...862 MHz ✓ Adjustable attenuator and equalizer	7611682030020	1
	BVS 2-65 BVS00265	CATV amplifier 25 dB 98 dBμV ✓ Downstream 85...862 MHz ✓ Adjustable attenuator and equalizer ✓ Upstream 5...65 MHz, passive	7611682032024	1
	BVS 3-01 BVS00301	CATV amplifier 30 dB 98 dBμV 862 MHz ✓ Downstream 47...862 MHz ✓ Adjustable attenuator and equalizer ✓ Upstream 5...30 MHz, passive	7611682031034	1
	BVS 3-65 BVS00365	CATV amplifier 30 dB 98 dBμV ✓ Downstream 85...862 MHz ✓ Adjustable attenuator and equalizer ✓ Upstream 5...65 MHz, passive	7611682034035	1
Type	BVS 2-01	BVS 2-65	BVS 3-01	BVS 3-65
EMC	according to EN 50083-2, class A			
Downstream				
Frequency range	47...862 MHz	85...862 MHz	47...862 MHz	85...862 MHz
Gain	25 dB	25 dB	30 dB	30 dB
Max. output level CSO/CTB (CENELEC raster, 41 channels, 60 dB IMA)				98 dB μ V
Attenuation: continuously adjustable				0...20 dB
Equalization: continuously adjustable				0...18 dB
Return loss				≥ 14 dB (-1.5 dB/Oktave)
Noise figure typ.				≤ 7 dB
Upstream				
Frequency range	-	5...65 MHz	5...30 MHz	5...65 MHz
RF connectors				
Type	F-female			
General				
Power supply	230 VAC / 50 Hz			
Power indicator	LED			
Power consumption	6 W			
Equipotential bonding connection	4 mm ²			
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Dimensions (W x H x D) appr.	160 x 100 x 45 mm			
Weight	0.488 kg	0.488 kg	0.478 kg	0.478 kg
IP code	IP20			



	Type Part No.	Product description	GTIN	PU
	TVS 10-00 TVS01000	Broadband amplifier <ul style="list-style-type: none"> ✓ For small CATV networks ✓ 47...862 MHz ✓ Adjustable attenuator ✓ Incl. 2 adapters (IEC-male / F-male) 	7611682060102	1
Type		TVS 10-00		
Downstream				
Frequency range		47...862 MHz		
Gain		22 dB		
Max. output level (3rd order, EN 50083-3, 60 dB KMA)		108 dB μ V		
Attenuation: continuously adjustable		0...20 dB		
Noise figure typ.		≤ 7 dB		
Output				
Noise figure		≤ 7 dB		
RF connectors				
Type		IEC-female		
General				
Power supply		230 V~ / 50 Hz		
Power indicator		LED		
Power consumption		3 W		
Equipotential bonding connection		4 mm ²		
Operating temperature range (acc. to EN 60065)		-20...+50°C		
Dimensions (W × H × D) appr.		160 × 100 × 45 mm		
Weight		0.488 kg		
IP code		IP20		


	Type Part No.	Product description	GTIN	PU
	BVS 10-00 BVS01000	CATV inline amplifier 20 dB 862 MHz ✓ Remote power supply via input or output ✓ Mounting bracket ✓ Die-cast housing	7611682031003	1
	BVS 10-01 BVS01001	Amplifier set ✓ Amplifier BVS 10-00 ✓ Power supply TZU 11-04 ✓ Power inserter TZU 15-04 ✓ Mounting bracket TZU 14-00	7611682031010	1
	BVS 10-30 BVS01030	CATV inline amplifier 30 dB ✓ Remote power supply via input or output ✓ 47...862 MHz ✓ Mounting bracket ✓ Die-cast housing ✓ With adjustable attenuator - for indoor use only	7611682000313	1
	BVS 10-02 BVS01002	CATV inline amplifier 10 dB ✓ 47...862 MHz ✓ In die-cast housing ✓ Remote feedable	7611682031041	1
Type	BVS 10-00	BVS 10-01	BVS 10-30	BVS 10-02
EMC	according to EN 50083-2, class A			
Downstream				
Frequency range	47...862 MHz			
Gain	18...20 dB	18...20 dB	27...30 dB	10 dB
Max. output level (3rd order, EN 50083-3, 60 dB KMA)	102 dB μ V			
Max. output level (2nd order, EN 50083-3, 60 dB IMA)	92 dB μ V			
Attenuation: continuously adjustable	-	-	0...18 dB	-
Return loss	≥ 14 dB (-1.5 dB/Octave)			
Noise figure typ.	≤ 8 dB			
RF connectors				
Type	F-female			
General				
Remote voltage	12 V=	12 V=	12 V=	5/6 V=
Current consumption	≤ 65 mA	≤ 65 mA	≤ 100 mA	≤ 30 mA
Max. through-current	1000 mA	1000 mA	300 mA	1000 mA
Operating temperature range (acc. to EN 60065)	-20...+50°C	-20...+50°C	-20...+50°C	-20...+50°C
Dimensions (W x H x D) appr.	85 x 26 x 20 mm			
Weight	0.066 kg	0.210 kg	0.074 kg	0.066 kg
External accessories				
Power supply unit	-	230 VAC/50 Hz 12 V/200 mA	-	-
	TZU 14-00 TZU01400	Mounting bracket ✓ For miniature inline amplifiers (e.g. BVS 10-xx/SVS 2-xx)	7611682007145	1
	Type	TZU 14-00		
General				
Weight	0.009 kg			


	Type Part No.	Product description	GTIN	PU
	TVS 14-00 TVS01400	CATV Distribution amplifier ✓ For small CATV networks ✓ To plug on to a wall outlet ✓ 4-way distribution	7611682000368	1
	TVS 16-00 TVS01600	CATV Distribution amplifier ✓ For small CATV networks ✓ To plug on to a wall outlet ✓ 47...862 MHz ✓ 6-way distribution	7611682060164	1
Type		TVS 14-00	TVS 16-00	
Downstream				
Frequency range		47...862 MHz		
Gain		4 × 10 dB	6 × 10 dB	
Max. output level (3rd order, EN 50083-3, 60 dB KMA)		93 dBμV		
Attenuation: continuously adjustable		0...18 dB		
Return loss		≤ 7 dB		
Noise figure typ.		≤ 7 dB		
RF connectors				
Type		1 × IEC-female @ input 4 × IEC-male @ output	1 × IEC-female @ input 6 × IEC-male @ output	
General				
Power supply		230 VAC / 50 Hz		
Power consumption		3.0 W		
Dimensions (W × H × D) appr.		80 × 140 × 60 mm		
Weight		0.362 kg	0.374 kg	
IP code		IP20		
	TVS 8-01 TVS00801	CATV amplifier for inhouse distribution ✓ 47...862 MHz ✓ 2-way distribution	7611682060089	1
	TVS 9-02 TVS00902	CATV amplifier for inhouse distribution ✓ 47...862 MHz ✓ 3-way distribution	7611682060096	1
	TVS 21-00 TVS02100	CATV amplifier for inhouse distribution ✓ 47...862 MHz ✓ 2-way distribution ✓ Plug-on type on antenna wall outlets ✓ Incl. power supply	7611682000337	1
Type		TVS 8-01	TVS 9-02	TVS 21-00
Downstream				
Frequency range		47...862 MHz		
Gain		2 × 12 dB	R+TV 5dB R/TV 15 dB	1 × 0 dB 1 × 12 dB
Max. output level (3rd order, EN 50083-3, 60 dB KMA)		92 dBμV	96 dBμV	93 dBμV
Noise figure typ.		≤ 7 dB	≤ 7 dB	-
Output				
Noise figure		≤ 7 dB	≤ 7 dB	-
RF connectors				
Type		1 × IEC-female with cable @ input 2 × IEC male @ output	1 × IEC female/1 × IEC male @ input* 2 × IEC female/1 × IEC male @ output	1 × IEC female @ input 1 × IEC male/1 × F male @ output
General				
Operating voltage		-	-	12 VDC
Power supply		230 V~ / 50 Hz	230 V~ / 50 Hz	-
Power consumption		2.8 W	3 W	-
Current consumption		-	-	120 mA
Dimensions (W × H × D) appr.		60 × 90 × 90 mm	80 × 140 × 60 mm	40 × 50 × 30 mm
Weight		0.230 kg	0.356 kg	0.340 kg
IP code		IP20		
External accessories				
Plug-in power supply		-	-	230 VAC/2.4 W
General				
Comments		-	*At rear side to plug on to a antenna wall outlet	-



Type	Part No.	Product description	GTIN	PU
DVB-T/T2 amplifiers basic-line				
	TVS 5-00 TVS00500	Multiband amplifier with 4 inputs <ul style="list-style-type: none"> ✓ For use in terrestrial head ends ✓ 4 inputs, UKW, Ch 2...4, Ch 5...12, Ch 21...69 	7611682060058	1
Type	TVS 5-00			
Inputs				
Connector	IEC			
Frequency range	47...68 MHz @ B I 87.5...108 MHz @ FM 174...230 MHz @ B III 470...862 MHz @ B IV/V			
Gain	30 dB @ B I 30 dB @ FM 30 dB @ B III 30 dB @ B IV/V			
Attenuator adjustment range	0...20 dB			
Output				
Max. output level TERR (3rd order, EN 50083-3, 60 dB KMA)	109 dBμV			
Connector	IEC			
General				
Power indicator	LED			
Power consumption	3 W			
Equipotential bonding connection	4 mm ²			
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Dimensions (W × H × D) appr.	160 × 100 × 45 mm			
Weight	0.500 kg			
IP code	IP20			
SAT amplifiers				
	SVS 1-00 SVS00100	SAT wideband amplifier <ul style="list-style-type: none"> ✓ Can be used as inline amplifier for combined terrestrial, CATV and satellite TV signals ✓ 47...2200 MHz ✓ 18...25 dB ✓ 22 kHz-compatible ✓ DiSEqC-compatible ✓ Unicable-compatible 	7611682150018	1
Type	SVS 1-00			
Frequency range	47 ... 2200 MHz			
Gain	18 ... 25 dB			
Inputs				
Attenuator adjustment range	0...20 dB			
Output				
Max. output level TERR (3rd order, EN 50083-3, 60 dB KMA)	101 dBμV			
Max. output level SAT (3rd order SAT, EN 50083-3, 35 dB KMA)	108 dBμV			
Noise figure	8 dB			
RF connectors				
Type	F-female			
General				
DC power pass	yes			
Power supply	230 V~ / 50 Hz			
Power indicator	LED			
Power consumption	3 W			
Equipotential bonding connection	4 mm ²			
Dimensions (W × H × D) appr.	160 × 100 × 45 mm			
Weight	0.486 kg			
IP code	IP20			

	Type Part No.	Product description	GTIN	PU																																																																																																												
 	SVS 2-01 SVS00201	SAT inline amplifier 950...2400 MHz 20 dB ✓ DC bypass ✓ 22 kHz-compatible ✓ DiSEqC-compatible ✓ Unicable-compatible ✓ The amplifier is powered through the coaxial cable	7611682151022	1																																																																																																												
	SVS 2-02 SVS00202	Same as SVS 2-0, but 47...2400 MHz 16...20 dB	7611682152029	1																																																																																																												
	SVS 2-04 SVS00204	Same as SVS 2-0, but 47...2400 MHz 10 dB	7611682000221	1																																																																																																												
	SVS 2-05 SVS00205	Same as SVS 2-0, but 47...2400 MHz 8...15 dB	7611682003338	1																																																																																																												
	SVS 4-00 SVS00400	Same as SVS 2-0, but 47...862 MHz 950...2400 MHz 12...14 dB 14...17 dB	7611682150049	1																																																																																																												
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Weight	0.070 kg	0.070 kg	0.030 kg	0.050 kg	0.113 kg																																																																																																											
	TZU 14-00 TZU01400	Mounting bracket ✓ For miniature inline amplifiers (e.g. BVS 10-xx/SVS 2-xx)	7611682007145	1																																																																																																												
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Type	Part No.	Product description	GTIN	PU
		SVS 440-06	7611682006858	1
		SVS44006		
Type	SVS 440-06			
Inputs				
Number	4			
Frequency range	250...2400 MHz			
Attenuator adjustment range	0...15 dB			
Gain SAT	14...20 dB ±2 dB			
Output				
Max. output level SAT (3rd order SAT, EN 50083-3, 35 dB KMA)	114 dBμV			
Trunk line				
Isolation internal	>38 dB			
General				
Operating voltage	18 V			
Current consumption	220 mA ±12 mA			
Equipotential bonding connection	4 mm ²			
Operating temperature range (acc. to EN 60065)	-20...+50°C			
Dimensions (W × H × D) appr.	170 × 145 × 40 mm			
Weight	0.464 kg			
IP code	IP20			

Type	Part No.	Product description	GTIN	PU			
Mechanical accessories							
Mounting cabinet							
	QAS 3045 QAS3045	Mounting cabinet 300 x 400 x 200 mm <ul style="list-style-type: none"> ✓ Steel plate cabinet with recessed, removable door ✓ Surface powder-coated ✓ Colour: RAL 7035 ✓ Four-way locking incl. locking cylinder and 2 x key ✓ Incl. perforated mounting plate and earthing cable 	7611682007589	1			
	QAS 4045 QAS4045	Same as QAS 3045, but 400 x 400 x 200 mm	7611682007596	1			
	QAS 4065 QAS4065	Same as QAS 3045, but 400 x 600 x 200 mm	7611682007602	1			
	QAS 6065 QAS6065	Same as QAS 3045, but 600 x 600 x 200 mm	7611682007619	1			
	QAS 6085 QAS6085	Same as QAS 3045, but 600 x 800 x 200 mm	7611682007626	1			
	QAS6010501 QAS6010501	<ul style="list-style-type: none"> ✓ Mounting cabinet 600 x 1000 x 200 mm Steel plate cabinet with recessed, removable door ✓ Surface powder-coated ✓ Colour: RAL 7035 ✓ Four-way locking incl. locking cylinder and 2 x key ✓ Incl. perforated mounting plate and earthing cable 	7611682004113	1			
	QAS8010501 QAS8010501	<ul style="list-style-type: none"> ✓ Mounting cabinet 800 x 1000 x 200 mm Steel plate cabinet with recessed, removable door ✓ Surface powder-coated ✓ Colour: RAL 7035 ✓ Four-way locking incl. locking cylinder and 2 x key ✓ Incl. perforated mounting plate and earthing cable 	7611682004144	1			
Type	QAS 3045	QAS 4045	QAS 4065	QAS 6065	QAS 6085	QAS6010501	QAS8010501
General							
Dimensions (W x H x D) appr.	300 x 400 x 200 mm	400 x 400 x 200 mm	400 x 600 x 200 mm	600 x 600 x 200 mm	600 x 800 x 200 mm	600 x 1000 x 200 mm	800 x 1000 x 200 mm
Common							
Mounting area	-	-	-	-	-	-	-
General							
Weight	6.7 kg	8.2 kg	10.5 kg	16.0 kg	19.0 kg	22.0 kg	26.0 kg



Perforated mounting plate							
	QMP 3045 QMP3045	Perforated mounting plate 300 x 400 mm <ul style="list-style-type: none"> ✓ Galvanised sheet steel 1.5 mm ✓ Hole diameter 3 mm, hole spacing 5 mm 	7611682007633	1			
	QMP 4045 QMP4045	Same as QMP 3045, but 400 x 400 mm	7611682007640	1			
	QMP 4065 QMP4065	Same as QMP 3045, but 400 x 600 mm	7611682007657	1			
	QMP 601-05 QMP60105	Same as QMP 3045, but 600 x 1000 mm	7611682007664	1			
	QMP 6065 QMP6065	Same as QMP 3045, but 600 x 600 mm	7611682007671	1			
	QMP 6085 QMP6085	Same as QMP 3045, but 600 x 600 mm	7611682007688	1			
	Type	QMP 3045	QMP 4045	QMP 4065	QMP 601-05	QMP 6065	QMP 6085
General							
Dimensions (W x H x D) appr.	300 x 400 x 20 mm	400 x 400 x 20 mm	400 x 600 x 20 mm	600 x 1000 x 20 mm	600 x 600 x 20 mm	600 x 800 x 20 mm	
Common							
Mounting area	-	-	-	-	-	-	
General							
Weight	1.2 kg	1.6 kg	2.4 kg	-	3.5 kg	4.5 kg	

Type	Part No.	Product description	GTIN	PU
19" Racks				
	QRA 200 QRA00200	19" Rack 2 RU ✓ Steplessly adjustable depth 22 to 40 cm ✓ Including screws, cage nuts and wall mounting ✓ Material: sturdy sheet steel, surface powder-coated	7611682007725	1
	QRA 400 QRA00400	Same as QRA 400, but 4 RU	7611682007732	1
Type	QRA 200		QRA 400	
General				
Dimensions (W x H x D) appr.	497 x 95 x 225...400 mm		497 x 185 x 225...400 mm	
Weight	1.84 kg		2.72 kg	
	SWZ 4-00 SWZ00400		7611682007749	1
	Type	SWZ 4-00		


Type Part No. Product description GTIN PU

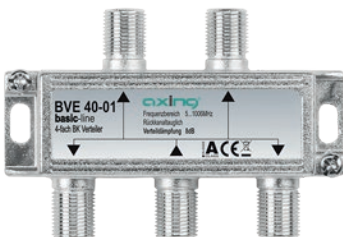
Splitters and Taps

Splitters CATV | premium-line | 1218 MHz


 	BVE 2-01P BVE00201P	2-way splitters 5...1218 MHz type 01 ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed ✓ High intermodulation suppression ✓ Class A (+10 dB) according to EN 50083-2 ✓ Return loss and isolation according to VFKD TS 220 ✓ Vodafone Kabel Deutschland approved	7611682005592	1
	BVE 3-01P BVE00301P	Same as BVE 2-01P, but 3-way splitter	7611682005608	1
	BVE 4-01P BVE00401P	Same as BVE 2-01P, but 4-way splitter	7611682005615	1
	BVE 6-01P BVE00601P	Same as BVE 2-01P, but 6-way splitter	7611682005622	1
	BVE 8-01P BVE00801P	Same as BVE 2-01P, but 8-way splitter	7611682005639	1



Type	BVE 2-01P	BVE 3-01P	BVE 4-01P	BVE 6-01P	BVE 8-01P
Frequency range	5...1218 MHz				
Intermodulation ratio (EN 60728-4)	118.5 dB μ V	115 dB μ V	120 dB μ V	120 dB μ V	113.5 dB μ V
Splitting	2-way	3-way	4-way	6-way	8-way
Distribution loss					
5...94 MHz	≤ 3.3 dB	≤ 5.2 dB	≤ 6.9 dB	≤ 8.5 dB	≤ 10.2 dB
94...188 MHz	≤ 3.3 dB	≤ 5.2 dB	≤ 6.6 dB	≤ 8.4 dB	≤ 10 dB
188...376 MHz	≤ 3.4 dB	≤ 5.3 dB	≤ 6.8 dB	≤ 8.6 dB	≤ 10.2 dB
376...752 MHz	≤ 3.5 dB	≤ 5.6 dB	≤ 7.3 dB	≤ 8.9 dB	≤ 10.8 dB
752...950 MHz	≤ 3.5 dB	≤ 5.7 dB	≤ 7.4 dB	≤ 9.5 dB	≤ 11.4 dB
950...1218 MHz	≤ 3.9 dB	≤ 6.3 dB	≤ 8 dB	≤ 10.1 dB	≤ 12.3 dB
Return loss					
5...94 MHz	≥ 18 dB				
94...188 MHz	≥ 16.5 dB				
188...376 MHz	≥ 15 dB				
376...752 MHz	≥ 13.5 dB				
752...1218 MHz	≥ 12 dB				
Isolation					
Output-output @ 10...94 MHz	≥ 22 dB				
Output-output @ 94...188 MHz	≥ 20.5 dB				
Output-output @ 188...376 MHz	≥ 19 dB				
Output-output @ 376...752 MHz	≥ 17.5 dB				
Output-output @ 752...950 MHz	≥ 16 dB				
Output-output @ 950...1218 MHz	≥ 14 dB				
Connectors					
Connector type	F				
General					
Dimensions (W × H × D) appr.	48 × 50 × 26 mm	72 × 50 × 26 mm	72 × 50 × 26 mm	117 × 60 × 27 mm	117 × 60 × 27 mm
Weight	0.045 kg	0.063 kg	0.063 kg	0.120 kg	0.120 kg



	Type Part No.	Product description	GTIN	PU
	BVE 4-02P BVE00402P	4-way splitter 5...1218 MHz type 02 ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed ✓ High intermodulation suppression ✓ Class A (+10 dB) according to EN 50083-2 ✓ Return loss and isolation according to VFKD TS 220 ✓ Vodafone Kabel Deutschland approved	7611682006216	1
	BVE 6-02P BVE00602P	Same as BVE 4-02P, but 6-way splitter	7611682006223	1
	BVE 8-02P BVE00802P	Same as BVE 4-02P, but 8-way splitter	7611682006230	1
Type	BVE 4-02P	BVE 6-02P	BVE 8-02P	
Frequency range		5...1218 MHz		
Intermodulation ratio (EN 60728-4)		120 dB μ V		
Splitting	4-way	6-way	8-way	
Distribution loss				
5...40 MHz	$\leq 6.9 \pm 1$ dB	≤ 8.5 dB	$\leq 10.2 \pm 1$ dB	
40...470 MHz	$\leq 6.8 \pm 1$ dB	≤ 8.8 dB	≤ 10.5 dB	
470...862 MHz	$\leq 7.2 \pm 1$ dB	≤ 9.3 dB	≤ 11.5 dB	
862...1006 MHz	$\leq 7.4 \pm 1$ dB	≤ 9.6 dB	≤ 12.0 dB	
1006...1300 MHz	$\leq 8 \pm 1$ dB	≤ 10.8 dB	≤ 14.5 dB	
Return loss				
5...40 MHz		≥ 20 dB		
40...470 MHz		≥ 22 dB		
470...862 MHz		≥ 20 dB		
862...1006 MHz		≥ 20 dB		
1006...1300 MHz		≥ 20 dB		
Isolation				
Output-output @ 5...40 MHz		≥ 27 dB		
Output-output @ 40...470 MHz		≥ 32 dB		
Output-output @ 470...862 MHz		≥ 30 dB		
Output-output @ 862...1006 MHz		≥ 28 dB		
output-output @ 1006...1300 MHz		≥ 26 dB		
Connectors				
Connector type		F		
General				
Dimensions (W x H x D) appr.	89 x 39 x 54 mm	89 x 39 x 54 mm	115 x 39 x 54 mm	
Weight	0.165 kg	0.175 kg	0.220 kg	



	Type Part No.	Product description	GTIN	PU																																																																																				
Splitters CATV basic-line																																																																																								
 <p>KLASSE A CLASS</p>	BVE 20-01 BVE02001	2-way splitter 5...1006 MHz ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed	7611682240207	1																																																																																				
	BVE 30-01 BVE03001	Same as BVE 20-01, but 3-way splitter	7611682240306	1																																																																																				
	BVE 40-01 BVE04001	Same as BVE 20-01, but 4-way splitter	7611682240504	1																																																																																				
	BVE 60-01 BVE06001	Same as BVE 20-01, but 6-way splitter	7611682240702	1																																																																																				
	BVE 80-01 BVE08001	Same as BVE 20-01, but 8-way splitter	7611682240900	1																																																																																				
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Type	BVE 20-01	BVE 30-01	BVE 40-01	BVE 60-01	BVE 80-01																																																																																			
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Splitters for two devices

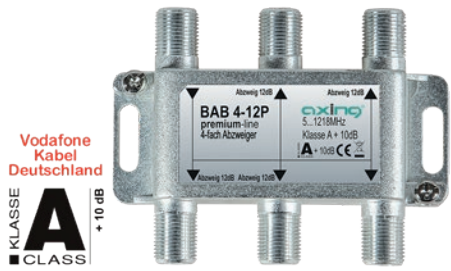
	TVE 1-03 TVE00103	Same as TVE 1-01, but 0.1...2200 MHz	7611682000030	1																																				
	TVE 2-03 TVE00203	Same as TVE 2-01, but 0.1...2200 MHz	7611682050042	1																																				
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Type	TVE 1-03	TVE 2-03																																						
Application	TV	Radio																																						
Frequency range	0.1...2200 MHz																																							
Isolation @ 0.1...1006 MHz	22 dB																																							
DC power pass	yes																																							
Distribution loss																																								
0.1...1006 MHz	3.5 dB																																							
Connectors																																								
Connector type	1 × IEC-female/2 × IEC-male	2 × IEC-female/1 × IEC-male																																						
General																																								
Dimensions (W × H × D) appr.	55 × 34 × 18 mm	60 × 31 × 18 mm																																						
Weight	0.032 kg	0.036 kg																																						



	Type Part No.	Product description	GTIN	PU
 	TZU 40-01 TZU04001	Splitter for two devices Multimedia ✓ To plug on to a multimedia connector ✓ 0,1...1006 MHz ✓ 4 dB through loss between input and outputs ✓ Connector 1: Input ✓ Connector 2: Output ✓ Connector 3: Output	7611682002591	1
	TZU 40-02 TZU04002	Splitter for two devices SAT ✓ To plug on to a SAT connector ✓ 0.1...2200 MHz ✓ 4 dB through loss between input and outputs ✓ Connector 1: Input ✓ Connector 2: Output ✓ Connector 3: Output	7611682002607	1
Type	TZU 40-01		TZU 40-02	
Application	Multimedia		SAT	
Frequency range	0.1...1006 MHz		0.1...2200 MHz	
Through loss	4 dB		4 dB	
DC power pass	-		yes	
Connectors				
Connector 1	IEC-female		F-male, quickfix	
Connector 2	IEC-male		F-female	
Connector 3			F-female	
General				
Dimensions (W × H × D) appr.		55 × 34 × 18 mm		
Weight	0.029 kg		0.025 kg	


Type Part No.	Product description	GTIN	PU				
Taps CATV premium-line 1218 MHz							
 	BAB 1-06P BAB00106P <ul style="list-style-type: none"> ✓ 1-way tap 6 dB 5...1218 MHz ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed ✓ High intermodulation suppression ✓ Class A (+10 dB) according to EN 50083-2 ✓ Return loss and isolation according to VFKD TS 220 ✓ Vodafone Kabel Deutschland approved 	7611682005646	1				
	BAB 1-08P BAB00108P <p>Same as BAB 1-06P, but 8 dB tap loss</p>	7611682005653	1				
	BAB 1-10P BAB00110P <p>Same as BAB 1-06P, but 10 dB tap loss</p>	7611682005660	1				
	BAB 1-12P BAB00112P <p>Same as BAB 1-06P, but 12 dB tap loss</p>	7611682005677	1				
	BAB 1-16P BAB00116P <p>Same as BAB 1-06P, but 16 dB tap loss</p>	7611682005684	1				
	BAB 1-20P BAB00120P <p>Same as BAB 1-06P, but 20 dB tap loss</p>	7611682005691	1				
	BAB 1-24P BAB00124P <p>Same as BAB 1-06P, but 24 dB tap loss</p>	7611682005707	1				
Type	BAB 1-06P	BAB 1-08P	BAB 1-10P	BAB 1-12P	BAB 1-16P	BAB 1-20P	BAB 1-24P
Frequency range	5...1218 MHz						
Intermodulation ratio (EN 60728-4)	120 dB μ V	120 dB μ V	120 dB μ V	120 dB μ V	118 dB μ V	118 dB μ V	118 dB μ V
Tap loss							
5...94 MHz	≤ 7.8 dB	≤ 9.1 dB	≤ 10.5 dB	≤ 12.2 dB	≤ 16.8 dB	≤ 20.2 dB	≤ 23.8 dB
94...188 MHz	≤ 6.1 dB	≤ 8.9 dB	≤ 10.4 dB	≤ 12.1 dB	≤ 16.7 dB	≤ 20.1 dB	≤ 23.8 dB
188...376 MHz	≤ 6.2 dB	≤ 8.7 dB	≤ 10.3 dB	≤ 12 dB	≤ 16.7 dB	≤ 20.1 dB	≤ 23.7 dB
376...752 MHz	≤ 6.5 dB	≤ 8.7 dB	≤ 10.3 dB	≤ 12 dB	≤ 16.8 dB	≤ 20.2 dB	≤ 23.7 dB
752...950 MHz	≤ 6.4 dB	≤ 7.7 dB	≤ 9.9 dB	≤ 11.8 dB	≤ 16.9 dB	≤ 20.3 dB	≤ 23.7 dB
950...1218 MHz	≤ 6.3 dB	≤ 7.2 dB	≤ 10.9 dB	≤ 11.9 dB	≤ 17.4 dB	≤ 20.9 dB	≤ 24.3 dB
Through loss							
5...94 MHz	≤ 2.1 dB	≤ 1.4 dB	≤ 0.9 dB	≤ 0.6 dB	≤ 0.4 dB	≤ 0.4 dB	≤ 0.4 dB
94...188 MHz	≤ 2.2 dB	≤ 1.3 dB	≤ 1 dB	≤ 0.5 dB	≤ 0.4 dB	≤ 0.4 dB	≤ 0.3 dB
188...376 MHz	≤ 2.2 dB	≤ 1.4 dB	≤ 1 dB	≤ 0.6 dB	≤ 0.5 dB	≤ 0.4 dB	≤ 0.5 dB
376...752 MHz	≤ 2.3 dB	≤ 1.7 dB	≤ 1.3 dB	≤ 0.9 dB	≤ 0.6 dB	≤ 0.6 dB	≤ 0.7 dB
752...950 MHz	≤ 2.5 dB	≤ 1.9 dB	≤ 1.5 dB	≤ 1 dB	≤ 0.8 dB	≤ 0.7 dB	≤ 0.9 dB
950...1218 MHz	≤ 3.4 dB	≤ 2.4 dB	≤ 2.4 dB	≤ 1.3 dB	≤ 1.1 dB	≤ 1.1 dB	≤ 1.4 dB
Return loss							
5...94 MHz	≥ 18 dB						
94...188 MHz	≥ 16.5 dB						
188...376 MHz	≥ 15 dB						
376...752 MHz	≥ 13.5 dB						
752...1218 MHz	≥ 12 dB						
Connectors							
Connector type	F						
General							
Dimensions (W × H × D) appr.	45 × 55 × 25 mm						
Weight	0.045 kg						

Type	Part No.	Product description	GTIN	PU		
 	BAB 2-08P BAB00208P	2-way tap 8 dB 5...1218 MHz ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed ✓ High intermodulation suppression ✓ Class A (+10 dB) according to EN 50083-2 ✓ Return loss and isolation according to VFKD TS 220 ✓ Vodafone Kabel Deutschland approved	7611682005714	1		
	BAB 2-10P BAB00210P	Same as BAB 2-08P, but 10 dB tap loss	7611682005721	1		
	BAB 2-12P BAB00212P	Same as BAB 2-08P, but 12 dB tap loss	7611682005738	1		
	BAB 2-16P BAB00216P	Same as BAB 2-08P, but 16 dB tap loss	7611682005745	1		
	BAB 2-20P BAB00220P	Same as BAB 2-08P, but 20 dB tap loss	7611682005752	1		
	BAB 2-24P BAB00224P	Same as BAB 2-08P, but 24 dB tap loss	7611682005769	1		
	Type	BAB 2-08P	BAB 2-10P	BAB 2-12P	BAB 2-16P	BAB 2-20P
Frequency range	5...1218 MHz					
Intermodulation ratio (EN 60728-4)	120 dB μ V					
Tap loss						
5...94 MHz	≤ 9.7 dB	≤ 10.6 dB	≤ 12.5 dB	≤ 16.9 dB	≤ 20.3 dB	≤ 23.9 dB
94...188 MHz	≤ 8.5 dB	≤ 10.4 dB	≤ 12.1 dB	≤ 16.8 dB	≤ 20.2 dB	≤ 23.9 dB
188...376 MHz	≤ 8.3 dB	≤ 10.5 dB	≤ 12.2 dB	≤ 16.8 dB	≤ 20.2 dB	≤ 24 dB
376...752 MHz	≤ 8.8 dB	≤ 10.5 dB	≤ 12.6 dB	≤ 17.3 dB	≤ 20.7 dB	≤ 24.5 dB
752...950 MHz	≤ 9 dB	≤ 10.4 dB	≤ 12.6 dB	≤ 17.3 dB	≤ 20.6 dB	≤ 24.8 dB
950...1218 MHz	≤ 9.2 dB	≤ 11.2 dB	≤ 12.9 dB	≤ 17.5 dB	≤ 21.5 dB	≤ 25 dB
Through loss						
5...94 MHz	≤ 3.6 dB	≤ 2.1 dB	≤ 1.5 dB	≤ 0.8 dB	≤ 0.7 dB	≤ 0.7 dB
94...188 MHz	≤ 3.6 dB	≤ 2 dB	≤ 1.5 dB	≤ 0.7 dB	≤ 0.6 dB	≤ 0.8 dB
188...376 MHz	≤ 3.8 dB	≤ 2.3 dB	≤ 1.7 dB	≤ 0.7 dB	≤ 0.6 dB	≤ 0.8 dB
376...752 MHz	≤ 4 dB	≤ 2.9 dB	≤ 1.9 dB	≤ 1.1 dB	≤ 1.1 dB	≤ 1 dB
752...950 MHz	≤ 4.1 dB	≤ 3.2 dB	≤ 1.9 dB	≤ 1.3 dB	≤ 1.3 dB	≤ 1.3 dB
950...1218 MHz	≤ 4.7 dB	≤ 4.4 dB	≤ 2.4 dB	≤ 1.7 dB	≤ 1.8 dB	≤ 1.7 dB
Return loss						
5...94 MHz	≥ 18 dB					
94...188 MHz	≥ 16.5 dB					
188...376 MHz	≥ 15 dB					
376...752 MHz	≥ 13.5 dB					
752...1218 MHz	≥ 12 dB					
Isolation						
Tap-tap @ 47...862 MHz	≥ 32 dB					
Tap-tap @ 862...950 MHz	≥ 30 dB					
Tap-tap @ 950...1218 MHz	≥ 20 dB					
Connectors						
Connector type	F					
General						
Dimensions (W × H × D) appr.	70 × 55 × 25 mm					
Weight	0.063 kg					


Type Part No.	Product description	GTIN	PU																																																																																																																																																																																																
 <p>Vodafone Kabel Deutschland KLASSE A +10 dB CLASS</p>	BAB 3-10P BAB00310P 3-way tap 10 dB 5...1218 MHz ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed ✓ High intermodulation suppression ✓ Class A (+10 dB) according to EN 50083-2 ✓ Return loss and isolation according to VFKD TS 220 ✓ Vodafone Kabel Deutschland approved	7611682005776	1																																																																																																																																																																																																
	BAB 3-12P BAB00312P Same as BAB 3-10P, but 12 dB tap loss	7611682005783	1																																																																																																																																																																																																
	BAB 3-16P BAB00316P Same as BAB 3-10P, but 16 dB tap loss	7611682005790	1																																																																																																																																																																																																
	BAB 3-20P BAB00320P Same as BAB 3-10P, but 20 dB tap loss	7611682005806	1																																																																																																																																																																																																
	BAB 3-24P BAB00324P Same as BAB 3-10P, but 24 dB tap loss	7611682005813	1																																																																																																																																																																																																
	<table border="1"> <thead> <tr> <th>Type</th> <th>BAB 3-10P</th> <th>BAB 3-12P</th> <th>BAB 3-16P</th> <th>BAB 3-20P</th> <th>BAB 3-24P</th> </tr> </thead> <tbody> <tr> <td>Frequency range</td> <td colspan="5">5...1218 MHz</td> </tr> <tr> <td>Intermodulation ratio (EN 60728-4)</td> <td colspan="5">120 dBμV</td> </tr> <tr> <td colspan="6">Tap loss</td> </tr> <tr> <td>5...94 MHz</td> <td>≤ 10.8 dB</td> <td>≤ 12.7 dB</td> <td>≤ 16.8 dB</td> <td>≤ 20.2 dB</td> <td>≤ 24.5 dB</td> </tr> <tr> <td>94...188 MHz</td> <td>≤ 10.8 dB</td> <td>≤ 12.7 dB</td> <td>≤ 16.8 dB</td> <td>≤ 20.2 dB</td> <td>≤ 24.5 dB</td> </tr> <tr> <td>188...376 MHz</td> <td>≤ 10.9 dB</td> <td>≤ 12.7 dB</td> <td>≤ 16.9 dB</td> <td>≤ 20.3 dB</td> <td>≤ 24.5 dB</td> </tr> <tr> <td>376...752 MHz</td> <td>≤ 10.5 dB</td> <td>≤ 12.8 dB</td> <td>≤ 17 dB</td> <td>≤ 20.6 dB</td> <td>≤ 24.6 dB</td> </tr> <tr> <td>752...950 MHz</td> <td>≤ 10.5 dB</td> <td>≤ 13.1 dB</td> <td>≤ 17 dB</td> <td>≤ 20.8 dB</td> <td>≤ 24.8 dB</td> </tr> <tr> <td>950...1218 MHz</td> <td>≤ 11.3 dB</td> <td>≤ 13.9 dB</td> <td>≤ 17.4 dB</td> <td>≤ 21.1 dB</td> <td>≤ 25.3 dB</td> </tr> <tr> <td colspan="6">Through loss</td> </tr> <tr> <td>5...94 MHz</td> <td>≤ 2.7 dB</td> <td>≤ 2.1 dB</td> <td>≤ 1.8 dB</td> <td>≤ 1.8 dB</td> <td>≤ 1.8 dB</td> </tr> <tr> <td>94...188 MHz</td> <td>≤ 2.6 dB</td> <td>≤ 2.1 dB</td> <td>≤ 1.7 dB</td> <td>≤ 1.7 dB</td> <td>≤ 1.8 dB</td> </tr> <tr> <td>188...376 MHz</td> <td>≤ 3 dB</td> <td>≤ 2.2 dB</td> <td>≤ 1.8 dB</td> <td>≤ 1.8 dB</td> <td>≤ 1.8 dB</td> </tr> <tr> <td>376...752 MHz</td> <td>≤ 3.5 dB</td> <td>≤ 2.7 dB</td> <td>≤ 2.2 dB</td> <td>≤ 2 dB</td> <td>≤ 1.9 dB</td> </tr> <tr> <td>752...950 MHz</td> <td>≤ 4.1 dB</td> <td>≤ 3.2 dB</td> <td>≤ 2.4 dB</td> <td>≤ 2.2 dB</td> <td>≤ 2 dB</td> </tr> <tr> <td>950...1218 MHz</td> <td>≤ 5.5 dB</td> <td>≤ 4.1 dB</td> <td>≤ 3.1 dB</td> <td>≤ 2.9 dB</td> <td>≤ 2.7 dB</td> </tr> <tr> <td colspan="6">Return loss</td> </tr> <tr> <td>5...94 MHz</td> <td colspan="5">≥ 18 dB</td> </tr> <tr> <td>94...188 MHz</td> <td colspan="5">≥ 16.5 dB</td> </tr> <tr> <td>188...376 MHz</td> <td colspan="5">≥ 15 dB</td> </tr> <tr> <td>376...752 MHz</td> <td colspan="5">≥ 13.5 dB</td> </tr> <tr> <td>752...1218 MHz</td> <td colspan="5">≥ 12 dB</td> </tr> <tr> <td colspan="6">Isolation</td> </tr> <tr> <td>Tap-tap @ 47...862 MHz</td> <td colspan="5">≥ 32 dB</td> </tr> <tr> <td>Tap-tap @ 862...950 MHz</td> <td colspan="5">≥ 30 dB</td> </tr> <tr> <td>Tap-tap @ 950...1218 MHz</td> <td colspan="5">≥ 20 dB</td> </tr> <tr> <td colspan="6">Connectors</td> </tr> <tr> <td>Connector type</td> <td colspan="5">F</td> </tr> <tr> <td colspan="6">General</td> </tr> <tr> <td>Dimensions (W × H × D) appr.</td> <td colspan="5">70 × 55 × 25 mm</td> </tr> <tr> <td>Weight</td> <td colspan="5">0.074 kg</td> </tr> </tbody> </table>				Type	BAB 3-10P	BAB 3-12P	BAB 3-16P	BAB 3-20P	BAB 3-24P	Frequency range	5...1218 MHz					Intermodulation ratio (EN 60728-4)	120 dB μ V					Tap loss						5...94 MHz	≤ 10.8 dB	≤ 12.7 dB	≤ 16.8 dB	≤ 20.2 dB	≤ 24.5 dB	94...188 MHz	≤ 10.8 dB	≤ 12.7 dB	≤ 16.8 dB	≤ 20.2 dB	≤ 24.5 dB	188...376 MHz	≤ 10.9 dB	≤ 12.7 dB	≤ 16.9 dB	≤ 20.3 dB	≤ 24.5 dB	376...752 MHz	≤ 10.5 dB	≤ 12.8 dB	≤ 17 dB	≤ 20.6 dB	≤ 24.6 dB	752...950 MHz	≤ 10.5 dB	≤ 13.1 dB	≤ 17 dB	≤ 20.8 dB	≤ 24.8 dB	950...1218 MHz	≤ 11.3 dB	≤ 13.9 dB	≤ 17.4 dB	≤ 21.1 dB	≤ 25.3 dB	Through loss						5...94 MHz	≤ 2.7 dB	≤ 2.1 dB	≤ 1.8 dB	≤ 1.8 dB	≤ 1.8 dB	94...188 MHz	≤ 2.6 dB	≤ 2.1 dB	≤ 1.7 dB	≤ 1.7 dB	≤ 1.8 dB	188...376 MHz	≤ 3 dB	≤ 2.2 dB	≤ 1.8 dB	≤ 1.8 dB	≤ 1.8 dB	376...752 MHz	≤ 3.5 dB	≤ 2.7 dB	≤ 2.2 dB	≤ 2 dB	≤ 1.9 dB	752...950 MHz	≤ 4.1 dB	≤ 3.2 dB	≤ 2.4 dB	≤ 2.2 dB	≤ 2 dB	950...1218 MHz	≤ 5.5 dB	≤ 4.1 dB	≤ 3.1 dB	≤ 2.9 dB	≤ 2.7 dB	Return loss						5...94 MHz	≥ 18 dB					94...188 MHz	≥ 16.5 dB					188...376 MHz	≥ 15 dB					376...752 MHz	≥ 13.5 dB					752...1218 MHz	≥ 12 dB					Isolation						Tap-tap @ 47...862 MHz	≥ 32 dB					Tap-tap @ 862...950 MHz	≥ 30 dB					Tap-tap @ 950...1218 MHz	≥ 20 dB					Connectors						Connector type	F					General						Dimensions (W × H × D) appr.	70 × 55 × 25 mm					Weight	0.074 kg			
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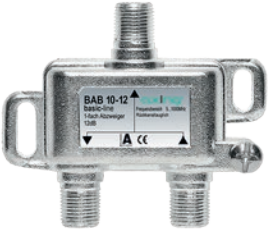
Type	Part No.	Product description	GTIN	PU																																																																																																																																																																
	BAB 4-12P BAB00412P	4-way tap 12 dB 5...1218 MHz <ul style="list-style-type: none"> ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed ✓ High intermodulation suppression ✓ Class A (+10 dB) according to EN 50083-2 ✓ Return loss and isolation according to VFKD TS 220 ✓ Vodafone Kabel Deutschland approved 	7611682005820	1																																																																																																																																																																
	BAB 4-16P BAB00416P	Same as BAB 4-12P, but 16 dB tap loss	7611682005837	1																																																																																																																																																																
	BAB 4-20P BAB00420P	Same as BAB 4-12P, but 20 dB tap loss	7611682005844	1																																																																																																																																																																
	BAB 4-24P BAB00424P	Same as BAB 4-12P, but 24 dB tap loss	7611682005851	1																																																																																																																																																																
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Type	Part No.	Product description	GTIN	PU
 	BAB 4-01P BAB00401P	4-way tap 12.5...15.5 dB 5...1218 MHz ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed ✓ High intermodulation suppression ✓ Class A (+10 dB) according to EN 50083-2 ✓ Return loss and isolation according to VFKD TS 220 ✓ Vodafone Kabel Deutschland approved	7611682005929	1
	BAB 6-01P BAB00601P	Same as BAB 4-01P, but 6-way tap, 12.5 ... 17.5 dB tap loss	7611682005936	1
	BAB 8-01P BAB00801P	Same as BAB 4-01P, but 8-way tap, 12.5...19.5 dB tap loss	7611682005943	1
Type	BAB 4-01P	BAB 6-01P	BAB 8-01P	
Frequency range		5...1218 MHz		
Intermodulation ratio (EN 60728-4)	120 dB μ V	119 dB μ V	119 dB μ V	
Taps	4	6	8	
Tap loss				
Tap 1		12.5 \pm 1 dB		
Tap 2		13.5 \pm 1 dB		
Tap 3		14.5 \pm 1 dB		
Tap 4	15.5 \pm 1dB	15.5 \pm 1 dB	15.5 \pm 1 dB	
Tap 5	-	16.5 \pm 1 dB	16.5 \pm 1 dB	
Tap 6	-	17.5 \pm 1 dB	17.5 \pm 1 dB	
Tap 7	-	-	18.5 \pm 1 dB	
Tap 8	-	-	19.5 \pm 1 dB	
Through loss				
5...94 MHz	\leq 4 dB	\leq 5.8 dB	\leq 8.2 dB	
94...188 MHz	\leq 3.4 dB	\leq 4.8 dB	\leq 7 dB	
188...376 MHz	\leq 3.5 dB	\leq 4.9 dB	\leq 7 dB	
376...752 MHz	\leq 4 dB	\leq 5.8 dB	\leq 7.8 dB	
752...950 MHz	\leq 4.3 dB	\leq 6.5 dB	\leq 8.5 dB	
950...1218 MHz	\leq 5 dB	\leq 7.7 dB	\leq 9.9 dB	
Return loss				
5...94 MHz		\geq 18 dB		
94...188 MHz		\geq 16.5 dB		
188...376 MHz		\geq 15 dB		
376...752 MHz		\geq 13.5 dB		
752...1218 MHz		\geq 12 dB		
Isolation				
Tap-tap @ 47...862 MHz		\geq 32 dB		
Tap-tap @ 862...950 MHz		\geq 30 dB		
Tap-tap @ 950...1218 MHz		\geq 20 dB		
Connectors				
Connector type		F		
General				
Dimensions (W x H x D) appr.	70 x 55 x 25 mm	93 x 54 x 39 mm	115 x 54 x 39 mm	
Weight	0.172 kg	0.178 kg	0.224 kg	

Type	Part No.	Product description	GTIN	PU
 <p>Vodafone Kabel Deutschland KLASSE A CLASS +10 dB</p>	BAB 4-02P BAB00402P	4-way terminal taps 13.0...14.5 dB 5...1218 MHz ✓ High return loss ✓ For multimedia-use ✓ Inputs hum-suppressed ✓ High intermodulation suppression ✓ Screening factor Class A +10 dB, according to EN 50083-2 ✓ Return loss and isolation according to VFKD TS 220 ✓ Vodafone Kabel Deutschland approved	7611682006339	1
	BAB 6-02P BAB00602P	Same as BAB 4-02P, but 6-way tap, 13.0...15.5 dB tap loss	7611682006346	1
	BAB 8-02P BAB00802P	Same as BAB 4-02P, but 8-way tap, 13.0...16.5 dB tap loss	7611682006353	1
Table 1: Comparison of BAB 4-02P, 6-02P, and 8-02P				
Type	BAB 4-02P	BAB 6-02P	BAB 8-02P	
Frequency range		5...1218 MHz		
Intermodulation ratio (EN 60728-4)		120 dB μ V		
Taps	4	6	8	
Table 2: Tap loss				
Tap 1		13.0 \pm 2.5 dB		
Tap 2		13.0 \pm 2.5 dB		
Tap 3	14.5 \pm 2.5 dB	14.5 \pm 2.5 dB	14.0 \pm 2.5 dB	
Tap 4	14.5 \pm 2.5 dB	14.5 \pm 2.5 dB	14.0 \pm 2.5 dB	
Tap 5	-	15.5 \pm 2.5 dB	15.5 \pm 2.5 dB	
Tap 6	-	15.5 \pm 2.5 dB	15.5 \pm 2.5 dB	
Tap 7	-	-	16.5 \pm 2.5 dB	
Tap 8	-	-	16.5 \pm 2.5 dB	
Table 3: Return loss				
5...40 MHz		\geq 18 dB		
40...470 MHz		\geq 18 dB		
470...862 MHz		\geq 16 dB		
862...1006 MHz		\geq 14 dB		
1006...1300 MHz		\geq 14 dB		
Table 4: Isolation				
Tap-tap @ 5...40 MHz		\geq 30 dB		
Tap-tap @ 40...470 MHz		\geq 32 dB		
Tap-tap @ 470...862 MHz		\geq 30 dB		
Tap-tap @ 862...1006 MHz		\geq 30 dB		
Tap-tap @ 1006...1300 MHz		\geq 25 dB		
Connectors				
Connector type		F		
General				
Dimensions (W x H x D) appr.	70 x 55 x 25 mm	93 x 54 x 39 mm	115 x 54 x 39 mm	
Weight	0.167 kg	0.175 kg	0.220 kg	

Taps CATV | premium-line

 <p>KLASSE A CLASS</p>	BAB 12-02 BAB01202	12-way tap 5...1006 MHz terminal type ✓ 13...21 dB tap loss ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed	7611682250121	1
	BAB 16-02 BAB01602	Same as BAB 12-02, but 16-way tap, with 13...25 dB tap loss	7611682250169	1
Type	BAB 12-02	BAB 16-02		
General				
Weight	0.542 kg	0.586 kg		



	Type Part No.	Product description	GTIN	PU		
Taps CATV basic-line						
 	BAB 10-08 BAB01008	1-way tap 8 dB 5...1006 MHz ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed	7611682000962	1		
	BAB 10-10 BAB01010	Same as BAB 10-08, but 10 dB tap loss	7611682000979	1		
	BAB 10-12 BAB01012	Same as BAB 10-08, but 12 dB tap loss	7611682251005	1		
	BAB 10-16 BAB01016	Same as BAB 10-08, but 16 dB tap loss	7611682000993	1		
	BAB 10-18 BAB01018	Same as BAB 10-08, but 18 dB tap loss	7611682001006	1		
	BAB 10-20 BAB01020	Same as BAB 10-08, but 20 dB tap loss	7611682001013	1		
Type	BAB 10-08	BAB 10-10	BAB 10-12	BAB 10-16	BAB 10-18	BAB 10-20
Screening factor acc. to EN 50083-2	> 90 dB					
Frequency range	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz
Tap loss	8 ±1 dB	10 ±1 dB	12 ±1 dB	16 ±1 dB	18 ±1 dB	20 ±1 dB
Through loss						
5...40 MHz	≤ 2.0 dB	≤ 1.2 dB	≤ 1.0 dB	≤ 0.8 dB	≤ 0.8 dB	≤ 0.8 dB
40...470 MHz	≤ 2.0 dB	≤ 1.2 dB	≤ 1.0 dB	≤ 1.0 dB	≤ 1.0 dB	≤ 0.8 dB
470...862 MHz	≤ 2.5 dB	≤ 1.5 dB	≤ 1.2 dB	≤ 1.0 dB	≤ 1.2 dB	≤ 1.0 dB
862...1006 MHz	≤ 2.5 dB	≤ 1.6 dB	≤ 1.4 dB	≤ 1.2 dB	≤ 1.5 dB	≤ 1.4 dB
Connectors						
Connector type	F					
Return loss	≥ 20 dB					
General						
Dimensions (W × H × D) appr.	42 × 52 × 17 mm					
Weight	0.058 kg					



	Type Part No.	Product description	GTIN	PU			
	BAB 20-08 BAB02008	2-way tap 8 dB 5...1006 MHz ✓ High return loss ✓ For multimedia-use ✓ Inputs and outputs hum-suppressed	7611682001020	1			
	BAB 20-10 BAB02010	Same as BAB 20-08, but 10 dB tap loss	7611682001037	1			
	BAB 20-12 BAB02012	Same as BAB 20-08, but 12 dB tap loss	7611682250206	1			
	BAB 20-14 BAB02014	Same as BAB 20-08, but 14 dB tap loss	7611682001044	1			
	BAB 20-16 BAB02016	Same as BAB 20-08, but 16 dB tap loss	7611682001051	1			
	BAB 20-18 BAB02018	Same as BAB 20-08, but 18 dB tap loss	7611682001068	1			
	BAB 20-20 BAB02020	Same as BAB 20-08, but 20 dB tap loss	7611682001075	1			
	Type	BAB 20-08	BAB 20-10	BAB 20-12	BAB 20-14	BAB 20-16	BAB 20-18
Screening factor acc. to EN 50083-2	> 90 dB						
Frequency range	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz
Tap loss	8 ±1 dB	10 ±1 dB	12 ±1 dB	14 ±1 dB	16 ±1 dB	18 ±1 dB	20 ±1 dB
Through loss							
5...40 MHz	≤ 4 dB	≤ 2.8 dB	≤ 1.5 dB	≤ 1.3 dB	≤ 1.2 dB	≤ 1.0 dB	≤ 0.8 dB
40...470 MHz	≤ 4 dB	≤ 2.8 dB	≤ 1.5 dB	≤ 1.4 dB	≤ 1.2 dB	≤ 1.0 dB	≤ 0.8 dB
470...862 MHz	≤ 4.5 dB	≤ 3.2 dB	≤ 1.8 dB	≤ 1.7 dB	≤ 1.7 dB	≤ 1.0 dB	≤ 1.0 dB
862...1006 MHz	≤ 5 dB	≤ 3.2 dB	≤ 2.5 dB	≤ 1.9 dB	≤ 1.5 dB	≤ 1.2 dB	≤ 1.3 dB
Connectors							
Connector type	F						
Return loss	≥ 18	≥ 19	≥ 17	≥ 17	≥ 21	≥ 19	≥ 17
General							
Dimensions (W × H × D) appr.	89 × 55 × 30 mm						
Weight	0.079 kg						



Type	Part No.	Product description	GTIN	PU
Splitters/Taps CATV Outdoor				
	BVE 202-00 BVE20200	2-way splitter 5...1006 MHz outdoor ✓ Distribution method transformer ✓ DC/AC suitable with max. 65V~/10A ✓ 5/8" connectors ✓ Al die-cast housing with wall mounting bow ✓ Protection class IP 55	7611682242027	1
	BVE 203-00 BVE20300	Same as BVE 202-00, but 3-way splitter	7611682242034	1
	BAB 201-08 BAB20108	1-way tap 8 dB 5...1006 MHz outdoor ✓ Tap method - directional coupler ✓ Trunk and tap DC/AC suitable with max. 65V~/10 A ✓ 5/8" Connectors ✓ Al die-cast housing with wall mounting bow ✓ Protection class IP 55	7611682259087	1
	BAB 201-12 BAB20112	Same as BAB 201-08, but 12 dB tap loss	7611682259124	1
	BAB 201-16 BAB20116	Same as BAB 201-08, but 16 dB tap loss	7611682259162	1
	BAB 202-08 BAB20208	2-way tap 8 dB 5...1006 MHz outdoor ✓ Tap method - directional coupler ✓ Trunk and tap DC/AC suitable with max. 65V~/10 A ✓ 5/8" Connectors ✓ Al die-cast housing with wall mounting bow ✓ Protection class IP 55	7611682258080	1
	BAB 202-12 BAB20212	Same as BAB 202-08, but 12 dB tap loss	7611682258127	1
	BAB 202-16 BAB20216	Same as BAB 202-08, but 16 dB tap loss	7611682258165	1
	BWE 200-00 BWE20000	AC remote feed diplexer outdoor ✓ 5/8" Connectors ✓ Max. power feeding current 65V~/10 A ✓ Al die-cast housing with wall mounting bow ✓ Protection class IP 55	7611682082005	1

Type	BVE 202-00	BVE 203-00	BAB 201-08	BAB 201-12	BAB 201-16	BAB 202-08	BAB 202-12	BAB 202-16	BWE 200-00
Screening factor acc. to EN 50083-2	> 90 dB								
Frequency range	5...1006 MHz								
Tap loss	-	-	8 ±1 dB	12 ±1 dB	16 ±1 dB	8 ±1.5 dB	12 ±1 dB	16 ±1 dB	-
Splitting	2-way	3-way	-	-	-	-	-	-	-
Isolation	≥ 25 dB	≥ 25 dB	≥ 25 dB	≥ 25 dB	≥ 25 dB	≥ 25 dB	≥ 25 dB	≥ 25 dB	-
Distribution loss									
5...40 MHz	≤ 3.5 dB	≤ 7.0 dB	-	-	-	-	-	-	-
40...470 MHz	≤ 3.8 dB	≤ 7.5 dB	-	-	-	-	-	-	-
470...862 MHz	≤ 4.1 dB	≤ 8.0 dB	-	-	-	-	-	-	-
862...1006 MHz	≤ 4.5 dB	≤ 8.2 dB	-	-	-	-	-	-	-
Through loss									
5...40 MHz	-	-	≤ 2.0 dB	≤ 1.0 dB	≤ 1.2 dB	≤ 3.5 dB	≤ 2.0dB	≤ 1.3dB	< 1dB
40...470 MHz	-	-	≤ 2.3 dB	≤ 1.0 dB	≤ 1.5 dB	≤ 3.8 dB	≤ 2.3 dB	≤ 1.4 dB	-
470...862 MHz	-	-	≤ 2.8 dB	≤ 1.3dB	≤ 1.8 dB	≤ 4.2 dB	≤ 2.8 dB	≤ 1.7 dB	< 1dB
862...1006 MHz	-	-	≤ 3.1 dB	≤ 1.6 dB	≤ 2.0 dB	≤ 4.3 dB	≤ 3.1 dB	≤ 1.9 dB	< 1dB
Connectors									
Connector type	5/8"								
Return loss	≥ 20 dB	≥ 20 dB	≥ 20 dB	≥ 20 dB	≥ 20 dB	≥ 18 dB	≥ 18 dB	≥ 18 dB	-
General									
Dimensions (W x H x D) appr.	140 x 120 x 80 mm								
Weight	0.727 kg	0.727 kg	0.719 kg	0.719 kg	0.719 kg	0.737 kg	0.737 kg	0.737 kg	0.725 kg
IP code	IP55								



	Type Part No.	Product description	GTIN	PU
Splitters SAT				
 	SVE 20-01 SVE02001	2-way SAT splitter 5...2400 MHz ✓ DC-isolated with diodes ✓ DC power pass ✓ Suitable for single cable	7611682260205	1
	SVE 30-01 SVE03001	Same as SVE 20-01, but 3-way SAT splitter	7611682260304	1
	SVE 40-01 SVE04001	Same as SVE 20-01, but 4-way SAT splitter	7611682260403	1
	SVE 60-01 SVE06001	Same as SVE 20-01, but 6-way SAT splitter	7611682002874	1
Type	SVE 20-01	SVE 30-01	SVE 40-01	SVE 60-01
Frequency range	5...2400 MHz			
DC power pass	yes			
Splitting	2-way	3-way	4-way	6-way
Isolation	≥ 18 dB	≥ 18 dB	≥ 18 dB	≥ 18 dB
Distribution				
Distribution loss	≤ 8.0 dB	≤ 12 dB	≤ 14 dB	≤ 16 dB
Connectors				
Connector type	F	F	F	F
General				
Dimensions (W × H × D) appr.	52 x 52 x 17 mm	77 x 52 x 17 mm	77 x 52 x 17 mm	120 x 78 x 30 mm
Weight	0.058 kg	0.083 kg	0.085 kg	0.152 kg

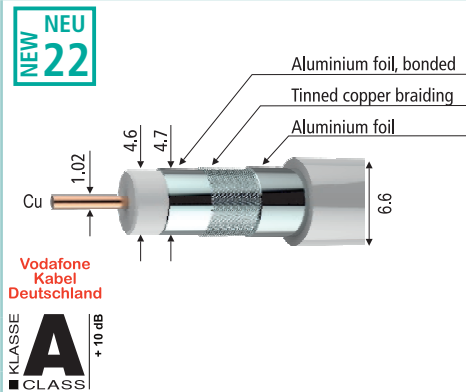
	Type Part No.	Product description	GTIN	PU
Taps SAT				
 	SAB 1-12 SAB00112	1-way SAT tap 12 dB 5...2400 MHz ✓ DC power pass on trunk ✓ With detachable mounting brackets ✓ Connectors gold-plated	7611682271126	1
	SAB 1-16 SAB00116	Same as SAB 1-12, but 16 dB tap loss	7611682271164	1
	SAB 1-20 SAB00120	Same as SAB 1-12, but 20 dB tap loss	7611682271201	1
Type	SAB 1-12	SAB 1-16	SAB 1-20	
Screening factor acc. to EN 50083-2		> 90 dB		
Frequency range		5...2400 MHz		
DC power pass		yes		
Tap loss				
5...862 MHz	≤ 13.0 dB	≤ 16 dB	≤ 20 dB	
Isolation				
950...1750 MHz	-	-	-	
1750...2400 MHz	≤ 13.0 dB	≤ 19 dB	≤ 23.5 dB	
Through loss				
5...862 MHz	< 1.1 dB	< 0.5 dB	< 0.5 dB	
950...1750 MHz	< 1.1 dB	< 0.7 dB	< 0.7 dB	
1750...2400 MHz	< 2.0 dB	< 2.0 dB	< 2.3 dB	
Directivity				
5...862 MHz	≥ 30 dB	≥ 30 dB	≥ 40 dB	
950...1750 MHz	≥ 25 dB	≥ 30 dB	≥ 40 dB	
1750...2400 MHz	≥ 25 dB	≥ 20 dB	≥ 30 dB	
Return loss				
Taps @ 5...862 MHz	≥ 15 dB	≥ 20 dB	≥ 15 dB	
Input @ 5...862 MHz		≥ 20 dB		
Taps @ 950...1750 MHz	≥ 15 dB	≥ 15 dB	≥ 18 dB	
Input @ 950...1750 MHz		≥ 20 dB		
Taps @ 1750...2400 MHz	≥ 15 dB	≥ 15 dB	≥ 18 dB	
Input @ 1750...2400 MHz		≥ 15 dB		
Output @ 5...862 MHz		≥ 20 dB		
Output @ 950...1750 MHz		≥ 20 dB		
Output @ 1750...2400 MHz	≥ 20 dB	≥ 15 dB	≥ 15 dB	
Connectors				
Connector type		F		
General				
Dimensions (W × H × D) appr.		67 × 55 × 33 mm		
Weight		0.069 kg		

Type	Part No.	Product description	GTIN	PU
 	SAB 2-12 SAB00212	2-way SAT tap 12 dB 5...2400 MHz ✓ DC power pass on trunk ✓ With detachable mounting brackets ✓ Connectors gold-plated	7611682272123	1
	SAB 4-16 SAB00416	4-way SAT tap 16 dB 5...2400 MHz ✓ DC power pass on trunk ✓ Connectors gold-plated	7611682274165	1
Type	SAB 2-12		SAB 4-16	
Screening factor acc. to EN 50083-2			> 90 dB	
Frequency range			5...2400 MHz	
DC power pass			yes	
Tap loss				
5...862 MHz	12±1 dB		16 ±1.5 dB	
Isolation				
950...1750 MHz	≥ 25 dB		≥ 22 dB	
1750...2400 MHz	12±1 dB		16 ±1.5 dB	
Through loss				
5...862 MHz	< 2.2 dB		< 3.5 dB	
950...1750 MHz			< 2.5 dB	
1750...2400 MHz	< 5.0 dB		< 6.0 dB	
Directivity				
5...862 MHz	> 15 dB		≥ 35 dB	
950...1750 MHz	> 15 dB		≥ 30 dB	
1750...2400 MHz	> 18 dB		≥ 22 dB	
Return loss				
Taps @ 5...862 MHz	≥ 15 dB		≥ 12 dB	
Input @ 5...862 MHz	≥ 20 dB		≥ 15 dB	
Taps @ 950...1750 MHz			≥ 10 dB	
Input @ 950...1750 MHz	≥ 20 dB		≥ 15 dB	
Taps @ 1750...2400 MHz	≥ 15 dB		≥ 10 dB	
Input @ 1750...2400 MHz	≥ 14 dB		≥ 12 dB	
Output @ 5...862 MHz	≥ 15 dB		≥ 12 dB	
Output @ 950...1750 MHz	≥ 15 dB		≥ 12 dB	
Output @ 1750...2400 MHz	≥ 15 dB		≥ 12 dB	
Isolation				
5...862 MHz	≥ 25 dB		≥ 22 dB	
950...1750 MHz	≥ 25 dB		≥ 22 dB	
Tap loss				
1750...2400 MHz	≥ 22 dB		≥ 16 dB	
Connectors				
Connector type	F			
General				
Dimensions (W × H × D) appr.	89 × 55 × 30 mm		93 × 65 × 18 mm	
Weight	0.097 kg		0.112 kg	

Type Part No.	Product description	GTIN	PU
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Coaxial cable

premium-line

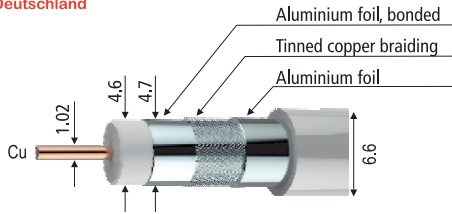


SKB 97-01 SKB09701	Flame retardant, halogen free coaxial cable 3-way shielded Vodafone Kabel Deutschland approved 100 m ✓ For SAT or CATV indoor installation ✓ According to KDG 1 TS 153 ✓ Class A+ according to EN 50117-9-2 ✓ Fire behaviour Cca acc. to EN 50575 ✓ Inner conductor Cu, diameter 1.02 mm ✓ Physically-foamed dielectric, diameter 4.6 mm ✓ Screening aluminium foil, bonded/tinned copper braiding/ aluminium foil ✓ Jacket LSZH, white ✓ Degressive metering ✓ 100 m on wooden drum	7611682008432	4
SKB 97-03 SKB09703	Same as SKB 97-01, but 500 m on wooden drum	7611682008449	1
SKB 97-04 SKB09704	Same as SKB 97-01, but 250 m in a opti-box	7611682008456	2

Type	SKB 97-01	SKB 97-03	SKB 97-04
Electrical data			
Impedance	75 Ω		
Attenuation	8.7 dB / 100 m @ 200 MHz 18.4 dB / 100 m @ 800 MHz 33.2 dB / 100 m @ 2400 MHz		
Screening factor	≥ 110 dB @ 30...1000 MHz ≥ 110 dB @ 1000...2000 MHz ≥ 110 dB @ 2000...3000 MHz		
Coupling resistance	< 2.5 mOhm/m		
Mechanical data			
Inner conductor material diameter	Cu 1.02 mm		
Dielectric diameter	4.60 mm		
Dielectric diameter, incl. bonded foil	4.70 mm		
Braiding opt. coverage	120 x 0.1 mm 65%		
Jacket material diameter	LSZH 6.80 mm		
Bending radius single multiple	24 mm 68 mm		
General			
Application temperature range	-5...+50°C		
Operating temperature range	-20...+75°C		
Fire behaviour	Cca		
Weight	4.500 kg	23.900 kg	10.660 kg

Type Part No. Product description GTIN PU

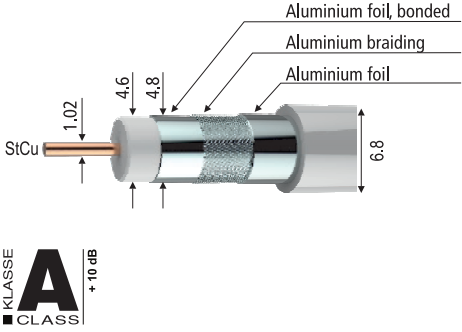
Vodafone Kabel Deutschland



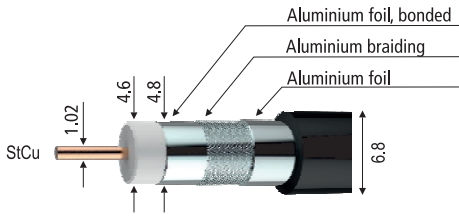
KLASSE A CLASS +10 dB

SKB 94-01 SKB09401	Coaxial cable 3-way shielded Vodafone Kabel Deutschland approved 100 m <ul style="list-style-type: none"> ✓ For SAT or CATV indoor installation ✓ According to KDG 1 TS 153 ✓ Class A+ according to EN 50117-2-4 ✓ Fire behaviour Eca acc. to EN 50575 ✓ Inner conductor Cu, diameter 1.02 mm ✓ Physically-foamed dielectric, diameter 4.6 mm ✓ Screening alum. foil, bonded/tinned copper braiding/alum. foil ✓ Jacket PVC, white ✓ UV resistant ✓ Degressive metering ✓ 100 m on a cardboard spool 	7611682004021	4
SKB 94-03 SKB09403	Same as SKB 94-01, but 500 m on wooden drum	7611682004038	1
SKB 94-04 SKB09404	Same as SKB 94-01, but 250 m in a opti-box	7611682004045	2

Type	SKB 94-01	SKB 94-03	SKB 94-04
Electrical data			
Impedance		75 Ω	
Attenuation		8.7 dB / 100 m @ 200 MHz 18.4 dB / 100 m @ 800 MHz 33.2 dB / 100 m @ 2400 MHz	
Screening factor		≥110 dB @ 30...1000 MHz ≥110 dB @ 1000...2000 MHz ≥110 dB @ 2000...3000 MHz	
Coupling resistance		<1.5 mOhm/m	
Mechanical data			
Inner conductor material diameter	Cu 1.02 mm	Cu 1.02 mm	Cu 1.02 mm
Dielectric diameter		4.60 mm	
Dielectric diameter, incl. bonded foil		4.70 mm	
Braiding opt. coverage		120 x 0.1 mm 65%	
Jacket material diameter		PVC 6.60 mm	
Bending radius single multiple		24 mm 68 mm	
General			
Application temperature range		-5...+50°C	
Operating temperature range		-20...+75°C	
Fire behaviour		Eca	
Weight	4.500 kg	23.900 kg	11.490 kg

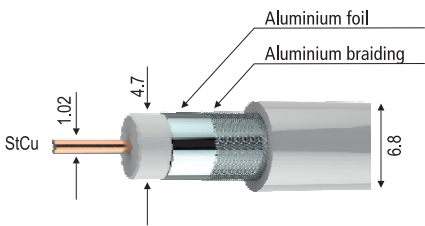
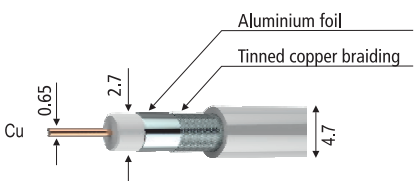
Type	Part No.	Product description	GTIN	PU
	SKB 395-01 SKB39501	Coaxial cable 3-way shielded 100 m ✓ For SAT or CATV indoor installation ✓ Class A+ according to EN 50117-2-4 ✓ Fire behaviour Eca acc. to EN 50575 ✓ Inner conductor StCu, diameter 1.02 mm ✓ Physically-foamed dielectric, diameter 4.6 mm ✓ Screening alum. foil, bonded/alum. braiding/alum. foil ✓ Jacket PVC, white ✓ UV resistant ✓ Degressive metering ✓ 100 m on a cardboard spool	7611682113952	4
	SKB 395-03 SKB39503	Same as SKB 395-01, but 500 m on wooden drum	7611682113969	1
	SKB 395-04 SKB39504	Same as SKB 395-01, but 250 m in a opti-box	7611682113976	2
	Type	SKB 395-01	SKB 395-03	SKB 395-04
Electrical data				
Impedance	75 Ω			
Attenuation	8.7 dB / 100 m @ 200 MHz 18.0 dB / 100 m @ 800 MHz 32.9 dB / 100 m @ 2400 MHz			
Screening factor	>100 dB @ 30...1000 MHz >100 dB @ 1000...2000 MHz >100 dB @ 2000...3000 MHz			
Coupling resistance	<2.5mOhm/m			
Mechanical data				
Inner conductor material diameter	StCu 1.02 mm			
Dielectric diameter	4.6 mm			
Braiding opt. coverage	80 x 0.12 mm 55%			
Jacket material diameter	PVC 6.8 mm			
Bending radius single multiple	24 mm 68 mm			
General				
Application temperature range	-5...+50°C			
Operating temperature range	-20...+75°C			
Fire behaviour	Eca			
Weight	3.805 kg	22.900 kg	10.660 kg	

Type Part No.	Product description	GTIN	PU
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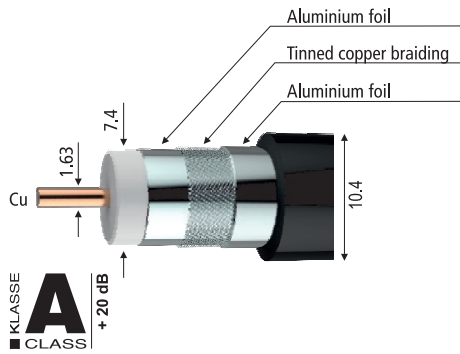
SKB 395-11 SKB39511	Coaxial cable 3-way shielded 100 m <ul style="list-style-type: none"> ✓ For SAT or CATV indoor installation ✓ Class A+ according to EN 50117-2-4 ✓ Fire behaviour Eca acc. to EN 50575 ✓ Inner conductor StCu, diameter 1.02 mm ✓ Physically-foamed dielectric, diameter 4.6 mm ✓ Screening alum. foil, bonded/alum. braiding/alum. foil ✓ Jacket PE, black ✓ UV resistant ✓ Degressive metering ✓ 100 m on a cardboard spool 	7611682001648	4
SKB 395-13 SKB39513	Same as SKB 395-11, but 500 m on wooden drum	7611682002522	1
SKB 395-14 SKB39514	Same as SKB 395-11, but 250 m in a opti-box	7611682002539	2

Type	SKB 395-11	SKB 395-13	SKB 395-14
Electrical data			
Impedance	75 Ω		
Attenuation	8.7 dB / 100 m @ 200 MHz 18.0 dB / 100 m @ 800 MHz 32.9 dB / 100 m @ 2400 MHz		
Screening factor	>100 dB @ 30...1000 MHz >100 dB @ 1000...2000 MHz >100 dB @ 2000...3000 MHz		
Coupling resistance	<2.5mOhm/m		
Mechanical data			
Inner conductor material diameter	StCu 1.02 mm		
Dielectric diameter	4.6 mm		
Braiding opt. coverage	80 x 0.12 mm 55%		
Jacket material diameter	PE 6.8 mm		
Bending radius single multiple	24 mm 68 mm		
General			
Application temperature range	-5...+50°C		
Operating temperature range	-20...+75°C		
Fire behaviour	Eca		
Weight	3.235 kg	15.860 kg	8.360 kg

Type	Part No.	Product description	GTIN	PU
basic-line				
	SKB 88-01 SKB08801	Coaxial cable 2-way shielded 100 m ✓ For SAT or CATV indoor installation ✓ Fire behaviour Eca acc. to EN 50575 ✓ Inner conductor StCu, diameter 1.02 mm ✓ Physically-foamed dielectric, diameter 4.7 mm ✓ Screening alum. foil/alum. braiding ✓ Jacket PVC, white ✓ Degressive metering ✓ 100 m on a cardboard spool	7611682000054	4
	SKB 88-03 SKB08803	Same as SKB 88-01, but 500 m on wooden drum	7611682000061	1
	SKB 88-04 SKB08804	Same as SKB 88-01, but 250 m in a opti-box	7611682118742	2
Type	SKB 88-01	SKB 88-03	SKB 88-04	
Electrical data				
Impedance	75 Ω			
Attenuation	8.4 dB / 100 m @ 200 MHz 17.8 dB / 100 m @ 800 MHz 32.1 dB / 100 m @ 2400 MHz			
Screening factor	> 85 dB @ 30...1000 MHz > 80 dB @ 1000...2000 MHz > 80 dB @ 2000...3000 MHz			
Coupling resistance	<16mOhm/m			
Mechanical data				
Inner conductor material diameter	StCu 1.02 mm			
Dielectric diameter	4.7 mm			
Braiding opt. coverage	64 x 0.12 mm 45%			
Jacket material diameter	PVC 6.8 mm			
Bending radius single multiple	24 mm 68 mm			
General				
Application temperature range	-5...+50°C			
Operating temperature range	-20...+75°C			
Fire behaviour	Eca			
Weight	3.685 kg	19.340 kg	9.675 kg	
	SKB 75-01 SKB07501	Mini coaxial cable 100 m ✓ For SAT or CATV indoor installation ✓ Fire behaviour Eca acc. to EN 50575 ✓ Inner conductor Cu, diameter 0.65 mm ✓ Physically-foamed dielectric, diameter 2.7 mm ✓ Screening alum. foil and tinned copper braiding ✓ Jacket PVC, white ✓ Degressive metering ✓ 100 m on a cardboard spool	7611682110753	8
	Type	SKB 75-01		
	Electrical data			
Impedance	75 Ω			
Attenuation	14.9 dB / 100 m @ 200 MHz 30.3 dB / 100 m @ 800 MHz 53.4 dB / 100 m @ 2400 MHz			
Screening factor	>90 dB @ 30...1000 MHz >85 dB @ 1000...2000 MHz >80 dB @ 2000...3000 MHz			
Coupling resistance	<20mOhm/m			
Mechanical data				
Inner conductor material diameter	Cu 0.65 mm			
Dielectric diameter	2.7 mm			
Braiding opt. coverage	80 x 0.1 mm 70%			
Jacket material diameter	PVC 4.7 mm			
Bending radius single multiple	14 mm 46 mm			
General				
Application temperature range	-5...+50°C			
Operating temperature range	-20...+75°C			
Fire behaviour	Eca			
Weight	2.333 kg			

Type Part No. Product description GTIN PU

Underground cable



SKB 11-13 SKB01113	RG11 Coaxial cable CATV SAT 300 m ✓ 3-way shielded ✓ Class A++ according to EN 50117-2-3 ✓ Screening factor ≥ 105 dB @ 30...1000 MHz ✓ Coupling resistance ≤ 0.9 m Ω /m @ 5...30 MHz ✓ Inner conductor made of solid copper, diameter 1.63 mm ✓ Physically-foamed dielectric, diameter 7.4 mm ✓ Screening alum. foil, tinned copper braiding, alum. foil ✓ Jacket PE, black ✓ UV resistant ✓ Degressive metering ✓ Fire behaviour Fca acc. to EN 50575 ✓ Suitable for underground installation in a ductwork for cables ✓ 300 m on wooden drum ✓ Compression tool and stripping tool available on request.	7611682007756	1
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Type	SKB 11-13
Electrical data	
Impedance	75 Ohm
Attenuation	5.4 dB / 100 m @ 200 MHz 13.5 dB / 100 m @ 1000 MHz 22.0 dB / 100 m @ 2400 MHz
Screening factor	>105 dB @ 30...1000 MHz >95 dB @ 1000...2000 MHz >85 dB @ 2000...3000 MHz
Coupling resistance	<0.9 m Ω /m @ 5...30 MHz
Mechanical data	
Inner conductor material diameter	Cu 1.63 mm
Dielectric diameter	7.3 mm
Braiding opt. coverage	144 x 0.15 mm 85%
Jacket material diameter	PE 10.3 mm
Bending radius single multiple	36 100 mm
General	
Application temperature range	-5...+50°C
Operating temperature range	-40° C ... +85° C
Fire behaviour	Fca






Accessories






SZU 11-01 SZU01101	Water protection sleeve ✓ Neopren for coaxial cable SKB 88-xx, 395-xx, 94-xx ✓ UV-resistant	7611682160116	100
TZU 20-01 TZU02001	Carrying strap ✓ Carrying strap for opti-box ✓ Length adjustable	7611682080216	1
SKA 1-00 SKA00100	Cable dispenser ✓ For all AXING SKB xxx-01 100 m. spools (except SKB 11-01) ✓ Integrated rollbrake ✓ Easy, tool-free exchange of coaxial cable reels	7611682003871	1


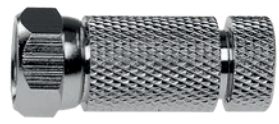
Type	SZU 11-01	TZU 20-01	SKA 1-00
General			
Weight	0.003 kg	0.630 kg	1.850 kg


	Type Part No.	Product description	GTIN	PU
Coaxial connectors				
Compression premium-line				
 	CKS 7-48 CKS00748	IEC male compression ✓ NITIN coated (anti-allergie) ✓ To mount with compression tool BWZ 8-00 ✓ For coaxial cable with diameter of dielectricum 4.9 mm (SKB 94-xx/SKB 395-xx/SKB 88-xx)	7611682003482	100
	CKS 7-51 CKS00751	Same as CKS 7-48, but for coaxial cable with diameter of dielectricum 5.1 mm	7611682003499	100
Type	CKS 7-48		CKS 7-51	
Electrical data				
Impedance	75 Ω			
General				
Weight	0.009 kg			
 	CKK 7-48 CKK00748	IEC female compression ✓ NITIN coated (anti-allergie) ✓ To mount with compression tool BWZ 8-00 ✓ For coaxial cable with diameter of dielectricum 4.9 mm (SKB 94-xx/SKB 395-xx/SKB 88-x)	7611682003505	50
	CKK 7-51 CKK00751	Same as CKK 7-48, but for coaxial cable with diameter of dielectricum 5.1 mm	7611682003512	50
Type	CKK 7-48		CKK 7-51	
Electrical data				
Impedance	75 Ω			
General				
Weight	0.009 kg			
 	CFS 97-48 CFS09748	F male compression ✓ NITIN coated (anti-allergie) ✓ To mount with Compression tool BWZ 7-00 ✓ For coaxial cable with diameter of dielectricum 4.9 mm (SKB 94-xx/SKB 395-xx/SKB 88-x)	7611682001655	50
	Type	CFS 97-48		Screening factor acc. to EN 50083-2 > 100 dB
Electrical data				
Impedance	75 Ω			
Mechanical data				
Width across flats	11 mm			
General				
Weight	0.007 kg			
 	CFS 99-48 CFS09948	F male compression Quickfix ✓ Axial ✓ NITIN coated (anti-allergie) ✓ To mount with Compression tool BWZ 8-00 ✓ For coaxial cable with diameter of dielectricum 4.9 mm (SKB 94-xx/SKB 395-xx/SKB 88-x)	7611682002089	50
	CFS 99-51 CFS09951	Same as CFS 99-48, but for coaxial cable with diameter of dielectricum 5.1 mm	7611682002096	50
	CFS 100-48 CFS10048	Same as CFS 99-48, but right-angled	7611682002102	50
	CFS 100-51 CFS10051	Same as CFS 99-51, but right-angled	7611682002119	50
Type	CFS 99-48	CFS 99-51	CFS 100-48	CFS 100-51
Screening factor acc. to EN 50083-2	> 100 dB	> 100 dB	> 100 dB	> 100 dB
Electrical data				
Impedance	75 Ω			
General				
Weight	0.007 kg	0.009 kg	0.017 kg	0.017 kg


	Type Part No.	Product description	GTIN	PU
 	EX 6-49/83 EX64983	F-compression connector NITIN for coaxial cable with dielectric 4.8 mm ✓ For coaxial cable with diameter of dielectricum 4.9 mm ✓ To mount with Compression tool BWZ 6-05 ✓ Vodafone Kabel Deutschland approved	7611682008548	50
	EX 6-51/83 EX65183	F-compression connector NITIN for coaxial cable with dielectric 5.1 mm ✓ For coaxial cable with diameter of dielectricum 5.1 mm ✓ To mount with Compression tool BWZ 6-05 ✓ Vodafone Kabel Deutschland approved	7611682008555	50
	EX 11N EX11N	F-compression connector NITIN for coaxial cable with dielectric 7.2 mm ✓ For coaxial cable with diameter of dielectricum 7.2 mm ✓ To mount with Compression tool BWZ 8-00 ✓ Vodafone Kabel Deutschland approved	7611682008562	50
Type	EX 6-49/83	EX 6-51/83	EX 11N	
Screening factor acc. to EN 50083-2		> 100 dB		
Electrical data				
Impedance		75 Ω		
Mechanical data				
Width across flats		11 mm		
General				
Weight		0.007 kg	0.007 kg	0.018 kg
 	CFS 93-48 CFS09348	F Opti-fix male self compression ✓ To mount without compression tool ✓ NITIN coated (anti-allergie) ✓ Usable for coaxial cable with diameter of dielectricum 4.9 mm (SKB 94-xx/SKB 395-xx/SKB 88-x)	7611682002225	50
	Type		CFS 93-48	
Electrical data				
Impedance		75 Ω		
Mechanical data				
Width across flats		11 mm		
General				
Weight		0.007 kg		
	BZU 60-00 BZU06000	Assortment box compression connectors, empty ✓ Empty assorting box for AXING compression connectors	7611682002133	1
	BZU 60-01 BZU06001	Assortment box compression connectors standard ✓ 1 x BWZ 7-00 ✓ 1 x BWZ 5-02 ✓ 100 x CFS 97-48	7611682002140	1
	BZU 60-02 BZU06002	Assortment box compression connectors professional ✓ 1 x BWZ 8-00 ✓ 1 x BWZ 7-00 ✓ 1 x BWZ 5-02 ✓ 100 x CFS 97-48 ✓ 10 x CFS 100-48 10 x CFS 100-51 ✓ 10 x CFS 99-48 10 x CFS 99-51	7611682002157	1
Type	BZU 60-00	BZU 60-01	BZU 60-02	
General				
Dimensions (W x H x D) appr.		400 x 300 x 90 mm		
Weight	0.720 kg	1.791 kg	2.646 kg	


	Type Part No.	Product description	GTIN	PU
IEC premium-line				
 	CKS 4-00 CKS00400	IEC male ✓ Die-cast housing, high shielded ✓ Right-angel with screw clamp	7611682340044	100
	CKS 5-00 CKS00500	Same as CKS 4-00, but axial	7611682340051	100
	CKK 4-00 CKK00400	IEC female ✓ Die-cast housing, high shielded ✓ Right-angel with screw clamp	7611682350043	100
	CKK 5-00 CKK00500	Same as CKK 4-00, but axial	7611682350050	100
Type	CKS 4-00	CKS 5-00	CKK 4-00	CKK 5-00
Electrical data				
Impedance	75 Ω			
General				
Weight	0.029 kg	0.023 kg	0.030 kg	0.024 kg




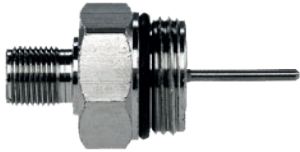
IEC basic-line						
	CKS 1-00 CKS00100	IEC male ✓ With screw clamp ✓ Metal/plastic	7611682340013	100		
	CKS 6-00 CKS00600	IEC male ✓ Easy to fit, for direct mounting on the cable ✓ Solid metal	7611682350067	100		
	CKS 20-00 CKS02000	IEC male ✓ With screw clamp ✓ Metal/plastic	7611682340204	100		
	CKK 1-00 CKK00100	IEC female ✓ With screw clamp ✓ metal/plastic	7611682350012	100		
	CKK 6-00 CKK00600	IEC female ✓ Easy to fit, for direct mounting on the cable ✓ Solid metal	7611682340068	100		
	CKK 21-00 CKK02100	IEC female ✓ With screw clamp ✓ Metal/plastic	7611682350210	100		
Type	CKS 1-00	CKS 6-00	CKS 20-00	CKK 1-00	CKK 6-00	CKK 21-00
Electrical data						
Impedance	75 Ω					
General						
Weight	0.007 kg	0.012 kg	0.006 kg	0.006 kg	0.015 kg	0.006 kg

F premium-line				
 	CFS 89-01 CFS08901	F male screw type for SKB 89-xx ✓ Double rubber gasket (from front and backside)	7611682368918	100
	Type	CFS 89-01		
Electrical data				
Impedance	75 Ω			
Mechanical data				
Width across flats	12 mm			
General				
Weight	0.015 kg			




	Type Part No.	Product description	GTIN	PU
	CFS 0-00 CFS00000	F male screw type ✓ For cable diameter 7 mm	7611682360004	100
	CFS 0-02 CFS00002	Same as CFS 0-00, but waterproof with rubber seal	7611682360011	100
	CFS 1-00 CFS00100	F male screw type ✓ for cable diameter 6.5 mm	7611682360103	100
	CFS 2-00 CFS00200	F male screw type ✓ for cable diameter 5.2 mm	7611682360202	100
	CFS 3-00 CFS00300	F male screw type ✓ for cable diameter 4 mm	7611682360301	100
	CFS 4-00 CFS00400	F male screw type ✓ for cable diameter 4.7 mm	7611682360400	100
	CFS 7-02 CFS00702	F male screw type ✓ For cable diameter 10.4 mm ✓ Incl. 2 center pin for 1.1 mm ID and 1.6 mm ID inner conductor	7611682360714	1


Type	CFS 0-00	CFS 0-02	CFS 1-00	CFS 2-00	CFS 3-00	CFS 4-00	CFS 7-02	
Electrical data								
Impedance	75 Ω							
Mechanical data								
Width across flats	11 mm							
General								
Weight	0.004 kg	0.004 kg	0.004 kg	0.006 kg	0.006 kg	0.006 kg	0.020 kg	
	CFS 7-00 CFS00700	F male crimp type ✓ For cable diameter 7.5 mm ✓ Incl. 2 center pin for 1.1 mm ID and 1.6 mm ID inner conductor					7611682360707	100
	CFS 20-00 CFS02000	F Quickfix ✓ For cable diameter 4.5...7 mm					7611682362008	100
Type	CFS 7-00			CFS 20-00				
Electrical data								
Impedance	75 Ω							
Mechanical data								
Width across flats	11 mm			-				
General								
Weight	0.013 kg			0.006 kg				

Adapters premium-line				
	CFA 4-01 CFA00401	Adapter F/F Quickfix ✓ Male to male, Quickfix ✓ Professional version ✓ High return loss	7611682280401 100	
	CFA 26-02 CFA02602	Adapter F F ✓ Female to female, with lock nut ✓ Professional version, 29 mm long ✓ High return loss	7611682006254 100	
Type	CFA 4-01		CFA 26-02	
Electrical data				
Impedance	75 Ω			
Connectors				
Return loss	>50 dB @ 5...65 MHz >22 dB @ 86...862 MHz >22 dB @ 950...2200 MHz			
General				
Weight	0.006 kg		0.014 kg	


	Type Part No.	Product description	GTIN	PU	
 	CFA 13-01 CFA01301	Adapter F IEC laboratory-type ✓ IEC-female to F-female ✓ High return loss	7611682004601	1	
	CFA 14-01 CFA01401	Same as CFA 13-01, but IEC-male to F-female	7611682004809	1	
	CFA 15-00 CFA01500	Same as CFA 13-01, but IEC-male to F-male	7611682002065	1	
	CFA 16-01 CFA01601	Same as CFA 13-01, but IEC-female to F-male, Quickfix	7611682007404	1	
	CFA 17-00 CFA01700	Same as CFA 13-01, but F-male, Quickfix to IEC-female	7611682002614	1	
Type	CFA 13-01	CFA 14-01	CFA 15-00	CFA 16-01	CFA 17-00
Electrical data					
Impedance	75 Ω	75 Ω	75 Ω	75 Ω	-
General					
Weight	0.012 kg	0.012 kg	0.017 kg	0.017 kg	0.017 kg
 	CFA 12-00 CFA01200	Adapter PG11 F ✓ PG11 to F female ✓ for BVS 14-66	7611682280128	1	
	CKA 12-00 CKA01200	PG 11 to IEC female for BVS 14-66	7611682320121	1	
Type		CFA 12-00		CKA 12-00	
Electrical data					
Impedance			75 Ω		
General					
Weight			0.040 kg		

Adapters | basic-line

	CFA 1-00 CFA00100	Adapter F IEC ✓ F-male to IEC-female	7611682280012	100
	CFA 2-00 CFA00200	Adapter F IEC ✓ F-female to IEC-female	7611682280029	100
	CFA 5-00 CFA00500	Adapter F IEC ✓ F-female to IEC-male	7611682280050	100
	CFA 10-00 CFA01000	Adapter F IEC ✓ F-male to IEC-male	7611682280104	100
Type	CFA 1-00	CFA 2-00	CFA 5-00	CFA 10-00
Electrical data				
Impedance	75 Ω			
General				
Weight	0.009 kg	0.008 kg	0.007 kg	0.008 kg
 	CKA 1-00 CKA00100	IEC-male to IEC-male	7611682320015	100
	CKA 2-00 CKA00200	IEC-female to IEC-female	7611682320022	100
Type		CKA 1-00		CKA 2-00
Electrical data				
Impedance	75 Ω			
General				
Weight	0.005 kg			

	Type Part No.	Product description	GTIN	PU	
	CFA 3-00 CFA00300	Adapter F F ✓ F female to F female	7611682280036	100	
	CFA 3-02 CFA00302	Adapter F F ✓ F female to F female ✓ U-shaped	7611682280326	100	
	CFA 4-00 CFA00400	Adapter F F ✓ F male to F male	7611682280043	100	
	CFA 6-02 CFA00602	Adapter F F ✓ F female to F male ✓ Right-angled	7611682280609	100	
	CFA 18-00 CFA01800	Adapter F F ✓ F male, screw type to F male, Quickfix	7611682002928	1	
Type	CFA 3-00	CFA 3-02	CFA 4-00	CFA 6-02	CFA 18-00
Electrical data					
Impedance	75 Ω				
General					
Weight	0.005 kg	0.021 kg	0.007 kg	0.014 kg	0.007 kg







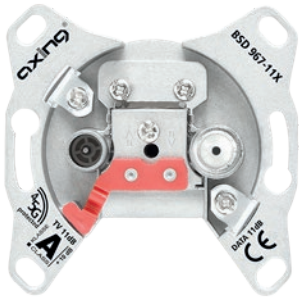
Terminal resistors

	Type Part No.	Product description	GTIN	PU	
	CFA 8-00 CFA00800	Terminating resistor 75 Ohm ✓ F male	7611682280081	100	
	CFA 11-00 CFA01100	Terminating resistor 75 Ohm DC isolated ✓ F male ✓ DC isolated	7611682280111	100	
	TZU 3-00 TZU00300	Terminating resistor ✓ 75 Ohm ✓ For CATV loop-through wall outlets CATV	7611682080032	100	
	TZU 3-01 TZU00301	Terminating resistor, DC-isolated ✓ 75 Ohm ✓ For CATV and SAT loop-through wall outlets	7611682080308	100	
Type	CFA 8-00	CFA 11-00	TZU 3-00	TZU 3-01	
Electrical data					
Impedance	75 Ω				
General					
Weight	0.003 kg	0.005 kg	0.001 kg	0.001 kg	





	Type Part No.	Product description	GTIN	PU				
Tools								
 <div style="position: absolute; top: 315px; left: 85px; border: 1px solid black; padding: 2px; font-weight: bold;"> NEU 22 </div>	BWZ 1-00 BWZ00100	Crimping tool ✓ For crimping-type F connectors ✓ Cable diameter 5...7 mm	7611682330014	1				
	BWZ 3-00 BWZ00300	F connector wrench ✓ Tightening aid ✓ 11 mm across the flats	7611682330038	1				
	BWZ 4-01 BWZ00401	Crimping aid ✓ For use when assembling F connectors	7611682330045	1				
	BWZ 5-02 BWZ00502	Universal cable stripping tool ✓ For stripping of coax cables (e. g. SKB 75, SKB 88, SKB 94, SKB 395) ✓ Insertable stripping block 13/8 mm (premium-line wall outlets) and 7/6 mm (AXING F compression connectors)	7611682002942	1				
	BWZ 5-12 BWZ00512	Replacement block for BWZ 5-02 ✓ 13/8 mm (premium-line wall outlets) and 7/6 mm (AXING F compression connectors)	7611682003369	1				
	BWZ 6-05 BWZ00605	Compression tool ✓ For AXING F compression connectors CFS 97-xx	7611682008272	1				
	BWZ 8-00 BWZ00800	Compression tool ✓ Adjustable compression ✓ Three tool inserts ✓ For all AXING-F compression connectors	7611682002058	1				
	BWZ 11-00 BWZ01100	Special open-ended wrench ✓ Open-ended/open ring wrench ✓ For small F-socket distances ✓ 11 mm across the flats	7611682002898	1				
	Type	BWZ 1-00	BWZ 3-00	BWZ 4-01	BWZ 5-02	BWZ 5-12	BWZ 6-05	BWZ 8-00
General								
Weight	0.729 kg	0.016 kg	0.034 kg	0.078 kg	0.008 kg	-	0.488 kg	0.036 kg

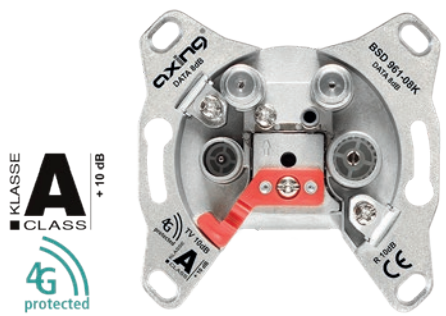
Antenna wall outlets





Multimedia | DOCSIS 3.1/4.0

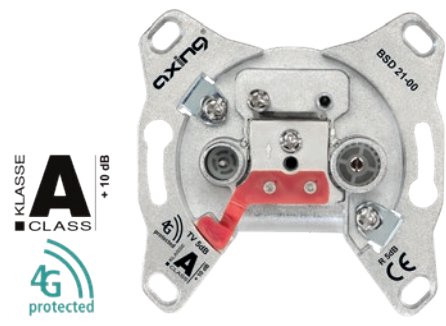
Type	Part No.	Product description	GTIN	PU
      	BSD 967-04X BSD96704X	Multimedia end outlet 5 ... 1800 MHz 4 dB CATV DATA ✓ Class A (+10 dB) according to EN 50083-2 ✓ For DOCSIS 3.1/4.0 applications ✓ Suitable for broadband return path ✓ High overvoltage protection ✓ High intermodulation immunity (≤ 115 dBc) ✓ TV port IEC male ✓ DATA port F female ✓ Surface treated ✓ Vodafone Kabel Deutschland project-approved	7611682008302	1
	BSD 967-09X BSD96709X	Same as BSD 967-04, but end outlet terminated 10 dB	7611682008319	1
	BSD 967-11X BSD96711X	Same as BSD 967-04, but loop-through outlet 11 dB	7611682008326	1
	BSD 967-14X BSD96714X	Same as BSD 967-04, but loop-through outlet 14 dB	7611682008333	1
	BSD 967-17X BSD96717X	Same as BSD 967-04, but loop-through outlet 17 dB	7611682008340	1
	BSD 967-20X BSD96720X	Same as BSD 967-04, but loop-through outlet 20 dB	7611682008357	1

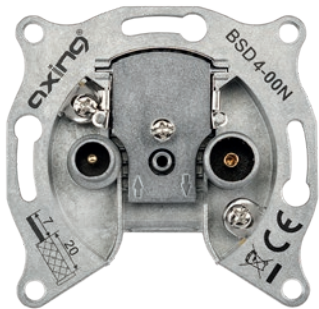
Type	BSD 967-04X	BSD 967-09X	BSD 967-11X	BSD 967-14X	BSD 967-17X	BSD 967-20X
Screening factor acc. to EN 50083-2	Class A (+10 dB)					
Trunk line						
Frequency range input	5 ... 1800 MHz					
Through loss @ 5...1800 MHz	-	-	≤ 3 ... 5 dB	≤ 1,8 ... 4 dB	≤ 1,5 ... 2,5 dB	≤ 1,0 ... 2,5 dB
Frequency range output	-	-	5 ... 1800 MHz	5 ... 1800 MHz	5 ... 1800 MHz	5 ... 1800 MHz
Suitable cables (inner conductor outer conductor outer diameter)	0.4 ... 1.13 mm 3.5 ... 6.0 mm 4.70 ... 7.35 mm					
TV connector						
Connector type	IEC male					
Frequency range	-					
Tap loss	4 dB ±1 dB	9 dB ±1 dB	11 dB ±1 dB	14 dB ±1 dB	17 dB ±1 dB	20 dB ±1 dB
DATA connector						
Connector type	F female					
Frequency range	5 ... 1800 MHz					
Tap loss	4 dB ±1 dB	9 dB ±1 dB	11 dB ±1 dB	14 dB ±1 dB	17 dB ±1 dB	20 dB ±1 dB
Isolation TV DATA @ 5 ... 204 MHz	≥ 60 dB					
Isolation TV DATA @ 258 ... 1800 MHz	≥ 25 dB					
General						
Dimensions (W × H × D) appr.	68 × 68 × 39 mm					
Weight	0.1 kg					



Type Part No.	Product description	GTIN	PU					
Multimedia premium-line								
   	BSD 963-00N Multimedia end outlet 5...1006 MHz CATV DATA BSD96300N	7611682001501	1					
	✓ Class A (+10 dB) according to EN 50083-2 ✓ Suitable for broadband return path ✓ Easy to install ✓ Stripping length 8/13 mm ✓ Extended F socket ✓ Surface treaded ✓ Vodafone Kabel Deutschland approved							
	BSD 963-10N Same as BSD 963-00N, but loop-through type with 10 dB tap loss BSD96310N	7611682002218	1					
	BSD 963-11N Same as BSD 963-00N, but terminal type type with 10 dB tap loss BSD96311N	7611682000832	1					
	BSD 963-12N Same as BSD 963-00N, but loop-through type with 12 dB tap loss BSD96312N	7611682001525	1					
	BSD 963-13N Same as BSD 963-00N, but loop-through type with 14 dB tap loss and with high pass filter on the trunk (blocked return path) BSD96313N	7611682001532	1					
	BSD 963-14N Same as BSD 963-00N, but loop-through type with 14 dB tap loss BSD96314N	7611682001549	1					
	BSD 963-17N Same as BSD 963-00N, but loop-through type with 17 dB tap loss BSD96317N	7611682001563	1					
BSD 963-20N Same as BSD 963-00N, but loop-through type with 20 dB tap loss BSD96320N	7611682001556	1						
Type	BSD 963-00N	BSD 963-10N	BSD 963-11N	BSD 963-12N	BSD 963-13N	BSD 963-14N	BSD 963-17N	BSD 963-20N
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)							
Trunk line								
Frequency range input	5...1006 MHz							
Through loss @ 5...65 MHz	-	-	-	-	≥ 45 dB	-	-	-
Through loss @ 5...1006 MHz	-	≤ 4.5 dB	-	≤ 3.5 dB	-	≤ 2.5 dB	≤ 2.2 dB	≤ 1.9 dB
Through loss @ 85...1006 MHz	-	-	-	-	≤ 3.3 dB	-	-	-
Frequency range output	-	5...1006 MHz	-	5...1006 MHz	87.5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm							
TV connector								
Connector type	IEC-male							
Frequency range	109...1006 MHz							
Tap loss	6 dB ±1 dB	10 dB ±1 dB	10 dB ±1 dB	12 dB ±1 dB	14 dB ±1 dB	14 dB ±1 dB	17 dB ±1 dB	20 dB ±1 dB
Radio connector								
Connector type	IEC-female							
Frequency range	87.5...125 MHz							
Tap loss	8 dB ±1.5 dB	12 dB ±1.5 dB	12 dB ±1.5 dB	14 dB ±1.5 dB	16 dB ±1.5 dB	16 dB ±1.5 dB	18 dB ±1.5 dB	21 dB ±1.5 dB
DATA connector								
Connector type	F-female							
Frequency range	5...1006 MHz							
Tap loss	6 dB ±1 dB	10 dB ±1 dB	10 dB ±1 dB	12 dB ±1 dB	14 dB ±1 dB	14 dB ±1 dB	17 dB ±1 dB	20dB ±1 dB
Isolation TV DATA @ 5...65 MHz	≥ 70 dB							
Isolation TV DATA @ 109...1006 MHz	≥ 30 dB							
General								
Dimensions (W × H × D) appr.	68 × 68 × 39 mm							
Weight	0.100 kg							

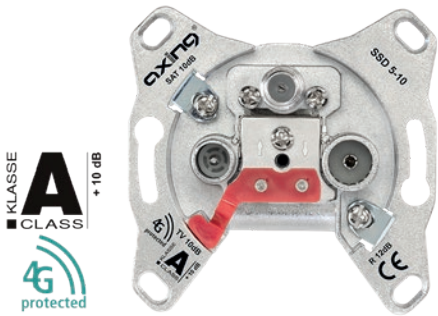
Type Part No.	Product description	GTIN	PU				
	BSD 961-08K Multimedia end outlet 8 dB 5...1006 MHz CATV DATA DATA ✓ Class A (+10 dB) according to EN 50083-2 ✓ High intermodulation suppression ✓ Suitable for broadband return path ✓ Easy to install ✓ Stripping length 8/13 mm ✓ Extended F sockets ✓ Surface treaded	7611682005240	1				
	BSD 961-11K Same as BSD 961-08K, but terminal type with 12 dB tap loss	7611682005257	1				
	BSD 961-12K Same as BSD 961-08K, but loop-through type with 12 dB tap loss	7611682005264	1				
	BSD 961-13K Same as BSD 961-08K, but loop-through type with 15 dB tap loss and with high pass filter on the trunk (blocked return path)	7611682005271	1				
	BSD 961-15K Same as BSD 961-08K, but loop-through type with 15 dB tap loss	7611682005288	1				
	BSD 961-17K Same as BSD 961-08K, but loop-through type with 17 dB tap loss	7611682005295	1				
	BSD 961-20K Same as BSD 961-08K, but loop-through type with 20 dB tap loss	7611682005301	1				
Type	BSD 961-08K	BSD 961-11K	BSD 961-12K	BSD 961-13K	BSD 961-15K	BSD 961-17K	BSD 961-20K
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)						
Trunk line							
Frequency range input	5...1006 MHz						
Through loss @ 5...65 MHz	-	-	-	≤ 45 dB	-	-	-
Through loss @ 5...1006 MHz	-	-	≤ 4.5 dB	-	≤ 2.8 dB	≤ 1.8 dB	≤ 1.6 dB
Through loss @ 85...1006 MHz	-	-	-	≤ 3.2 dB	-	-	-
Frequency range output	-	-	5...1006 MHz	87.5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm						
TV connector							
Connector type	IEC-male						
Frequency range	109...1006 MHz						
Tap loss	8 dB ±1.0 dB	12 dB ±1.0 dB	12 dB ±1.0 dB	15 dB ±1.5 dB	15 dB ±1.0 dB	17 dB ±1.0 dB	20 dB ±1.0 dB
Radio connector							
Connector type	IEC-female						
Frequency range	87.5...125 MHz						
Tap loss	9 dB ±1.5 dB	14 dB ±1.5 dB	13 dB ±1.5 dB	16 dB ±1.5 dB	16 dB ±1.5 dB	18 dB ±1.5 dB	21 dB ±1.5 dB
DATA connector							
Connector type	F-female						
Frequency range	5...1006 MHz						
Tap loss	8 dB ±1.0 dB	12 dB ±1.0 dB	12 dB ±1.0 dB	15 dB ±1.0 dB	15 dB ±1.0 dB	17 dB ±1.0 dB	20 dB ±1.0 dB
Isolation TV DATA @ 5...65 MHz	≥ 60 dB						
Isolation TV DATA @ 109...1006 MHz	≥ 30 dB						
Isolation R DATA 1/2 @ 5...65 MHz	≥ 60 dB						
Isolation R DATA 1/2 @ 87.5...108 MHz	≥ 30 dB						
General							
Dimensions (W × H × D) appr.	68 × 68 × 39 mm						
Weight	0.104 kg						

Type Part No.	Product description	GTIN	PU	
   	BSD 960-00N BSD96000N	Multimedia end outlet 5...2200 MHz CATV DATA SAT ✓ Class A (+10 dB) according to EN 50083-2 ✓ Suitable for broadband return path ✓ Easy to install ✓ Stripping length 8/13 mm ✓ Extended F sockets ✓ Surface treated ✓ Vodafone Kabel Deutschland approved	7611682002638	1
	BSD 960-10N BSD96010N	Same as BSD 960-00N, but loop-through type with 10 dB tap loss	7611682003420	1
Type	BSD 960-00N	BSD 960-10N		
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)			
Trunk line				
Frequency range input	5...2200 MHz			
Through loss @ 5...2200 MHz	-	≤ 3.7 dB		
Frequency range output	-	5...2200 MHz		
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm			
TV connector				
Connector type	IEC-male			
Frequency range	109...862 MHz			
Tap loss	8.0 dB ±1.5 dB	17 dB ±1.5 dB		
Radio connector				
Connector type	IEC-female			
Frequency range	87.5...125 MHz			
Tap loss	9.0 dB ±1.5 dB	18 dB ±1.5 dB		
SAT connector				
Connector type	F-female			
Frequency range	950...2200 MHz			
Tap loss	1.0 dB ±1.5 dB	10 dB ±1.5 dB		
DATA connector				
Connector type	F-female			
Frequency range	5...862 MHz			
Tap loss	8.0 dB ±1.5 dB	12 dB ±1.5 dB		
Isolation TV DATA @ 5...65 MHz	≥ 60 dB			
Isolation TV DATA @ 109...1006 MHz	≥ 25 dB			
General				
Dimensions (W × H × D) appr.	68 × 68 × 39 mm			
Weight	0.103 kg	0.082 kg		

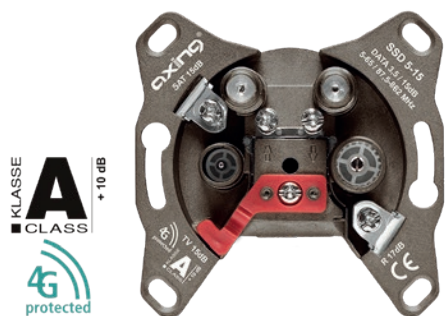
Type	Part No.	Product description	GTIN	PU				
CATV premium-line								
	BSD 21-00 BSD02100	Extended wideband end outlet 5...2200 MHz CATV <ul style="list-style-type: none"> ✓ Class A (+10 dB) according to EN 50083-2 ✓ Suitable for broadband return path ✓ Easy to install ✓ Stripping length 8/13 mm ✓ Surface treated 	7611682002416	1				
	BSD 21-01 BSD02101	Same as BSD 21-00, but with DC power pass (suitable for SAT)	7611682002423	1				
	BSD 21-07 BSD02107	Same as BSD 21-00, but loop-through type with 7 dB tap loss, frequency range 5...1006 MHz	7611682002430	1				
	BSD 21-10 BSD02110	Same as BSD 21-00, but loop-through type with 10 dB tap loss	7611682002447	1				
	BSD 21-11 BSD02111	Same as BSD 21-10, but with DC power pass (suitable for SAT)	7611682002454	1				
	BSD 21-14 BSD02114	Same as BSD 21-00, but loop-through type with 14 dB tap loss	7611682002461	1				
	BSD 21-18 BSD02118	Same as BSD 21-00, but loop-through type with 18 dB tap loss	7611682002478	1				
	BSD 21-22 BSD02122	Same as BSD 21-00, but loop-through type with 22 dB tap loss	7611682002485	1				
Type	BSD 21-00	BSD 21-01	BSD 21-07	BSD 21-10	BSD 21-11	BSD 21-14	BSD 21-18	BSD 21-22
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)							
Tap method	Ferrite splitter	Ferrite splitter	Directional couple + ferrite splitter	Double directional coupler	Double directional coupler	Directional couple + ferrite splitter	Directional couple + ferrite splitter	Directional couple + ferrite splitter
Trunk line								
Frequency range input	5...2200 MHz	5...2200 MHz	5...1006 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz
Through loss @ 5...862 MHz	-	-	≤ 5.3 dB	≤ 3.5 dB	≤ 3.5 dB	≤ 1.5 dB	≤ 0.9 dB	≤ 0.9 dB
Through loss @ 862...2200 MHz	-	-	-	≤ 4.0 dB	≤ 4.2 dB	≤ 2.5 dB	≤ 1.8 dB	≤ 1.8 dB
Isolation internal	≥ 15 dB	≥ 15 dB	≥ 20 dB	≥ 25 dB	≥ 25 dB	≥ 15 dB	≥ 15 dB	≥ 20 dB
Frequency range output	-	-	5...1006 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm							
TV connector								
Connector type	IEC-male							
Frequency range	5...2200 MHz	5...2200 MHz	5...1006 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz
Tap loss	5 dB ±1.5 dB	5 dB ±1.5 dB	7.5 dB ±1.5 dB	10 dB ±1.5 dB	10 dB ±1.5 dB	14 dB ±1.5 dB	18 dB ±1.5 dB	22 dB ±1.5 dB
DC power pass to trunk	-	yes	-	-	yes	-	-	-
Radio connector								
Connector type	IEC-female							
Frequency range	5...2200 MHz	5...2200 MHz	5...1006 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz	5...2200 MHz
Tap loss	5 dB ±1.5 dB	5 dB ±1.5 dB	7.5 dB ±1.5 dB	10 dB ±1.5 dB	10 dB ±1.5 dB	14 dB ±1.5 dB	18 dB ±1.5 dB	22 dB ±1.5 dB
General								
Dimensions (W × H × D) appr.	68 × 68 × 35 mm							
Weight	0.092 kg							

	Type Part No.	Product description	GTIN	PU		
CATV basic-line						
 <p>KLASSE A CLASS</p>	BSD 4-00N BSD00400N	CATV end outlet 5...1006 MHz ✓ Suitable for broadband return path ✓ Surface treated	7611682007305	1		
	BSD 4-07N BSD00407N	Same as BSD 4-00N, but loop-through type with 7 dB tap loss	7611682007312	1		
	BSD 4-10N BSD00410N	Same as BSD 4-00N, but loop-through type with 10 dB tap loss	7611682007329	1		
	BSD 4-14N BSD00414N	Same as BSD 4-00N, but loop-through type with 14 dB tap loss	7611682007336	1		
	BSD 4-18N BSD00418N	Same as BSD 4-00N, but loop-through type with 18 dB tap loss	7611682007343	1		
	BSD 4-22N BSD00422N	Same as BSD 4-00N, but loop-through type with 22 dB tap loss	7611682007350	1		
	Type	BSD 4-00N	BSD 4-07N	BSD 4-10N	BSD 4-14N	BSD 4-18N
Tap method	Ferrite splitter	Double directional coupler	Double directional coupler	Double directional coupler	Double directional coupler	Double directional coupler
Trunk line						
Frequency range input	5...1006 MHz					
Through loss @ 5...1006 MHz	-	<5.5 dB	<4.0 dB	<3.8 dB	<2.5 dB	<2.5 dB
Isolation internal	> 15 dB	≥ 15 dB	≥ 20 dB	≥ 25 dB	≥ 28 dB	≥ 30 dB
Frequency range output	5...1006 MHz					
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.7...7.35 mm					
TV connector						
Connector type	IEC-male					
Frequency range	5...1006 MHz					
Tap loss	4 dB ±2 dB	7 dB ±2 dB	10 dB ±2 dB	14 dB ±2 dB	18 dB ±2 dB	22 dB ±2 dB
Radio connector						
Connector type	IEC-female					
Frequency range	5...1006 MHz					
Tap loss	4 dB ±2 dB	7 dB ±2 dB	10 dB ±2 dB	14 dB ±2 dB	18 dB ±2 dB	22 dB ±2 dB
General						
Dimensions (W × H × D) appr.	70 × 66 × 32 mm					
Weight	0.091 kg					

Type Part No.	Product description	GTIN	PU
SAT premium-line			
 	SSD 5-00 SSD00500	SAT end outlet 5...2200 MHz CATV SAT ✓ Class A (+10 dB) according to EN 50083-2 ✓ Suitable for return path 5...65 MHz ✓ Easy to install ✓ Stripping length 8/13 mm ✓ Extended F socket ✓ Surface treaded ✓ Vodafone Kabel Deutschland approved	7611682000894 1
	SSD 5-07 SSD00507	Same as SSD 5-00, but terminal type with 7 dB tap loss, suitable for Unicable I (EN50494) and Unicable II (EN50607)	7611682001662 1
Type	SSD 5-00	SSD 5-07	
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)		
Tap method	Filter circuit/directional coupler		
Trunk line			
Frequency range input	5...2200 MHz		
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm		
TV connector			
Connector type	IEC-male		
Frequency range	109...862 MHz / 5...65 MHz		
Tap loss	≤ 1.5 dB	7 dB ±1.5 dB	
Radio connector			
Connector type	IEC-female		
Frequency range	87.5...125 MHz	87.5...125 MHz	
Tap loss	≤ 4.5 dB	9 dB ±2.0 dB	
SAT connector			
Connector type	F female		
Frequency range	950...2200 MHz		
Tap loss	≤ 1.5 dB	7 dB ±1.5 dB	
DC power pass to trunk	yes		
General			
Dimensions (W × H × D) appr.	68 × 68 × 39 mm		
Weight	0.104 kg		

Type	Part No.	Product description	GTIN	PU
	SSD 5-10 SSD00510	SAT multimedia loop-through outlet 15 dB 5...2200 MHz CATV SAT DATA ✓ Class A (+10 dB) according to EN 50083-2 ✓ With high pass filter on the trunk (blocked return path) ✓ Suitable for return path 5...65 MHz ✓ Suitable for Unicable I (EN50494) and Unicable II (EN50607) ✓ Easy to install ✓ Stripping length 8/13 mm ✓ Extended F socket ✓ Surface treaded	7611682000900	1
	SSD 5-14 SSD00514	Same as SSD 5-10, but 14 dB tap loss	7611682000917	1
	SSD 5-18 SSD00518	Same as SSD 5-10, but 18 dB tap loss	7611682000948	1
Type	SSD 5-10	SSD 5-14	SSD 5-18	
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)			
Tap method	Filter circuit/directional coupler			
Trunk line				
Frequency range input	5...2200 MHz			
Through loss @ 5...862 MHz	≤ 2.0 dB	≤ 1.3 dB	≤ 1.3 dB	
Through loss @ 862...2200 MHz	≤ 3.0 dB	≤ 2.5 dB	≤ 2.5 dB	
Frequency range output	5...2200 MHz			
DC power pass	yes			
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm			
TV connector				
Connector type	IEC-male			
Frequency range	109...862 MHz / 5...65 MHz			
Tap loss	10 dB ±1.5 dB	14 dB ±1.5 dB	18 dB ±1.5 dB	
Radio connector				
Connector type	IEC-female			
Frequency range	87.5...125 MHz	87.5...125 MHz	87.5...125 MHz	
Tap loss	13 dB ±2.0 dB	16 dB ±2.0 dB	22 dB ±2.0 dB	
SAT connector				
Connector type	F female			
Frequency range	950...2200 MHz			
Tap loss	10 dB ±1.5 dB	14 dB ±1.5 dB	18 dB ±1.5 dB	
DC power pass to trunk	yes			
General				
Dimensions (W × H × D) appr.	68 × 68 × 39 mm			
Weight	0.104 kg			

Type Part No. Product description GTIN PU



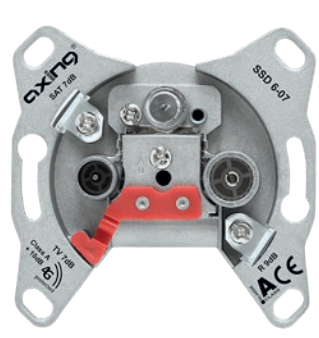


SSD 5-15
SSD00515



SAT multimedia loop-through outlet 15 dB | 5...2200 MHz | CATV | SAT | DATA
 ✓ Class A (+10 dB) according to EN 50083-2
 ✓ With high pass filter on the trunk (blocked return path)
 ✓ Suitable for return path 5...65 MHz
 ✓ Suitable for Unicable I (EN50494) and Unicable II (EN50607)
 ✓ Easy to install
 ✓ Stripping length 8/13 mm
 ✓ Extended F socket
 ✓ Surface treated


7611682003673



1

Type	SSD 5-15
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)
Tap method	Filter circuit/directional coupler
Trunk line	
Frequency range input	5...2200 MHz
Through loss @ 5...65 MHz	≤ 45 dB
Through loss @ 85...862 MHz	≤ 4 dB
Through loss @ 862...2200 MHz	≤ 6 dB
Frequency range output	5...2200 MHz
DC power pass	yes
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm
TV connector	
Connector type	IEC-male
Frequency range	109...862 MHz
Tap loss	15 dB +1.5/-2.0 dB
Radio connector	
Connector type	IEC-female
Frequency range	87.5...125 MHz
Tap loss	17 dB ±2.0 dB
SAT connector	
Connector type	F-female
Frequency range	950...2200 MHz
Tap loss	15 dB ±1.5 dB
DC power pass to trunk	yes
DATA connector	
Connector type	F-female
Frequency range	5...65 MHz 85...862 MHz
Tap loss	<3.5 dB 15 dB ±1.5 dB
General	
Dimensions (W × H × D) appr.	68 × 68 × 39 mm
Weight	0.095 kg



Type Part No.	Product description	GTIN	PU	
 KLASSE A CLASS +10 dB 	SSD 6-07 SSD00607 Programmable single cable end outlet terminated 7 dB 5 ... 2200 MHz CATV SAT ✓ Class A (+10 dB) according to EN 50083-2 ✓ Suitable for return path 5 ... 65 MHz ✓ Suitable for Unicable I (EN50494) and Unicable II (EN50607) ✓ Each socket can be allocated to one ore more user-bands (programming with the SZU 60-00 programmer and the free-of charge software AnDoKon (www.axing.com download)) ✓ Easy to install ✓ Stripping length 8/13 mm ✓ Extended F socket ✓ Surface treated	7611682002294	1	
	SSD 6-10 SSD00610 Same as SSD 6-07, but loop-through type with 10 dB tap loss	7611682002300	1	
	SSD 6-14 SSD00614 Same as SSD 6-07, but loop-through type with 14 dB tap loss	7611682002317	1	
	SSD 6-18 SSD00618 Same as SSD 6-07, but loop-through type with 18 dB tap loss	7611682002324	1	
Type	SSD 6-07	SSD 6-10	SSD 6-14	SSD 6-18
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)			
Tap method	Filter circuit/directional coupler			
Trunk line				
Frequency range input	5 ... 2200 MHz			
Through loss @ 5...862 MHz	-	≤ 2.0 dB	≤ 1.3 dB	≤ 1.3 dB
Through loss @ 862...2200 MHz	-	≤ 3.0 dB	≤ 2.5 dB	≤ 2.5 dB
Frequency range output	-	5 ... 2200 MHz	5 ... 2200 MHz	5 ... 2200 MHz
DC power pass	-	yes	yes	yes
Suitable cables (Inner conductor outer diameter)	0.63 ... 1.13 mm 4.70...7.35 mm			
TV connector				
Connector type	IEC-male			
Frequency range	109 ... 862 MHz 5...65MHz			
Tap loss	7 dB ±1.5 dB	10 dB ±1.5 dB	14 dB ±1.5 dB	18 dB ±1.5 dB
Radio connector				
Connector type	IEC-female			
Frequency range	87.5 ... 108 MHz			
Tap loss	9 dB ±2.0 dB	12 dB ±2.0 dB	16 dB ±2.0 dB	20 dB ±2.0 dB
SAT connector				
Connector type	F female			
Frequency range	950 ... 2200 MHz			
Tap loss	-	-	-	-
DC power pass to trunk	yes			
General				
Dimensions (W × H × D) appr.	68 × 68 × 39 mm			
Weight	0.102 kg			
 KLASSE A CLASS	SZU 60-00 SZU06000 Antenna wall outlet programmer for SSD 6-xx ✓ To programm the user bands ✓ Software AnDoKon available at www.axing.com Downloads for free ✓ Including F connecting cable and USB connecting cable	7611682002331	1	
	Type	SZU 60-00		
Interfaces				
USB	USB Mini			
SAT connector				
Connector type	F-female			
General				
Weight	0.172 kg			

Type Part No.	Product description	GTIN	PU
SSD 7-00 SSD00700	SAT twin end outlet 5...2200 MHz CATV SAT SAT ✓ Class A (+10 dB) according to EN 50083-2 ✓ Suitable for return path 5...65 MHz ✓ Suitable for Unicable I (EN50494) and Unicable II (EN50607) ✓ Easy to install ✓ Stripping length 8/13 mm ✓ Extended F sockets ✓ Surface treaded ✓ Vodafone Kabel Deutschland approved	7611682002751	1
 			
Type	SSD 7-00		
Screening factor acc. to EN 50083-2	Class A (+ 10 dB)		
Tap method	Filter circuit/directional coupler		
Trunk line			
Frequency range input right	950...2200 MHz		
Frequency range input left	5...2200 MHz		
Isolation internal	≥ 30 dB		
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm		
TV connector			
Connector type	IEC-male		
Frequency range	109...862 MHz 5...65MHz		
Tap loss	2 dB ±1.0 dB		
Radio connector			
Connector type	IEC-female		
Frequency range	87.5...125 MHz		
Tap loss	2 dB ±1.0 dB		
SAT connector left			
Connector type	F-female		
Frequency range	950...2200 MHz		
Tap loss	2 dB ±1.0 dB		
DC power pass to trunk	yes		
SAT connector right			
Connector type	F-female		
Frequency range	950...2200 MHz		
Tap loss	2 dB ±1.0 dB		
DC power pass to trunk	yes		
General			
Dimensions (W × H × D) appr.	68 × 68 × 39 mm		
Weight	0.107 kg		






Type	Part No.	Product description	GTIN	PU
SAT basic-line				
	SSD 2-00 SSD00200	SAT end outlet 5...2200 MHz CATV SAT ✓ Suitable for return path 5...65 MHz ✓ F connector gold-plated ✓ With cover plate and frame	7611682180022	1
	SSD 2-10 SSD00210	Same as SSD 2-00, but loop-through type with 10 dB tap loss	7611682180206	1
Type	SSD 2-00		SSD 2-10	
Tap method	Filter circuit/directional coupler			
Trunk line				
Frequency range input	5...2200 MHz			
Through loss @ 5...2200 MHz	-	2...5 dB		
Isolation internal	20...40 dB			
Frequency range output	-	5...2200 MHz		
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm			
TV connector				
Connector type	IEC-male			
Frequency range	174...862 MHz 5...65MHz			
Tap loss	≤ 2 dB ≤ 1 dB		≤ 10 dB ≤ 11 dB	
Radio connector				
Connector type	IEC-female			
Frequency range	87.5...125 MHz			
Tap loss	≤ 1 dB		≤ 10 dB	
SAT connector				
Connector type	F female			
Frequency range	950...2200 MHz			
Tap loss	-	-		
DC power pass to trunk	yes			
General				
Dimensions (W × H × D) appr.	78 × 78 × 44 mm			
Weight	0.149 kg			


	Type Part No.	Product description	GTIN	PU
	SSD 4-00 SSD00400	SAT twin end outlet 5...2200 MHz CATV SAT SAT ✓ Suitable for return path 5...65 MHz ✓ With cover plate and frame	7611682180046	1
				
Type	SSD 4-00			
Tap method	Filter circuit/directional coupler			
Trunk line				
Frequency range input right	5...2200 MHz			
Frequency range input left	5...2200 MHz			
Isolation internal	≥ 20 dB			
Suitable cables (Inner conductor outer diameter)	0.63...1.13 mm 4.70...7.35 mm			
TV connector				
Connector type	IEC-male			
Frequency range	125...862 MHz 5...65MHz			
Tap loss	≤ 2 dB ≤ 2 dB			
Radio connector				
Connector type	IEC-female			
Frequency range	87.5...125 MHz			
Tap loss	≤ 2 dB			
SAT connector left				
Connector type	F-female			
Frequency range	950...2200 MHz			
Tap loss	≤ 2 dB			
DC power pass to trunk	yes			
SAT connector right				
Connector type	F-female			
Frequency range	5...2200 MHz			
Tap loss	≤ 2 dB			
DC power pass to trunk	yes			
General				
Dimensions (W × H × D) appr.	78 × 78 × 46 mm			
Weight	0.149 kg			



Cover plates one part



 	SZU 2-00 SZU00200	Cover plate TV/R/SAT single piece ✓ Dimensions 80 x 80 mm ✓ Suitable for antenna wall outlets SSD 5-xx and SSD 6-xx ✓ Suitable surface frame TZU 1-00	7611682160208	1
	SZU 2-01 SZU00201	Same as SZU 2-00, but TV/R/DATA for antenna wall outlets BSD 963xxN	7611682160215	1
	SZU 2-02 SZU00202	Same as SZU 2-00, but TV/R/SAT/DATA for antenna wall outlets BSD 960-xx	7611682002362	1
	SZU 2-03 SZU00203	Same as SZU 2-00, but TV/R/DATA/DATA for antenna wall outlets BSD 961-xxK	7611682002379	1
	SZU 2-04 SZU00204	Same as SZU 2-00, but TV/R/SAT/SAT for antenna wall outlet SSD 7-00	7611682002386	1
	TZU 2-00 TZU00200	Same as SZU 2-00, but TV/R for antenna wall outlets BSD 21-xx and BSD 4-xx	7611682080025	1
	TZU 2-01 TZU00201		7611682009200	1
	TZU 1-00 TZU00100	Surface frame ✓ For single piece cover ✓ Dimensions 80 x 80 mm	7611682080018	1






Type	SZU 2-00	SZU 2-01	SZU 2-02	SZU 2-03	SZU 2-04	TZU 2-00	TZU 2-01	TZU 1-00
General								
Dimensions (W × H)	80 x 80 mm	80 x 80 mm	80 x 80 mm	80 x 80 mm	80 x 80 mm	80 x 80 mm	80 x 80 mm	80 x 80 mm
Weight	0.017 kg	0.016 kg	0.018 kg	0.018 kg	0.018 kg	0.016 kg	0.016 kg	0.042 kg


	Type Part No.	Product description				GTIN	PU
Cover plates two parts							
 	SZU 2-10 SZU00210	Cover plate TV/R/SAT two-parts ✓ Dimensions 75 × 75 mm ✓ Suitable for antenna wall outlets SSD 5-xx and SSD 6-xx ✓ Suitable surface frame TZU 1-10				7611682002560	1
	SZU 2-12 SZU00212	Same as SZU 2-10, but TV/R/SAT/SAT for antenna wall outlets BSD 960-xx				7611682004489	1
	SZU 2-13 SZU00213	Same as SZU 2-10, but TV/R/DATA/DATA for antenna wall outlets BSD 961-xxK				7611682004496	1
	SZU 2-14 SZU00214	Same as SZU 2-10, but TV/R/SAT/SAT for antenna wall outlet SSD 7-00				7611682002577	1
	TZU 2-10 TZU00210	Same as SZU 2-10, but TV/R for antenna wall outlets BSD 21-xx and BSD 4-xx				7611682002553	1
	TZU 2-11 TZU00211					7611682009217	1
	TZU 1-10 TZU00110	Surface frame ✓ For two-part cover ✓ Dimensions 75 x 75 mm				7611682002546	1
	Type	SZU 2-10	SZU 2-12	SZU 2-13	SZU 2-14	TZU 2-10	TZU 2-11
General							
Dimensions (W × H)	75 × 75 mm (55 × 55 mm)	75 × 75 mm (55 × 55 mm)	75 × 75 mm (55 × 55 mm)	75 × 75 mm (55 × 55 mm)	75 × 75 mm (55 × 55 mm)	75 × 75 mm (55 × 55 mm)	75 × 75 mm (55 × 55 mm)
Weight	0.008 kg	0.016 kg	0.016 kg	0.012 kg	0.016 kg	0.016 kg	0.034 kg
Accessories							
 	TZU 21-65 TZU02165	Plug-on adapter Multimedia ✓ Return path 5...65MHz ✓ Can be plugged Radio/TV antenna wall outlets either in wide band or filter technique ✓ F-Port to connect an interactive unit (e. g. cable modem)				7611682082166	1
	Type	TZU 21-65					
Upstream							
Frequency range	5...65 MHz						
TV connector							
Frequency range	85...1006 MHz						
Tap loss	3.5 dB						
DATA connector							
Connector type	F-female						
Tap loss	3.5 dB						
Isolation TV DATA @ 5...65 MHz	> 75 dB						
Isolation TV DATA @ 109...1006 MHz	≥ 30 dB						
Connectors							
Connector antenna wall outlet	IEC-female						
Connector TV	IEC-male						
Return loss	> 18 dB (-1.5 dB/Oktave)						
General							
Weight	0.073 kg						
	TZU 3-00 TZU00300	Terminating resistor ✓ 75 Ohm ✓ For CATV loop-through wall outlets CATV				7611682080032	100
	TZU 3-01 TZU00301	Terminating resistor, DC-isolated ✓ 75 Ohm ✓ For CATV and SAT loop-through wall outlets				7611682080308	100
Type	TZU 3-00			TZU 3-01			
Electrical data							
Impedance	75 Ω						
General							
Weight	0.001 kg						


	Type Part No.	Product description	GTIN	PU
	TZU 23-00 TZU02300	Electronic level ✓ Digital display ✓ Magnetic base	7611682002171	1
Type	TZU 23-00			
General				
Weight	0.070 kg			



	Type Part No.	Product description	GTIN	PU			
Connection cables							
CATV connection cables							
 KLASSE A CLASS	BAK 152-00 BAK15200	Connection cable IEC axial connectors male female high shielded sheath current filter ✓ 1.50 m ✓ Screening factor according to EN 60966-2-5, class A ✓ White, in polybag with self service card	7611682011555	1			
	BAK 252-00 BAK25200	Same as BAK 152-00, but 2.50 m	7611682012552	1			
	BAK 502-00 BAK50200	Same as BAK 152-00, but 5.00 m	7611682015041	1			
	BAK 752-00 BAK75200	Same as BAK 152-00, but 7.50 m	7611682017557	1			
	BAK 992-00 BAK99200	Same as BAK 152-00, but 10.00 m	7611682019957	1			
	Type	BAK 152-00	BAK 252-00	BAK 502-00	BAK 752-00	BAK 992-00	
Screening factor acc. to EN 60966-2-5	Class A						
Connectors							
Connector type	IEC-male, axial IEC-female, axial						
Mechanical data							
Cable length	1.50 m	2.50 m	5.00 m	7.50 m	10.00 m		
General							
Weight	0.080 kg	0.108 kg	0.194 kg	0.282 kg	0.392 kg		
 KLASSE A CLASS	BAK 125-90 BAK12590	Connection cable IEC axial connectors male female high shielded ✓ 1.25 m ✓ Screening factor according to EN 60966-2-5, class A ✓ White, in polybag with self service card	7611682011258	1			
	BAK 150-90 BAK15090	✓ Connection cable IEC axial connectors male female high shielded 1.50 m ✓ Screening factor according to EN 60966-2-5, class A ✓ White, in polybag with self service card	7611682011500	1			
	BAK 250-90 BAK25090	Same as BAK 125-90, but 2.50 m	7611682012507	1			
	BAK 375-90 BAK37590	Same as BAK 125-90, but 3.75 m	7611682013757	1			
	BAK 500-90 BAK50090	Same as BAK 125-90, but 5.00 m	7611682015003	1			
	BAK 750-90 BAK75090	Same as BAK 125-90, but 7.50 m	7611682017502	1			
	BAK 999-90 BAK99990	Same as BAK 125-90, but 10.00 m	7611682019995	1			
	Type	BAK 125-90	BAK 150-90	BAK 250-90	BAK 375-90	BAK 500-90	BAK 750-90
Screening factor acc. to EN 60966-2-5	Class A						
Connectors							
Connector type	IEC-male, axial IEC-female, axial						
Mechanical data							
Cable length	1.25 m	1.50 m	2.50 m	3.75 m	5.00 m	7.50 m	10.00 m
General							
Weight	0.054 kg	0.066 kg	0.100 kg	0.144 kg	0.190 kg	0.274 kg	0.362 kg


	Type Part No.	Product description	GTIN	PU			
	BAK 153-00 BAK15300	Connection cable IEC right-angle connectors male female high shielded ✓ 1.50 m ✓ Screening factor according to EN 60966-2-5, class A ✓ White, in polybag with self service card	7611682011562	1			
	BAK 253-00 BAK25300	Same as BAK 153-00, but 2.50 m	7611682012569	1			
	BAK 373-00 BAK37300	Same as BAK 153-00, but 3.75 m	7611682013764	1			
	BAK 503-00 BAK50300	Same as BAK 153-00, but 5.00 m	7611682015058	1			
	BAK 753-00 BAK75300	Same as BAK 153-00, but 7.50 m	7611682017564	1			
	BAK 993-00 BAK99300	Same as BAK 153-00, but 10.00 m	7611682019964	1			
	Type	BAK 153-00	BAK 253-00	BAK 373-00	BAK 503-00	BAK 753-00	BAK 993-00
Screening factor acc. to EN 60966-2-5	Class A						
Connectors							
Connector type	IEC-male, right-angled IEC-female, right-angled						
Mechanical data							
Cable length	1.50 m	2.50 m	3.75 m	5.00 m	7.50 m	10.00 m	
General							
Weight	0.074 kg	0.108 kg	0.190 kg	0.220 kg	0.284 kg	0.384 kg	
	BAK 150-80 BAK15080	Connection cable IEC axial connectors male female high shielded ✓ 1.50 m ✓ Type according to Vodafone KDG 1 TS 152 ✓ Screening factor according to EN 60966-2-5, class A ✓ White, in polybag with self service card	7611682001204	1			
	BAK 200-80 BAK20080	Same as BAK 150-80, but 2.00 m	7611682001211	1			
	BAK 250-80 BAK25080	Same as BAK 150-80, but 2.50 m	7611682001631	1			
	BAK 350-80 BAK35080	Same as BAK 150-80, but 3.50 m	7611682001228	1			
	BAK 500-80 BAK50080	Same as BAK 150-80, but 5.00 m	7611682001235	1			
	BAK 750-80 BAK75080	Same as BAK 150-80, but 7.50 m	7611682001242	1			
	BAK 999-80 BAK99980	Same as BAK 150-80, but 10.00 m	7611682001259	1			
	Type	BAK 150-80	BAK 200-80	BAK 250-80	BAK 350-80	BAK 500-80	BAK 750-80
Screening factor acc. to EN 60966-2-5	Class A						
Connectors							
Connector type	IEC-male, axial IEC-female, axial						
Mechanical data							
Cable length	1.50 m	2.00 m	2.50 m	3.50 m	5.00 m	7.50 m	10.00 m
General							
Weight	0.066 kg	0.080 kg	0.100 kg	0.136 kg	0.190 kg	0.274 kg	0.362 kg





	Type Part No.	Product description	GTIN	PU		
CATV patch/modem cable						
 	MAK 20-80 MAK02080	F patch cable axial connectors male double shielded ✓ 0.20 m ✓ Type according to Vodafone KDG 1 TS 151 ✓ Screening factor according to EN 60966-2-6, class A ✓ White, in polybag	7611682001105	10		
	MAK 30-80 MAK03080	Same as MAK 20-80, but 0.30 m	7611682001112	10		
	MAK 40-80 MAK04080	Same as MAK 20-80, but 0.40 m	7611682001129	10		
	MAK 50-80 MAK05080	Same as MAK 20-80, but 0.50 m	7611682001136	10		
	Type	MAK 20-80	MAK 30-80	MAK 40-80	MAK 50-80	
Screening factor acc. to EN 60966-2-5	Class A					
Connectors						
Connector type	F-male, screw type F-male, screw type					
Mechanical data						
Cable length	0.20 m	0.30 m	0.40 m	0.50 m		
General						
Weight	0.021 kg	0.022 kg	0.029 kg	0.032 kg		
  	MAK 150-80 MAK15080	F modem cable axial connectors male double shielded ✓ 1.50 m ✓ Type according to Vodafone KDG 1 TS 151 ✓ Screening factor according to EN 60966-2-6, class A ✓ To establish a connection of a cable modem to a multimedia antenna wall outlet ✓ White, in polybag	7611682001143	1		
	MAK 200-80 MAK20080	Same as MAK 150-80, but 2.00 m	7611682001150	1		
	MAK 350-80 MAK35080	Same as MAK 150-80, but 3.50 m	7611682001167	1		
	MAK 500-80 MAK50080	Same as MAK 150-80, but 5.00 m	7611682001174	1		
	MAK 750-80 MAK75080	Same as MAK 150-80, but 7.50 m	7611682001181	1		
	MAK 999-80 MAK99980	Same as MAK 150-80, but 10.00 m	7611682001198	1		
	Type	MAK 150-80	MAK 200-80	MAK 350-80	MAK 500-80	MAK 750-80
Screening factor acc. to EN 60966-2-5	Class A					
Connectors						
Connector type	F-male, screw type F-male, screw type					
Mechanical data						
Cable length	1.50 m	2.00 m	3.50 m	5.00 m	7.50 m	10.00 m
General						
Weight	0.068 kg	0.082 kg	0.136 kg	0.196 kg	0.279 kg	0.364 kg




Type	Part No.	Product description	GTIN	PU
SAT connection cables				
 KLASSE A <small>CLASS</small>	SAK 151-00 SAK15100	F Quickfix cable axial connectors male high shielded ✓ 1.50 m ✓ Screening factor according to EN 60966-2-7, class A ✓ White, in polybag with self service card	7611682091519	1
	SAK 251-00 SAK25100	Same as SAK 151-00, but 2.50 m	7611682092516	1
	SAK 501-00 SAK50100	Same as SAK 151-00, but 5.00 m	7611682095012	1
	SAK 991-00 SAK99100	Same as SAK 151-00, but 10.00 m	7611682099911	1
Type	SAK 151-00	SAK 251-00	SAK 501-00	SAK 991-00
Screening factor acc. to EN 60966-2-5	Class A			
Connectors				
Connector type	F-male, quickfix F-male, quickfix			
Mechanical data				
Cable length	1.50 m	2.50 m	5.00 m	10.00 m
General				
Weight	0.066 kg	0.104 kg	0.192 kg	0.360 kg

CATV patch cables				
 KLASSE A <small>CLASS</small>	SAK 21-02 SAK02102	F Quickfix patch cable right-angle connectors double shielded ✓ 0.20 m ✓ Screening factor according to EN 60966-2-6, class A ✓ White, in polybag	7611682006582	1
	SAK 41-02 SAK04102	F Quickfix patch cable right-angle connectors double shielded ✓ 0.40 m ✓ Screening factor according to EN 60966-2-6, class A ✓ White, in polybag	7611682006599	1
Type	SAK 21-02	SAK 41-02		
Connectors				
Connector type	F-male, quickfix, right-angled F-male, quickfix, right-angled			
Mechanical data				
Cable length	0.20 m	0.40 m		
General				
Weight	0.024 kg	0.03 kg		





Type	Part No.	Product description	GTIN	PU		
Power supplies						
For CATV/TERR components						
	BZU 100-00 BZU10000	Remote feed transformer 50V~/2A ✓ External power supply to be used exclusively as spare part for BVS 14-66 or BVS 20-66 ✓ Primary voltage: 230V~/50-60Hz ✓ Secondary voltage: 50V~/2A	7611682371000	1		
	BZU 150-00 BZU15000	Remote feed cable ✓ Accessory or spare part for BZU 100-00 ✓ F-male to 2 × 1.5 mm ² (tinned) ✓ 1.5 m	7611682371505	1		
Type	BZU 100-00		BZU 150-00			
General						
Operating voltage	230VAC/50-60Hz		-			
Output voltage	50 VAC		-			
Output current	2 A		-			
Mechanical data						
Cable length	-		1.5 m			
General						
Operating temperature range	-20 - +55°C		-			
Weight	2.150 kg		0.070 kg			
	TZU 11-02 TZU01102	Power supply 6V~/100 mA ✓ External power supply to be used exclusively as spare part for BVS 10-02	7611682000542	1		
	TZU 11-04 TZU01104	Power supply 12V~/200 mA ✓ External power supply to be used exclusively as spare part for BVS 10-00, BVS 10-30, TVS 21-00 or TAA 3-20	7611682006179	1		
	TZU 15-01 TZU01501	Power inserter for CATV ✓ For remote feeding of BVS 10-xx ✓ 5...862 MHz ✓ Max. remote feed voltage 65 VAC/DC/2 A	7611682080162	1		
	TZU 15-03 TZU01503	Power inserter for SES ✓ For remote feeding of SES 5532-19 ✓ Frequency range 5...2400 MHz ✓ Remote feed current 18V/750 mA	7611682005202	1		
	TZU 15-04 TZU01504	Power inserter ✓ For remote feeding of CATV and SAT amplifiers ✓ Frequency range 5...2400 MHz ✓ Remote feed current 24 V/1 A	7611682005219	1		
	TZU 110-04 TZU11004	DC insertion set 12 V~/200 mA ✓ For DVB-C/S ✓ Power supply 12 V~/200 mA TZU 11-04 ✓ Power inserter TZU 15-04	7611682007527	1		
	Type	TZU 11-02	TZU 11-04	TZU 15-01	TZU 15-03	TZU 15-04
Application	-	-	TERR/CATV	Unicable II	-	-
Screening factor acc. to EN 50083-2	-	-	> 90 dB	-	> 90 dB	> 90 dB
Frequency range	-	-	5...862 MHz	5...2400 MHz	5...2400 MHz	5...2400 MHz
Connectors						
Connector type	-	-	F-male/F-female	F-female	F-male F-female	F-male F-female
General						
Operating voltage	230 VAC / 50 Hz	100...240 VAC 50...60 Hz	-	-	-	230 VAC / 50 Hz
Remote voltage	-	-	65 VAC	18 V	24 V	24 V
Power consumption	2.0 W	2.4 W	-	-	-	5.4 W
Power consumption open-circuit	0.2 W	0.3 W	-	-	-	-
Remote feed current	-	-	2A	750 mA	1 A	1 A
Connector DC	F-female	1.8 m cable with F-male	F-female	-	-	1.8 m cable with f connector
Output voltage	6 VDC	12 VDC	-	-	-	12 VDC
Output current	100 mA	200 mA	-	-	-	200 mA
Dimensions (W × H × D) appr.	-	-	53 × 55 × 16 mm	53 × 55 × 16 mm	53 × 55 × 16 mm	-
Weight	0.178 kg	0.076 kg	0.075 kg	0.075 kg	0.048 kg	0.114 kg









	Type Part No.	Product description	GTIN	PU
For SAT components				
	SZU 99-06 SZU09906	Switching mode power supply 18 V= / 2 A ✓ External power supply to be used exclusively as spare part for OPU 14-03, SES 522-06, SES 544-06, SES 984-06, SPU 1308-06, SPU 1312-06, SPU 1316-06, SPU 1324-06, SPU 1332-06, SPU 1708-06, SPU 1712-06, SPU 1716-06, SPU 1724-06, SPU 1732-06, SPU 512-06, SPU 516-06, SPU 524-06, SPU 532-06, SPU 58-06, SPU 912-06, SPU 916-06, SPU 924-06, SPU 932-06, SPU 98-06, SVS 1313-06, SVS 1717-06, SVS 1717-09, SVS 440-06, SVS 550-06, SVS 990-06 ✓ Consisting of switching mode power supply SZU 99-15 and adapter cable with barrel connector 5.5 / 2.1 mm	7611682005530	1
	SZU 99-22 SZU09922	Switching mode power supply 18 V= / 700 mA ✓ External power supply to be used exclusively as spare part for SPU 510-09, SPU 516-09, SPU 54-09, SPU 56-09, SPU 58-09 ✓ Incl. adapters F to RCA and F-male to F-male	7611682160185	1
Type		SZU 99-06	SZU 99-22	
General				
Operating voltage		90...250 VAC / 47-63 Hz		
Power consumption		39 W		18 W
Power consumption open-circuit		0.4 W		0.2 W
Connector DC		F-female		
Output voltage		18 VDC		
Output current		2 A		0.7 A
Weight		0.260 kg		0.220 kg







Type	Part No.	Product description	GTIN	PU		
Attenuation Equalization Filters Combiners						
Attenuators						
 	BZU 91-03 BZU09103	CATV attenuator F-female F-male ✓ 5...1006MHz ✓ 3 dB	7611682000375	1		
	BZU 91-06 BZU09106	Same as BZU 91-03, but 6 dB	7611682000382	1		
	BZU 91-10 BZU09110	Same as BZU 91-03, but 10 dB	7611682000399	1		
	BZU 92-03 BZU09203	Return path attenuator F-female F-male ✓ Attenuation in return path 3 dB ✓ No attenuation in forward path	7611682002805	1		
	BZU 92-06 BZU09206	Same as BZU 92-03, but 6 dB	7611682002812	1		
	BZU 92-09 BZU09209	Same as BZU 92-03, but 10 dB	7611682002829	1		
	Type	BZU 91-03	BZU 91-06	BZU 91-10	BZU 92-03	BZU 92-06
Frequency range	5...1218 MHz	5...1218 MHz	5...1218 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz
Through loss	3 dB	6 dB	10 dB	-	-	-
Downstream						
Attenuation	-	-	-	0 dB	0 dB	0 dB
Upstream						
Attenuation	-	-	-	3 dB	6 dB	9 dB
Connectors						
Connector type	F-female/F-male					
General						
Weight	0.013 kg	0.013 kg	0.013 kg	0.022 kg	0.022 kg	0.022 kg
 	TZU 4-00 TZU00400	Adjustable attenuator, CATV IEC-female IEC-male ✓ 0.5 - 20 dB	7611682080407	1		
	TZU 4-01 TZU00401	Same as TZU 4-00, but F-female F-male	7611682080414	1		
Type	TZU 4-00		TZU 4-01			
Screening factor acc. to EN 50083-2	> 75 dB					
Frequency range	0.1...1006 MHz					
Inputs						
Attenuator adjustment range	0.5...20 dB					
Connectors						
Connector type	IEC-female/IEC-male			F-female/F-male		
General						
Weight	0.058 kg					

	Type Part No.	Product description	GTIN	PU
  	SZU 3-00 SZU00300	SAT adjustable attenuator F-female F-male ✓ DC power pass ✓ die-cast housing ✓ 0.5...20 dB	7611682160307	1
	SZU 44-00 SZU04400	SAT attenuator block F-female F-Quickfix ✓ Plug-on type for multiswitches SPU 5xx-09 SPU 9xx-09 SPU 17xx-09 ✓ For individual adjustment of the SAT input levels	7611682160444	1
	SZU 91-01 SZU09101	Attenuator F-female F-male ✓ 10 dB attenuation ✓ DC power pass ✓ 0.1...2400 MHz	7611682160918	1
Type	SZU 3-00	SZU 44-00	SZU 91-01	
Frequency range	0.1...2400 MHz	950...2200MHz	0.1...2400 MHz	
DC power pass	-	yes	-	
Inputs				
Attenuator adjustment range	0.5...20 dB	0...20 dB	-	
Connectors				
Connector type		F-female/F-male		
General				
Weight	0.060 kg	0.125 kg	0.020 kg	

Equalizers | Filters | Combiners

	SZU 8-00 SZU08000	SAT equalizer F-female F-male ✓ Frequency range 47...2200 MHz ✓ Equalization range 950...2200 MHz	7611682160086	1
	Type	SZU 8-00		
Frequency range	47...2200 MHz			
Equalization	12 dB @ 950...2200 MHz			
Return loss TERR	≤ 10 dB			
Return loss SAT	≥ 6 dB			
Trunk outputs				
Through loss TERR	15 dB @ 47...862 MHz			
Connectors				
Connector type	F-female/F-male			
General				
Weight	0.057 kg			
  	TZU 9-01 TZU00901		7611682008579	1
	Type	TZU 9-01		
Frequency range	5 ... 1218 MHz			
Equalization	0 ... 18 dB			
Through loss	< 1.5 dB			
Connectors				
input/output	-			
Return loss	-			
General				
Weight	-			


	Type Part No.	Product description	GTIN	PU
 	TZU 198-62 TZU19862	DVB-T Low-pass filter 5...862 MHz F ✓ Blocking depth >40 dB @ 950...2200 MHz ✓ For prevention of interferences from mobile phones ✓ F-female F-male	7611682081985	1
	TZU 198-63 TZU19863	Same as TZU 198-02, but IEC	7611682081992	1
Type	TZU 198-62		TZU 198-63	
Screening factor acc. to EN 50083-2			> 90 dB	
Frequency range			5...862 MHz	
Frequency range blocked			950...2200 MHz	
Blocking depth			> 40 dB	
Through loss			0...2.5 dB	
DC power pass			yes	
Connectors				
Connector type	F-male/F-female		IEC male/IEC female	
Return loss	> 18 dB...1.5 dB/Oktave (min. >10 dB)			
General				
Weight	0.027 kg			
  	TZU 19-65 TZU01965	High-pass filter return path blocker 5...65 MHz ✓ Frequency range 85...862 MHz ✓ Frequency range blocked 5...68 MHz	7611682081961	1
	TZU 19-66 TZU01966	High-pass filter return path blocker 5...65 MHz ✓ Frequency range 85...2400 MHz ✓ Frequency range blocked 5...68 MHz ✓ DC power pass	7611682000627	1
	TZU 19-68X TZU01968X	High-pass filter return path blocker 5...204 MHz ✓ Frequency range 258...2200 MHz ✓ Frequency range blocked 5...204 MHz ✓ Blocking depth 45 dB ✓ DC power pass	7611682007961	1
Type	TZU 19-65	TZU 19-66	TZU 19-68X	
Screening factor acc. to EN 50083-2	> 90 dB	> 90 dB	> 90 dB	
Frequency range	85...862 MHz	85...2200 MHz	258...2200 MHz	
Frequency range blocked	5...65 MHz	5...65 MHz	5...204 MHz	
Blocking depth	> 50 dB	> 50 dB	50 dB	
Through loss	1.5...0.5 dB	1.5 dB	0.7...1.7 dB	
DC power pass	-	yes	yes	
Connectors				
Connector type	F-female/F-male			
Return loss	> 18 dB...1.5 dB/Oktave	> 18 dB...1.5 dB/Oktave	> 15 dB	
General				
Weight	0.021 kg	0.028 kg	0.028 kg	
  	TZU 10-00 TZU01000	Sheath current filter IEC-female IEC-male ✓ Hum suppressor-choke, isolator ✓ Galvanic and capacitive isolation of inner/outer conductor ✓ IEC/IEC	7611682000245	1
	TZU 10-01 TZU01001	Same as TZU 10-00, but F-female F-male	7611682080100	1
	TZU 10-02 TZU01002	Sheath current filter F-female F-male ✓ Hum suppressor-choke, isolator ✓ Galvanic and capacitive isolation of inner/outer conductor ✓ Plastic housing	7611682081022	1
Type	TZU 10-00	TZU 10-01	TZU 10-02	
Frequency range			5...1006 MHz	
Through loss	< 2 dB	< 2 dB	< 0.5 dB	
Connectors				
Connector type	IEC-female/IEC-male	IEC-female/IEC-male	F-female/F-female	
Return loss	≥14 dB – 1.5 dB/Okt.	≥14 dB – 1.5 dB/Okt.	≥18 dB – 1.5 dB/Okt.	
General				
Weight	0.024 kg	0.030 kg	0.167 kg	

		Type Part No.	Product description	GTIN	PU																																
 		SZU 12-00 SZU01200	22 kHz blocker F-female F-male ✓ 47...2400 MHz	7611682160123	1																																
		SZU 13-00 SZU01300	Test port ✓ 47...2400 MHz	7611682160130	1																																
		SZU 14-00 SZU01400	DC blocker F-female F-male ✓ 5...2200 MHz	7611682160147	1																																
	<table border="1"> <thead> <tr> <th>Type</th> <th>SZU 12-00</th> <th>SZU 13-00</th> <th>SZU 14-00</th> </tr> </thead> <tbody> <tr> <td>Frequency range</td> <td>47...2200 MHz</td> <td>5...2200 MHz</td> <td>5...2200 MHz</td> </tr> <tr> <td>Return loss TERR</td> <td>≤ 15 dB</td> <td>≤ 14 dB...1.5 dB/Okt. (≤ 10 dB)</td> <td>≤ 20 dB...1.5 dB/Okt. (≤ 15 dB)</td> </tr> <tr> <td>Return loss SAT</td> <td>≥ 10 dB</td> <td>≥ 10 dB</td> <td>≥ 15 dB</td> </tr> <tr> <td>DC power pass</td> <td>yes</td> <td>-</td> <td>-</td> </tr> <tr> <td colspan="5">Trunk outputs</td> </tr> <tr> <td>Through loss TERR</td> <td>≤ 1 dB</td> <td>≤ 1 dB</td> <td>≤ 0.25 dB</td> </tr> <tr> <td>Through loss SAT</td> <td>≤ 2.5 dB</td> <td>≤ 1.5 dB</td> <td>≤ 0.5 dB</td> </tr> </tbody> </table>					Type	SZU 12-00	SZU 13-00	SZU 14-00	Frequency range	47...2200 MHz	5...2200 MHz	5...2200 MHz	Return loss TERR	≤ 15 dB	≤ 14 dB...1.5 dB/Okt. (≤ 10 dB)	≤ 20 dB...1.5 dB/Okt. (≤ 15 dB)	Return loss SAT	≥ 10 dB	≥ 10 dB	≥ 15 dB	DC power pass	yes	-	-	Trunk outputs					Through loss TERR	≤ 1 dB	≤ 1 dB	≤ 0.25 dB	Through loss SAT	≤ 2.5 dB	≤ 1.5 dB
Type	SZU 12-00	SZU 13-00	SZU 14-00																																		
Frequency range	47...2200 MHz	5...2200 MHz	5...2200 MHz																																		
Return loss TERR	≤ 15 dB	≤ 14 dB...1.5 dB/Okt. (≤ 10 dB)	≤ 20 dB...1.5 dB/Okt. (≤ 15 dB)																																		
Return loss SAT	≥ 10 dB	≥ 10 dB	≥ 15 dB																																		
DC power pass	yes	-	-																																		
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Through loss TERR	≤ 1 dB	≤ 1 dB	≤ 0.25 dB																																		
Through loss SAT	≤ 2.5 dB	≤ 1.5 dB	≤ 0.5 dB																																		
Connectors																																					
Test port TERR SAT		-		20 dB ± 1.0 dB/20 dB ± 1.5 dB																																	
Connector type		F-female/F-male		F-female/F-male/IEC-female																																	
General																																					
Weight		0.037 kg		0.060 kg																																	
 	SWE 2-10 SWE00210	SAT combiner F ✓ For combining of two satellite inputs onto a common line	7611682004588	1																																	
	SWE 20-01 SWE02001	SAT/terrestrial combiner 2-way F ✓ For combining terr. and satellite (single LNB) inputs onto a common line ✓ DC power pass	7611682290028	1																																	
	SWE 30-01 SWE03001	Same as SWE 20-01, but 3-way for twin-LNB	7611682290301	1																																	
	SWE 40-01 SWE04001	4-way combiner for Quad-LNBs F ✓ To feed in terrestrial signals in a SAT system with Quad-LNB (LNB with integrated multiswitch)	7611682003468	1																																	
	<table border="1"> <thead> <tr> <th>Type</th> <th>SWE 2-10</th> <th>SWE 20-01</th> <th>SWE 30-01</th> <th>SWE 40-01</th> </tr> </thead> <tbody> <tr> <td>Screening factor acc. to EN 50083-2</td> <td>> 90 dB</td> <td>> 90 dB</td> <td>> 90 dB</td> <td>-</td> </tr> </tbody> </table>					Type	SWE 2-10	SWE 20-01	SWE 30-01	SWE 40-01	Screening factor acc. to EN 50083-2	> 90 dB	> 90 dB	> 90 dB	-																						
Type	SWE 2-10	SWE 20-01	SWE 30-01	SWE 40-01																																	
Screening factor acc. to EN 50083-2	> 90 dB	> 90 dB	> 90 dB	-																																	
Inputs																																					
Frequency range		950...1100 MHz 1150...2200 MHz		5...862 MHz @ TERR 950...2400 MHz @ SAT																																	
Frequency range		5...862 MHz @ TERR 950...2400 MHz @ SAT		5...862 MHz @ TERR 950...2400 MHz @ SAT																																	
Trunk outputs																																					
Through loss TERR		-		< 2.5 dB																																	
Through loss SAT		≤ 6 dB		< 2.5 dB																																	
Connectors																																					
Connector type		F female																																			
General																																					
Dimensions (W × H × D) appr.		81 × 60 × 22 mm		52 × 52 × 17 mm																																	
Dimensions (W × H × D) appr.		0.070 kg		0.058 kg																																	
Weight		0.110 kg		0.195 kg																																	
 	SZU 55-02 SZU05502	Singlecable system combiner ✓ To combine two singlecable multiswitches to one system ✓ For receiving of four satellite positions ✓ 5...2400 MHz	7611682006247	1																																	
	<table border="1"> <thead> <tr> <th>Type</th> <th>SZU 55-02</th> </tr> </thead> <tbody> <tr> <td>Frequency range</td> <td>5...2400 MHz</td> </tr> </tbody> </table>					Type	SZU 55-02	Frequency range	5...2400 MHz																												
Type	SZU 55-02																																				
Frequency range	5...2400 MHz																																				
Trunk line																																					
Through loss @ 5...65 MHz		≤ 7.5 dB																																			
Connectors																																					
Connector type		F																																			
General																																					
Dimensions (W × H × D) appr.		67 × 55 × 30 mm																																			
Weight		0.069 kg																																			



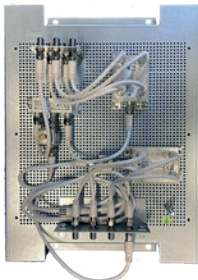
Type Part No. Product description GTIN PU


SMARTSolutions


CMTS (Cable Modem Termination System)


	<p>CMTS 2-00 CMTS00200</p>	<p>Cable Modem Termination System</p> <ul style="list-style-type: none"> ✓ Feeding in Internet services in small cable systems ✓ According to DOCSIS and EuroDOCSIS 3.0 / 2.0 ✓ 32 downstream channels ✓ 8 upstream channels ✓ 1600 Mbps in the downstream ✓ 240 Mbps in the upstream ✓ Web-based configuration ✓ Supports SNMP ✓ 19" housing, 1RU ✓ Suitable cable modems on request 	<p>7611682007206 1</p>
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Type	CMTS 2-00
Max. number of modems in the network	1000
Downstream	
Number of channels	32
Data rate	1600 Mbps
Frequency range	87...1002 MHz
Channel bandwidth	6 MHz / 8 MHz
Modulation	QAM64, QAM256
Output level	40 dBmV = 100 dBµV @ 32 chs 43 dBmV = 103 dBµV @ 16 chs 46 dBmV = 106 dBµV @ 8 chs 49 dBmV = 109 dBµV @ 4 chs 52 dBmV = 112 dBµV @ 2 chs 55 dBmV = 115 dBµV @ 1 ch
MER	≥39 dB @ Equalizer off ≥43 dB @ Equalizer on
Upstream	
Number of channels	8
Data rate	240 Mbps
Frequency range	5...65 MHz
Channel bandwidth	1.6 MHz / 3.2 MHz/ 6.4 MHz
Output level	-7...+23 dBmV @ 6.4 MHz -10...+20 dBmV @ 3.2MHz -13...+17 dBmV @ 1.6MHz
Demodulation	QPSK, QAM16, QAM32, QAM64
Connectors	
Connector type	F-female
Return loss	≥12 dB
Interfaces	
Internet	1 × 10GE SFP+
Configuration interface	1 × RJ45, IEEE 802.3ah, 1000 Base-T 1 × Serial, 115200 bps
General	
Operating voltage	90...264 VAC 47...63Hz
Power consumption	70 W
Operating temperature range	0...+40°C
Operating humidity (non-condensing)	10...90%
Dimensions (W × H × D) appr.	483 mm × 44 mm × 300 mm
Weight	4.800 kg

	Type Part No.	Product description	GTIN	PU
CMTS Accessories				
	BZU 65-85 BZU06585	Diplexer ✓ For splitting or merging the return path (upstream) and forward path (downstream) for the signals of a Cable Modem Termination System (CMTS) ✓ Class A + 10 dB according to EN 50083-2	7611682007480	1
Type	BZU 65-85			
Frequency range	5 ... 1218 MHz 5 ... 65 MHz @ Upstream 85 ... 1218 MHz @ Downstream			
Through loss	≤ 1.0 dB @ 5 ... 65 MHz Upstream IN ≥ 48 dB @ 85 ... 1218 MHz Upstream IN ≥ 50 dB @ 5 ... 65 MHz Downstream IN ≤ 2.2 dB @ 85 ... 1218 MHz. Downstream IN			
Impedance	75 Ω			
RF connectors				
Type	F-female			
Connectors				
Return loss	≥ 13 dB			
General				
Dimensions (W × H × D) appr.	75 × 35 × 18 mm			
Weight	0.980 kg			
	CZU 2-00 CZU00200	Additional power supply unit CMTS 2-00 ✓ To be used exclusively as spare part or as redundant power supply for the CMTS 2-00	7611682007572	1
Type	CZU 2-00			
General				
Operating voltage	90 ... 264 VAC 47 ... 63 Hz			
Current consumption	2.5 A @ 100 VAC 1.25 A @ 240 VAC			
Output voltage	12 VDC			
Output current	6.67 A			
Operating temperature range	-10°C ... +70°C			
	CZU 3-00 CZU00300	Startup kit with accessories for CMTS 2-00 ✓ 1 × BZU 65-85 Diplexer 65/85 MHz ✓ 2 × BVE 4-02P 4-way splitter 5 ... 1218 MHz type 02 ✓ 2 × TZU 4-01 Adjustable attenuator, CATV F-female F-male 0.5 ... 20 dB" ✓ 11 × MAK 20-80 Patch cable axial F connectors male double shielded 0.20 m ✓ 7 × SAK 151-00 Quickfix cable axial F connectors male high shielded 1.50 m ✓ 1 × QEW 4-06 Earthing angle single-rowed 4-way ✓ 1 × QEW 5-50 Earthing angle 5-way ✓ 1 × QMP 3045 perforated mounting plate 300 × 400 mm (the components are pre-assembled and wired on it)	7611682008760	1
Type	CZU 3-00			
Downstream				
Frequency range	85 ... 1006 MHz			
Attenuation	19 ... 58 dB			
Upstream				
Frequency range	5 ... 65 MHz			
Attenuation	17 ... 56 dB			
General				
Dimensions (W × H × D) appr.	300 × 400 × 95 mm			

Type	Part No.	Product description	GTIN	PU
Cable modems				
	CMO 1-01 CMO00101	DOCSIS/EuroDOCSIS cable modem ✓ Full-Band Capture Tuner ✓ Dynamic downstream/upstream combinations ✓ Supports up to 8 downstream and 4 upstream channels ✓ Downstream data rate up to 400 Mbps ✓ Upstream data rate up to 160 Mbps ✓ GbE port for 10/100/1000Base-T Ethernet with auto-negotiation	7611682007435	1
	CMO 2-01 CMO00201	DOCSIS/EuroDOCSIS cable modem WiFi ✓ Full-Band Capture Tuner ✓ Dynamic downstream/upstream combinations ✓ Supports up to 8 downstream and 4 upstream channels ✓ Downstream data rate up to 400 Mbps ✓ Upstream data rate up to 160 Mbps ✓ Two GbE ports for 10/100/1000Base-T Ethernet with auto-negotiation ✓ WiFi according to IEEE 802.11b/g/n	7611682007442	1
Type		CMO 1-01	CMO 2-01	
Downstream				
Data rate			Max. 320 Mbps @ DOCSIS Max. 400 Mbps @ EuroDOCSIS	
Frequency range			108...1002 MHz	
Channel bandwidth			6 MHz @ DOCSIS 8 MHz @ EuroDOCSIS	
Channel bonding			≤8	
Input level			-15 dBmV...+15 dBmV	
Demodulation			QAM64, QAM256	
Upstream				
Data rate			120 Mbps @ TDMA 160 Mbps @ S-CDMA	
Frequency range			5...42 MHz @ DOCSIS 5...65 MHz @ EuroDOCSIS	
Channel bandwidth			200/400/800/1600/3200/6400 KHz	
Output level			8...58 dBmV @ QPSK 8...54 dBmV @ 64 QAM 8...54 dBmV @ 32 QAM 8...53 dBmV @ S-CDMA	
Channel bonding			≤4	
Modulation			QPSK, QAM8, QAM16, QAM32, QAM64, QAM128 (SCDMA)	
Interfaces				
Ethernet connectors (LAN)		1 × RJ 45		2 × RJ 45
Ethernet standards		IEEE 802.3 10Base-T 802.3u 100Base-TX 802.3ab 1000Base-T (GigE)		
WiFi standard		-		IEEE 802.11b/g/n
WiFi band		-		2.4 GHz single-band
Wifi signal rate		-		300 Mbps
WiFi encryption		-		WPA/WPA2
Supported transport protocols		IP, TCP, UDP, ARP		IP, TCP, UDP, ARP, TR-069
Supported application protocols		HTTP, ICMP, DHCP, TFTP, SNMP		
DOCSIS				F-female (75 Ohm)
General				
Operating voltage				12 VDC
Operating temperature range				0...40 °C
Storage temperature range		-20...70 °C		-10...60 °C
Operating humidity (non-condensing)				10...90%
Dimensions (W × H × D) appr.		160 × 125 × 33 mm		167 × 125 × 38 mm
Weight		0.200 kg		0.320 kg
External accessories				
Plug-in power supply		100...240 V/50...60 Hz 12 V=1 A		110...240 V/50...60 Hz 12 V=1.5 A

Type	Part No.	Product description	GTIN	PU
Ethernet over Coax Peer-to-Peer				
	EOC 1-31 EOC00131	Ethernet over Coax Peer-to-Peer 720 Mbps ✓ Feeding IP signals into SAT, CATV or DVB-T systems or headends ✓ Transmission range 5...65 MHz ✓ Net data rate 720 Mbps (PHY) ✓ 128 bit AES encryption ✓ 2 x RJ 45 Connectors ✓ Incl. external switching power supply	7611682007770	1
	EOC 2-31 EOC00231	Same as EOC 1-31, but with WiFi access point	7611682007787	1
Type	EOC 1-31		EOC 2-31	
Frequency range			5...1218 MHz	
Frequency range transmission			5...65 MHz	
Frequency range TV bypass			258...1218 MHz	
Maximum allowed attenuation in coaxial network			77 dB	
Transmission level in coaxial network			113 dBµV ± 1 dB	
EoC				
Standard	ITU-T G.9960/G.9961 G.hn over Coax			
Net data rate (PHY)	720 Mbps			
Encryption	AES 128 Bit			
Max. number of devices in EoC network	16			
Connectors (G.hn TV)	2 × F-female			
Interfaces				
Ethernet connectors (LAN)	2 × RJ 45			
Ethernet standards	IEEE 802.3u 100BaseT Fast Ethernet, IEEE 802.3ab 1000BaseT Gigabit Ethernet			
WiFi standard	-		MIMO 2x2 IEEE 802.11b/g/n/a/ac	
WiFi encryption	-		WEP, WPA/WPA2, WPA/WPA2 m. PSK	
WiFi frequency range @ 2.4 GHz	-		2400 ... 2484 MHz	
WiFi frequency range @ 5 GHz	-		5150 ... 5350 MHz 5470 ... 5725 MHz	
Max. transmitted power @ 2400 ... 2484 MHz	-		20 dBm (EIRP)	
Max. transmitted power @ 5150 ... 5350 MHz	-		23 dBm (EIRP)	
Max. transmitted power @ 5470 ... 5725 MHz	-		30 dBm (EIRP)	
General				
Operating voltage	12 VDC			
Power consumption	4 W			8 W
Operating temperature range	0° C ... 50 °C			
Dimensions (W × H × D) appr.	130 x 95 x 32 mm			
External accessories				
Switching power supply	100...240 V~/50...60 Hz 12 V=/0.5 A		100...240 V~/50...60 Hz 12 V=/1 A	

Type	Part No.	Product description	GTIN	PU
	EOC 1-32 EOC00132	Ethernet over Coax Peer-to-Peer 1800 Mbps ✓ Feeding IP signals into SAT, CATV or DVB-T systems or headends ✓ Transmission range 5...204 MHz, may only be used if the forward path frequency range starts from 258 MHz ✓ Net data rate 1800 Mbps (PHY) ✓ 128 bit AES encryption ✓ 2 x RJ 45 Connectors ✓ Incl. external switching power supply	7611682007800	1
	EOC 2-32 EOC00232	Same as EOC 1-32, but with WiFi access point	7611682007817	1
Type	EOC 1-32		EOC 2-32	
Frequency range	5...1800 MHz			
Frequency range transmission	5...204 MHz			
Frequency range TV bypass	258...1800 MHz			
Maximum allowed attenuation in coaxial network	77 dB			
Transmission level in coaxial network	113 dBμV ± 1dB			
EoC				
Standard	ITU-T G.9960/G.9961 G.hn over Coax			
Net data rate (PHY)	1800 Mbps*			
Encryption	AES 128 Bit			
Max. number of devices in EoC network	16			
Connectors (G.hn TV)	2 x F-female			
Interfaces				
Ethernet connectors (LAN)	2 x RJ 45			
Ethernet standards	IEEE 802.3u 100BaseT Fast Ethernet, IEEE 802.3ab 1000BaseT Gigabit Ethernet			
WiFi standard	-	MIMO 2x2 IEEE 802.11b/g/n/a/ac		
WiFi encryption	-	WEP, WPA/WPA2, WPA/WPA2 m. PSK		
WiFi frequency range @ 2.4 GHz	-	2400 ... 2484 MHz		
WiFi frequency range @ 5 GHz	-	5150 ... 5350 MHz 5470 ... 5725 MHz		
Max. transmitted power @ 2400 ... 2484 MHz	-	20 dBm (EIRP)		
Max. transmitted power @ 5150 ... 5350 MHz	-	23 dBm (EIRP)		
Max. transmitted power @ 5470 ... 5725 MHz	-	30 dBm (EIRP)		
General				
Operating voltage	12 VDC			
Power consumption	4 W			8 W
Operating temperature range	0° C ... 50 °C			
Dimensions (W x H x D) appr.	130 x 95 x 32 mm			
External accessories				
Switching power supply	100...240 V~/50...60 Hz 12 V=0.5 A		100...240 V~/50...60 Hz 12 V=1 A	
General				
Comments	* The data rate indicates the data throughput between the EoC devices. For technical reasons, a maximum of 1000 Mbps is available at each Ethernet interface.			

Ethernet over Coax | Master-Endpoint



Part No.	Product description	Order No.	Qty
EOC 30-01 EOC03001	Ethernet over Coax Master 1800 Mbps ✓ Feeding IP signals into existing coax cable networks for max. 16 Endpoints ✓ Data transmission range 5...204 MHz ✓ Net data rate 1800 Mbps (PHY) ✓ 128 bit-AES-Encryption ✓ Web interface for configuration ✓ 2 x RJ 45 Connectors for internet modem and configuration ✓ Incl. external switching power supply	7611682008074	1
EOC 30-21 EOC03021	Same as EOC 30-01, but max. 32 Endpoints	7611682008104	1
EOC 30-02 EOC03002	Ethernet over Coax Endpoint WiFi ✓ Connects WiFi and Ethernet devices over established coaxial cable to the EoC 30-01/-21 Master ✓ Data transmission range 5...204 MHz ✓ Net data rate 1800 Mbps (PHY) ✓ WiFi access point for tablet, smartphone, notebook (2,4/5 GHz band) ✓ 2 x RJ 45 connectors for PC/Notebook ✓ Incl. external switching power supply	7611682008081	1
EOC 30-03 EOC03003	Same as EOC 30-02, but without WiFi	7611682008098	1

Type	EOC 30-01	EOC 30-21	EOC 30-02	EOC 30-03
Frequency range		5...1800 MHz		
Frequency range transmission		5...204 MHz		
Frequency range TV bypass		258...1800 MHz		
Maximum allowed attenuation in coaxial network		77 dB		
Transmission level in coaxial network	113 dBµV ± 1dB	109 dBµV ± 1dB	113 dBµV ± 1dB	113 dBµV ± 1dB
EoC				
Standard	ITU-T G.9960 G.hn over Coax			
Net data rate (PHY)	1800 Mbps*			
Encryption	AES 128 Bit			
Max. number of devices in EoC network	16	32	16/32**	16/32**
Connectors (G.hn TV)	2 x F-female			
Interfaces				
Ethernet connectors (LAN)	2 x RJ 45			
Ethernet standards	IEEE 802.3u 100BaseT Fast Ethernet IEEE 802.3ab 1000BaseT Gigabit Ethernet IEEE 802.3az Energy Efficiency Ethernet			
WiFi standard	-	-	IEEE 802.11 b/g/n/a/ac	-
WiFi encryption	-	-	WEP, WPA/WPA2, WPA/WPA2 with PSK	-
WiFi frequency range @ 2.4 GHz	-	-	2400 ... 2484 MHz	-
WiFi frequency range @ 5 GHz	-	-	5150 ... 5350 MHz 5470 ... 5725 MHz	-
Max. transmitted power @ 2400 ... 2484 MHz	-	-	20 dBm (EIRP)	-
Max. transmitted power @ 5150 ... 5350 MHz	-	-	23 dBm (EIRP)	-
Max. transmitted power @ 5470 ... 5725 MHz	-	-	30 dBm (EIRP)	-
General				
Operating voltage	12 VDC			
Power consumption	<5 W	<7 W	8 W	4 W
Operating voltage over Coax	60 VAC ± 20%	60 VAC ± 20%	-	-
Operating voltage over LAN (PoE)	37...57 V	37...57 V	-	-
Operating temperature range	-10°C...55°C	-10 °C ... 55 °C	0° C ... 50 °C	0° C ... 50 °C
Operating humidity (non-condensing)	10...95%	10...95 %	10...95%	10...95%
Dimensions (W x H x D) appr.	178 x 136 x 35 mm	178 x 136 x 35 mm	130 x 95 x 32 mm	130 x 95 x 32 mm
Weight	0.375 kg	0.380 kg	0.210 kg	0.150 kg
External accessories				
Switching power supply	100...240 V~/50/60Hz 12 V=1 A	100...240 V~/50/60Hz 12 V=1 A	100...240 V~/50/60Hz 12 V=1 A	100...240 V~/50/60Hz 12 V=0.5 A
General				

Comments	* The data rate indicates the data throughput between the EoC devices. For technical reasons, a maximum of 1000 Mbps is available at each Ethernet interface.	* The data rate indicates the data throughput between the EoC devices. For technical reasons, a maximum of 1000 Mbps is available at each Ethernet interface.	* The data rate indicates the data throughput between the EoC devices. For technical reasons, a maximum of 1000 Mbps is available at each Ethernet interface. ** depending on the EoC Master	* The data rate indicates the data throughput between the EoC devices. For technical reasons, a maximum of 1000 Mbps is available at each Ethernet interface. ** depending on the EoC Master
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Ethernet over Coax | Accessories

	TZU 40-03 TZU04003	EoC inserter 4 dB ✓ For feeding in RF-modulated IP signals ✓ 5...1006 MHz 85...1006 MHz (with 85 MHz high-pass filter) ✓ 4 dB EoC loss between connector "EoC" and connector "Eingang/Ausgang" ✓ 4 dB through loss between the connector "terr. Signale" and the connector "Eingang/Ausgang" ✓ Connection 1: terr. Signale ✓ Connection 2: EoC ✓ Connection 3: Eingang/Ausgang	7611682003475	1
	TZU 40-04 TZU04004	EoC inserter 15 dB ✓ To feed in RF modulated IP signals ✓ 5...1006 MHz 85...1006 MHz (with high pass filter 85 MHz) ✓ 15 dB EoC loss between connector "EoC" and connector "Input/Output" ✓ 1,3 dB through loss between connector „terr. Signale" and connector „Eingang/Ausgang" ✓ Connector 1: terr. Signale ✓ Connector 2: Eingang/Ausgang ✓ Connector 3: EoC	7611682004472	1
	TZU 40-05 TZU04005	RF and EoC inserter ✓ 5 ... 1218 MHz ✓ Tap loss 4 dB ✓ To feed in RF modulated IP signals ✓ With high pass filter 258 MHz	7611682008142	1

Type	TZU 40-03	TZU 40-04	TZU 40-05
Application	EoC	EoC	RF/EoC
Frequency range	5...1006 MHz 85...1006 MHz	5...1006 MHz 85...1006 MHz	5...1218 MHz 258...1218 MHz
EoC loss	4 dB	15 dB	4 dB
Through loss	4 dB	1.3 dB	4 dB
Connectors			
Connector 1		F-female	
Connector 2		F-female	
Connector 3	F-male, quickfix	-	F-male, quickfix
General			
Dimensions (W x H x D) appr.		55 x 34 x 18 mm	
Weight	0.029 kg	0.290 kg	0,029 kg

KLASSE
A
CLASS



NEU
22

TZU 19-65 TZU01965	High-pass filter return path blocker 5...65 MHz ✓ Frequency range 85...862 MHz ✓ Frequency range blocked 5...68 MHz	7611682081961	1
TZU 19-66 TZU01966	High-pass filter return path blocker 5...65 MHz ✓ Frequency range 85...2400 MHz ✓ Frequency range blocked 5...68 MHz ✓ DC power pass	7611682000627	1
TZU 19-68X TZU01968X	High-pass filter return path blocker 5...204 MHz ✓ Frequency range 258...2200 MHz ✓ Frequency range blocked 5...204 MHz ✓ Blocking depth 45 dB ✓ DC power pass	7611682007961	1
TZU 198-64 TZU19864	EoC low-pass filter 5 ... 65 MHz F ✓ For prevention of FM/TV interferences up to 204 MHz ✓ To reduce the EoC frequency range to 5 ... 65 MHz ✓ Blocking depth > 50 dB @ 85 ... 2200 MHz ✓ F-female F-male	7611682008258	1

Type	TZU 19-65	TZU 19-66	TZU 19-68X	TZU 198-64
Screening factor acc. to EN 50083-2	> 90 dB	> 90 dB	> 90 dB	> 90 dB
Frequency range	85...862 MHz	85...2200 MHz	258...2200 MHz	5 ... 65 MHz
Frequency range blocked	5...65 MHz	5...65 MHz	5...204 MHz	85 ... 2200 MHz
Blocking depth	> 50 dB	> 50 dB	50 dB	> 40 dB
Through loss	1.5...0.5 dB	1.5 dB	0.7...1.7 dB	0 ... 2.5 dB
DC power pass	-	yes	yes	yes

Connectors				
Connector type	F-female/F-male	F-female/F-male	F-female/F-male	F-female F-male
Return loss	> 18 dB...1.5 dB/Oktave	> 18 dB...1.5 dB/Oktave	> 15 dB	> 18 dB

General				
Weight	0.021 kg	0.028 kg	0.028 kg	0.0027 kg

KLASSE
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CLASS



NEU
22

BZU 30-65 BZU03065	Passive return channel bypass 5 ... 65 MHz ✓ EoC signals 5 ... 65 MHz can be routed passively around a broadband amplifier ✓ Separates and recombines the frequency ranges 5 ... 65 MHz and 85 ... 1218 MHz	7611682007091	1
BZU 30-204 BZU030204	Passive return channel bypass 5 ... 204 MHz ✓ EoC signals 5 ... 204 MHz can be routed passively around a broadband amplifier ✓ Separates and recombines the frequency ranges 5 ... 204 MHz and 258 ... 1218 MHz	7611682008289	1

Type	BZU 30-65	BZU 30-204
Screening factor acc. to EN 50083-2	Class A	
Frequency range	5...1218 MHz @ COM1/2 85...1218 MHz @ V1/2	5 ... 1218 MHz @ COM1/2 258 ... 1218 MHz @ V1/2
Through loss	2.5 dB	2.0 dB
Isolation	≥ 35 dB	≥ 45 dB

Connectors		
Connector type	F-female	
Return loss	≥ 14 dB (-1 dB/Oct.)	≥ 18 dB (-1.5 dB/oct.)

General		
Operating temperature range	-20 °C ... +50 °C	
Dimensions (W x H x D) appr.	123 x 89 x 44 mm	72 x 27 x 54 mm
Weight	0.262 kg	0.069 kg
IP code	IP54	

Optical distribution | digital

Bidirectional SFP+ Transceiver

NEW
22



11,3 Gbps

SFPB 10-1023 SFPB101023	Bidirectional SFP+ Transceiver 10G 10 km TX 1270 nm RX 1330 nm	7611682008371	1
	<ul style="list-style-type: none"> ✓ Operating data rate up to 11.3 Gbps ✓ Single +3.3 V ± 5 % power supply ✓ LC single connector ✓ Hot pluggable 20 pin connector ✓ Power Dissipation < 1.5W ✓ Digital Monitoring SFF-8472 Rev. 10 compliant ✓ Compliant to SFP+ MSA ✓ PIN Rx photo diodes ✓ 9/125 µm SMF (single mode fibre) ✓ Operation with suitable SFP+ transceiver 		
SFPB 10-1032 SFPB101032	Same as SFPB 10-1032, but 10 km TX 1330 nm/RX 1270 nm	7611682008388	1

Type	SFPB 10-1023	SFPB 10-1032
Transmitter		
Wavelength (TX 1270)	1260 ... 1280 nm	-
Wavelength (TX 1330)	-	1320 ... 1340 nm
Bandwidth@-20dB	≤ 1 nm	
Optical Output Power	-8.2 ... 0.5 dBm	
Extinction Ratio (ER)	≥ 3.5 dB	
SMSR	≥ 30 dB	
Receiver		
Wavelength (RX 1270)	-	1260 ... 1280 nm
Wavelength (RX 1330)	1320 ... 1340 nm	-
Sensitivity	-14.4 dBm*	
Overload Input	≥ 1 dBm	
LOSA	≥ -38 dBm	
LOSD	≤ -30 dBm	
Hysteresis	0.5 ... 5 dB**	
Data transmission		
Bit rate	10.3 Gb/s	
BER	< 10E-12	
Applications	10GBASE-LR/LW 10G Ethernet OBSAI (3.072 Gb/s, 6.144 Gb/s) CPRI (2.4576 Gb/s, 4.9152 Gb/s, 6.144 Gb/s, 9.8304 Gb/s)	
Compliances	IEEE 802.3ae SFF-8431 Rev 4 SFF-8472 Rev 10	
General		
Operating voltage	3.14 ... 3.46 V	
Operating temperature range	0 ... 70 °C	
Storage temperature range	-40 ... +85 °C	
Operating humidity (non-condensing)	5 ... 95 %	
Comments	* Measured with a PRBS 2E31-1 test pattern, @10.3 Gb/s, EX = 5 dB, BER < 10E-12. ** The LOS Hysteresis to minimize "chatter" on the output line. In principle, hysteresis alone does not guarantee chatter-free operation.	

NEW
NEU
22



11,3
Gbps

SFPB 10-2023 SFPB102023	Same as SFPB 10-1032, but 20 km TX 1270 nm RX 1330 nm	7611682008395	1
SFPB 10-2032 SFPB102032	Same as SFPB 10-1032, but 20 km TX 1330 nm/RX 1270 nm	7611682008401	1

Type	SFPB 10-2023	SFPB 10-2032
Transmitter		
Wavelength (TX 1270)	1260 ... 1280 nm	-
Wavelength (TX 1330)	-	1320 ... 1340 nm
Bandwidth@-20dB	≤ 1 nm	
Optical Output Power	-2 ... 3 dBm	
Extinction Ratio (ER)	≥ 3.5 dB	
SMSR	≥ 30 dB	
Receiver		
Wavelength (RX 1270)	-	1260 ... 1280 nm
Wavelength (RX 1330)	1320 ... 1340 nm	-
Sensitivity	-15 dBm*	
Overload Input	≥ 1 dBm	
LOSA	≥ -38 dBm	
LOSD	≤ -30 dBm	
Hysteresis	0.5 ... 5 dB**	
Data transmission		
Bit rate	10.3 Gb/s	
BER	< 10E-12	
Applications	10GBASE-LR/LW 10G Ethernet OBSAI (3.072 Gb/s, 6.144 Gb/s) CPRI (2.4576 Gb/s, 4.9152 Gb/s, 6.144 Gb/s, 9.8304 Gb/s)	
Compliances	IEEE 802.3ae SFF-8431 Rev 4 SFF-8472 Rev 10	
General		
Operating voltage	3.14 ... 3.46 V	
Operating temperature range	0 ... 70 °C	
Storage temperature range	-40 ... +85 °C	
Operating humidity (non-condensing)	5 ... 95 %	
Comments	* Measured with a PRBS 2E31-1 test pattern, @10.3 Gb/s, EX = 5 dB, BER < 10E-12. ** The LOS Hysteresis to minimize "chatter" on the output line. In principle, hysteresis alone does not guarantee chatter-free operation.	

Accessories

NEW 22



OAK 1-04 OAK00104	Optic cable steel armoured LC/UPC 1 m ✓ 1 m in polybag ✓ Assembled with LC/UPC plugs ✓ Type single-mode ✓ Colour grey	7611682008586	1
OAK 5-04 OAK00504	Same as OAK 1-04, but 5 m	7611682008609	1
OAK 10-04 OAK01004	Same as OAK 1-04, but 10 m	7611682008616	1
OAK 100-04 OAK10004	Same as OAK 1-04, but 100 m	7611682008623	1
OAK 500-04 OAK50004	Same as OAK 1-04, but 500 m	7611682008630	1

Type	OAK 1-04	OAK 5-04	OAK 10-04	OAK 100-04	OAK 500-04
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Connectors

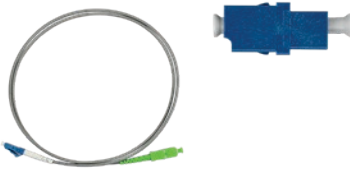
Connector type	-
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Mechanical data

Cable length	-	-	-	-	-
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Bending radius single multiple	-	-	40 mm	-	-
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NEW 22



OZU 1-04 OZU00104	Optical joint LC/UPC ✓ LC/UPC connector ✓ female female	7611682008647	1
OAK 1-43 OAK00143	Optical adapter cable LC/UPC - SC/APC 1 m ✓ 1 m in polybag ✓ Assembled with LC/UPC and SC/APC plugs ✓ Type single-mode ✓ Colour grey	7611682008593	1

Type	OZU 1-04	OAK 1-43
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Connectors

Connector type	-	-
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Mechanical data

Cable length	-	-
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Bending radius single multiple	-	40 mm
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Audio/Video

Audio/Video modulators



AVM 3-00 AVM00300	TWIN Audio/video modulator mono UHF <ul style="list-style-type: none"> ✓ Modulates an AV signal into a RF signal ✓ CCD camera, video camera etc. can be connected ✓ RF output UHF 470...862 MHz, PAL B/G ✓ Active RF-loop through ✓ Output level 70...90 dBµV adjustable ✓ LED display for channel indication ✓ With plug-in power supply 	7611682001716	1
AVM 6-00 AVM00600	Audio/video modulator stereo VHF UHF <ul style="list-style-type: none"> ✓ Modulates an AV signal into a RF signal ✓ CCD camera, video camera or DVD player etc. can be connected ✓ RF output 85 dBµV, VHF/UHF/S11-S41, 47...862 MHz, PAL B/G ✓ LED display for channel indication ✓ With plug-in power supply, cinch/SCART cable, 2 x F to IEC cable 	7611682001693	1

Type	AVM 3-00	AVM 6-00
Inputs		
Video level		1 VSS
Video impedance		75 Ohm
Audio level typ.		1 VSS
Audio impedance typ.		10 kOhm
Connectors audio/video	RCA/Cinch + SCART	RCA/cinch female
Output		
Verstärkung	2...4 dB	- 4 dB
Frequency range	470...862 MHz	47...862 MHz
Channels selectable	PAL BG / PAL I / SECAM L	5...12 S 2...40 21...69
Output level	-	85 dBµV
Output level adjustable	70...90 dBµV	-
RF connectors		
Type		F-female
General		
Dimensions (W x H x D) appr.	190 x 170 x 40 mm	120 x 90 x 30 mm
Weight	0.564 kg	0.562 kg
External accessories		
Plug-in power supply	100...240 V~/50...60 Hz/3 W 6 V= /500 mA	230 V~/50 Hz 9 V= /600 mA

Audio/Video converters



AVC 1-00 AVC00100	Audio/Video converter HDMI <ul style="list-style-type: none"> ✓ Converts one analogue CVBS-signal into HDMI ✓ Resolution is switchable between 720p and 1080p ✓ Incl. power supply and HDMI cable (1 m) 	7611682006261	1
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Type	AVC 1-00
Inputs	
Connector	3 x Cinch (yellow, white, red)
Processable signals	PAL, PAL-M, PAL-N, NTSC3.58, NTSC4.43, SECAM
Output	
Connector	1 x HDMI
Video resolution	1080p/60 Hz, 720p/60 Hz
General	
Dimensions (W x H x D) appr.	100 x 102 x 25 mm
Weight	0.238 kg
External accessories	
Switching power supply	110...230 VAC/5 VDC

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