



# Main catalog 2022/2023

Perfect technology  
for highest demands



Connecting past,  
present and future.

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The WISI Group  
Committed  
to innovation.





**For more than nine decades, WISI has been one of the leading worldwide pioneers in reception and distribution technology.**

As a system provider in the product areas of CATV technology, reception and distribution technology, mobile communication and high-frequency plug connections, we have learned during this time not only to stay at the forefront of technological development, but also to turn visions into new quality products at all times.

Converging media, new multimedia offerings and broadband services require intelligent transport routes for their distribution. This is our business. As a developer and technology supplier in the key areas of communications, we are committed to innovation now and in the future.

#### **Industry diversity**

- Electrician and specialized reseller
- wholesale
- cable network operators
- broadcasters
- platform operator
- telecommunications providers
- Energy supplier/public utility
- hospitality
- Planners and architects
- integrators
- housing sector

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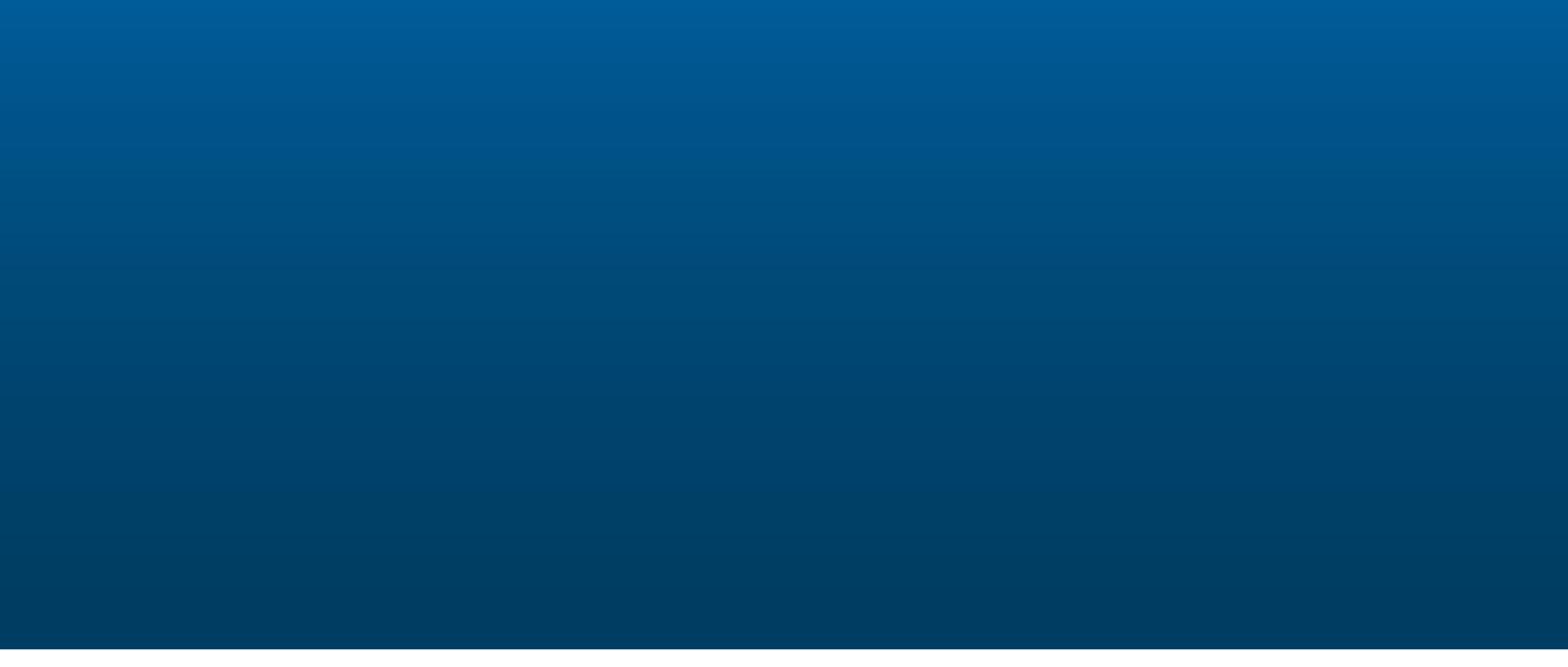


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# More product platforms from WISI



## Channel processing TANGRAM

### TANGRAM

#### Maximum performance with minimum footprint



### TANGRAM DVB-IP Gateway and Edge Solutions

The **TANGRAM platform** is a professional and especially flexible DVB compliant signal processing and distribution platform in a compact 1 height unit design. The headend is used for the playout of analogue and digital TV/radio content and feed into various access networks such as HFC, IP or FTTx.

#### At a glance

- Excellent price-performance ratio due to highest density and low power consumption
- Very high reliability due to fully redundant Concept and operationally interchangeable fans & power supplies
- Great versatility for building up your promising TV network: IP, DVB-C, ASI, DVB-T/T2/S/S2, DVB-T2-MI, PAL, NTSC, SECAM, FM, ISDB-T, ATSC



## Channel processing Chameleon

### CHAMELEON

#### A Single Hardware Multi Software Headend



### Software-based headend solution

WISI Chameleon is an extremely flexible headend that requires only one type of module. The integrated modules can change their function as required. They are suitable for all current and future applications and are ideally suited for the transition from the analog to the digital world as well as for feeding into HFC and IP distribution platforms.

#### At a glance

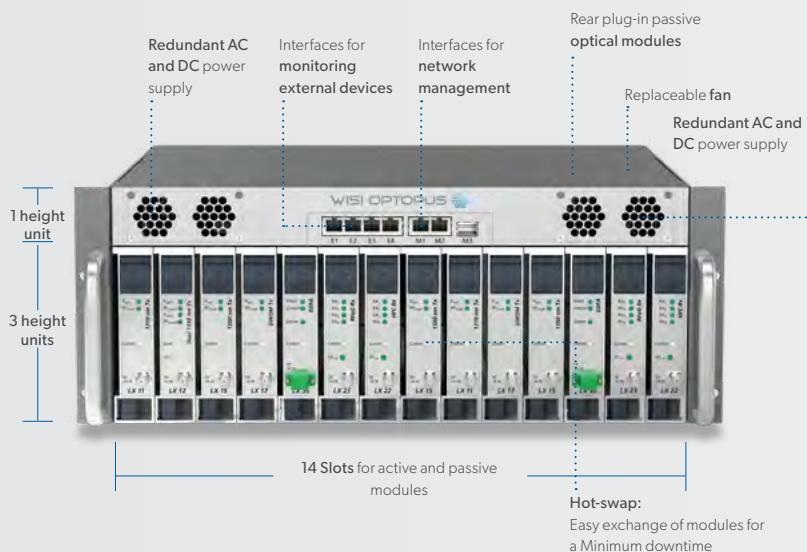
- One hardware for all applications
- Flexibility through software applications
- Scalability in function and installation size
- Stability in operation
- Easy installation, commissioning and operation
- Excellent performance, also suitable for large network operators
- Redundant power supply units guarantee the overall availability of the system





## Optical transmission platform Optopus

### OPTOPUS Optical platform for HFC and FTTx



The Optopus transmission system from WISI is a flexible platform with a very high port density for all optical transmission applications in broadband networks. The system can be used in all network types such as HFC, RF over Glass (RFoG), RF Overlay and FTTx.

Optopus was developed to meet the high demands of today's transmission networks. Features such as redundant power supplies, hot-swappable ventilation units and advanced network management meet all the requirements of a professional network operator.

The Optopus platform offers a maximum of flexibility for the realization of the desired application with a wide range of plug-in modules.

14 slots in 3+1 height units (HE) are possible, for example, with up to 28 optical transmitters, 56 return path receivers and in mix.

#### At a glance

- Fully modular concept
- Reduced maintenance effort due to module replacement during operation
- „Backplates“ reduce interruption times
- Extended module service life due to dust-free Cooling without fan in the module
- Easy installation and operation
- Integrated WDM filters in the modules
- Redundant power supply units guarantee high overall Availability of the system



## IP Video platform Inca 4440

### Intelligent Video Broadcasting-Plattform

#### What is intelligent video broadcasting?

Inca's intelligent video transmission concept is an affordable, reliable and feature-rich software architecture integrated into every Inca product. The concept characterizes the intelligence of the products and the possibility of deep insights into every step of the process chain.

When feeding or outputting video signals to the Inca products, video thumbnails of all signals, stream downloads, payload analysis and alarms are generated. With a single click, you can download sample video for offline analysis. All the information you need is just a click away and is presented in real time, in a graphically-appealing web-based interface that is both powerful and very user-friendly.

#### At a glance

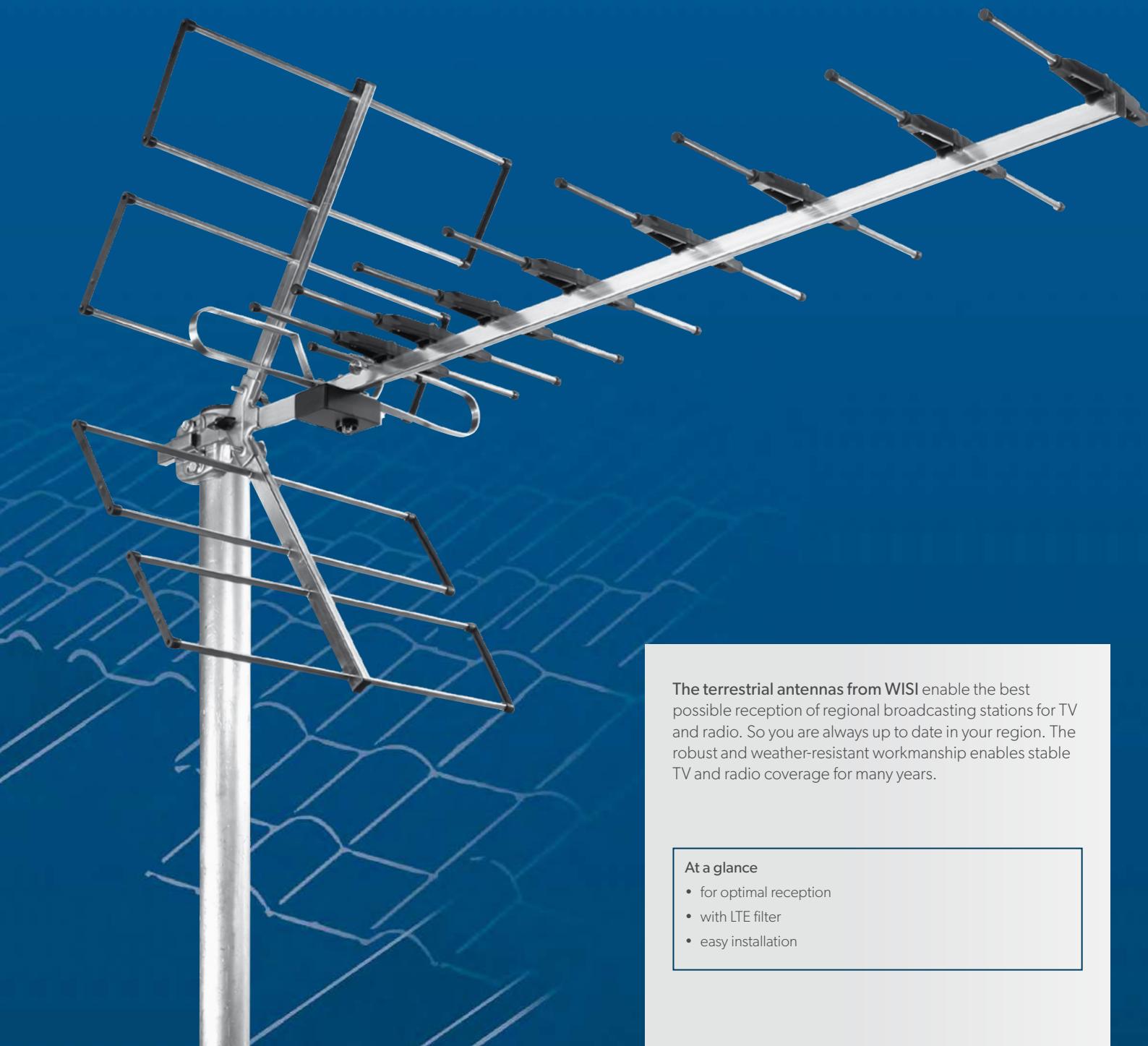
- Linear transcoding of MPEG-2, MPEG-4 and HEVC signals
- Most cost-effective ABR transcoding per transport stream
- Modular and flexible chassis with less than 200W consumption
- Reception of 8VSB, ASI, IP, SRT, MPEG-DASH signals
- IP transmission in UDP, HLS or SRT format
- Automatic reserve switching for power supplies, modules and signal sources

You will find these and other interesting products for implementing your individual reception and distribution solution in the **WISI online catalogue** and the **WISI product brochures**.



# Terrestrial antennas

WISI terrestrial antennas:  
**Regional on reception**



The terrestrial antennas from WISI enable the best possible reception of regional broadcasting stations for TV and radio. So you are always up to date in your region. The robust and weather-resistant workmanship enables stable TV and radio coverage for many years.

#### At a glance

- for optimal reception
- with LTE filter
- easy installation

# UHF antennas

## EE 06 A

UHF antenna, ch. 21...48



### Technical Data

Channels	21...48 (UHF)
Frequency range UHF	470...694 MHz
Polarization	horizontal/vertikal
Gain	14.5 dB (max.)
Rejection	25 dB (up 730 MHz)
Forward/backward ratio	>25 dB
Aperture angle horizontal	46 °
Aperture angle vertikal	27 °
Wind load horizontal	107 N
Wind load vertical	107 N
<b>Connectors</b>	
F-female	1 pcs.
<b>General data</b>	
Dimensions (width x height x depth)	645 x 830 x 260 mm

## EB 457 LTE

UHF antenna, ch. 21...48, with LTE filter



### Technical Data

Channels	21...48 (UHF, with LTE filter)
Frequency range UHF	470...690 MHz
Rejection range	730...862 MHz
Rejection	25 dB (up 730 MHz)
Polarization	Horizontal
Elements	28 pcs.
Gain	13 dB
Forward/backward ratio	>20 dB
Aperture angle horizontal	40 °
Aperture angle vertikal	48 °
Wind load horizontal	32 N
Wind load vertical	43 N
<b>Connectors</b>	
F-female	1 pcs.
<b>General data</b>	
Length	1040 mm

## EB 677 LTE

UHF antenna, ch. 21...48, with LTE filter



## EZ 457 LTE

UHF antenna, ch. 21...48, with LTE filter



### Technical Data

Channels	21...48 (UHF, with LTE filter)
Frequency range UHF	470...690 MHz
Rejection range	730...862 MHz
Rejection	25 dB (up 730 MHz)
Polarization	Horizontal
Elements	38 pcs.
Gain	15 dB
Forward/backward ratio	>28 dB
Aperture angle horizontal	35 °
Aperture angle vertikal	42 °
Wind load horizontal	76 N
Wind load vertical	114 N
<b>Connectors</b>	
F-female	1 pcs.
<b>General data</b>	
Length	1140 mm



# FM antennas

## UE 01

UKW cross dipole antenna

### characteristics

- VHF directional antenna for radio reception
- High antenna gain of 5 dB
- For mast diameters from 34...60 mm



### Technical Data

Channels	UKW (crossed dipole antenna)
----------	------------------------------

Frequency range FM	87,5...108 MHz
--------------------	----------------

Elements	2 pcs.
----------	--------

Gain	-3 dB (max.)
------	--------------

Forward/backward ratio	0 dB
------------------------	------

Aperture angle horizontal	360 °
---------------------------	-------

Wind load horizontal	22.1 N
----------------------	--------

### Connectors

F-female	1 pcs.
----------	--------

### General data

Length	- mm
--------	------

Mast clamp diameter	34...60 mm
---------------------	------------

## UD 23

FM/DAB combi antenna



### Technical Data

Reception range	FM/DAB/DAB+
-----------------	-------------

Frequency range FM	87,5...108 MHz
--------------------	----------------

Frequency range DAB/DAB+	174...240 MHz
--------------------------	---------------

Impedance	75 Ω
-----------	------

Elements	1 pcs.
----------	--------

Gain FM	max. 0 dB
---------	-----------

Gain DAB/DAB+	max. 3 dB
---------------	-----------

Aperture angle horizontal	±180 °
---------------------------	--------

Wind load at 150 km/h	14 N
-----------------------	------

### Connectors

F-female	2 pcs.
----------	--------

### General data

Dimensions (width x height x depth)	462 x 760 x 600 mm
-------------------------------------	--------------------

Weight	0,75 kg
--------	---------

Material	Aluminium
----------	-----------

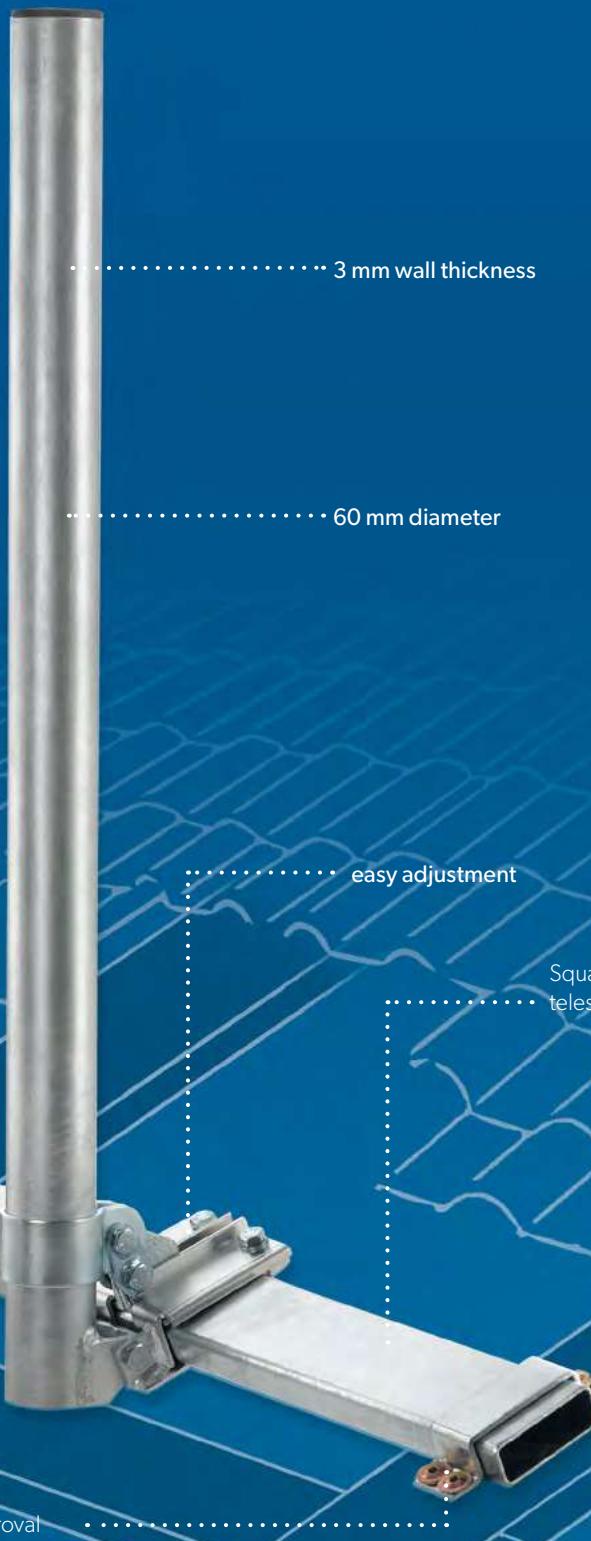
Mast clamp diameter	30...60 mm
---------------------	------------



# Mechanical accessories

WISI mechanical accessories:

**Stable in  
any weather**



WISI offers the complete range of solutions for the installation of SAT reception systems. This ranges from simple sealing tape to highly stable and weather-resistant rafter brackets. So there is a suitable right solution for every application.

## At a glance

- also suitable for larger antenna diameters
- suitable for all tiled roofs
- easiest handling
- especially suitable for roofs with thermal insulation

# Mast accessories

## NB 10

Mast foot



### Technical Data

Material	Galvanized steel
Wall thickness	3 mm
Hole distance	76 mm
Hole diameter	9 mm
Dimensions (width x height x depth)	96 x 60 x 66 mm
For mast with Ø	60 mm (until)

## NC 85 B

Roof hood



### Technical Data

Material	Die cast threading
Wall thickness	0.3 mm
Dimensions (width x height x depth)	385 x 150 x 420 mm
For mast with Ø	60 mm

## NC 91 A

Sealing strip



### Technical Data

Material	Tightening tape. Not to be used when temperature below 5°C.
For mast with Ø	80 mm (until)

## NC 10

Mast clamp till 45 mm



### Technical Data

Material	Steel
Hole diameter	9 mm
For mast with Ø	42...45 mm

## NC 11

Mast clamp till 50 mm



### Technical Data

Material	Steel
Hole diameter	9 mm
For mast with Ø	46...50 mm

# Mast accessories

## NC 95 A

Pole casing



### Technical Data

Material	plastic
For mast with Ø	44...48 mm

## NC 03

Mast cap



### Technical Data

Material	weather-proof plastic
For mast with Ø	37...48 mm

## NG 60

Mast fitting kit, 60 mm



### Technical Data

Included in the kit	Mast base, mast clamp, mast cap, roof hood, mast grommet, fastening screws, grounding strap
For mast with Ø	60 mm



# Wall mounts

## MN 08 A

Wall bracket

## MN 09 A

Wall bracket

## MN 10 A

Wall bracket

## MN 11 A

Wall bracket

### characteristics

- Angle wall bracket for parabolic antennas
- Tube diameter 50 mm
- Stable base plate with drawn tube mounting



### Technical Data

Material	Aluminium	Material	Aluminium	Material	Aluminium	Material	Aluminium
Tube diameter	50 mm						
Tube length	250 mm						
Wall thickness baseplate	5 mm						
Wall distance	200 mm	500 mm	400 mm	300 mm	150 x 150 mm	150 x 150 mm	150 x 150 mm
Base plate	150 x 150 mm						

## MN 03

Wall bracket

### characteristics

- Wall bracket for antenna mast tubes up to Ø 80 mm
- Secure hold due to serrated clamps
- Scope of delivery 1 pair



### Technical Data

Material	Steel hot galvanized, Top or bottom installation
Wall distance	220 mm
Hole distance	355 mm
Hole diameter	11 mm
For mast with Ø bracket distance	80 mm (until) 300...400 mm

# Roof rafter bracket

## MN 90 A

Rafter fastener



### characteristics

- Bending moment of min 1100Nm in all directions. Currently the strongest holder on the market. A 100 cm antenna is possible.
- mast tube with Ø 60 mm
- wall thickness 3 mm and a height from 90 cm
- 8x fastening element with construction approval
- for rafter spacing to 800 mm
- for roof pitch from 25-56°
- Precise and strong positioning for bi-directional and powerful Internet reception via satellite (e.g. for the systems Filiago, skyDSL, sat\_speed).
- no wobbling with bigger rafter distances
- Rafter and between rafter solution.

### Technical Data

Material	Tubes: galvanized steel; clamp: diecast aluminum
Mast diameter	60 mm
Mast length	900 mm
Wall thickness	3 mm
Roof bar spacing	800 mm (max.)
Roof pitch	24...56 °
Bending force	1100 Nm

The MN 90 A is a rafter fastener. With its high bending moment from min 1100 Nm in all directions, it is the most stable holder on the market. A 100 cm antenna is possible. The mast tube's diameter is 60 mm and is suitable for a roof pitch of 25° to 56°. Thanks to 8 fixing elements with a certification for construction industry, there is no wobble at larger distances between the rafters (up to 800 mm). Thanks to a precise and stable orientation, powerful bidirectional Internet is guaranteed via satellite. The wall thickness is 3 mm and the height 90 mm.

### Scope of delivery

- mast 90 cm
- mast clamping
- 4 screws 10 x 100 mm, SW 17
- 8 TORX- flat head screw 8x 120 mm
- installation instructions

# Roof rafter bracket

## MN 17 B

Telescopic mast



## MN 60 A 0300

Mast tube



### Technical Data

Material	Steel hot galvanized, guide groove	Steel hot galvanized, EN ISO 1461
Mast diameter	48 mm	60 mm
Mast length	2000 mm	3000 mm
Wall thickness	2 mm	3 mm
Bending force	1650 Nm (max.)	1100 Nm
Weight	4,8 kg	8,55 kg



# Electrical accessories

WISI electrical accessories:  
**Always the perfect  
connection.**



**WISI cables, plugs and sockets** are perfectly matched to each other so that they achieve consistently high shielding. They are quick and easy to install, have excellent performance characteristics.

The WISI connectors are characterised by a very high manufacturing quality, which not only has a positive effect on the signal quality and low power losses, but also on the simple assembly. WISI also offers the necessary tools for this. Thanks to the adapters in our range, there is hardly a coaxial connector that cannot be realized with WISI connectors. The WISI system gives you maximum flexibility.

## At a glance

- suitable for all cable types
- high-grade workmanship
- easy handling

# Tap BK 1 GHz

## DM 34 C

Two-way tap, 16 dB



### Technical Data

Frequency range	5...1006 MHz
Through loss	0,8...1,2 dB
TAP loss	16 dB
Directional attenuation	≥35/≥28 dB (5...470/470...1000 MHz)
Isolation	≥34 dB
Return loss	18...22 dB
<b>Connectors</b>	
F-female	4 pcs. (1x input, 1x run through, 2x branch)
<b>General data</b>	
Screening factor	>85 dB (class A)
DC Bypass IN/OUT 1A/30V	No
Dimensions (width x height x depth)	78 x 50 x 27 mm

### characteristics

- Frequency range 5...1000 MHz
- Screening factor according to Class A
- High port isolation and return loss

## DM 35 C

Two-way tap, 20 dB



### Technical Data

Frequency range	5...1006 MHz
Through loss	0,5...1,0 dB
TAP loss	20 dB
Directional attenuation	≥45/≥32 dB (5...470/470...1000 MHz)
Isolation	≥34 dB
Return loss	18...22 dB
<b>Connectors</b>	
F-female	4 pcs. (1x input, 1x run through, 2x branch)
<b>General data</b>	
Screening factor	>85 dB (class A)
DC Bypass IN/OUT 1A/30V	No
Dimensions (width x height x depth)	78 x 50 x 27 mm

### characteristics

- Frequency range 5...1000 MHz
- Screening factor according to Class A
- High port isolation and return loss

# Tap BK 1 GHz

## DM 36 A 4020

Four-way tap, 20 dB



KLASSE  
**A**  
CLASS

### Technical Data

Frequency range	5...1006 MHz
Through loss	1      +/- 0.2 dB
TAP loss	20      +/- 1.0 dB
Directional attenuation	> 40 / > 33 dB (5...470/470...1000 MHz)
Isolation	> 32 / > 28 dB (5...470/470...1000 MHz)
Return loss	> 22 dB
<b>Connectors</b>	
F-female	6 pcs. (1x input, 1x run through, 4x branch)
<b>General data</b>	
Screening factor	>85 dB (class A)
Dimensions (width x height x depth)	78 x 58 x 28 mm

### characteristics

- Frequency range 5...1000 MHz
- Screening factor according to Class A
- High port isolation and return loss

# Tap BK 1.3 GHz

## DM 61 A 0006

TAP symmetrical 1,3 GHz,  
1-way, 6 dB



**A**  
CLASS

## DM 61 A 0008

TAP symmetrical 1,3 GHz,  
1-way, 8 dB



**A**  
CLASS

## DM 61 A 0010

TAP symmetrical 1,3 GHz,  
1-way, 10 dB



**A**  
CLASS

### characteristics

- Frequency range from 5...1300 MHz (DOCSIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- Approved by Vodafone Kabel Deutschland

### Technical Data

	5...1300 MHz	5...1300 MHz	5...1300 MHz
<b>Through loss</b>			
5...65 MHz	2,2 dB ( $\pm 0,5$ dB)	1,5 dB ( $\pm 0,3$ dB)	1,2 dB ( $\pm 0,3$ dB)
65...470 MHz	2,2 dB ( $\pm 0,5$ dB)	1,5 dB ( $\pm 0,3$ dB)	1,2 dB ( $\pm 0,3$ dB)
470...862 MHz	2,4 dB ( $\pm 0,5$ dB)	1,8 dB ( $\pm 0,3$ dB)	1,4 dB ( $\pm 0,5$ dB)
862...1006 MHz	2,5 dB ( $\pm 0,5$ dB)	2,0 dB ( $\pm 0,5$ dB)	1,6 dB ( $\pm 0,5$ dB)
1006...1300 MHz	3,0 dB ( $\pm 0,8$ dB)	2,2 dB ( $\pm 0,5$ dB)	1,8 dB ( $\pm 0,5$ dB)
<b>TAP loss</b>			
5...65 MHz	6,0 dB ( $\pm 1,5$ dB)	8,0 dB ( $\pm 1,5$ dB)	10,0 dB ( $\pm 1,0$ dB)
65...470 MHz	6,0 dB ( $\pm 1,0$ dB)	8,0 dB ( $\pm 1,0$ dB)	10,0 dB ( $\pm 1,0$ dB)
470...862 MHz	6,0 dB ( $\pm 1,0$ dB)	8,0 dB ( $\pm 1,0$ dB)	10,0 dB ( $\pm 1,0$ dB)
862...1006 MHz	6,0 dB ( $\pm 1,0$ dB)	8,0 dB ( $\pm 1,0$ dB)	10,0 dB ( $\pm 1,0$ dB)
1006...1300 MHz	6,0 dB ( $\pm 1,5$ dB)	8,0 dB ( $\pm 1,5$ dB)	10,0 dB ( $\pm 1,0$ dB)
<b>Isolation</b>			
5...65 MHz	>24,0 dB	>24,0 dB	>25,0 dB
65...470 MHz	>25,0 dB	>30,0 dB	>30,0 dB
470...862 MHz	>22,0 dB	>26,0 dB	>22,0 dB
862...1006 MHz	>22,0 dB	>22,0 dB	>22,0 dB
1006...1300 MHz	>20,0 dB	>20,0 dB	>20,0 dB
<b>Return loss</b>			
5...65 MHz	>22,0 dB	>22,0 dB	>22,0 dB
65...470 MHz	>20,0 dB	>20,0 dB	>20,0 dB
470...862 MHz	>18,0 dB	>18,0 dB	>18,0 dB
862...1006 MHz	>18,0 dB	>18,0 dB	>18,0 dB
1006...1300 MHz	>16,0 dB	>16,0 dB	>16,0 dB
<b>Connectors</b>			
F-female	3pcs.(1x Input, 1x Loop-through output, 1x TAP output)	3pcs.(1x Input, 1x Loop-through output, 1x TAP output)	3pcs.(1x Input, 1x Loop-through output, 1x TAP output)
<b>General data</b>			
Screening factor	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2
Intermodulation ratio	120dB $\mu$ V according to EN 60728-4	120dB $\mu$ V according to EN 60728-4	120dB $\mu$ V according to EN 60728-4
DC Bypass IN/OUT	No	No	No
Dimensions (width x height x depth)	mm	mm	mm

# Tap BK 1.3 GHz

## DM 61 A 0012

TAP symmetrical 1,3 GHz,  
1-way, 12 dB



**A**  
KLASSE  
CLASS

## DM 61 A 0016

TAP symmetrical 1,3 GHz,  
1-way, 16 dB



**A**  
KLASSE  
CLASS

## DM 61 A 0020

TAP symmetrical 1,3 GHz,  
1-way, 20 dB



**A**  
KLASSE  
CLASS

### characteristics

- Frequency range from 5...1300 MHz (DOCSIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- Approved by Vodafone Kabel Deutschland

### Technical Data

	5...1300 MHz	5...1300 MHz	5...1300 MHz
<b>Through loss</b>			
5...65 MHz	0,8 dB ( $\pm 0,2$ dB)	0,4 dB ( $\pm 0,2$ dB)	0,4 dB ( $\pm 0,2$ dB)
65...470 MHz	0,8 dB ( $\pm 0,3$ dB)	0,4 dB ( $\pm 0,2$ dB)	0,4 dB ( $\pm 0,2$ dB)
470...862 MHz	0,8 dB ( $\pm 0,3$ dB)	0,6 dB ( $\pm 0,3$ dB)	0,6 dB ( $\pm 0,3$ dB)
862...1006 MHz	1,0 dB ( $\pm 0,5$ dB)	0,8 dB ( $\pm 0,5$ dB)	0,8 dB ( $\pm 0,3$ dB)
1006...1300 MHz	1,5 dB ( $\pm 0,8$ dB)	1,0 dB ( $\pm 0,8$ dB)	0,8 dB ( $\pm 0,5$ dB)
<b>TAP loss</b>			
5...65 MHz	12,0 dB ( $\pm 1,0$ dB)	16,0 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)
65...470 MHz	12,0 dB ( $\pm 1,0$ dB)	16,0 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)
470...862 MHz	12,0 dB ( $\pm 1,0$ dB)	16,0 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)
862...1006 MHz	12,0 dB ( $\pm 1,0$ dB)	16,0 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)
1006...1300 MHz	12,0 dB ( $\pm 1,0$ dB)	16,0 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)
<b>Isolation</b>			
5...65 MHz	>25,0 dB	>32,0 dB	>35,0 dB
65...470 MHz	>30,0 dB	>32,0 dB	>35,0 dB
470...862 MHz	>25,0 dB	>30,0 dB	>32,0 dB
862...1006 MHz	>24,0 dB	>28,0 dB	>30,0 dB
1006...1300 MHz	>22,0 dB	>25,0 dB	>26,0 dB
<b>Return loss</b>			
5...65 MHz	>22,0 dB	>22,0 dB	>22,0 dB
65...470 MHz	>20,0 dB	>20,0 dB	>20,0 dB
470...862 MHz	>18,0 dB	>18,0 dB	>18,0 dB
862...1006 MHz	>18,0 dB	>18,0 dB	>18,0 dB
1006...1300 MHz	>16,0 dB	>16,0 dB	>16,0 dB
<b>Connectors</b>			
F-female	3pcs.(1x Input, 1x Loop-through output, 1x TAP output)	3pcs.(1x Input, 1x Loop-through output, 1x TAP output)	3pcs.(1x Input, 1x Loop-through output, 1x TAP output)
<b>General data</b>			
Screening factor	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2
Intermodulation ratio	120dB $\mu$ V according to EN 60728-4	120dB $\mu$ V according to EN 60728-4	120dB $\mu$ V according to EN 60728-4
DC Bypass IN/OUT	No	No	No
Dimensions (width x height x depth)	mm	mm	mm

# Tap BK 1.3 GHz

## DM 62 A 0008

TAP symmetrical 1,3 GHz,  
2-way, 8 dB



### characteristics

- Frequency range from 5...1300 MHz (DOCSIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- Approved by Vodafone Kabel Deutschland

## DM 62 A 0010

TAP symmetrical 1,3 GHz,  
2-way, 10 dB



## DM 62 A 0012

TAP symmetrical 1,3 GHz,  
2-way, 12 dB



### Technical Data

	5...1300 MHz	5...1300 MHz	5...1300 MHz
<b>Through loss</b>			
5...65 MHz	3,8 dB ( $\pm 0,5$ dB)	2,2 dB ( $\pm 0,5$ dB)	1,2 dB ( $\pm 0,5$ dB)
65...470 MHz	3,8 dB ( $\pm 0,5$ dB)	2,2 dB ( $\pm 0,5$ dB)	1,2 dB ( $\pm 0,5$ dB)
470...862 MHz	3,8 dB ( $\pm 0,5$ dB)	2,7 dB ( $\pm 0,5$ dB)	1,4 dB ( $\pm 0,5$ dB)
862...1006 MHz	3,8 dB ( $\pm 0,5$ dB)	2,8 dB ( $\pm 0,5$ dB)	1,8 dB ( $\pm 0,5$ dB)
1006...1300 MHz	4,0 dB ( $\pm 0,8$ dB)	3,5 dB ( $\pm 0,8$ dB)	2,2 dB ( $\pm 0,8$ dB)
<b>TAP loss</b>			
5...65 MHz	8,5 dB ( $\pm 1,0$ dB)	10,5 dB ( $\pm 1,0$ dB)	12,5 dB ( $\pm 1,0$ dB)
65...470 MHz	8,5 dB ( $\pm 1,0$ dB)	10,5 dB ( $\pm 1,0$ dB)	12,5 dB ( $\pm 1,0$ dB)
470...862 MHz	8,5 dB ( $\pm 1,0$ dB)	10,5 dB ( $\pm 1,0$ dB)	12,5 dB ( $\pm 1,0$ dB)
862...1006 MHz	8,5 dB ( $\pm 1,0$ dB)	10,5 dB ( $\pm 1,0$ dB)	12,5 dB ( $\pm 1,0$ dB)
1006...1300 MHz	8,5 dB ( $\pm 1,0$ dB)	10,5 dB ( $\pm 1,0$ dB)	12,5 dB ( $\pm 1,0$ dB)
<b>Decoupling OUT-TAP</b>			
5...65 MHz	>25,0 dB	>28,0 dB	>30,0 dB
65...470 MHz	>24,0 dB	>26,0 dB	>28,0 dB
470...862 MHz	>22,0 dB	>24,0 dB	>26,0 dB
862...1006 MHz	>20,0 dB	>22,0 dB	>24,0 dB
1006...1300 MHz	>20,0 dB	>20,0 dB	>22,0 dB
<b>Decoupling TAP-TAP</b>			
5...65 MHz	>36 dB	>36 dB	>36 dB
65...470 MHz	>34 dB	>36 dB	>36 dB
470...862 MHz	>32 dB	>32 dB	>32 dB
862...1006 MHz	>30 dB	>30 dB	>30 dB
1006...1300 MHz	>28 dB	>30 dB	>30 dB
<b>Return loss</b>			
5...65 MHz	>20,0dB	>22,0dB	>22,0dB
65...470 MHz	>20,0dB	>20,0dB	>20,0dB
470...862 MHz	>18,0dB	>18,0dB	>18,0dB
862...1006 MHz	>18,0dB	>18,0dB	>18,0dB
1006...1300 MHz	>16,0dB	>16,0dB	>16,0dB
<b>Connectors</b>			
F-female	4pcs.(1x Input, 1x Loop through output, 2x TAP output)	4pcs.(1x Input, 1x Loop through output, 2x TAP output)	4pcs.(1x Input, 1x Loop through output, 2x TAP output)
<b>General data</b>			
Screening factor	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2
Intermodulation ratio	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4
DC Bypass IN/OUT	No	No	No
Dimensions (width x height x depth)	71,8 x 25,5 x 49,5 mm	71,8 x 25,5 x 49,5 mm	71,8 x 25,5 x 49,5 mm

# Tap BK 1.3 GHz

## DM 62 A 0016

TAP symmetrical 1,3 GHz,  
2-way, 16 dB



### characteristics

- Frequency range from 5...1300 MHz (DOCSIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- Approved by Vodafone Kabel Deutschland

## DM 62 A 0020

TAP symmetrical 1,3 GHz,  
2-way, 20 dB



## DM 63 A 0016

TAP symmetrical 1,3 GHz,  
3-way, 16 dB



### Technical Data

	DM 62 A 0016	DM 62 A 0020	DM 63 A 0016
Frequency range	5...1300 MHz	5...1300 MHz	5...1300 MHz
<b>Through loss</b>			
5...65 MHz	1,0 dB ( $\pm 0,5$ dB)	0,8 dB ( $\pm 0,3$ dB)	1,6 dB ( $\pm 0,5$ dB)
65...470 MHz	1,0 dB ( $\pm 0,5$ dB)	0,8 dB ( $\pm 0,3$ dB)	1,6 dB ( $\pm 0,3$ dB)
470...862 MHz	1,2 dB ( $\pm 0,5$ dB)	1,0 dB ( $\pm 0,3$ dB)	1,6 dB ( $\pm 0,3$ dB)
862...1006 MHz	1,4 dB ( $\pm 0,5$ dB)	1,2 dB ( $\pm 0,5$ dB)	1,8 dB ( $\pm 0,3$ dB)
1006...1300 MHz	1,7 dB ( $\pm 0,5$ dB)	1,7 dB ( $\pm 0,5$ dB)	2,5 dB ( $\pm 0,5$ dB)
<b>TAP loss</b>			
5...65 MHz	16,5 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)	16,5 dB ( $\pm 1,0$ dB)
65...470 MHz	16,5 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)	16,5 dB ( $\pm 1,0$ dB)
470...862 MHz	16,5 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)	16,5 dB ( $\pm 1,0$ dB)
862...1006 MHz	16,5 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)	16,5 dB ( $\pm 1,0$ dB)
1006...1300 MHz	16,5 dB ( $\pm 1,0$ dB)	20,0 dB ( $\pm 1,0$ dB)	16,5 dB ( $\pm 1,0$ dB)
<b>Decoupling OUT-TAP</b>			
5...65 MHz	>32,0 dB	>35,0 dB	>30,0 dB
65...470 MHz	>32,0 dB	>36,0 dB	>28,0 dB
470...862 MHz	>30,0 dB	>34,0 dB	>26,0 dB
862...1006 MHz	>28,0 dB	>32,0 dB	>24,0 dB
1006...1300 MHz	>26,0 dB	>28,0 dB	>22,0 dB
<b>Decoupling TAP-TAP</b>			
5...65 MHz	>36 dB	>36 dB	>36 dB
65...470 MHz	>36 dB	>36 dB	>36 dB
470...862 MHz	>32 dB	>32 dB	>32 dB
862...1006 MHz	>30 dB	>30 dB	>30 dB
1006...1300 MHz	>30 dB	>30 dB	>30 dB
<b>Return loss</b>			
5...65 MHz	>22,0dB	>22,0dB	>22,0dB
65...470 MHz	>20,0dB	>20,0dB	>20,0dB
470...862 MHz	>18,0dB	>18,0dB	>18,0dB
862...1006 MHz	>18,0dB	>18,0dB	>18,0dB
1006...1300 MHz	>16,0dB	>16,0dB	>16,0dB
<b>Connectors</b>			
F-female	4pcs.(1x Input, 1x Loop through output, 2x TAP output)	4pcs.(1x Input, 1x Loop through output, 2x TAP output)	5pcs.(1x Input, 1x Loop through output, 3x TAP output)
<b>General data</b>			
Screening factor	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2
Intermodulation ratio	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4
DC Bypass IN/OUT	No	No	No
Dimensions (width x height x depth)	71,8 x 25,5 x 49,5 mm	71,8 x 25,5 x 49,5 mm	71,8 x 25,5 x 49,5 mm

# Tap BK 1.3 GHz

## DM 64 A 0012

TAP symmetrical 1,3 GHz, 4-way, 12 dB



**A**  
KLASSE  
■ CLASS

## DM 64 A 0016

TAP symmetrical 1,3 GHz, 4-way, 16 dB



**A**  
KLASSE  
■ CLASS

## DM 64 A 0020

TAP symmetrical 1,3 GHz, 4-way, 20 dB



**A**  
KLASSE  
■ CLASS

## DM 64 A 0024

TAP symmetrical 1,3 GHz, 4-way, 24 dB



**A**  
KLASSE  
■ CLASS

### characteristics

- Frequency range from 5...1300 MHz (DOCSIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- Very high port isolation and return loss

### Technical Data

	Frequency range	5...1300 MHz	5...1300 MHz	5...1300 MHz	5...1300 MHz
<b>Through loss</b>					
5...65 MHz	3,2 dB ( $\pm 0,5$ dB)	1,2 dB ( $\pm 0,5$ dB)	0,5 dB ( $\pm 0,3$ dB)	0,3 dB ( $\pm 0,3$ dB)	
65...470 MHz	3,5 dB ( $\pm 0,3$ dB)	1,3 dB ( $\pm 0,3$ dB)	0,7 dB ( $\pm 0,3$ dB)	0,5 dB ( $\pm 0,3$ dB)	
470...862 MHz	3,8 dB ( $\pm 0,3$ dB)	1,6 dB ( $\pm 0,3$ dB)	0,9 dB ( $\pm 0,3$ dB)	0,7 dB ( $\pm 0,3$ dB)	
862...1006 MHz	4,0 dB ( $\pm 0,3$ dB)	1,8 dB ( $\pm 0,3$ dB)	1 dB ( $\pm 0,3$ dB)	0,8 dB ( $\pm 0,3$ dB)	
1006...1300 MHz	4,5 dB ( $\pm 0,5$ dB)	2,2 dB ( $\pm 0,5$ dB)	1,2 dB ( $\pm 0,5$ dB)	1 dB ( $\pm 0,5$ dB)	
<b>TAP loss</b>					
5...65 MHz	12 dB ( $\pm 1,0$ dB)	16 dB ( $\pm 1,0$ dB)	20 dB ( $\pm 1,0$ dB)	24 dB ( $\pm 1,0$ dB)	
65...470 MHz	12 dB ( $\pm 1,0$ dB)	16 dB ( $\pm 1,0$ dB)	20 dB ( $\pm 1,0$ dB)	24 dB ( $\pm 1,0$ dB)	
470...862 MHz	12 dB ( $\pm 1,0$ dB)	16 dB ( $\pm 1,0$ dB)	20 dB ( $\pm 1,0$ dB)	24 dB ( $\pm 1,0$ dB)	
862...1006 MHz	12 dB ( $\pm 1,0$ dB)	16 dB ( $\pm 1,0$ dB)	20 dB ( $\pm 1,0$ dB)	24 dB ( $\pm 1,0$ dB)	
1006...1300 MHz	12 dB ( $\pm 1,0$ dB)	16 dB ( $\pm 1,0$ dB)	20 dB ( $\pm 1,0$ dB)	24 dB ( $\pm 1,0$ dB)	
<b>Decoupling OUT-TAP</b>					
5...65 MHz	>32 dB	>32 dB	>36 dB	>32 dB	
65...470 MHz	>28 dB	>32 dB	>32 dB	>32 dB	
470...862 MHz	>25 dB	>30 dB	>30 dB	>30 dB	
862...1006 MHz	>24 dB	>30 dB	>30 dB	>30 dB	
1006...1300 MHz	>22 dB	>28 dB	>28 dB	>28 dB	
<b>Decoupling TAP-TAP</b>					
5...65 MHz	>30 dB	>30 dB	>30 dB	>30 dB	
65...470 MHz	>28 dB	>28 dB	>28 dB	>28 dB	
470...862 MHz	>25 dB	>25 dB	>25 dB	>25 dB	
862...1006 MHz	>24 dB	>24 dB	>24 dB	>24 dB	
1006...1300 MHz	>22 dB	>22 dB	>22 dB	>22 dB	
<b>Return loss</b>					
5...65 MHz	>22dB	>22dB	>22dB	>22dB	
65...470 MHz	>20dB	>20dB	>20dB	>20dB	
470...862 MHz	>18dB	>18dB	>18dB	>18dB	
862...1006 MHz	>18dB	>18dB	>18dB	>18dB	
1006...1300 MHz	>16dB	>16dB	>16dB	>16dB	
<b>Connectors</b>					
F-female	6pcs.(1x Input, 1x Loop through output, 4x TAP output)	6pcs.(1x Input, 1x Loop through output, 4x TAP output)	6pcs.(1x Input, 1x Loop through output, 4x TAP output)	6pcs.(1x Input, 1x Loop through output, 4x TAP output)	
<b>General data</b>					
Screening factor	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2	
Intermodulation ratio	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4	
DC Bypass IN/OUT	No	No	No	No	
Dimensions (w x h x d)	71,8 x 25,5 x 49,5 mm				

# Tap BK 1.3 GHz

## DM 64 A 1316

TAP asymmetrical 1,3 GHz,  
4-way 13...16 dB



KLASSE  
**A**  
CLASS

### Technical Data

Frequency range	5...1300 MHz
<b>Through loss</b>	
5...65 MHz	3,8 dB ( $\pm 0,8$ dB)
65...470 MHz	3,8 dB ( $\pm 0,8$ dB)
470...862 MHz	3,8 dB ( $\pm 0,8$ dB)
862...1006 MHz	4,0 dB ( $\pm 1,0$ dB)
1006...1300 MHz	5,0 dB ( $\pm 1,0$ dB)
<b>TAP loss</b>	
TAP 1	12,5 dB ( $\pm 1,5$ dB)
TAP 2	13,5 dB ( $\pm 1,5$ dB)
TAP 3	14,5 dB ( $\pm 1,5$ dB)
TAP 4	15,5 dB ( $\pm 1,5$ dB)

### characteristics

- Frequency range from 5...1300 MHz (DOC-SIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- High durability and perfect electrical values thanks to the white bronze plating
- Graded TAP loss
- Approved by Vodafone Kabel Deutschland

## DM 66 A 1318

TAP asymmetrical 1,3 GHz,  
6-way 13...18 dB



KLASSE  
**A**  
CLASS

### Technical Data

Frequency range	5...1300 MHz
<b>Through loss</b>	
5...65 MHz	5,0 dB ( $\pm 1,0$ dB)
65...470 MHz	5,0 dB ( $\pm 1,0$ dB)
470...862 MHz	5,5 dB ( $\pm 1,0$ dB)
862...1006 MHz	6,5 dB ( $\pm 1,0$ dB)
1006...1300 MHz	7,5 dB ( $\pm 1,5$ dB)
<b>TAP loss</b>	
TAP 1	12,5 dB ( $\pm 1,5$ dB)
TAP 2	13,5 dB ( $\pm 1,5$ dB)
TAP 3	14,5 dB ( $\pm 1,5$ dB)
TAP 4	15,5 dB ( $\pm 1,5$ dB)
TAP 5	16,5 dB ( $\pm 1,5$ dB)
TAP 6	17,5 dB ( $\pm 1,5$ dB)

### characteristics

- Frequency range from 5...1300 MHz (DOC-SIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- High durability and perfect electrical values thanks to the white bronze plating
- Graded TAP loss
- Approved by Vodafone Kabel Deutschland

## DM 68 A 1320

TAP asymmetrical 1,3 GHz,  
8-way 13...20 dB



KLASSE  
**A**  
CLASS

### Technical Data

Frequency range	5...1300 MHz
<b>Through loss</b>	
5...65 MHz	7,5 dB ( $\pm 1,0$ dB)
65...470 MHz	7,5 dB ( $\pm 1,0$ dB)
470...862 MHz	7,5 dB ( $\pm 1,0$ dB)
862...1006 MHz	8,0 dB ( $\pm 1,5$ dB)
1006...1300 MHz	9,5 dB ( $\pm 1,5$ dB)
<b>TAP loss</b>	
TAP 1	12,5 dB ( $\pm 1,5$ dB)
TAP 2	13,5 dB ( $\pm 1,5$ dB)
TAP 3	14,5 dB ( $\pm 1,5$ dB)
TAP 4	15,5 dB ( $\pm 1,5$ dB)
TAP 5	16,5 dB ( $\pm 1,5$ dB)
TAP 6	17,5 dB ( $\pm 1,5$ dB)
TAP 7	18,5 dB ( $\pm 1,5$ dB)
TAP 8	19,5 dB ( $\pm 1,5$ dB)

### characteristics

- Frequency range from 5...1300 MHz (DOC-SIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- High durability and perfect electrical values thanks to the white bronze plating
- Graded TAP loss
- Approved by Vodafone Kabel Deutschland

# Tap BK 1.3 GHz

## DM 51 1010

One-way tap, 11 dB

### characteristics

- Frequency range from 5....2400 MHz
- Parallel distribution of satellite, cable and terrestrial signals possible
- Screening factor Class A
- DC-Bypass in the trunk line
- Removable plastic base for cable routing below the distributor



**A**  
KLASSE  
CLASS

## DM 51 1015

One-way tap, 15 dB



**A**  
KLASSE  
CLASS

## DM 51 1020

One-way tap, 20 dB



**A**  
KLASSE  
CLASS

### Technical Data

Frequency range	5...2400 MHz	5...2400 MHz	5...2400 MHz
Through loss	1,5...2,5 dB	1,0...2,0 dB	0,7...1,8 dB
TAP loss	11 dB	15 dB	20 dB
Directional attenuation	32/25/22 dB (5...40/40...100/100...2400 MHz)	35/30/25 dB (5...40/40...100/100...2400 MHz)	40/32/28 dB (5...40/40...100/100...2400 MHz)
Return loss	18...22 dB	18...22 dB	18...22 dB
<b>Connectors</b>			
F-female	3 pcs. (1x input, 1x run through, 1x branch)	3 pcs. (1x input, 1x run through, 1x branch)	3 pcs. (1x input, 1x run through, 1x branch)
<b>General data</b>			
Screening factor	>85 dB (class A)	>85 dB (class A)	>85 dB (class A)
DC Bypass IN/OUT 1A/30V	Yes	Yes	Yes
Dimensions (width x height x depth)	52 x 50 x 18 mm	52 x 50 x 18 mm	52 x 50 x 18 mm

## DM 52 2010

Two-way tap, 11 dB

### characteristics

- Frequency range from 5....2400 MHz
- Parallel distribution of satellite, cable and terrestrial signals possible
- Screening factor Class A
- DC-Bypass in the trunk line



**A**  
KLASSE  
CLASS

## DM 52 2015

Two-way tap, 15 dB



**A**  
KLASSE  
CLASS

## DM 52 2020

Two-way tap, 20 dB



**A**  
KLASSE  
CLASS

### Technical Data

Frequency range	5...2400 MHz	5...2400 MHz	5...2400 MHz
Through loss	3,0...4,0 dB	2,0...4,0 dB	1,5...3,5 dB
TAP loss	11 dB	15 dB	20 dB
Directional attenuation	23/20 dB (5...40/40...2400 MHz)	22 / 20 dB (5...40/40...2400 MHz)	25/20 dB (5...40/40...2400 MHz)
Isolation	≥28 dB	≥30 dB	≥32 dB
Return loss	18...22 dB	18...22 dB	18...22 dB
<b>Connectors</b>			
F-female	4 pcs. (1x input, 1x run through, 2x branch)	4 pcs. (1x input, 1x run through, 2x branch)	4 pcs. (1x input, 1x run through, 2x branch)
<b>General data</b>			
Screening factor	>85 dB (class A)	>85 dB (class A)	>85 dB (class A)
DC Bypass IN/OUT 1A/30V	Yes	Yes	Yes
Dimensions (width x height x depth)	74 x 48 x 18 mm	74 x 48 x 18 mm	74 x 48 x 18 mm

# Tap SAT

## DM 54 A 4010    DM 54 A 4015    DM 54 A 4020    DM 54 A 4025

Four-way tap, 10 dB

Four-way tap, 15/15 dB

Four-way tap, 20/20 dB

Four-way tap, 25 dB

### characteristics

- Frequency range from 5....2400 MHz
- Parallel distribution of satellite, cable and terrestrial signals possible
- Screening factor according to Class A
- DC-Bypass in the trunk line



**A**  
KLASSE  
■ CLASS



**A**  
KLASSE  
■ CLASS



**A**  
KLASSE  
■ CLASS



**A**  
KLASSE  
■ CLASS

### Technical Data

Frequency range	5...2400 MHz	5...2400 MHz	5...2400 MHz	5...2400 MHz
Through loss	3,5/4,5...5 dB (5...862/862...2400 MHz)	2,5/4,5 dB (5...862/862...2400 MHz)	1,0/2...2,5 dB (5...862/862...2400 MHz)	0,6/1,8...2,5 dB (5...862/862...2400 MHz)
TAP loss	10/10 dB (5...862/862...2400 MHz)	15/15 dB (5...862/862...2400 MHz)	20/20 dB (5...862/862...2400 MHz)	25/25 dB (5...862/862...2400 MHz)
Directional attenuation	≥25 dB	≥25 dB	≥25 dB	≥25 dB
Isolation	≥21 dB	≥21 dB	≥21 dB	≥21 dB
Return loss	18...22 dB	18...22 dB	18...22 dB	18...22 dB

### Connectors

F-female	6 pcs. (1x input, 1x run through, 4x branch)	6 pcs. (1x input, 1x run through, 4x branch)	6 pcs. (1x input, 1x run through, 4x branch)	6 pcs. (1x input, 1x run through, 4x branch)
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### General data

Screening factor	>85 dB (class A)			
DC Bypass IN/OUT 1A/30V	Yes	Yes	Yes	Yes
Dimensions (width x height x depth)	74 x 58 x 18 mm			

# Splitter BK 1 GHz

## DM 02 B

Splitter, 2-way

### characteristics

- Frequency range 5...1000 MHz
- Screening factor according to Class A
- High port isolation and return loss



**A**  
KLASSE  
CLASS

## DM 03 B

Splitter, 3-way



**A**  
KLASSE  
CLASS

## DM 04 B

Splitter, 4-way



**A**  
KLASSE  
CLASS

### Technical Data

Frequency range	5...1006 MHz	5...1006 MHz	5...1006 MHz
Distribution loss	3.7 dB	5.9 dB	7.5 dB
Isolation	30 dB	30 dB	30 dB
Return loss	18 dB	18 dB	18 dB
<b>Connectors</b>			
F-female	3 pcs. (1x input, 2x output)	4 pcs. (1x input, 3x output)	5 pcs. (1x input, 4x output)
<b>General data</b>			
Screening factor	>85 dB (class A)	>85 dB (class A)	>85 dB (class A)
DC Bypass IN/OUT 1A/30V	No	No	No
Dimensions (width x height x depth)	55x50x28 mm	78x50x28 mm	78x50x28 mm

## DM 06 B

Splitter, 6-way

## DM 08 B

Splitter, 8-way

### characteristics

- Frequency range 5...1000 MHz
- Screening factor according to Class A
- High port isolation and return loss



**A**  
KLASSE  
CLASS



**A**  
KLASSE  
CLASS

### Technical Data

Frequency range	5...1006 MHz	5...1006 MHz
Distribution loss	10 dB	11 dB
Isolation	≥25 dB	>25 dB
Return loss	18 dB	18 dB
<b>Connectors</b>		
F-female	7 pcs. (1x input, 6x output)	9 pcs. (1x input, 8x output)
<b>General data</b>		
Screening factor	>85 dB (class A)	>85 dB (class A)
DC Bypass IN/OUT 1A/30V	No	No
Dimensions (width x height x depth)	115x54x42 mm	115x54x42 mm

# Splitter BK 1.3 GHz

## DM 02 D

Splitter 1,3 GHz, 2-way

### characteristics

- Frequency range from 5...1300 MHz (DOCSIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- High durability and perfect electrical values thanks to the white bronze plating
- Approved by Vodafone Kabel Deutschland



## DM 03 D

Splitter 1,3 GHz, 3-way



### Technical Data

	5...1300 MHz	5...1300 MHz
<b>Distribution loss</b>		
5...65 MHz	3,3 dB ( $\pm 0,5$ dB)	5,2 dB ( $\pm 0,5$ dB)
65...470 MHz	3,3 dB ( $\pm 0,5$ dB)	5,2 dB ( $\pm 0,5$ dB)
470...862 MHz	3,5 dB ( $\pm 0,5$ dB)	5,6 dB ( $\pm 0,5$ dB)
862...1006 MHz	3,7 dB ( $\pm 0,5$ dB)	5,8 dB ( $\pm 0,5$ dB)
1006...1300 MHz	4,0 dB ( $\pm 0,8$ dB)	6,2 dB ( $\pm 0,5$ dB)
<b>Isolation</b>		
5...65 MHz	>30,0 dB	>28,0 dB
65...470 MHz	>28,0 dB	>28,0 dB
470...862 MHz	>26,0 dB	>26,0 dB
862...1006 MHz	>25,0 dB	>25,0 dB
1006...1300 MHz	>22,0 dB	>22,0 dB
<b>Return loss</b>		
5...65 MHz	>22,0 dB	>22,0 dB
65...470 MHz	>20,0 dB	>20,0 dB
470...862 MHz	>18,0 dB	>18,0 dB
862...1006 MHz	>18,0 dB	>18,0 dB
1006...1300 MHz	>16,0 dB	>16,0 dB
<b>Connectors</b>		
F-female	3 pcs. (1x input, 2x output)	4 pcs. (1x input, 3x output)
<b>General data</b>		
Screening factor	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2
Intermodulation ratio	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4
DC Bypass IN/OUT	No	No
Dimensions (width x height x depth)	47,5 x 25,5 x 49,5 mm	71,8 x 25,5 x 49,5 mm

# Splitter BK 1.3 GHz

## DM 04 D

Splitter 1,3 GHz, 4-way



**A**  
KLASSE  
■ CLASS

## DM 06 D

Splitter 1,3 GHz, 6-way



**A**  
KLASSE  
■ CLASS

## DM 08 D

Splitter 1,3 GHz, 8-way



**A**  
KLASSE  
■ CLASS

### characteristics

- Frequency range from 5...1300 MHz (DOCSIS 3.1 capable)
- Screening factor according to Class A (+10 dB)
- High intermodulation suppression
- Very high port isolation and return loss
- Approved by Vodafone Kabel Deutschland

### Technical Data

#### Distribution loss

	5...1300 MHz	5...1300 MHz	5...1300 MHz
Frequency range	5...1300 MHz	<8,5 dB ( $\pm 0,5$ dB)	<10,0 dB ( $\pm 0,5$ dB)
5...65 MHz	6,6 dB ( $\pm 0,5$ dB)	<8,8 dB ( $\pm 0,5$ dB)	<10,0 dB ( $\pm 0,5$ dB)
65...470 MHz	6,6 dB ( $\pm 0,5$ dB)	<9,4 dB ( $\pm 0,5$ dB)	<10,5 dB ( $\pm 0,5$ dB)
470...862 MHz	7,1 dB ( $\pm 0,5$ dB)	<9,6 dB ( $\pm 0,5$ dB)	<11,0 dB ( $\pm 0,5$ dB)
862...1006 MHz	7,5 dB ( $\pm 0,5$ dB)	<10,5 dB ( $\pm 0,5$ dB)	<11,5 dB ( $\pm 0,8$ dB)
1006...1300 MHz	7,9 dB ( $\pm 0,5$ dB)		

#### Isolation

5...65 MHz	>30,0 dB	>25,0 dB	>25,0 dB
65...470 MHz	>30,0 dB	>25,0 dB	>25,0 dB
470...862 MHz	>26,0 dB	>24,0 dB	>25,0 dB
862...1006 MHz	>25,0 dB	>24,0 dB	>24,0 dB
1006...1300 MHz	>22,0 dB	>22,0 dB	>22,0 dB

#### Return loss

5...65 MHz	>22,0 dB	>18,0 dB	>18,0 dB
65...470 MHz	>20,0 dB	>18,0 dB	>18,0 dB
470...862 MHz	>18,0 dB	>18,0 dB	>18,0 dB
862...1006 MHz	>18,0 dB	>18,0 dB	>18,0 dB
1006...1300 MHz	>16,0 dB	>14,0 dB	>14,0 dB

#### Connectors

F-female	5 pcs. (1x input, 4x output)	7 pcs. (1x input, 6x output)	9 pcs. (1x input, 8x output)
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#### General data

Screening factor	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2	Class A (+10 dB), according to EN 50083-2
Intermodulation ratio	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4	120 dB $\mu$ V according to EN 60728-4
DC Bypass IN/OUT	No	No	No
Dimensions (width x height x depth)	71,8 x 25,5 x 49,5 mm	87,5 x 41,8 x 53,5 mm	111,5 x 41,8 x 53,5 mm

# Splitter SAT

## DM 12 A

SAT splitter, 2-way



## DM 13 A

SAT splitter, 3-way



## DM 14 A

SAT splitter, 4-way



## DM 16 B

SAT splitter, 6-way



### characteristics

- Frequency range from 5....2400 MHz
- Parallel distribution of satellite, cable and terrestrial signals possible
- Screening factor according to Class A
- DC bypass

### Technical Data

Frequency range	5...2400 MHz	5...2400 MHz	5...2400 MHz	5...2400 MHz
Distribution loss	4...6 dB	7...10,5 dB	8...11,5 dB	11...17 dB
Isolation	>20 dB	>20 dB	>20 dB	>20 dB
Return loss	18 dB	18 dB	18 dB	18 dB

### Connectors

F-female	3 pcs. (1x input, 2x output)	4 pcs. (1x input, 3x output)	5 pcs. (1x input, 4x output)	7 pcs. (1x input, 6x output)
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### General data

Screening factor	>85 dB (class A)			
DC Bypass IN/OUT 1A/30V	Yes	Yes	Yes	Yes
Dimensions (width x height x depth)	55x55x28 mm	74x55x18 mm	74x55x18 mm	92x35x28 mm

# Splitter SAT RF

## DM 50

SAT splitter



## DM 90

SAT splitter



### characteristics

- 2-fold tap for multiswitch cascades
- Distribution of a satellite and terrestrial signals
- 13 dB junctionattenuation

### Technical Data

Frequency range	5...862/950...2400 MHz (TERR/SAT)	5...862/950...2400 MHz (TERR/SAT)
Through loss	1,0...1,8/1,1...2,7 dB (TERR/SAT)	1,5...3,0/2...3,5 dB (TERR/SAT)
TAP loss	13...13,5/12,2...13,7 dB (TERR/SAT)	13...14/14...12 dB (TERR/SAT)
Isolation	35/35 dB (trunk, TERR/SAT)	35/38 dB (trunk, TERR/SAT)
Return loss	10 dB (min., SAT)	10 dB (min., SAT)
Connectors		
F-female	20 pcs.	36 pcs.
General data		
Screening factor	Class A, EN 50083-2	Class A, EN 50083-2
DC Bypass IN/OUT 1A/30V	Yes	Yes

# Handover points

## XU 60 0500

handover box, KDG version



### characteristics

- Approved by Vodafone Kabel Deutschland
- Integrated measuring socket at the output
- Flexible device concept with pluggable modules

### Technical Data

Frequency range	5...862 MHz
Return loss	>18 dB (starting 47 MHz >18 dB -1,5 dB/oct. min. 14 dB)
Through loss	<1,5 dB
Test point	-2 dB
<b>General data</b>	
Screening factor	Class A, EN 50083-2
Dimensions (width x height x depth)	109x107,5x52 mm
Protection class	IP54

### Packaging Data

Sales unit	1 pcs. (PE-bag)
Dimensions (WxHxD) sales unit	400 x 125 x 130 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.3 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	0.65

# Grounding accessories

## NB 02 F

Equipotential bonding block, duplex



## NB 04 F

Equipotential bonding block, quadruple



### Technical Data

Material	nickel plated brass	nickel plated brass
Hole distance	74 mm	137 mm
Hole diameter	4 mm	4 mm
Dimensions (width x height x depth)	84x24,5x27 mm	148x25x27 mm

### Packaging Data

Sales unit	1 pcs.	1 pcs.
Dimensions (WxHxD) sales unit	35 x 25 x 23 mm	41 x 27 x 13 mm
Packaging volume sales unit	dm <sup>3</sup>	dm <sup>3</sup>
Gross weight sales unit	0.041 kg	0.082 kg
Shipping unit	100 pcs.	100 pcs.
Dimensions (WxHxD) shipping unit	mm	mm
Packaging volume shipping package	-	-

## NB 05

Grounding plate, 5-times



## NB 09

Grounding angle, 9-times



### Technical Data

Material	Steel	Steel
Hole distance	59.5 mm	125.9 mm
Hole diameter	6 mm	6 mm
Dimensions (width x height x depth)	79,50x60x53 mm	150,3x60x53 mm

### Packaging Data

Sales unit	1 pcs.	1 pcs.
Dimensions (WxHxD) sales unit	190 x 128 x 100 mm	260 x 170 x 110 mm
Packaging volume sales unit	dm <sup>3</sup>	dm <sup>3</sup>
Gross weight sales unit	0.137 kg	0.257 kg
Shipping unit	120 pcs.	120 pcs.
Dimensions (WxHxD) shipping unit	mm	mm
Packaging volume shipping package	2.43	2.5

# Tools

## DZ 01

Tightening aid



### Technical Data

Material	Aluminium, plastic
----------	--------------------

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	80 x 25 x 25 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.1 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

### characteristics

- For all F connectors with 11 mm (hexagonal)
- Twisting aid for simplified coaxial cable installation
- Ideal for confined spaces

## DZ 14

Compression tool for F-connector



### Technical Data

Type of mounting	compress
------------------	----------

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	300 x 200 x 80 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.5 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume ship- ping package	0.9

### characteristics

- For DV 14 or 10 mm coaxial cable
- Compression pliers for mounting compression plugs
- stable design

## DZ 15 2130

Compression tool for F-connector



### Technical Data

Type of mounting	compress
------------------	----------

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	300 x 150 x 150 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.445 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume ship- ping package	0.9

### characteristics

- For DV 10,10 N, 15 and 15 N or 5 / 7 mm coaxial cable
- Compression pliers for mounting compression plugs
- stable design

# Tools

## DZ 85

Crimping tool



## MZ 01

COAX stripper



### Technical Data

Type of mounting	Crimp
Dimensions (width x height x depth)	70x122,5x23 mm

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	300 x 200 x 80 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.5 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	0.9

### Technical Data

suitable cable type	MK 91, 96, 86, 99 (adjustable for other cable sizes)
---------------------	--

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	400 x 330 x 180 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.061 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

DZ 85 is a tool for processing the crimp plugs DV 85, DV 95... The plug can be pressed with DZ 85 after the cable is set down and the plug is pushed onto the cable.

MZ 01 is a stripping tool for a fast, clean and standardised discontinuation of coaxial cables. The inner and outer conductors are cleared in one operation by 2 adjustable blades. Adaptable to different types of coaxial cables.

# F-termination resistor

DV 24

F-termination resistor

DV 25

F-terminating resistor with DC-separation



## Technical Data

Type	F-plug, load resistance 75 Ω	F-plug, load resistance 75 Ω
Type of mounting	Screwed	Screwed
construction style	straight	straight
Material	nickel plated brass	nickel plated brass
Dimensions (width x height x depth)	SW 11 x 17 mm	MK 91, MK96, MK99, MK86
DC seperation	No	SW 11 x 28 mm

# F-plug connector

DV 50

F-plug



DV 54

F-plug



DV 55

F-plug



## Technical Data

Type	F-plug	F-plug	F-plug
Type of mounting	Screwed	Screwed	Screwed
construction style	straight	straight	straight
Material	nickel plated brass	nickel plated brass	nickel plated brass
suitable cable type	MK 76	MK 15	MK 91, MK 96, MK 99, MK 86 B
Dimensions (width x height x depth)	SW 11 x 22 mm	SW 12 x 30 mm	SW 11 x 21 mm
DC seperation	No	No	No

# F-Crimp-plug

DV 85	DV 90	DV 95	DV 97
F-plug, crimpable	F-Quick-plug, crimpable	F-Quick-plug, crimpable	F-Quick-ellbow connector, crimp
			

## Technical Data

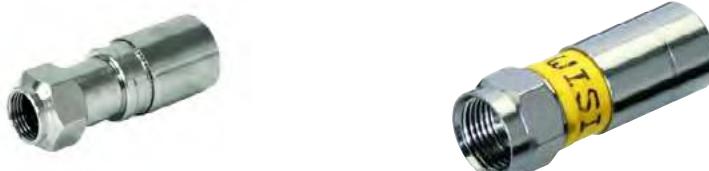
Type	F-plug	F-plug	F-plug	F-plug
Type of mounting	Crimp	Crimp	Crimp	Crimp
construction style	straight	straight	straight	angled
Material	nickel plated brass	nickel plated brass	nickel plated brass	nickel plated brass
suitable cable type	MK 91, MK 96, MK 99, MK 86 B	MK 76	MK 91, MK 96, MK 99, MK 86 B	MK 91, MK 96, MK 99, MK 86 B
Dimensions (width x height x depth)	SW 11 x 20 mm	Ø 11,80 x 25 mm	Ø 11,80 x 25 mm	34,5 x 12 x 22,9 mm
DC separation	No	No	No	No

# F-Compression-plug

DV 14 N	DV 15 N
F-Compression-plug with NiTin-coating	F-Compression-plug with NiTin-coating

## characteristics

- NiTin-coating



## Technical Data

Type	F-plug	F-plug
Type of mounting	compress	compress
construction style	straight	straight
Material	brass with NiTin-coating	brass with NiTin-coating
suitable cable type	MK 15	MK 91, MK 96, MK 99, MK 86 B
Dimensions (width x height x depth)	- mm	SW 11 x 21,30 mm
DC separation	No	No

# F-Compression-plug

## DV 10 N

F-Compression-plug with NiTin-coating

## DV 15

F-Compress-plug

### characteristics

- NiTin-coating



### Technical Data

Type	F-plug	F-plug
Type of mounting	compress	compress
construction style	straight	straight
Material	brass with NiTin-coating	nickel plated brass
suitable cable type	MK 76	MK 91, MK 96, MK 99, MK 86 B
Dimensions (width x height x depth)	SW 11 x 21,30 mm	SW 11 x 21,30 mm
DC seperation	No	No

# IEC-plug / terminating resistor

## DV 07 0397

Coaxial socket



## DV 75

Terminating resistor  $75 \Omega$



### Technical Data

Type	IEC socket
Type of mounting	Plugged
construction style	straight
Material	nickel plated brass
suitable cable type	MK 76, MK 91, MK 96
Dimensions (width x height x depth)	$\varnothing 14 \times 38 \text{ mm}$
DC seperation	No

### Technical Data

Type	IEC-plug, terminating resistor $75 \Omega$
Type of mounting	Plugged
construction style	straight
Material	nickel plated brass
Dimensions (width x height x depth)	$\varnothing 11 \times 25 \text{ mm}$
DC seperation	No

### characteristics

- IEC coaxial socket straight
- Simple installation due to solderless terminal connection
- For coaxial cables with 1. 2. . . 4. 8 mm dielectric diameter

### characteristics

- 75 Ohm Terminating resistor
- IEC-plug
- Ideal termination of coaxial systems

# Adapter

## DV 49 A

Adapter plug



## DV 52

F-adapter



## DV 53

F-ellbow adapter



### Technical Data

Type	F-adapter, F-Fix on F-Quick	Transition connector IEC Male to F socket	F-angular adapter F-plug on F-connector
Type of mounting	Screwed/plugged	Screwed/plugged	Screwed
construction style	straight	straight	angled
Material	nickel plated brass	nickel plated brass	nickel plated brass
Dimensions (width x height x depth)	SW11x22,30 mm	11x25 mm	23,8x11x19,2 mm
DC separation	No	No	No

# Connector

## DV 45

F-splice



## DV 46 HQ

High quality plug adapter



### characteristics

- 2x F-socket
- Simple and secure connection of 2 coaxial cables
- 180° angled version

### Technical Data

Type	F-splice	F-splice
Type of mounting	Screwed	Screwed
construction style	angled 180°	straight
Material	nickel plated brass	nickel plated brass
Dimensions (width x height x depth)	24,5x21x9,6 mm	11x26 mm
DC separation	No	No

# Cable end plug

## ZE 10 1200

Cable end plug KES for iKx, 1,2 GHz



## ZE 11 1200

Cable end plug KES for nKx, 1,2 GHz



## ZE 12 1200

Cable end plug KES for qKx, 1,2 GHz



## ZE 13 1200

Cable end plug KES for sKx, 1,2 GHz



### characteristics

- Impedance 75 Ohm
- Frequency range up to 1,2 GHz
- High-quality materials for ideal electrical properties and a long service life
- Approved by Vodafone Kabel Deutschland
- Approved by Unitymedia

### Technical Data

Type	Cable end plug KES			
Impedance	75 Ω	75 Ω	75 Ω	75 Ω
Through loss	≤0,1 dB	≤ 0,1 dB	≤ 0,1 dB	≤ 0,1 dB
Insertion resistance	≤ 2,0 mΩ	≤ 2,0 mΩ	≤ 2,0	≤ 2,0 mΩ
Isolation resistance (Inner conductor <-> Outer conductor)	≥ 50 GΩ (1 minute @ 500 V)	≥ 50 GΩ (1 minute @ 500 V)	≥ 50 GΩ (1 minute @ 500 V)	≥ 50 GΩ (1 minute @ 500 V)
Dielectric strength (Inner conductor <-> Outer conductor)	≥ 2 kV (1 minute)			
Return loss	≥ 30 dB (5...1218 MHz)	≥ 30 dB (5...1218 MHz)	≥ 30 dB (5...1218 MHz)	≥ 30 dB (5...606 MHz), ≥28 dB(606...1218 MHz)
Screening factor	≥ 85 dB (30...300 MHz) / ≥ 80 dB (300...470 MHz) / ≥ 75 dB (470...1218 MHz)	≥ 85 dB (30...300 MHz) / ≥ 80 dB (300...470 MHz) / ≥ 75 dB (470...1218 MHz)	≥ 85 dB (30...300 MHz) / ≥ 80 dB (300...470 MHz) / ≥ 75 dB (470...1218 MHz)	≥ 85 dB (30...300 MHz) / ≥ 80 dB (300...470 MHz) / ≥ 75 dB (470...1218 MHz)
Transfer impedance	≤ 5,0 mΩ	≤ 5,0 mΩ	≤ 5,0 mΩ	≤ 5,0 mΩ
Rated current	8 A (11 A ≥ 2 h)			

### General data

Material	Contact surface white bronze plated (CuSnZn)	Contact surface white bronze plated (CuSnZn)	Contact surface white bronze plated (CuSnZn)	Contact surface white bronze plated (CuSnZn)
Type of mounting	Plugged	Plugged	Plugged	Plugged
construction style	straight	straight	straight	straight
suitable cable type	Ø 1,1 mm/Ø 7,8 mm (Inner conductor/Outer conductor) iKx	Ø 2,2 mm/Ø 9,3 mm (Inner conductor/Outer conductor) nKx	Ø 3,3 mm/Ø 14,0 mm (Inner conductor/Outer conductor) qKx	Ø 4,9 mm/Ø 20,0 mm (Inner conductor/Outer conductor) sKx
Dimensions	22 x 22 x 56 mm	22 x 22 x 56 mm	22 x 22 x 56 mm	22 x 22 x 90 mm
DC separation	No	No	No	No

# Cable end plug

## ZE 15 1200

Cable end plug KES for hKx, 1,2 GHz

## ZE 16 1200

Cable end plug KES for kKx, 1,2 GHz

### characteristics

- Impedance 75 Ohm
- Frequency range up to 1,2 GHz
- High-quality materials for ideal electrical properties and a long service life
- Approved by Vodafone Kabel Deutschland
- Approved by Unitymedia



### Technical Data

Type	Cable end plug KES	Cable end plug KES
Impedance	75 Ω	75 Ω
Through loss	≤ 0,1 dB	≤ 0,1 dB
Insertion resistance	≤ 2,0 mΩ	≤ 2,0 mΩ
Isolation resistance (Inner conductor <-> Outer conductor)	≥ 50 GΩ (1 minute @ 500 V)	≥ 50 GΩ (1 minute @ 500 V)
Dielectric strength (Inner conductor <-> Outer conductor)	≥ 2 kV (1 minute)	≥ 2 kV (1 minute)
Return loss	≥ 30 dB (5...606 MHz), ≥28 dB(606...1218 MHz)	≥ 30 dB (5...606 MHz), ≥28 dB(606...1218 MHz)
Screening factor	≥ 85 dB (30...300 MHz) / ≥ 80 dB (300...470 MHz) / ≥ 75 dB (470...1218 MHz)	≥ 85 dB (30...300 MHz) / ≥ 80 dB (300...470 MHz) / ≥ 75 dB (470...1218 MHz)
Transfer impedance	≤ 5,0 mΩ	≤ 5,0 mΩ
Rated current	8 A (11 A ≥ 2 h)	8 A (11 A ≥ 2 h)

### General data

Material	Contact surface white bronze plated (CuSnZn)	Contact surface white bronze plated (CuSnZn)
Type of mounting	Plugged	Plugged
construction style	straight	straight
suitable cable type	Ø 1,8 mm/Ø 12 mm (Inner conductor/Outer conductor) hKx	Ø 2,9 mm/Ø 20,0 mm (Inner conductor/Outer conductor) kKx
Dimensions	22 x 22 x 56 mm	22 x 22 x 90 mm
DC separation	No	No

# Cable end plug

## ZG 22

Housing connection IEC to cable end plug, 1,2 GHz



### Technical Data

Type	Adapter KES on IEC-coupling
Type of mounting	Plugged
construction style	Straight/screwed
suitable cable type	
DC separation	No
Transfer impedance	$\leq 5,0 \text{ m}\Omega$
Rated current	8 A (11 A $\geq 2 \text{ h}$ )
Screening factor	$\geq 85 \text{ dB}$ (30...300 MHz) / $\geq 80 \text{ dB}$ (300...470 MHz) / $\geq 75 \text{ dB}$ (470...1218 MHz)
Return loss	$\geq 30 \text{ dB}$ (5...1218 MHz)
Through loss	$\leq 0,1 \text{ dB}$
Isolation resistance (Inner conductor <-> Outer conductor)	$\geq 50 \text{ G}\Omega$ (1 minute @ 500 V)
Material	White bronze (Cu-SnZn) plated
Dimensions	26,5 x 26,5 x 70 mm

### characteristics

- Impedance 75 Ohm
- Frequency range up to 1,2 GHz
- Suitable for WISI KES ZExx 1200
- High-quality materials for ideal electrical properties and a long service life
- Approved by Vodafone Kabel Deutschland
- Approved by Unitymedia

## ZK 10 1200

Contact sleeve for cable end plug, 1,2 GHz



### Technical Data

Type	Contact sleeve KES on KES
Type of mounting	Plugged
construction style	straight
Material	brass
suitable cable type	Cable with coax hardline connector KES
Dimensions	22 x 22 x 105 mm
DC separation	No
Transfer impedance	$\leq 5,0 \text{ m}\Omega$
Rated current	8 A (11 A $\geq 2 \text{ h}$ )
Screening factor	$\geq 85 \text{ dB}$ (30...300 MHz) / $\geq 80 \text{ dB}$ (300...470 MHz) / $\geq 75 \text{ dB}$ (470...1218 MHz)
Return loss	$\geq 38 \text{ dB}$ (5...1218 MHz)
Through loss	$\leq 0,1 \text{ dB}$

### characteristics

- Impedance 75 Ohm
- Frequency range up to 1,2 GHz
- Suitable for WISI KES ZExx 1200
- Approved by Vodafone Kabel Deutschland
- Approved by Unitymedia

## ZR 10 1200

Cable end plug terminating resistor, 1,2 GHz



### Technical Data

Type	Terminating resistor 75 $\Omega$ , KES
Impedance	75 $\Omega$
Isolation resistance (Inner conductor <-> Outer conductor)	75 $\Omega$
Return loss	$\geq 26 \text{ dB}$ (5...1218 MHz)
<b>General data</b>	
Material	Contact surface white bronze plated (CuSnZn)
Type of mounting	Plugged
construction style	straight
Dimensions	22 x 22 x 91 mm
DC separation	No

### characteristics

- Impedance 75 Ohm
- Frequency range up to 1,2 GHz
- Suitable for WISI ZK10 1200
- High-quality materials for ideal electrical properties and a long service life
- Approved by Vodafone Kabel Deutschland
- Approved by Unitymedia

# Universal Antenna Sockets

## DB 07

Universal antenna sockets,  
2-hole loop-through sockets 14 dB



**KLASSE**  
**A**  
CLASS

## DB 05

Universal antenna sockets, 2-hole loop-through sockets 10 dB



**KLASSE**  
**A**  
CLASS

## DB 03 A

Universal antenna sockets, 2-hole stub sockets 4 dB



**KLASSE**  
**A**  
CLASS

### Technical Data

Inputs	
Frequency range	5...2400 MHz
Outputs	
Frequency range TV	5...862 MHz
Frequency range FM	87,5...108 MHz
Frequency range-SAT	950...2150 MHz
Insertion loss TV	14 dB
Insertion loss FM	14 dB
Insertion loss SAT	15 dB
Through loss	1 dB
Decoupling 5...40 MHz	≥40 dB (between 2 sockets / ab 10 MHz)
Decoupling 40...862 MHz	≥40 dB (between 2 boxes)
Decoupling 862...2400 MHz	≥40 dB (between 2 boxes)
Return loss TV	Cat C
Return loss Input	Cat B
Connectors	
Outer conductor clamp	7.5 mm
Inner conductor clamp	0,8...1,3 mm
IEC socket	1 pcs.
IEC-plug	1 pcs.
General data	
Screening factor	>85 dB (class A)
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm

### characteristics

- Broadband frequency range 5...2400 MHz
- High decoupling of the subscriber outputs
- High class A shielding dimension, according to EN 50083-2

### Technical Data

Inputs	
Frequency range	5...2400 MHz
Outputs	
Frequency range IEC female	5...2400 MHz
Frequency range IEC male	5...2400 MHz
Insertion loss IEC female	10 dB ( $\pm 1$ dB)
Insertion loss IEC male	10 dB ( $\pm 1$ dB)
Through loss	2,5...3,5 dB
Decoupling OUT 1 - OUT 2	≥ 30 dB (5...2400 MHz)
Return loss subscriber	≥ 14 dB
Return loss Input	≥ 14 dB
Return loss output	≥ 14 dB
Connectors	
Outer conductor clamp	2,3...5,4 mm
Inner conductor clamp	0,4...1,15 mm
IEC socket	1 pcs.
IEC-plug	1 pcs.
General data	
Screening factor	Class A, by EN 50083-2 ( $\geq 85$ dB)
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm
Impedance	75 Ω

### characteristics

- Broadband frequency range 5...2400 MHz
- High decoupling of the subscriber outputs
- High class A shielding dimension, according to EN 50083-2

### Technical Data

Inputs	
Frequency range	5...2400 MHz
Outputs	
Frequency range TV	5...862 MHz
Frequency range FM	87,5...108 MHz
Frequency range-SAT	950...2150 MHz
Insertion loss TV	4,5 dB
Insertion loss FM	4,5 dB
Insertion loss SAT	5 dB
Decoupling 5...40 MHz	>20 dB (from 15 MHz)
Decoupling 40...862 MHz	>20 dB
Decoupling 862...2400 MHz	>20 dB
Return loss TV	Cat C
Return loss Input	Cat B
Power passing	24 V DC (remote power 400 mA)
Connectors	
Outer conductor clamp	7.5 mm
Inner conductor clamp	0,8...1,3 mm
IEC socket	1 pcs.
IEC-plug	1 pcs.
General data	
Screening factor	>85 dB (class A)
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm

### characteristics

- Broadband frequency range 5...2400 MHz
- For bidirectional BK systems or SAT distribution systems
- High decoupling of the subscriber outputs
- High class A shielding dimension, according to EN 50083-2
- DC bypass for multiswitch systems

# Wall outlet sockets TERR/CATV

## DB 10 1006

TERR/BK antenna socket, 2-hole stub socket 5...1006 MHz



KLASSE  
■ CLASS  
**A**

Technical Data	
<b>Inputs</b>	
Frequency range	5...1006 MHz
<b>Outputs</b>	
Frequency range TV	5...68/132...1006 MHz
Frequency range FM	87,5...108 MHz
Insertion loss TV	0.5 dB
Insertion loss FM	1.5 dB
Decoupling TV-FM	≥20 dB
Return loss TV	Cat C
Return loss Input	Cat B
Return loss FM	Cat C
<b>Connectors</b>	
Outer conductor clamp	7,5 mm
Inner conductor clamp	0,8...1,3 mm
IEC socket	1 pcs.
IEC-plug	1 pcs.
<b>General data</b>	
Screening factor	>85 dB (class A)
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm

The DB 10 1006 is a TER terminating outlet with filter. It has a small connection loss at TV as FM 0.5 / 1.5 dB. The housing has a very high stability and ensures high shielding (class A). Thanks to a flat design its space-saving architecture and IEC socket / plug, a secure connection is ensured.

### characteristics

- High class A shielding dimension, according to EN 50083-2
- Space-saving thanks to flat design
- 1x IEC-male, 1x IEC-female



# Multimedia wall outlet sockets, individual

## DD 04 M 0650

Broadband modem sockets, stub sockets, F



### characteristics

- Approved by Vodafone Kabel Deutschland
- Very high decoupling of DATA/TV/Radio connections
- Screwable inner conductor clamp for secure and durable connection



Technical Data	
<b>Inputs</b>	
Frequency range	5...1006 MHz
<b>Outputs</b>	
Frequency range TV	85...1006 MHz
Frequency range FM	87...1006 MHz
Frequency range DATA	5...1006 MHz
Rejection loss TV	≥40 dB (5...65 MHz)
Rejection loss FM	≥40 dB (5...65 MHz)
Insertion loss TV	4 dB
Insertion loss FM	8 dB
Insertion loss DATA	8 dB
Isolation DATA - TV	≥70 dB (5...65 MHz)
Isolation DATA - TV	≥35 dB (85...1006 MHz)
Isolation DATA - FM	≥70 dB (5...65 MHz)
Isolation DATA - FM	≥40 dB (85...1006 MHz)
Return loss IN, OUT	≥18 dB (-1.5 dB/oct.)
Return loss TV	≥14 dB (-1.5 dB/oct.)
Return loss FM	≥14 dB (-1.5 dB/oct.)
Return loss DATA	≥18 dB (-1.5 dB/oct.)
Intermodulation ratio	> 120 dBµV (EN60728-4)
<b>Connectors</b>	
Outer conductor clamp	7,5 mm
Inner conductor clamp	0,6...1,3 mm
F-female	1 pcs. EN60169-24
IEC socket	1 pcs. EN60169-2
IEC-plug	1 pcs. EN60169-2
<b>General data</b>	
Screening factor	>85 dB Class A, EN 50083-2
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm

TV connection with IEC technology. Multimedia with F-connector or WICLIC for cable modem. HF output high-pass filtered. Cover plate and connector cable see accessories

# Multimedia wall outlet sockets, loop-through

**DD 11 M 0650**

Broadband modem  
sockets, loop-through  
sockets



**KLASSE**  
**A**  
■ CLASS

**DD 15 M 0650**

Broadband modem  
sockets, loop-through  
sockets



**KLASSE**  
**A**  
■ CLASS

**DD 19 M 0650**

Broadband modem  
sockets, loop-through  
sockets



**KLASSE**  
**A**  
■ CLASS

**DD 23 M 0650**

Broadband modem  
sockets, loop-through  
sockets



**KLASSE**  
**A**  
■ CLASS

## characteristics

- Approved by Vodafone Kabel Deutschland
- Very high decoupling of DATA/TV/Radio connections
- Screwable inner conductor clamp for secure and durable connection

## Technical Data

### Inputs

Frequency range	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz
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### Outputs

Frequency range TV	85...1006 MHz	85...1006 MHz	85...1006 MHz	85...1006 MHz
Frequency range FM	87...1006 MHz	87...1006 MHz	87...1006 MHz	87...1006 MHz
Frequency range DATA	5...1006 MHz	5...1006 MHz	5...1006 MHz	5...1006 MHz
Through loss	3...4 dB	1,2...1,75 dB	1,2...1,4 dB	1,2...1,4 dB
Rejection loss TV	≥40 dB (5...65 MHz)	≥40 dB 5...65 MHz	≥40 dB 5...65 MHz	≥40 dB 5...65 MHz
Rejection loss FM	≥40 dB (5...65 MHz)	≥40 dB 5...65 MHz	≥40 dB 5...65 MHz	≥40 dB 5...65 MHz
Insertion loss TV	10 dB	14 dB	19 dB	23 dB
Insertion loss FM	11 dB	15 dB	19 dB	24 dB
Insertion loss DATA	10 dB	14 dB	19 dB	23 dB
Isolation DATA - TV	≥70 dB (5...65 MHz)			
Isolation DATA - TV	≥45 dB (85...1006 MHz)	≥50 dB (85...1006 MHz)	≥50 dB (85...1006 MHz)	≥50 dB (85...1006 MHz)
Isolation DATA - FM	≥70 dB (5...65 MHz)			
Isolation DATA - FM	≥45 dB (85...1006 MHz)	≥50 dB (85...1006 MHz)	≥50 dB (85...1006 MHz)	≥50 dB (85...1006 MHz)
Isolation DATA - OUT	≥30 dB (5...1006 MHz)	≥30 dB (5...65 MHz)	≥30 dB (5...65 MHz)	≥30 dB (5...65 MHz)
Isolation FM, TV - OUT	≥30 dB (5...1006 MHz)	≥30 dB (5...65 MHz)	≥30 dB (5...65 MHz)	≥30 dB (5...65 MHz)
Return loss IN, OUT	≥18 dB (-1.5 dB/oct.)			
Return loss TV	≥14 dB (-1.5 dB/oct.)			
Return loss FM	≥14 dB (-1.5 dB/oct.)			
Return loss DATA	≥18 dB (-1.5 dB/oct.)			
Intermodulation ratio	> 120 dB $\mu$ V (EN60728-4)			

### Connectors

Outer conductor clamp	7,5 mm	7,5 mm	7,5 mm	7,5 mm
Inner conductor clamp	0,6...1,3 mm	0,6...1,3 mm	0,6...1,3 mm	0,6...1,3 mm
F-female	1pcs.EN60169-24	1pcs.EN60169-24	1pcs.EN60169-24	1pcs.EN60169-24
IEC socket	1pcs.EN60169-2	1pcs.EN60169-2	1pcs.EN60169-2	1pcs.EN60169-2
IEC-plug	1pcs.EN60169-2	1pcs.EN60169-2	1pcs.EN60169-2	1pcs.EN60169-2

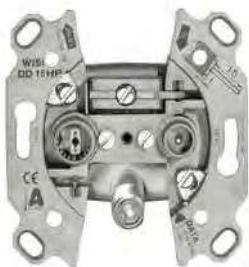
### General data

Screening factor	>85dB Class A, EN 50083-2	>85dB(class A)	>85dB(class A)	>85dB(class A)
Dimensions (width x height x depth)	mm	mm	mm	mm
Installation depth	35mm	35mm	35mm	35mm

# Multimedia wall outlet sockets, loop-through

## DD 15 HP

Broadband modem sockets, Data loop through socket with highpass filter



### characteristics

- Approved by Vodafone Kabel Deutschland
- Very high decoupling of DATA/TV/Radio connections
- Screwable inner conductor clamp for secure and durable connection

KLASSE  
■ CLASS A

Technical Data	
<b>Inputs</b>	
Frequency range	5...862 MHz
<b>Outputs</b>	
Frequency range TV	85...862 MHz
Frequency range FM	87...862 MHz
Frequency range DATA	5...862 MHz
Frequency range loop through	85...862 MHz
Insertion loss TV	14 dB
Insertion loss FM	14 dB
Insertion loss DATA	14 dB
Through loss	1,5...2,5 dB
Isolation DATA - TV	≥40 dB
Isolation DATA - FM	≥40 dB
Isolation DATA-DATA	74 dB (typ.)
Decoupling TV-FM	≥22 dB
Return loss IN	Cat B
Return loss OUT	Cat B
Return loss ALL	Cat C
<b>Connectors</b>	
Outer conductor clamp	7,5 mm
Inner conductor clamp	0,8...1,3 mm
F-female	1 pcs.
IEC socket	1 pcs.
IEC-plug	1 pcs.
<b>General data</b>	
Screening factor	>85 dB (class A)
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm

TV connection with IEC technology. Multimedia with F-connector for cable modem. HF output high-pass filtered. Cover plate and connector cable see accessories

# Multimedia wall outlet sockets, terminal socket

## DD 09 M 0650

Multimedia wall outlet sockets, terminal socket



### characteristics

- Approved by Vodafone Kabel Deutschland
- Very high decoupling of DATA/TV/Radio connections
- Screwable inner conductor clamp for secure and durable connection

KLASSE  
■ CLASS  
**A**

Technical Data	
<b>Inputs</b>	
Frequency range	5...1006 MHz
<b>Outputs</b>	
Frequency range TV	85...1006 MHz
Frequency range FM	87...1006 MHz
Frequency range DATA	5...1006 MHz
Rejection loss TV	≥40 dB 5...65 MHz
Rejection loss FM	≥40 dB 5...65 MHz
Insertion loss TV	9 dB
Insertion loss FM	10 dB
Insertion loss DATA	9 dB
Isolation DATA - TV	≥60 dB (5...65 MHz)
Isolation DATA - TV	≥35 dB (85...1006 MHz)
Isolation DATA - FM	≥70 dB (5...65 MHz)
Isolation DATA - FM	≥45 dB (85...1006 MHz)
Return loss IN, OUT	≥18 dB (-1.5 dB/oct.)
Return loss TV	≥14 dB (-1.5 dB/oct.)
Return loss FM	≥14 dB (-1.5 dB/oct.)
Return loss DATA	≥18 dB (-1.5 dB/oct.)
Intermodulation ratio	> 120 dB $\mu$ V (EN60728-4)
<b>Connectors</b>	
Outer conductor clamp	7,5 mm
Inner conductor clamp	0,6...1,3 mm
F-female	1 pcs. EN60169-24
IEC socket	1 pcs. EN60169-2
IEC-plug	1 pcs. EN60169-2
<b>General data</b>	
Screening factor	>85 dB (class A)
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm

TV connection with IEC technology. Multimedia with F-connector or WICLIC for cable modem. HF output high-pass filtered. Cover plate and connector cable see accessories

# Wall-outlet sockets SAT

## DB 53

SAT antenna sockets, 3-hole stub sockets



Technical Data	
<b>Inputs</b>	
Frequency range	47...2150 MHz
<b>Outputs</b>	
Frequency range TV	47...68/174...862 MHz
Frequency range FM	87,5...108 MHz
Frequency range-SAT	950...2150 MHz
Insertion loss TV	<2 dB
Insertion loss FM	1,5 dB
Insertion loss SAT	<2 dB
Decoupling TV-SAT	≥15 dB (typ. 25 dB)
Return loss TV	≥14 dB (≤ -1,5 dB per octave starting 40 MHz, ≥10 dB)
Return loss Input	≥4 dB
Return loss FM	≥10 dB
Return loss SAT	≥10 dB
Power passing	24 V DC (remote power 500 mA)
<b>Connectors</b>	
Outer conductor clamp	7,5 mm
Inner conductor clamp	0,8...1,3 mm
F-female	1 pcs.
IEC socket	1 pcs.
IEC-plug	1 pcs.
<b>General data</b>	
Screening factor	>85 dB (class A)
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm

### characteristics

- 3-hole stub sockets
- Space-saving thanks to flat design
- High screening efficiency according to Class A

The DB 53 is a 3 hole trick box for separate connections for radio, TV receivers, and additional SAT receivers. At the SAT connection, a DC bypass is integrated, which allows for the transmission of all needed switching voltage. The housing offers high stability and ensures high shielding properties (class A). Thanks to the flat design it is space-saving, and with the IEC-socket/plug, F-socket, a safe connection is guaranteed.

# Wall-outlet sockets SAT

## DB 54

SAT antenna socket, twin SAT 4-hole terminal socket



**A**  
■ CLASS

Technical Data	
<b>Inputs</b>	
Frequency range	5...2400 MHz
<b>Outputs</b>	
Frequency range TV	5...862 MHz
Frequency range FM	87,5...108 MHz
Frequency range SAT 1	950...2400 MHz
Frequency range SAT 2	5...2400 MHz
Insertion loss TV	4,5 dB ( $\pm 1$ )
Insertion loss FM	5,5 dB ( $\pm 1$ )
Insertion loss SAT 1	3...4 dB
Insertion loss SAT 2	1...2 dB
Decoupling TV-FM	$\geq 50/\geq 20/\geq 40$ dB (5...65 MHz/87,5...108 MHz/150...862 MHz)
Decoupling SAT 1 - TV	$\geq 50/\geq 30/\geq 20$ dB (5...65 MHz/80...862 MHz/950...2400 MHz)
Decoupling SAT 1 - FM	$\geq 50/\geq 40/\geq 30$ dB (5...65 MHz/85...2150 MHz/2150...2400 MHz)
Decoupling SAT 1 - SAT 2	$\geq 30/\geq 25$ dB (5...2150 MHz/2150...2400 MHz)
Return loss TV	$\geq 14$ dB ( $\leq -1,5$ dB per octave starting 40 MHz, $\geq 10$ dB)
Return loss Input	$\geq 4$ dB ( $\leq -1,5$ dB per octave starting 40 MHz, $\geq 10$ dB)
Return loss FM	$\geq 10$ dB
Return loss SAT	$\geq 10$ dB
Return loss SAT 2	$\geq 14$ dB ( $\leq -1,5$ dB per octave, starting 40 MHz, $\geq 10$ dB)
Power passing	24 V DC (remote power 800 mA)
<b>Connectors</b>	
Outer conductor clamp	7,5 mm
Inner conductor clamp	0,8...1,3 mm
F-female	2 pcs.
IEC socket	1 pcs.

### characteristics

- 2 SAT outputs for optimal signal feed of a twin receiver
- SAT output 2, also suitable for CATV
- High decoupling via directional coupler
- DC-bypass via both SAT outputs

### Technical Data

IEC-plug	1 pcs.
<b>General data</b>	
Screening factor	85 dB (class A, EN 50083-2)
Dimensions (width x height x depth)	70 x 70 x 22 mm

The DB 54 is a special 4 hole trick box for TWIN receivers, which enables 2 lines to operate independently. The SAT 2 input is suitable for CATV as well. In both SAT connections, a DC bypass is integrated to enable the transmission of the required switching voltage. The housing offers high stability and ensures high shielding properties (class A). Thanks to the flat design it is space-saving, and with the IEC-socket/plug, 2x F-socket, a safe connection is guaranteed.

# Wall-outlet sockets SAT

## DB 64

3-hole Unicable antenna sockets



### characteristics

- Special socket for Unicable solutions
- High decoupling via directional coupler
- DC bypass on F-connector and the trunk



Technical Data	
<b>Inputs</b>	
Frequency range	47...2150 MHz
<b>Outputs</b>	
Frequency range TV	47...68/120 ...862 MHz
Frequency range FM	87...108 MHz
Frequency range-SAT	950...2150 MHz
Insertion loss TV	12 dB
Insertion loss FM	12 dB
Insertion loss SAT	12,5 dB
Through loss	1...2 dB
Stopband attenuation	≥40 dB
Decoupling SAT-TV	≥18 dB (typ. 30 dB)
Decoupling SAT-FM	≥40 dB
Subscriber isolation VHF-UHF	≥42 dB
Subscriber decoupling SAT	≥32 dB
Return loss TV	Cat D
Return loss Input	Cat B
Return loss FM	Cat D
Return loss SAT	Cat D
Power passing	24 V DC
<b>Connectors</b>	
Outer conductor clamp	7,5 mm
Inner conductor clamp	0,8...1,3 mm
F-female	1 pcs.
IEC socket	1 pcs.
IEC-plug	1 pcs.
<b>General data</b>	
Screening factor	85 dB (class A, EN 50083-2)
Dimensions (width x height x depth)	70 x 70 x 22 mm
Installation depth	35 mm

The DB 64 is a 3-hole Unicable loop-through sockets for satellite receiving equipment to separately connect radio, TV receivers and additional SAT receivers. Inside the SAT connection a DC bypass is integrated which allows the passage of the required switching voltages. The housing has a very high stability despite a very flat construction. By F and IEC sockets and IEC connector, a faster and more reliable connection is ensured. If the DB 64 used as

# Accessories Wall-outlet sockets

## DV 27

Terminating resistor 75 Ω, with DC-separation



## DV 23

Terminating resistor 75 Ω



### Technical Data

Type	75 Ω termination for loop sockets
Type of mounting	clamped
construction style	straight
Material	nickel plated brass
Dimensions (width x height x depth)	Ø 5 x 22 mm
DC separation	Yes

### Technical Data

Type	75 Ω termination for loop sockets
Type of mounting	clamped
construction style	straight
Material	nickel plated brass
Dimensions (width x height x depth)	Ø 5 x 21 mm
DC separation	No

### characteristics

- For DB 64 or UNICABLE systems
- 75 Ohm Terminating resistor with DC block
- For mounting in through antenna sockets

### characteristics

- Terminalable 75 Ohm terminating resistor
- For mounting in through antenna sockets
- Without DC-Block

## DW 44

Central cover plate, 2-hole, 85 x 85 mm



## DW 42

Central cover plate, 2-hole, 75 x 75 mm



## DW 45 T

Central cover plate, 4-hole, 75 x 75 mm



### Technical Data

General data	
Quantity of holes	2 pcs.
Dimensions (width x height x depth)	85 x 85 mm

### Technical Data

General data	
Quantity of holes	2 pcs.
Dimensions (width x height x depth)	75 x 75 mm

### Technical Data

General data	
Quantity of holes	4 pcs.
Dimensions (width x height x depth)	75 x 75 mm

### characteristics

- Cover plate for 2-hole antenna sockets
- Colour: Pure white
- Incl. installation screw

### characteristics

- Cover plate for 2-hole antenna sockets
- Colour: Pure white
- Incl. installation screw

### characteristics

- Cover plate for 4-hole antenna sockets
- Colour: Pure white
- Incl. installation screw

# Accessories Wall-outlet sockets

## DW 45

Central cover plate, 3-hole, 75 x 75 mm



## DW 49 M

Central cover plate, 3-hole, 85 x 85 mm



## DW 49 T

Central cover plate, 4-hole, 85 x 85 mm



### Technical Data

#### General data

Quantity of holes 3 pcs.

Dimensions (width x height x depth) 75 x 75 mm

### Technical Data

#### General data

Quantity of holes 3 pcs.

Dimensions (width x height x depth) 85 x 85 mm

### Technical Data

#### General data

Quantity of holes 4 pcs.

Dimensions (width x height x depth) 85 x 85 mm

#### characteristics

- Cover plate for 3-hole antenna sockets
- Colour: Pure white
- Incl. installation screw

#### characteristics

- Approved by Vodafone Kabel Deutschland
- Cover plate for 3-hole antenna sockets
- Incl. installation screw
- Colour: Pure white

#### characteristics

- Cover plate for 4-hole antenna sockets
- Colour: Pure white
- Incl. installation screw

## DD 99

Mounting frame



## DW 41

Blocking socket for multimedia boxes



### Technical Data

#### General data

Dimensions (width x height x depth) 75 x 75 x 35 mm

### Technical Data

#### General data

Quantity of holes 2 pcs.

#### characteristics

- Mounting frame for the exposed fitting of wall outlets
- Approved by Vodafone Kabel Deutschland
- Approved by Unitymedia

#### characteristics

- TV & Radio-Buchsensperre
- Can only be removed with special tools
- Suitable for all current multimedia cans

# DC blocker

## DL 05

DC blocker



KLASSE  
**A**  
CLASS

### Technical Data

Frequency range	4...2500 MHz
Through loss	<0,8 dB
<b>Connectors</b>	
F-female	2 pcs.
F-plug	0 pcs.
<b>General data</b>	
Test voltage	2120 V DC
Dimensions (width x height x depth)	SW11x33 mm

## DL 20 A

Galvanic separating element



### Technical Data

Frequency range	5...1000 MHz
Through loss	<0,5 dB
<b>Connectors</b>	
F-female	2 pcs.
<b>General data</b>	
Test voltage	2120 V DC
Dimensions (width x height x depth)	60 x 20 x 48 mm

## DL 70

LTE-Filter 5...694 MHz



KLASSE  
**A**  
CLASS

### Technical Data

Frequency range	5...694 MHz
Through loss	<1,5 dB
Rejection	
<b>Connectors</b>	
F-female	1 pcs.
F-plug	1 pcs.
<b>General data</b>	
Screening factor	Class A
Dimensions (width x height x depth)	12x12x50 mm

## DL 72

LTE-Filter 5...694 MHz, Outdoor



KLASSE  
**A**  
CLASS

### Technical Data

Frequency range	5...694 MHz
Through loss	<1,0 dB
Rejection	
<b>Connectors</b>	
F-female	2 pcs.
<b>General data</b>	
Screening factor	Class A
Dimensions (width x height x depth)	70x55x23 mm

# CATV-Patch cable

## BK 76 0035

Patch cable, 35 cm, 75 Ohm



## BK 76 0045

Patch cable, 45 cm, 75 Ohm



## BK 96 0030

Patch cable, 30 cm, 75 Ohm



### characteristics

- Exceeds Class A (EN 50117-2-4)
- Screening efficiency >110 dB
- RoHS compliant

### Technical Data

#### Connectors

F-plug	2 pcs. (straight, compress)	2 pcs. (straight, compress)	2 pcs. (straight, compress)
--------	-----------------------------	-----------------------------	-----------------------------

#### General data

Length	0.35 m	0.45 m	0.3 m
Outer jacket material	PVC (RoHS compliant)	PVC (RoHS compliant)	PVC (RoHS compliant)

# Connection cable

## DS 26 0301

DATA-connection cable,  
F-Quick + WICLIC-angle plug,  
3 m



### characteristics

- Approved by Vodafone Kabel Deutschland
- F-Quick straight to WICLIC right-angle plug
- 5 mm outside diameter for easy installation



## DS 26 0501

DATA-connection cable,  
F-Quick + WICLIC-angle plug,  
5 m



## DS 26 0901

DATA-connection cable,  
F-Quick + WICLIC-angle plug,  
9 m



### Technical Data

#### Mechanical Data

Length	3 m	5 m	9 m
Outer jacket material	PVC RoHS compliant white	PVC RoHS compliant white	PVC RoHS compliant white
Outer jacket diameter	Ø 5,0 mm	Ø 5,0 mm	Ø 5,0 mm

#### Cable construction

Inner conductor material	Cu-core	Cu-core	Cu-core
Inner conductor diameter	Ø 0,8 mm	Ø 0,8 mm	Ø 0,8 mm
Dielectric	Zell-PE, physics. foamed	Zell-PE, physics. foamed	Zell-PE, physics. foamed
Dielectricum diameter	Ø 3,55 mm	Ø 3,55 mm	Ø 3,55 mm
Outer conductor 1	AL/Pet bonded	AL/Pet bonded	AL/Pet bonded
Outer conductor 2	CuSn	CuSn	CuSn
F-quick-male outer conductor	nickel plated brass	nickel plated brass	nickel plated brass
F-quick-male inner conductor		Brass, (Plating gold)	Brass, (Plating gold)
Wiclic-Quick outer conductor	nickel plated brass	nickel plated brass	nickel plated brass

#### Wiclic-inner conductor

Electrical data			
Frequency range	5...1000 MHz	5...1000 MHz	5...1000 MHz
Through loss	<0,31 dB	<0,31 dB	<0,31 dB
Return loss	>29 ... >20 dB (5...1006 MHz)	>29 ... >20 dB (5...1006 MHz)	>29... >20 dB (5...1006 MHz)
Coupling resistance 5...30 MHz	<5 mΩ/m	5 mΩ/m	5 mΩ/m
Screen class 30 ... 1000 MHz	85 dB	85 dB	85 dB
Screening factor	Class A, according to EN 50083-2	Class A, according to EN 50083-2	Class A, according to EN 50083-2

# Connection cable

## DS 35 0035

DATA-connection cable F-Quick  
+ F-Quick, 0,35 m

## DS 35 0050

DATA-connection cable F-Quick  
+ F-Quick, 0,5 m

### characteristics

- 2x F-Quick straight
- Ideal patch cable with flexible outer sheath



### Technical Data

#### Mechanical Data

Length	0,35 m	0,5 m
Outer jacket material	PVC RoHS compliant white	PVC RoHS compliant white
Outer jacket diameter	Ø 5,0 mm	Ø 5,0 mm

#### Cable construction

Inner conductor material	Cu	Cu
Inner conductor diameter	Ø0,8 mm	Ø0,8 mm
Dielectric	Zell-PE, physics. foamed	Zell-PE, physics. foamed
Dielectricum diameter	Ø3,55 mm	Ø3,55 mm
Outer conductor 1	AL/Pet bonded	AL/Pet bonded
Outer conductor 2	CuSn	CuSn
Outer conductor 3	AL/Pet	AL/Pet
F-quick-male outer conductor	nickel plated brass	nickel plated brass
F-quick-male inner conductor		

#### Electrical data

Frequency range	5...1000 MHz	5...1000 MHz
Through loss	<1 dB	<1 dB
Return loss	<20 dB	<20 dB
Coupling resistance 5...30 MHz	5 mΩ/m	5 mΩ/m
Screen class 30 ... 1000 MHz	85 dB	85 dB
Screening factor	Class A, according to EN 50083-2	Class A, according to EN 50083-2

# Connection cable

## DS 37 U 0150

connecting cable IEC-female / IEC-male, 1,5 m



### characteristics

- Class A++ > 105 dB (30...1000 MHz)
- Frequency range 5...1800 MHz
- Pre-assembled with 1 IEC female and 1 IEC male
- Bending radius: 30 mm
- Tensile strength > 130 N
- Unitymedia certified



## DS 37 U 0300

connecting cable IEC-female / IEC-male, 3 m



## DS 37 U 0500

connecting cable IEC-female / IEC-male, 5 m



### Technical Data

#### Mechanical Data

Length	1,5 m	3,0 m	5,0 m
Bend protection	Shrink tube black	Shrink tube black	Shrink tube black
Breaking stress	>130 N Cable / connector	>130 N Cable / connector	>130 N Cable / connector
Bending radius	30 mm	30 mm	30 mm
Outer jacket material	PVC black	PVC black	PVC black
Outer jacket diameter	Ø 5,00 mm (±0,1 mm)	Ø 5,00 mm (±0,1 mm)	Ø 5,00 mm (±0,1 mm)
<b>Cable construction</b>			
Inner conductor material	Cu-core	Cu-core	Cu-core
Inner conductor diameter	Ø 0,8 mm (±0,02 mm)	Ø 0,8 mm (±0,02 mm)	Ø 0,8 mm (±0,02 mm)
Dielectric	PE	PE	PE
Dielectricum diameter	Ø 3,55 mm (±0,05 mm)	Ø 3,55 mm (±0,05 mm)	Ø 3,55 mm (±0,05 mm)
Outer conductor 1	AL/Pet bonded	AL/Pet bonded	AL/Pet bonded
Outer conductor 2	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)
Outer conductor 3	AL/Pet	AL/Pet	AL/Pet
<b>Labeling</b>			
Character height	3 mm White	3 mm White	3 mm White
Text	(DS37U 0150 105dB WISI YYYY,WW)	(DS37U 0300 105dB WISI YYYY,WW)	(DS37U 0500 105dB WISI YYYY,WW)
<b>IEC connector</b>	(IEC 61169-2)	(IEC 61169-2)	(IEC 61169-2)
IEC-male outer conductor	Brass, plating white bronze. Color code: blue ring	Brass, plating white bronze. Color code: blue ring	Brass, plating white bronze. Color code: blue ring
IEC-male inner conductor	Brass, (plating white bronze)	Brass, (plating white bronze)	Brass, (plating white bronze)
Pull off / push on force IEC	≥40 N	≥40 N	≥40 N
IEC-female outer conductor	Brass, plating white bronze. Color code: green ring	Brass, plating white bronze. Color code: green ring	Brass, plating white bronze. Color code: green ring
IEC-female inner conductor	Brass, (plating white bronze)	Brass, (plating white bronze)	Brass, (plating white bronze)
<b>Electrical data</b>			
Frequency range	5...2400 MHz	5...2400 MHz	5...2400 MHz

# Connection cable

## DS 38 U 0150

Fly lead F-Quick / IEC-female,  
1,5 m



## DS 38 U 0300

Fly lead F-Quick / IEC-female,  
3 m



## DS 38 U 0500

Fly lead F-Quick / IEC-female,  
5 m



### characteristics

- Class A++ > 105 dB (30...1000 MHz)
- Frequency range 5...1800 MHz
- Pre-assembled with 1 F-Quick male and 1 IEC female
- Bending radius: 30 mm
- Tensile strength > 130 N
- Unitymedia certified

### Technical Data

#### Mechanical Data

Length	1,5 m	3,0 m	5,0 m
Bend protection	Shrink tube black	Shrink tube black	Shrink tube black
Breaking stress	>130 N Cable / connector	>130 N Cable / connector	>130 N Cable / connector
Bending radius	30 mm	30 mm	30 mm
Outer jacket material	PVC black	PVC black	PVC black
Outer jacket diameter	Ø 5,00 mm (±0,1 mm)	Ø 5,00 mm (±0,1 mm)	Ø 5,00 mm (±0,1 mm)
Cable construction			
Inner conductor material	Cu-core	Cu-core	Cu-core
Inner conductor diameter	Ø 0,8 mm (±0,02 mm)	Ø 0,8 mm (±0,02 mm)	Ø 0,8 mm (±0,02 mm)
Dielectric	PE	PE	PE
Dielectricum diameter	Ø 3,55 mm (±0,05 mm)	Ø 3,55 mm (±0,05 mm)	Ø 3,55 mm (±0,05 mm)
Outer conductor 1	AL/Pet bonded	AL/Pet bonded	AL/Pet bonded
Outer conductor 2	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)
Outer conductor 3	AL/Pet	AL/Pet	AL/Pet
Labeling			
Character height	3 mm White	3 mm White	3 mm White
Text	(DS38U 0150 105dB WISI YYYY,WW)	(DS38U 0300 105dB WISI YYYY,WW)	(DS38U 0500 105dB WISI YYYY,WW)
F-quick connector	(IEC 61169-47)	(IEC 61169-47)	(IEC 61169-47)
F-quick-male outer conductor	Brass, Plating white bronze. Color code: red ring	Brass, Plating white bronze. Color code: red ring	Brass, Plating white bronze. Color code: red ring
F-quick-male inner conductor	Brass, (Plating gold)	Brass, (Plating gold)	Brass, (Plating gold)
Pull off / push on force F-quick	≥40 N	≥40 N	≥40 N
IEC connector	(IEC 61169-2)	(IEC 61169-2)	(IEC 61169-2)
IEC-female outer conductor	Brass, plating white bronze. Color code: green ring	Brass, plating white bronze. Color code: green ring	Brass, plating white bronze. Color code: green ring
IEC-female inner conductor	Brass, (plating white bronze)	Brass, (plating white bronze)	Brass, (plating white bronze)
Pull off / push on force IEC	≥40 N	≥40 N	≥40 N

# Connection cable

## DS 39 U 0150

Fly lead F-Quick /  
IEC-male, 1,5 m

### characteristics

- Class A++ > 105 dB (30...1000 MHz)
- Frequency range 5...1800 MHz
- Pre-assembled with 1 F-Quick male and 1 IEC male
- Bending radius: 30 mm
- Tensile strength > 130 N
- Unitymedia certified



## DS 39 U 0300

connecting cable F-Quick /  
IEC-male, 3 m



## DS 39 U 0500

connecting cable F-Quick /  
IEC-male, 5 m



### Technical Data

#### Mechanical Data

Length	1,5 m	3,0 m	5,0 m
Bend protection	Shrink tube black	Shrink tube black	Shrink tube black
Breaking stress	>130 N Cable / connector	>130 N Cable / connector	>130 N Cable / connector
Bending radius	30 mm	30 mm	30 mm
Outer jacket material	PVC black	PVC black	PVC black
Outer jacket diameter	Ø 5,00 mm (±0,1 mm)	Ø 5,00 mm (±0,1 mm)	Ø 5,00 mm (±0,1 mm)
Cable construction			
Inner conductor material	Cu-core	Cu-core	Cu-core
Inner conductor diameter	Ø 0,8 mm (±0,02 mm)	Ø 0,8 mm (±0,02 mm)	Ø 0,8 mm (±0,02 mm)
Dielectric	PE	PE	PE
Dielectricum diameter	Ø 3,55 mm (±0,05 mm)	Ø 3,55 mm (±0,05 mm)	Ø 3,55 mm (±0,05 mm)
Outer conductor 1	AL/Pet bonded	AL/Pet bonded	AL/Pet bonded
Outer conductor 2	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)
Outer conductor 3	AL/Pet	AL/Pet	AL/Pet
Labeling			
Character height	3 mm White	3 mm White	3 mm White
Text	(DS39U 0150 105dB WISI YYYY,WW)	(DS39U 0300 105dB WISI YYYY,WW)	(DS39U 0500 105dB WISI YYYY,WW)
F-quick connector	(IEC 61169-47)	(IEC 61169-47)	(IEC 61169-47)
F-quick-male outer conductor	Brass, Plating white bronze. Color code: red ring	Brass, Plating white bronze. Color code: red ring	Brass, Plating white bronze. Color code: red ring
F-quick-male inner conductor	Brass, (Plating gold)	Brass, (Plating gold)	Brass, (Plating gold)
Pull off / push on force F-quick	≥40 N	≥40 N	≥40 N
IEC connector	(IEC 61169-2)	(IEC 61169-2)	(IEC 61169-2)
IEC-male outer conductor	Brass, plating white bronze. Color code: green ring	Brass, plating white bronze. Color code: green ring	Brass, plating white bronze. Color code: green ring
IEC-male inner conductor	Brass, (plating white bronze)	Brass, (plating white bronze)	Brass, (plating white bronze)
Pull off / push on force IEC	≥40 N	≥40 N	≥40 N

# Connection cable

## DS 50 U 0150

Fly lead F-Quick /  
F-Quick, 1,5 m



## DS 50 U 0300

connecting cable  
F-Quick/ F-Quick, 3 m



## DS 50 U 0500

Fly lead F-Quick /  
F-Quick, 5 m



## DS 50 V 0200

Fly lead F-Quick /  
F-Quick, 2,0 m



### characteristics

- Class A++ > 105 dB (30...1000 MHz)
- Frequency range 5...1800 MHz
- Pre-assembled with 2 F-Quick male
- Bending radius: 30 mm
- Tensile strength > 130 N
- Unitymedia certified

### Technical Data

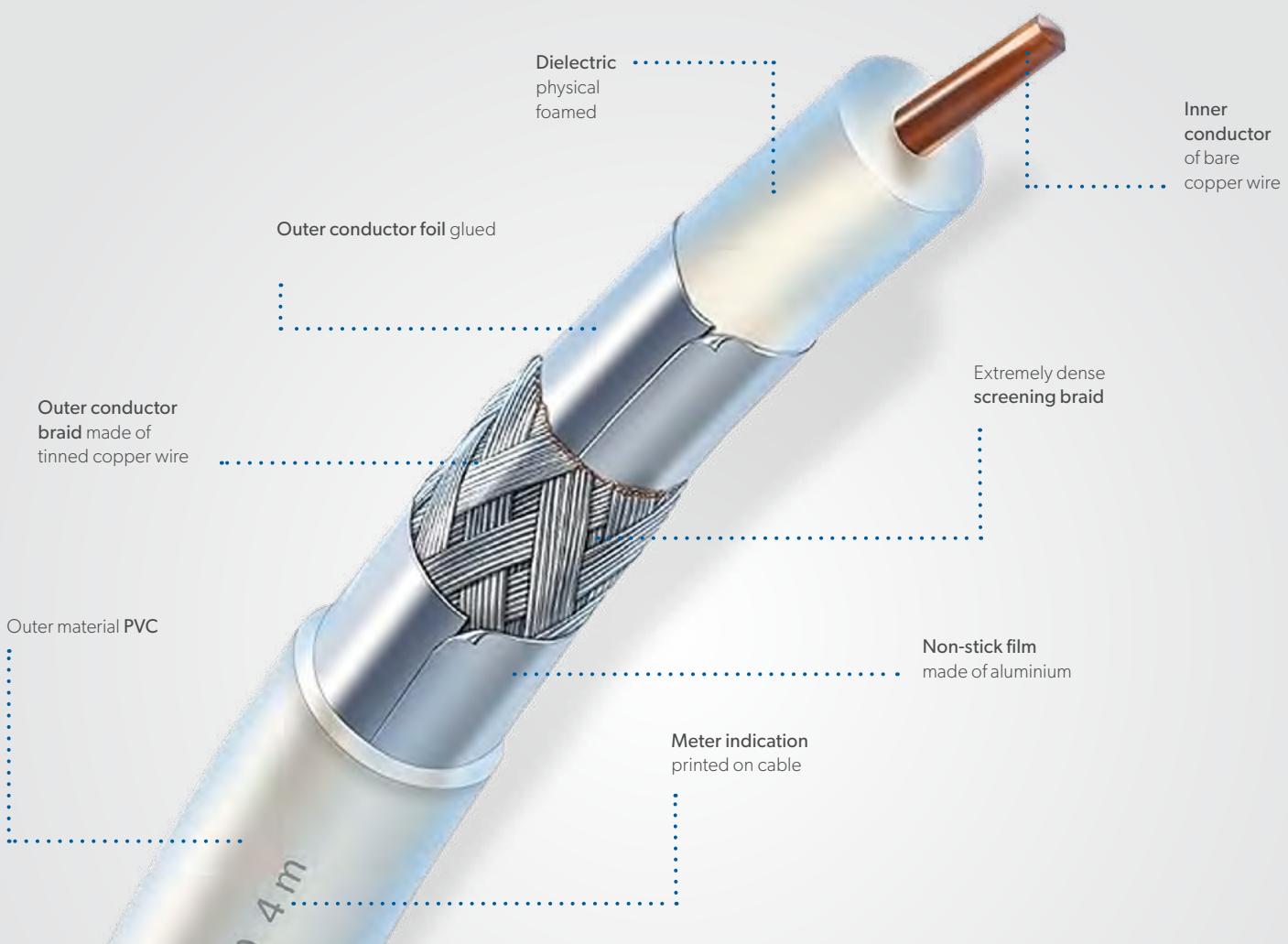
#### Mechanical Data

Length	1,5 m	3,0 m	5,0 m	2,0 m
Bend protection	Shrink tube black	Shrink tube black	Shrink tube black	shrink tube
Breaking stress	>130 N Cable / connector			
Bending radius	30 mm	30 mm	30 mm	30 mm
Outer jacket material	PVC black	PVC black	PVC black	PVC white
Outer jacket diameter	Ø 5,00 mm (±0,1 mm)			
<b>Cable construction</b>				
Inner conductor material	Cu-core	Cu-core	Cu-core	Cu-core
Inner conductor diameter	Ø 0,8 mm (±0,02 mm)			
Dielectric	PE	PE	PE	PE
Dielectricum diameter	Ø 3,55 mm (±0,05 mm)			
Outer conductor 1	AL/Pet bonded	AL/Pet bonded	AL/Pet bonded	AL/Pet bonded
Outer conductor 2	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)	Braid TCCA 24 x 4 x 0,12 (75% coverage)
Outer conductor 3	AL/Pet	AL/Pet	AL/Pet	AL/Pet
<b>Labeling</b>				
Character height	3 mm White	3 mm White	3 mm White	3 mm black
Text	(DS50U 0150 105dB WISI YYYY,WW)	(DS50U 0300 105dB WISI YYYY,WW)	(DS50U 0500 105dB WISI YYYY,WW)	WISI FQ(MS)-FQ(MS) Class A(+20 dB) acc. VF TS 5001 CW/YY
F-quick connector	(IEC 61169-47)	(IEC 61169-47)	(IEC 61169-47)	(IEC 61169-47)
F-quick-male outer conductor	Brass, Plating white bronze. Color code: red ring	Brass, Plating white bronze. Color code: red ring	Brass, Plating white bronze. Color code: red ring	Brass, plating white bronze
F-quick-male inner conductor	Brass, (Plating gold)	Brass, (Plating gold)	Brass, (Plating gold)	Red ring
Pull off / push on force F-quick	≥40 N	≥40 N	≥40 N	>15N
<b>Electrical data</b>				
Frequency range	5...2400 MHz	5...2400 MHz	5...2400 MHz	Brass, Plating white bronze. Color code: red ring
Insertion loss at 1006 MHz	<0,9 dB	<1,8 dB	<3,0 dB	Brass, (plating white bronze)
Insertion loss at 2400 MHz	<1,3 dB	<2,7 dB	<4,5 dB	<40 N



# Coaxial cable

WISI Coaxial cable:  
The perfect fit for every  
Installation.



Also available in the practical **KoaxBox**.



WISI cables, plugs and sockets are perfectly matched to each other so that they achieve consistently high shielding. They are quick and easy to install, have excellent performance characteristics and are manufactured in the proven and well-known WISI quality.

## At a glance

- better DC resistance due to copper inner conductor
- non-ageing foamed dielectric
- Bonded outer conductor foil prevents slipping while mounting the connector
- uniform covering of the cable by dense outer conductor braiding

# Installation cable

## MK 15 0500

Coaxial cable for wet rooms, Ø 10,3 mm, Length 500 m,  
PE black, on wood drum



### characteristics

- Class A++ (EN 50117-2-4)
- Screening efficiency > 125 dB
- Black PE outer sheath for wet rooms
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Fca (EN 50575)
- Length indication at the outer sheath

### Technical Data

General data	
Installation	wet room
Screening factor	Class A++, according to EN 50117-2-3
Color	black
Length	500 m
Reaction to fire	Fca, according to BauPVO (EN 50117)
Construction	
Screening construction	3-way
Inner conductor	Ø 1,63 mm (Cu)
Insulation	Ø 7,2 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 7,3 mm (Al-Pet bonded)
Outer conductor 2. Braid	65 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 10,3 mm (PE black)
Electrical data	
Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	8,5 Ω/km
DC resistance outer conductor	7,5 Ω/km
Rated current	16 A
Attenuation 5 MHz	0,9 dB (100 m)
Attenuation 50 MHz	2,8 dB (100 m)
Attenuation 100 MHz	3,9 dB (100 m)
Attenuation 400 MHz	8,2 dB (100 m)
Attenuation 860 MHz	12,3 dB (100 m)
Attenuation 1000 MHz	13,1 dB (100 m)
Attenuation 1400 MHz	15,7 dB (100 m)
Attenuation 2000 MHz	19,5 dB (100 m)
Attenuation 2400 MHz	21,6 dB (100 m)
Attenuation 3000 MHz	23,8 dB (100 m)

### Packaging Data

Sales unit	500 m (plastic drum)
Dimensions (WxHxD) sales unit	600 x 600 x 360 mm
Packaging volume sales unit	129,6 dm³
Gross weight sales unit	0,08 kg
Shipping unit	500 m
Dimensions (WxHxD) shipping unit	600 x 360 x 600 mm
Packaging volume shipping package	129,6

The MK 15 0500 is a 75 Ohm coaxial cable for the in-house installation in wet rooms or outside installation. The high-quality materials and the triple shielding with a screening efficiency of >125 dB guarantee an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 15 is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Fca, the MK 15 complies with the Construction Products Regulation (CPR) EU No. 305/2011. The specific PE outer sheath protects the cable against humidity. The cable is compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 76 A 0100

Coaxial cable 115 dB, Ø 5 mm, Length 100 m, PVC white,  
Cable ring in plastic foil



### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency > 115 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Eca (EN 50575)
- Length indication at the outer sheath

### Technical Data

#### General data

Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	100 m
Reaction to fire	Eca, according to CPR (EN 50575)

#### Construction

Screening construction	3-way
Inner conductor	Ø 0,80 mm
Insulation	Ø 3,55 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 3,65 mm (Cu)
Outer conductor 2. Braid	58 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 5,0 mm (PVC, white)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,85
DC resistance inner conductor	35,5 Ω/km
DC resistance outer conductor	16 Ω/km
Rated current	5 A
Attenuation 5 MHz	1,9 dB (100 m)
Attenuation 50 MHz	5,7 dB (100 m)
Attentuation 100 MHz	8,1 dB (100 m)
Attentuation 400 MHz	16,5 dB (100 m)
Attentuation 860 MHz	24,7 dB (100 m)
Attentuation 1000 MHz	26,7 dB (100 m)
Attentuation 1400 MHz	31,9 dB (100 m)
Attentuation 2000 MHz	38,6 dB (100 m)
Attentuation 2400 MHz	42,7 dB (100 m)
Attentuation 3000 MHz	48,2 dB (100 m)

### Packaging Data

Sales unit	100 m (Cable ring in plastic foil)
Dimensions (WxHxD) sales unit	415 x 525 x 265 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.026 kg
Shipping unit	600 m
Dimensions (WxHxD) shipping unit	240 x 480 x 415 mm
Packaging volume shipping package	47,81

The MK 76 A 0100 is a 75 Ohm coaxial cable for the in-house installation. Due to the small diameter of 5 mm, it is perfectly suited for the laying in ductwork or installations with limited space. The triple shielding with a screening efficiency of >115 dB guarantees an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Eca the MK 76 A complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 76 A 0101

Coaxial cable 115 dB, Ø 5 mm, Length 100 m, PVC white, on plastic drum



### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency > 115 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Eca (EN 50575)
- Length indication at the outer sheath

### Technical Data

General data	
Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	100 m
Reaction to fire	Eca, according to CPR (EN 50575)
Construction	
Screening construction	3-way
Inner conductor	Ø 0,80 mm
Insulation	Ø 3,55 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 3,65 mm (Cu)
Outer conductor 2. Braid	58 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 5,0 mm (PVC, white)
Electrical data	
Impedance	75 Ω
Velocity ratio	0,85
DC resistance inner conductor	35,5 Ω/km
DC resistance outer conductor	16 Ω/km
Rated current	5 A
Attenuation 5 MHz	1,9 dB (100 m)
Attenuation 50 MHz	5,7 dB (100 m)
Attentuation 100 MHz	8,1 dB (100 m)
Attentuation 400 MHz	16,5 dB (100 m)
Attentuation 860 MHz	24,7 dB (100 m)
Attentuation 1000 MHz	26,7 dB (100 m)
Attentuation 1400 MHz	31,9 dB (100 m)
Attentuation 2000 MHz	38,6 dB (100 m)
Attentuation 2400 MHz	42,7 dB (100 m)
Attentuation 3000 MHz	48,2 dB (100 m)

### Packaging Data

Sales unit	100 m (plastic drum)
Dimensions (WxHxD) sales unit	340 x 400 x 400 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0,031 kg
Shipping unit	500 m
Dimensions (WxHxD) shipping unit	290 x 675 x 280 mm
Packaging volume shipping package	54,81

The MK 76 A 0101 is a 75 Ohm coaxial cable for the in-house installation. Due to the small diameter of 5 mm, it is perfectly suited for the laying in ductwork or installations with limited space. The triple shielding with a screening efficiency of >115 dB guarantees an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Eca the MK 76 A complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 76 A 0500

Coaxial cable 115 dB, Ø 5 mm, Length 500 m, PVC white, on plastic drum



### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency > 115 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Eca (EN 50575)
- Length indication at the outer sheath

### Technical Data

#### General data

Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	500 m
Reaction to fire	Eca, according to CPR (EN 50575)

#### Construction

Screening construction	3-way
Inner conductor	Ø 0,80 mm
Insulation	Ø 3,55 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 3,65 mm (Cu)
Outer conductor 2. Braid	58 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 5,0 mm (PVC, white)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,85
DC resistance inner conductor	35,5 Ω/km
DC resistance outer conductor	16 Ω/km
Rated current	5 A
Attenuation 5 MHz	1,9 dB (100 m)
Attenuation 50 MHz	5,7 dB (100 m)
Attentuation 100 MHz	8,1 dB (100 m)
Attentuation 400 MHz	16,5 dB (100 m)
Attentuation 860 MHz	24,7 dB (100 m)
Attentuation 1000 MHz	26,7 dB (100 m)
Attentuation 1400 MHz	31,9 dB (100 m)
Attentuation 2000 MHz	38,6 dB (100 m)
Attentuation 2400 MHz	42,7 dB (100 m)
Attentuation 3000 MHz	48,2 dB (100 m)

### Packaging Data

Sales unit	500 m (plastic drum)
Dimensions (WxHxD) sales unit	360 x 370 x 220 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0,03 kg
Shipping unit	1000 m
Dimensions (WxHxD) shipping unit	360 x 710 x 220 mm
Packaging volume shipping package	56,23

The MK 76 A 0500 is a 75 Ohm coaxial cable for the in-house installation. Due to the small diameter of 5 mm, it is perfectly suited for the laying in ductwork or installations with limited space. The triple shielding with a screening efficiency of >115 dB guarantees an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Eca the MK 76 A complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 86 B 0101

Coaxial cable 110 dB, Ø 6,9 mm, Length 100 m, PVC white,  
on plastic drum



### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency >110 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Eca (EN 50575)
- Length indication at the outer sheath

### Technical Data

General data	
Installation	Indoor installation
Screening factor	Screening class A+ (EN 50117-2-4)
Color	White
Length	100 m
Reaction to fire	Eca, according to CPR (EN 50575)
Construction	
Screening construction	3-way
Inner conductor	Ø 1,02 mm (CCS)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (AL/PET/SY bonded)
Outer conductor 2. Braid	80 % (AL)
Outer conductor 3. Foil	(AL/PET/SY)
Sheath	Ø 6,9 mm (PVC, white)
Electrical data	
Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	<100 Ω/km
DC resistance outer conductor	<24 Ω/km
Rated current	8 A
Attenuation 5 MHz	2,4 dB (100 m)
Attenuation 50 MHz	4,3 dB (100 m)
Attenuation 100 MHz	6,0 dB (100 m)
Attenuation 400 MHz	12,7 dB (100 m)
Attenuation 800 MHz	18,2 dB (100 m)
Attenuation 1000 MHz	20,5 dB (100 m)
Attenuation 1400 MHz	24,5 dB (100 m)
Attenuation 2000 MHz	31,4 dB (100 m)
Attenuation 2400 MHz	32,8 dB (100 m)
Attenuation 3000 MHz	37,4 dB (100 m)

### Packaging Data

Sales unit	100 m (plastic drum)
Dimensions (WxHxD) sales unit	280 x 280 x 140 mm
Packaging volume sales unit	11 dm <sup>3</sup>
Gross weight sales unit	0.042 kg
Shipping unit	m
Dimensions (WxHxD) shipping unit	300 x 295 x 680 mm
Packaging volume shipping package	60,2

The MK 86 B 0101 is a 75 Ohm coaxial cable for the in-house installation. The quality materials and the triple shielding, with a screening efficiency of >110 dB, guarantees an interference free transmission. Thanks to its low cable loss and the perfect installation characteristics, the MK 86 B is ideal for the use in SAT-IF and terrestrial distribution systems. With the fire protection class Eca, the MK 86 B complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 86 B 0250

Coaxial cable 110 dB, Ø 6,9 mm, Length 250 m, PVC white, on plastic drum



### Technical Data

#### General data

Installation	Indoor installation
Screening factor	Screening class A+ (EN 50117-2-4)
Color	White
Length	250 m
Reaction to fire	Eca, according to CPR (EN 50575)

#### Construction

Screening construction	3-way
Inner conductor	Ø 1,02 mm (CCS)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (AL/PET/SY bonded)
Outer conductor 2. Braid	80 % (AL)
Outer conductor 3. Foil	(AL/PET/SY)
Sheath	Ø 6,9 mm (PVC, white)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	<100 Ω/km
DC resistance outer conductor	<24 Ω/km
Rated current	8 A
Attenuation 5 MHz	2,4 dB (100 m)
Attenuation 50 MHz	4,3 dB (100 m)
Attenuation 100 MHz	6,0 dB (100 m)
Attenuation 400 MHz	12,7 dB (100 m)
Attenuation 800 MHz	18,2 dB (100 m)
Attenuation 1000 MHz	20,5 dB (100 m)
Attenuation 1400 MHz	24,5 dB (100 m)
Attenuation 2000 MHz	31,4 dB (100 m)
Attenuation 2400 MHz	32,8 dB (100 m)
Attenuation 3000 MHz	37,4 dB (100 m)

### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency >110 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Eca (EN 50575)
- Length indication at the outer sheath

### Packaging Data

Sales unit	250 m (plastic drum)
Dimensions (WxHxD) sales unit	350 x 350 x 195 mm
Packaging volume sales unit	24 dm <sup>3</sup>
Gross weight sales unit	0.042 kg
Shipping unit	m
Dimensions (WxHxD) shipping unit	380 x 380 x 415 mm
Packaging volume shipping package	60

The MK 86 B 0250 is a 75 Ohm coaxial cable for the in-house installation. The quality materials and the triple shielding, with a screening efficiency of >110 dB, guarantees an interference free transmission. Thanks to its low cable loss and the perfect installation characteristics, the MK 86 B is ideal for the use in SAT-IF and terrestrial distribution systems. With the fire protection class Eca, the MK 86 B complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 96 A 0100

Coaxial cable 120 dB, Ø 6,8 mm, Length 100 m, PVC white,  
Cable ring in plastic foil



### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency >120 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Dca, s3, d2, a3 (EN 50575)
- Approved by Vodafone Kabel Deutschland

### Technical Data

General data	
Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	100 m
Reaction to fire	Dca, s3, d2, a3, according to BauPVO (EN 50117)
Construction	
Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (Al-Pet bonded)
Outer conductor 2. Braid	63 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 6,8 mm (PVC, white)
Electrical data	
Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	21,2 Ω/km
DC resistance outer conductor	11,7 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,3 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,9 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,4 dB (100 m)
Attenuation 3000 MHz	35,6 dB (100 m)

### Packaging Data

Sales unit	100 m (Cable ring in plastic foil)
Dimensions (WxHxD) sales unit	415 x 525 x 265 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0,05 kg
Shipping unit	600 m
Dimensions (WxHxD) shipping unit	265 x 415 x 525 mm
Packaging volume shipping package	57,74

The MK 96 A 0100 is a 75 Ohm coaxial cable for the in-house installation. The high-quality materials and the triple shielding, with a screening efficiency of >120 dB, guarantees an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 96 A is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Dca, s3, d2, a3 the MK 96 A complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 96 A 0101

Coaxial cable 120 dB, Ø 6,8 mm, Length 100 m, PVC white, on plastic drum



### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency >120 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Dca, s3, d2, a3 (EN 50575)
- Approved by Vodafone Kabel Deutschland

### Technical Data

#### General data

Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	100 m
Reaction to fire	Dca, s3, d2, a3, according to BauPVO (EN 50117)

#### Construction

Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (Al-Pet bonded)
Outer conductor 2. Braid	63 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 6,8 mm (PVC, white)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	21,2 Ω/km
DC resistance outer conductor	11,7 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,3 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,9 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,4 dB (100 m)
Attenuation 3000 MHz	35,6 dB (100 m)

### Packaging Data

Sales unit	100 m (plastic drum)
Dimensions (WxHxD) sales unit	340 x 400 x 400 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0,05 kg
Shipping unit	500 m
Dimensions (WxHxD) shipping unit	290 x 280 x 675 mm
Packaging volume shipping package	54,81

The MK 96 A 0101 is a 75 Ohm coaxial cable for the in-house installation. The high-quality materials and the triple shielding, with a screening efficiency of >120 dB, guarantees an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 96 A is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Dca, s3, d2, a3 the MK 96 A complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 96 A 0250

Coaxial cable 120 dB, Ø 6,8 mm, Length 250 m, PVC white,  
Cable ring in plastic foil



### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency >120 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Dca, s3, d2, a3 (EN 50575)
- Approved by Vodafone Kabel Deutschland

### Technical Data

General data	
Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	250 m
Reaction to fire	Dca, s3, d2, a3, according to BauPVO (EN 50117)
Construction	
Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (Al-Pet bonded)
Outer conductor 2. Braid	63 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 6,8 mm (PVC, white)
Electrical data	
Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	21,2 Ω/km
DC resistance outer conductor	11,7 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,3 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,9 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,4 dB (100 m)
Attenuation 3000 MHz	35,6 dB (100 m)

### Packaging Data

Sales unit	250 m (Cable ring in plastic foil)
Dimensions (WxHxD) sales unit	210 x 300 x 600 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0,05 kg
Shipping unit	500 m
Dimensions (WxHxD) shipping unit	380 x 210 x 600 mm
Packaging volume shipping package	47,88

The MK 96 A 0250 is a 75 Ohm coaxial cable for the in-house installation. The high-quality materials and the triple shielding, with a screening efficiency of >120 dB, guarantees an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 96 A is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Dca, s3, d2, a3 the MK 96 A complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 96 A 0252

Coaxial cable 120 dB, Ø 6,8 mm, Length 250 m, PVC white, in COAXBox dispenser carton



### Technical Data

#### General data

Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	250 m
Reaction to fire	Dca, s3, d2, a3, according to BauPVO (EN 50117)

#### Construction

Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (Al-Pet bonded)
Outer conductor 2. Braid	63 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 6,8 mm (PVC, white)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	21,2 Ω/km
DC resistance outer conductor	11,7 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,3 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,9 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,4 dB (100 m)
Attenuation 3000 MHz	35,6 dB (100 m)

### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency >120 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Dca, s3, d2, a3 (EN 50575)
- Approved by Vodafone Kabel Deutschland

### Packaging Data

Sales unit	250 m (COAXBox carton)
Dimensions (WxDxH) sales unit	370 x 370 x 260 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0.055 kg
Shipping unit	600 m
Dimensions (WxDxH) shipping unit	mm
Packaging volume shipping package	

The MK 96 A 0252 is a 75 Ohm coaxial cable for the in-house installation. The high-quality materials and the triple shielding, with a screening efficiency of >120 dB, guarantees an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 96 A is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Dca, s3, d2, a3 the MK 96 A complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 96 A 0500

Coaxial cable 120 dB, Ø 6,8 mm, Length 500 m, PVC white,  
on plastic drum



### characteristics

- Screening class A+ (EN 50117-2-4)
- Screening efficiency >120 dB
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Dca, s3, d2, a3 (EN 50575)
- Approved by Vodafone Kabel Deutschland

Technical Data	
<b>General data</b>	
Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	500 m
Reaction to fire	Dca, s3, d2, a3, according to BauPVO (EN 50117)
<b>Construction</b>	
Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (Al-Pet bonded)
Outer conductor 2. Braid	63 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 6,8 mm (PVC, white)
<b>Electrical data</b>	
Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	21,2 Ω/km
DC resistance outer conductor	11,7 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,3 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,9 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,4 dB (100 m)
Attenuation 3000 MHz	35,6 dB (100 m)

Packaging Data	
Sales unit	500 m (plastic drum)
Dimensions (WxHxD) sales unit	340 x 400 x 400 mm
Packaging volume sales unit	54,4 dm³
Gross weight sales unit	0,049 kg
Shipping unit	500 m
Dimensions (WxHxD) shipping unit	400 x 340 x 400 mm
Packaging volume shipping package	54,4

The MK 96 A 0500 is a 75 Ohm coaxial cable for the in-house installation. The high-quality materials and the triple shielding, with a screening efficiency of >120 dB, guarantees an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 96 A is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Dca, s3, d2, a3 the MK 96 A complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PVC outer sheath is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Installation cable

## MK 99 S 0102

Coaxial cable 100 dB, Ø 6,5 mm, Length 100 m, PE black, on plastic drum



### characteristics

- Screening class A (EN 50117-2-4)
- Screening efficiency >100 dB
- UV-resistant PE outer jacket for outdoor installation
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Fca (EN 50575)
- Easy mounting withWISI connector systems (DV55, DV 85)

### Technical Data

#### General data

Installation	Außeninstallation
Screening factor	Class A, according to EN 50117-2-4
Color	black
Length	100 m
Reaction to fire	Fca, according to BauPVO (EN 50117)

#### Construction

Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,8 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (AL/PET/AL bonded)
Outer conductor 2. Braid	44 %
Outer conductor 3. Foil	AL/PET
Sheath	Ø 6,5 mm (PE, black)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	<21,5 Ω/km
DC resistance outer conductor	<32 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,6 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attentuation 100 MHz	5,9 dB (100 m)
Attentuation 400 MHz	12,0 dB (100 m)
Attentuation 860 MHz	17,8 dB (100 m)
Attentuation 1000 MHz	19,4 dB (100 m)
Attentuation 1400 MHz	23,2 dB (100 m)
Attentuation 2000 MHz	28,2 dB (100 m)
Attentuation 2400 MHz	31,2 dB (100 m)
Attentuation 3000 MHz	34,5 dB (100 m)

### Packaging Data

Sales unit	100 m (plastic drum)
Dimensions (WxHxD) sales unit	340 x 400 x 400 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0.037 kg
Shipping unit	m
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The MK 99 S 0102 is a 75 Ohm coaxial cable with a pure inner conductor for the outdoor installation. The UV stable PE outer sheath enables a long life span, even at direct sunlight. The high-quality materials and the triple shielding, with a screening efficiency of >100 dB, guarantees an interference free transmission. The MK 99 S is ideal for the use in SAT-IF and terrestrial distribution systems, where the point of reception is out of the building. With the fire protection class Fca, the MK 99 S complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PE outer sheath is installation friendly and compatible with the WISI connector system (DV 55, DV 85) as well as commercially available connection accessories.

# Installation cable

## MK 99 S 0252

Coaxial cable 100 dB, Ø 6,5 mm, Length 250 m, PE black,  
in COAXBox dispenser carton



### characteristics

- Exceeds Class A (EN 50117-2-4)
- Screening efficiency >100 dB
- UV-resistant PE outer jacket for outdoor installation
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Fca (EN 50575)
- Easy mounting with WISI connector systems (DV55, DV 85)

### Technical Data

#### General data

Installation	Außeninstallation
Screening factor	Class A, according to EN 50117-2-4
Color	black
Length	250 m
Reaction to fire	Fca, according to BauPVO (EN 50117)

#### Construction

Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,8 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (AL/PET/AL bonded)
Outer conductor 2. Braid	44 %
Outer conductor 3. Foil	AL/PET
Sheath	Ø 6,5 mm (PE, black)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	<21,5 Ω/km
DC resistance outer conductor	<32 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,6 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,8 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,2 dB (100 m)
Attenuation 3000 MHz	34,5 dB (100 m)

### Packaging Data

Sales unit	100 m (plastic drum)
Dimensions (WxHxD) sales unit	400 x 400 x 340 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0.037 kg
Shipping unit	m
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The MK 99 S 0252 is a 75 Ohm coaxial cable with a pure inner conductor for the outdoor installation. The UV stable PE outer sheath enables a long life span, even at direct sunlight. The high-quality materials and the triple shielding, with a screening efficiency of >100 dB, guarantees an interference free transmission. The MK 99 S is ideal for the use in SAT-IF and terrestrial distribution systems, where the point of reception is out of the building. With the fire protection class Fca, the MK 99 S complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PE outer sheath is installation friendly and compatible with the WISI connector system (DV 55, DV 85) as well as commercially available connection accessories.

# Installation cable

## MK 99 S 0502

Coaxial cable 100 dB, Ø 6,5 mm, Length 500 m, PE black,  
on plastic drum



### characteristics

- Exceeds Class A (EN 50117-2-4)
- Screening efficiency >100 dB
- UV-resistant PE outer jacket for outdoor installation
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Fca (EN 50575)
- Easy mounting withWISI connector systems (DV55, DV 85)

### Technical Data

#### General data

Installation	Außeninstallation
Screening factor	Class A, according to EN 50117-2-4
Color	black
Length	500 m
Reaction to fire	Fca, according to BauPVO (EN 50117)

#### Construction

Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,8 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (AL/PET/AL bonded)
Outer conductor 2. Braid	44 %
Outer conductor 3. Foil	AL/PET
Sheath	Ø 6,5 mm (PE, black)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	<21,5 Ω/km
DC resistance outer conductor	<32 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,6 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attentuation 100 MHz	5,9 dB (100 m)
Attentuation 400 MHz	12,0 dB (100 m)
Attentuation 860 MHz	17,8 dB (100 m)
Attentuation 1000 MHz	19,4 dB (100 m)
Attentuation 1400 MHz	23,2 dB (100 m)
Attentuation 2000 MHz	28,2 dB (100 m)
Attentuation 2400 MHz	31,2 dB (100 m)
Attentuation 3000 MHz	34,5 dB (100 m)

### Packaging Data

Sales unit	100 m (plastic drum)
Dimensions (WxHxD) sales unit	400 x 400 x 340 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0.037 kg
Shipping unit	m
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The MK 99 S 0502 is a 75 Ohm coaxial cable with a pure inner conductor for the outdoor installation. The UV stable PE outer sheath enables a long life span, even at direct sunlight. The high-quality materials and the triple shielding, with a screening efficiency of >100 dB, guarantees an interference free transmission. The MK 99 S is ideal for the use in SAT-IF and terrestrial distribution systems, where the point of reception is out of the building. With the fire protection class Fca, the MK 99 S complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PE outer sheath is installation friendly and compatible with the WISI connector system (DV 55, DV 85) as well as commercially available connection accessories.

# Halogen-free cable

## MK 96 AL 100

Coaxial cable halogenfree 120 dB, Ø 6,8 mm, Length 100 m,  
PE-LSZH white, Cable ring in plastic foil



### characteristics

- Exceeds Class A+ (EN 50117-2-4), Screening efficiency > 120 dB
- Halogen free PE outer sheath (LSZH)
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Dca, s1, d2, a1 (EN 50575)
- Length indication at the outer sheath

### Technical Data

General data	
Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	100 m
Reaction to fire	Dca, s1, d2, a1, according to BauPVO (EN 50575)
Construction	
Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (Al-Pet bonded)
Outer conductor 2. Braid	63 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 6,8 mm (PE-LSZH, white)
Electrical data	
Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	21,2 Ω/km
DC resistance outer conductor	11,7 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,3 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,9 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,4 dB (100 m)
Attenuation 3000 MHz	35,6 dB (100 m)

### Packaging Data

Sales unit	100 m (Cable ring in plastic foil)
Dimensions (WxHxD) sales unit	415 x 525 x 265 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.047 kg
Shipping unit	600 m
Dimensions (WxHxD) shipping unit	265 x 415 x 525 mm
Packaging volume shipping package	57,74

The MK 96 AL 100 is a halogen free 75 Ohm coaxial cable for the in-house installation with specific safety requirements concerning fire protection and smoke emission. The high-quality materials and the triple shielding with a screening efficiency of >120 dB guarantee an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 96 AL is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Dca, s1, d2, a1 the MK 96 AL complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PE outer sheath with LSZH (Low smoke zero halogen) compound is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Halogen-free cable

## MK 96 AL 252

Coaxial cable halogenfree 120 dB, Ø 6,8 mm, Length 250 m, PE-LSZH white, COAXBox dispenser carton



### Technical Data

#### General data

Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	250 m
Reaction to fire	Dca, s1, d2, a1, according to BauPVO (EN 50575)

#### Construction

Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (Al-Pet bonded)
Outer conductor 2. Braid	63 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 6,8 mm (PE-LSZH, white)

#### Electrical data

Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	21,2 Ω/km
DC resistance outer conductor	11,7 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,3 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,9 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,4 dB (100 m)
Attenuation 3000 MHz	35,6 dB (100 m)

### characteristics

- Exceeds Class A+ (EN 50117-2-4), Screening efficiency > 120 dB
- Halogen free PE outer sheath (LSZH)
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Dca, s1, d2, a1 (EN 50575)
- Approved by Vodafone Kabel Deutschland

### Packaging Data

Sales unit	250 m (COAXBox carton)
Dimensions (WxHxD) sales unit	370 x 370 x 255 mm
Packaging volume sales unit	34,64 dm³
Gross weight sales unit	0,05 kg
Shipping unit	250 m
Dimensions (WxHxD) shipping unit	365 x 260 x 365 mm
Packaging volume shipping package	34,64

The MK 96 AL 0100 is a halogen free 75 Ohm coaxial cable for the in-house installation with specific safety requirements concerning fire protection and smoke emission. The high-quality materials and the triple shielding with a screening efficiency of >120 dB guarantee an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 96 AL is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Dca, s1, d2, a1 the MK 96 AL complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PE outer sheath with LSZH (Low smoke zero halogen) compound is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.

# Halogen-free cable

## MK 96 AL 500

Coaxial cable halogenfree 120 dB, Ø 6,8 mm, Length 500 m,  
PE-LSZH white, on plastic drum



### characteristics

- Exceeds Class A+ (EN 50117-2-4), Screening efficiency > 120 dB
- Halogen free PE outer sheath (LSZH)
- Triple shielded, bonded outer foil enables easy connector assembly
- Fulfils fire protection class Dca, s1, d2, a1 (EN 50575)
- Approved by Vodafone Kabel Deutschland

### Technical Data

General data	
Installation	Indoor installation
Screening factor	Class A+, according to EN 50117-2-4
Color	White
Length	500 m
Reaction to fire	Dca, s1, d2, a1, according to BauPVO (EN 50575)
Construction	
Screening construction	3-way
Inner conductor	Ø 1,02 mm (Cu)
Insulation	Ø 4,7 mm (Foam PE, gas injected)
Outer conductor 1. Foil	Ø 4,85 mm (Al-Pet bonded)
Outer conductor 2. Braid	63 % (optical coating, tinned copper)
Outer conductor 3. Foil	Aluminium
Sheath	Ø 6,8 mm (PE-LSZH, white)
Electrical data	
Impedance	75 Ω
Velocity ratio	0,84
DC resistance inner conductor	21,2 Ω/km
DC resistance outer conductor	11,7 Ω/km
Rated current	8 A
Attenuation 5 MHz	1,3 dB (100 m)
Attenuation 50 MHz	4,1 dB (100 m)
Attenuation 100 MHz	5,9 dB (100 m)
Attenuation 400 MHz	12,0 dB (100 m)
Attenuation 860 MHz	17,9 dB (100 m)
Attenuation 1000 MHz	19,4 dB (100 m)
Attenuation 1400 MHz	23,2 dB (100 m)
Attenuation 2000 MHz	28,2 dB (100 m)
Attenuation 2400 MHz	31,4 dB (100 m)
Attenuation 3000 MHz	35,6 dB (100 m)

### Packaging Data

Sales unit	500 m (plastic drum)
Dimensions (WxHxD) sales unit	340 x 400 x 400 mm
Packaging volume sales unit	54,4 dm³
Gross weight sales unit	0,051 kg
Shipping unit	500 m
Dimensions (WxHxD) shipping unit	400 x 340 x 400 mm
Packaging volume shipping package	54,4

The MK 96 AL 500 is a halogen free 75 Ohm coaxial cable for the in-house installation with specific safety requirements concerning fire protection and smoke emission. The high-quality materials and the triple shielding with a screening efficiency of >120 dB guarantee an interference free transmission in distribution systems for cable TV, terrestrial and satellite signals. The MK 96 AL is approved by Vodafone Kabel Deutschland and perfect for the installation in return path capable multimedia networks. The inner conductor consists of pure copper enabling perfect electrical values and a high reliability. With the fire protection class Dca, s1, d2, a1 the MK 96 AL complies with the Construction Products Regulation (CPR) EU No. 305/2011. The PE outer sheath with LSZH (Low smoke zero halogen) compound is installation friendly and compatible with the WISI connector system as well as commercially available connection accessories.



# Satellite receiving systems

WISI SAT antennas:

**Perfect reception in all weather conditions.**

The image shows a large, light-colored satellite dish antenna mounted on a silver metal stand. The dish has the 'WISI ORBIT®' logo in the center. Callout boxes with dashed lines point to various parts of the antenna:

- corrosion-resistant reflector made of aluminium, powder-coated** (points to the main dish surface)
- Feed holder made of die-cast aluminium** (points to the feed horn assembly)
- with optional multifeed rail expandable for up to 4 LNBs** (points to the feed system)
- Cable management for visually attractive installation** (points to the cable routing area)
- simple assembly of the reflector due to suspension clip** (points to the back of the dish where the suspension clip is visible)
- Reinforced back for more stability** (points to the reinforced base of the dish)
- for discreet installation, available in three colours** (points to the side of the dish)

**WISI TOPLINE antennas** are corrosion free and absolutely weatherproof. Due to the excellent material and the precise manufacturing, the antennas do not bend even under extreme temperature fluctuations. This guarantees a stable reception in almost all weather conditions.

It goes without saying that WISI TOPLINE antennas are extremely easy to assemble, highly resilient, durable, recyclable and designed for state-of-the-art technologies. Simply the best WISI antenna technology has to offer.

**WISI feed systems** can be used universally in all antennas with a 40 mm mounting diameter. They are easy to adjust and with duo feed holders suitable for reception of two neighbouring orbital positions.

WISI feed systems are characterized by a highly linear performance over the complete frequency range. They are low-noise and energy-saving. Every WISI power supply system is subjected to a careful final test in the laboratory - for long, clear reception.

The special construction and the retractable weather protection cap provide protection against weather influences, even after many years.

# Parabol offset antennas

## OA 10 A

Orbit Line parabol offset antenna, 100 cm, light grey



### Technical Data

Gain	39,8...40,9 dB
Aperture angle	<1,8 ° (3 dB)
Windloading at 72 km/h	294 N
Windloading at 144 km/h	1167 N
Windloading at 216 km/h	2628 N
<b>General data</b>	
Reflector material	Aluminium
Reflector colour	Light grey (RAL 7035)
Diameter	100 cm
Mounting clip	32...76 mm
Setting range elevation	5...90 °
Weight	8,8 kg

### characteristics

- Ø 100 cm
- Light grey (RAL 7035)
- Pluggable aluminum feed arm
- 40 mm aluminum feed holder
- Easy and quick installation thanks to the pre-mounted back part
- Corrosion resistant aluminum reflector powder-coated

The OA 10 A offset antenna convinces by its easy installation and low weight. The reflector, feed arm and LNB holder consists of light and weather resistant aluminum. The stable back part is pre-mounted to the reflector and enables an installation in a few steps. For the Installation is an antenna pipe MN 60A or wall holder MN xx available. Multifeed reception can be realized by using the optional multi feed bar OF85 0002 or OF85 0004.

## OA 13 A

Orbit Line parabol offset antenna, 125 cm, light grey



### Technical Data

Gain	43 dB (12 GHz)
Aperture angle	<1,37 ° (3 dB)
Windloading at 120 Km/h	1588 N
Offset angle	21,3°
<b>General data</b>	
Reflector material	Aluminium, powder-coated
Reflector colour	Light grey (RAL 7035)
Diameter	125 cm
Mounting clip	55...100 mm
Setting range elevation	20...50 °
Weight	12,8 kg

### characteristics

- Ø 125 cm
- Light grey (RAL 7035)
- Feedholder 40 mm
- easy installation of the reflector
- Corrosion resistant aluminum reflector powder-coated

Aluminium offset antennas , light-grey. Hot zinc dipped fastening in reflector colour, powder-coated.

# Parabol offset antennas

## OA 85 G

Orbit Topline parabol offset antenna, 85 cm, light grey

### characteristics

- Ø 85 cm
- Light grey (RAL 7035)
- Feedholder 40 mm
- easy installation of the reflector
- Corrosion resistant aluminum reflector powder-coated



## OA 85 H

Orbit Topline Parabol offset antenna, 85 cm, basalt grey



## OA 85 I

Orbit Topline Parabol offset antenna, 85 cm, red brown



### Technical Data

Gain	37 dB (12 GHz)	37 dB (12 GHz)	37 dB (12 GHz)
Aperture angle	<2,2 ° (3 dB)	<2,2 ° (3 dB)	<2,2 ° (3 dB)
Windloading at 72 km/h	167 N	167 N	167 N
Windloading at 144 km/h	677 N	677 N	677 N
Windloading at 216 km/h	1530 N	1530 N	1530 N
<b>General data</b>			
Reflector material	Aluminium, powder-coated	Aluminium, powder-coated	Aluminium, powder-coated
Reflector colour	Light grey (RAL 7035)	Basalt grey (RAL 7012)	red brown (RAL 8012)
Diameter	85 cm	85 cm	85 cm
Mounting clip	32...76 mm	32...76 mm	32...76 mm
Setting range elevation	0...90 °	0...90 °	0...90 °
Weight	5,8 kg	5,8 kg	5,8 kg

# Parabol offset antennas

## OA 36 G

Orbit Line parabol offset antenna, 60 cm, light grey

### characteristics

- Ø 60 cm
- Feedholder 40 mm
- easy installation of the reflector
- Corrosion resistant aluminum reflector powder-coated



## OA 36 H

Orbit Line Parabol offset antenna, 60 cm, basalt grey



## OA 36 I

Orbit Line Parabol offset antenna, 60 cm, red brown



### Technical Data

Gain	35 dB	35 dB	35 dB
Aperture angle	<3,0 ° (3 dB)	<3,0 ° (3 dB)	<3,0 ° (3 dB)
Wind load up to 20m mounting height	280 N	280 N	280 N
<b>General data</b>			
Reflector material	Aluminium, powder-coated	Aluminium, powder-coated	Aluminium, powder-coated
Reflector colour	Light grey (RAL 7035)	Basalt grey (RAL 7012)	red brown (RAL 8012)
Diameter	60 cm	60 cm	60 cm
Mounting clip	32...60 mm	32...60 mm	32...60 mm
Setting range elevation	16...50 °	16...50 °	16...50 °
Weight	1,6 kg	1,6 kg	1,6 kg

## OA 38 G

Orbit Line parabol offset antenna, 80 cm, light grey

### characteristics

- Ø 80 cm
- 40 mm aluminum feed holder
- easy installation of the reflector
- Corrosion resistant aluminum reflector powder-coated



## OA 38 H

Orbit Line Parabol offset antenna, 80 cm, basalt grey



## OA 38 I

Orbit Line Parabol offset antenna, 80 cm, red brown



### Technical Data

Gain	37 dB	37 dB	37 dB
Aperture angle	<2,5 ° (3 dB)	<2,5 ° (3 dB)	<2,5 ° (3 dB)
Wind load up to 20m mounting height	525 N	525 N	525 N
<b>General data</b>			
Reflector material	Aluminium, powder-coated	Aluminium, powder-coated	Aluminium, powder-coated
Reflector colour	Light grey (RAL 7035)	Basalt grey (RAL 7012)	red brown (RAL 8012)
Diameter	80 cm	80 cm	80 cm
Mounting clip	32...60 mm	32...60 mm	32...60 mm
Setting range elevation	16...50 °	16...50 °	16...50 °
Weight	3,8 kg	3,8 kg	3,8 kg

# Feed systems

## OC 01 E

Universal feed system,  
Single, light grey, feed  
diameter 40 mm



### characteristics

- UV-resistant housing in light grey
- Extendible weather protection
- Reception of DVB-S/S2/  
S2X
- 4G/LTE safe
- Very low noise figure

## OC 02 E

Universal feed system,  
Twin, light grey, feed  
diameter 40 mm



## OC 04 E

Universal feed system,  
Quattro, light grey,  
feed diameter 40 mm



## OC 06 E

Universal feed system,  
Quad, light grey, feed  
diameter 40 mm



### Technical Data

#### Electrical data

Input frequency	10,70...12,75 GHz	10,70...12,75 GHz	10,70...12,75 GHz	10,70...12,75 GHz
Oscillator frequency low band	9,75 GHz	9,75 GHz	9,75 GHz	9,75 GHz
Oscillator frequency high band	10,6 GHz	10,6 GHz	10,6 GHz	10,6 GHz
Switching voltage vertical	11...14 V DC	11...14 V DC	11...14 V DC	11...14 V DC
Switching voltage horizontal	16...20 V DC	16...20 V DC	16...20 V DC	16...20 V DC
Output frequency	950...2150 MHz	950...2150 MHz	950...2150 MHz	950...2150 MHz
Gain	>55 dB	>55 dB	>55 dB	>55 dB
Ripple	±4 dB	±4 dB	±4 dB	±4 dB
Noise figure	typ. 0,3 dB	typ. 0,3 dB	typ. 0,3 dB	typ. 0,3 dB
Polarization isolation	>22 dB	>22 dB	>22 dB	>22 dB
Image rejection	>40 dB	>40 dB	>40 dB	>40 dB
In band spurious level	max. -60 dBm	max. -60 dBm	max. -60 dBm	max. -60 dBm
L.O. phase noise @ 10 kHz	max. -80 dBc/Hz	max. -80 dBc/Hz	max. -80 dBc/Hz	max. -80 dBc/Hz
L.O. Frequency accuracy @ 25 °C	max. ±500 kHz	max. ±500 kHz	max. ±500 kHz	max. ±500 kHz
L.O. temperature drift @ 25°C	max. ±1,0 MHz	max. ±1,0 MHz	max. ±1,0 MHz	max. ±1,0 MHz
Output impedance	75 Ω	75 Ω	75 Ω	75 Ω
<b>Mechanical Data</b>				
Color	Light grey (RAL 7035)	Light grey (RAL 7035)	Light grey (RAL 7035)	Light grey (RAL 7035)
Feed diameter	40 mm	40 mm	40 mm	40 mm
With protective enclosure	Yes	Yes	Yes	Yes
<b>Connectors</b>				
RF-Output	1x F-female	2x F-female	4x F-female	4x F-female
<b>General data</b>				
Type	Single	Twin	Quattro	Quad
Subscriber	1 pcs.	2 pcs.	Depending on the multiswitch	4 pcs.
Integrated multi switch	Yes	Yes	No	Yes
Terrestrial feed	No	No	No	No
Input voltage	11...20V DC	11...20V DC	11...20V DC	11...20V DC
Current consumption	max. 95mA	max. 120mA	max. 240mA	max. 120mA
Operating Temperature	-30...+60°C	-30...+60°C	-30...+60°C	-30...+60°C
Weight	0.125kg	0.18kg	0,202kg	0.206kg
Dimensions (B)	115mm	138mm	138mm	138mm
Dimensions (H)	77mm	85,5mm	85,5mm	85,5mm
Dimensions (T)	61mm	61mm	61mm	61mm

# Receiver accessories

## OB 03

External IR receiver



### Technical Data

#### Connectors

RJ11	1 pcs.
------	--------

#### characteristics

- Concealed installation of the receiver possible
- Compatible with popular receivers with RJ 11 connector

IR-receiver with RJ 11-connection for OR 18, OR 18 HDMI, OR 180, OR 280.

## Accessories parabol offset antennas

### OF 85 0002

multifeed bar for 2 feed systems



### OF 85 0004

multifeed bar for 4 feed systems



#### Short description

- multifeed bar for 2 feed systems
- for offset antenna OA 85 G/H/I and OA 38 G/H/I, Ø 40 mm, and OA 100
- Variable alignment to different satellites

### Technical Data

Number feedsystems	2 pcs.	4 pcs.
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Type of offset antenna	OA 38, OA 85, OA 10A	OA 38, OA 85, OA 10A
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Diameter	40 mm	40 mm
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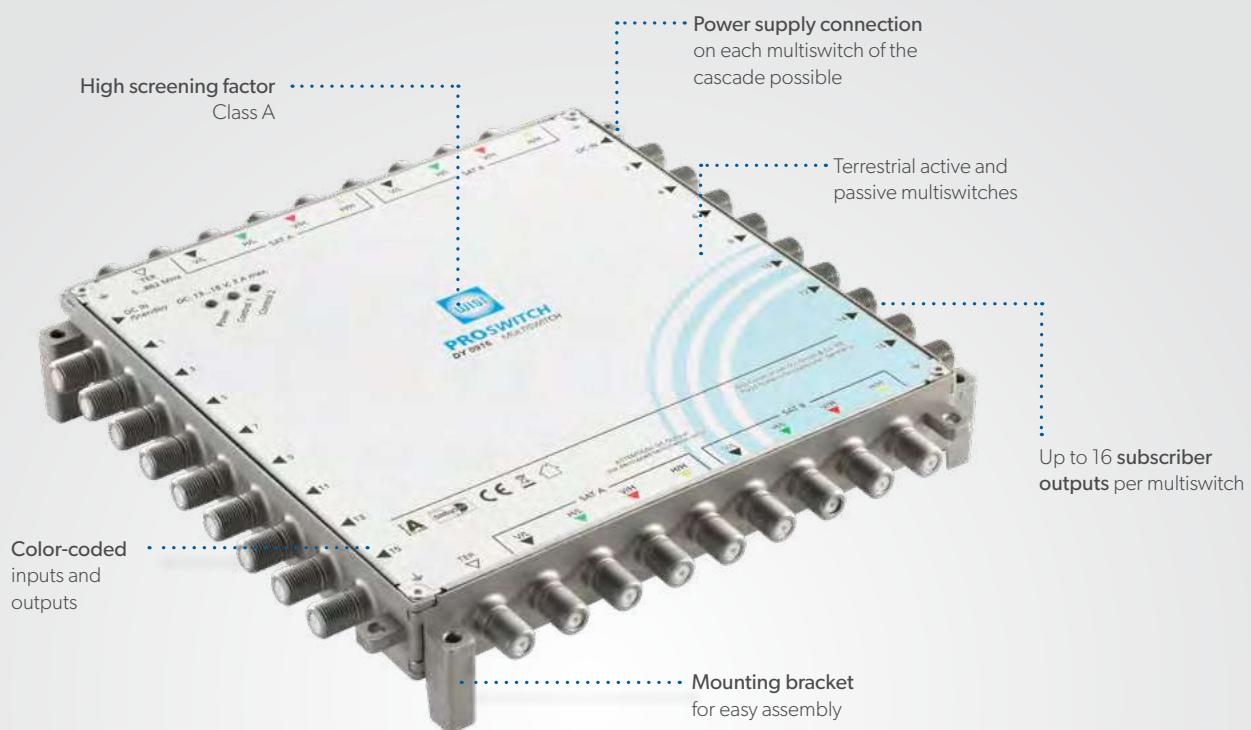
#### General data

Color	silver	silver
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# Multiswitch systems PROSWITCH

WISI Multiswitches:  
**Reliable technology  
for flexible use.**



## Auf einen Blick

- Stand alone multiswitch for the distribution of four SAT polarizations and terrestrial signals
- Quad LNB support for easy expansion of existing equipment
- Active terrestrial branch to distribute DVB-T/T2, DAB and FM without additional amplifier
- Integrated SAT amplifier for low attenuation at the subscriber port
- Pre-correction for compensation of cable slope
- Color coded inputs

# Surge protector

## DL 400

Surge protector



### characteristics

- 4 x SAT protection in one unit, module case sideways stackable for expansion to additional levels
- Over voltage protection for satellite distribution systems
- Typical operation site between (Quattro) LNB and cascaded multiswitches / headend or for protection of potential differences between dedicated building structures.
- remote power that SAT-trunk line via the lateral F-connector, powering to the output can be switched off
- overvoltage detection with LED- status indicator (only with active power supply)



### Technical Data

Connectors	
F socket (SAT / power supply)	8 / 1 pcs.
Frequency range	950...2200 MHz
input level max	115 dB $\mu$ V
Through loss	1...2 dB
return loss EN60728-3	Class A
Isolation trunk	35 dB (min. typ > 40 dB)
DiSEqC / 22 kHz passage	No
Surge protection	EN 61643-21
Rated leakage current (8/20 $\mu$ s)	5 kA
Protective level at 10 kA (8/20 $\mu$ s) Cat. C2	<30 V
Protective level at 1 kV/ $\mu$ s Cat. C3	<30 V
Protective level at 2.5 kV (10/350 $\mu$ s) Cat. D1	<30 V
Protective level at 6 kV (10/700 $\mu$ s) Cat. B2	<30 V
Alternating current stability	5 A
Overload error state	1
DC resistance input > output	1 $\Omega$
Highest perm. Voltage Uc	20 V DC
Rated current trunk	1000 mA
General data	
Current rates DC infeed	2500 mA max.
Power consumption	<0,2 W
Operating voltage DC	0...18 V DC
Protection class	IP20
Operating temperature range	0...55 °C
Screen class	A
Dimensions (width x height x depth)	140 x 85 x 38,5 mm
Weight	0,240 kg

Overvoltage protection for SAT distribution facilities as well as protection of SAT inputs at signal processing. With the DL400, all following components are protected from undesirable voltage peaks.

# Multiswitch 5 inputs, cascade

## DY 0508

PROSWITCH multiswitch 5 in 8, cascade & stand alone, TERR. passive



### characteristics

- Cascadable multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Useable as a stand alone device (DY 70 power supply required)
- Stand-by function with connected power supply, optional permanent operation
- Passive terrestrial path to feed in multimedia content or signals from a cable TV operator
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Stackable chassis for space-saving installation of various devices
- Colour-coded inputs and outputs
- Compatible with MagentaTV Sat, DIVEO and freenet TV

### Technical Data

#### SAT-IF trunk

Inputs SAT	4 pcs.
Outputs SAT	4 pcs.
Frequency range-SAT	950... 2150 MHz
Through loss SAT	1,1...3 dB
Decoupling SAT -SAT	40 dB typ.
Return loss SAT	>10 dB

#### Terrestrial trunk

Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	3,5...4,2 dB ( $\pm 1$ dB)
Isolation TERR - SAT	40 dB typ.
Return loss TERR	>15 dB

#### Subscriber outputs

Outputs	8 pcs.
Frequency range	5...2150 MHz
TERR type	Passive
Insertion loss SAT	3...-2,2 dB
Insertion TERR	24 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	90 dB $\mu$ V
Max. output level subscriber TERR	81 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>14 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 2.0

### Technical Data

Current consumption from receiver 70 mA

#### Connectors

F-female	20 pcs.
DC supply voltage	F-female
Color code	VL = black; HL = green; VH = red; HH = yellow

The DY 0508 is a cascadable multiswitch with five inputs for the distribution of one satellite and terrestrial signals. With the separately power supply DY 70 that powers the LNB, the multiswitch is useable as a stand alone device. The polarisations are available at five cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the eight subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The stand-by functionality minimizes power consumption by activating the multiswitch only in case the connected STB is tuned on.

# Multiswitch 5 inputs, cascade

## DY 0516

PROSWITCH multiswitch 5 in 16, cascade & stand alone,  
TERR. passive



KLASSE  
**A**  
CLASS

### characteristics

- Cascadable multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Useable as a stand alone device (DY 70 power supply required)
- Stand-by function with connected power supply, optional permanent operation
- Passive terrestrial path to feed in multimedia content or signals from a cable TV operator
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Stackable chassis for space-saving installation of various devices

### Technical Data

SAT-IF trunk	
Inputs SAT	4 pcs.
Outputs SAT	4 pcs.
Frequency range-SAT	950... 2150 MHz
Through loss SAT	1,6...4,5 dB
Decoupling SAT -SAT	40 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Through loss TERR	3,5...4,2 dB ( $\pm 1$ dB)
Isolation TERR - SAT	40 dB typ.
Return loss TERR	>15 dB
Subscriber outputs	
Outputs	16 pcs.
Frequency range	5...2150 MHz
TERR type	Passive
Insertion loss SAT	3...-2,2 dB
Insertion TERR	24 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	90 dB $\mu$ V
Max. output level subscriber TERR	81 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>14 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 2.0
Current consumption from receiver	100 mA
Connectors	
F-female	28 pcs.
DC supply voltage	F-female
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

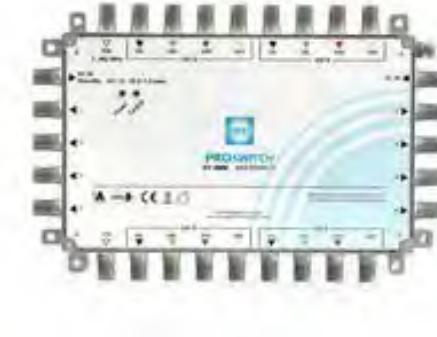
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	275 x 200 x 40 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.62 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DY 0516 is a cascadable multiswitch with five inputs for the distribution of one satellite and terrestrial signals. With the separately power supply DY 70 that powers the LNB, the multiswitch is useable as a stand alone device. The polarisations are available at five cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The stand-by functionality minimizes power consumption by activating the multiswitch only in case the connected STB is turned on.

# Multiswitch 9 inputs, cascade

## DY 0908

PROSWITCH multiswitch 9 in 8, cascade & Stand alone, TERR. passive



### characteristics

- Cascadable multiswitch for the distribution of 8 satellite polarisations and terrestrial signals
- Useable as a stand alone device (DY 70 power supply required)
- Stand-by function with connected power supply, optional permanent operation
- Passive terrestrial path to feed in multimedia content or signals from a cable TV operator
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Stackable chassis for space-saving installation of various devices
- Colour-coded inputs and outputs
- Compatible with MagentaTV Sat, DIVEO and freenet TV

### Technical Data

SAT-IF trunk	
Inputs SAT	8 pcs.
Outputs SAT	8 pcs.
Frequency range-SAT	950...2150 MHz
Through loss SAT	1,1...3 dB
Decoupling SAT -SAT	40 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Through loss TERR	3,5...4,2 dB ( $\pm 1$ dB)
Isolation TERR - SAT	40 dB typ.
Return loss TERR	>15 dB
Subscriber outputs	
Outputs	8 pcs.
Frequency range	5...2150 MHz
TERR type	Passive
Insertion loss SAT	3...-2,2 dB
Insertion TERR	24 dB
Max. output level subscriber SAT	90 dB $\mu$ V
Max. output level subscriber TERR	81 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>14 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 2.0
Current consumption from receiver	70 mA
Connectors	
F-female	28 pcs.
DC supply voltage	F-female
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	275 x 200 x 42 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.61 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DY 0908 is a cascadable multiswitch with nine inputs for the distribution of two satellites and terrestrial signals. With the separately power supply DY 70 that powers the LNB, the multiswitch is useable as a stand alone device. The polarisations are available at nine cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the eight subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The stand-by functionality minimizes power consumption by activating the multiswitch only in case the connected STB is turned on.

# Multiswitch 9 inputs, cascade

## DY 0916

PROSWITCH multiswitch 9 in 16, cascade & Stand alone,  
TERR. passive



### characteristics

- Cascadable multiswitch for the distribution of 8 satellite polarisations and terrestrial signals
- Useable as a stand alone device (DY 70 power supply required)
- Stand-by function with connected power supply, optional permanent operation
- Passive terrestrial path to feed in multimedia content or signals from a cable TV operator
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Stackable chassis for space-saving installation of various devices
- Colour-coded inputs and outputs
- Compatible with MagentaTV Sat, DIVEO and freenet TV

### Technical Data

SAT-IF trunk	
Inputs SAT	8 pcs.
Outputs SAT	8 pcs.
Frequency range-SAT	950...2150 MHz
Through loss SAT	1,6...4,5 dB
Decoupling SAT -SAT	40 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Through loss TERR	3,5...4,2 dB ( $\pm 1$ dB)
Isolation TERR - SAT	40 dB typ.
Return loss TERR	>15 dB
Subscriber outputs	
Outputs	16 pcs.
Frequency range	5...2150 MHz
TERR type	Passive
Insertion loss SAT	3...-2,2 dB
Insertion TERR	24 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	90 dB $\mu$ V
Max. output level subscriber TERR	81 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>14 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 2.0
Current consumption from receiver	50 mA
Connectors	
F-female	36 pcs.
DC supply voltage	F-female
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	275 x 265 x 40 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.86 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DY 0916 is a cascadable multiswitch with nine inputs for the distribution of two satellites and terrestrial signals. With the separately power supply DY 70 that powers the LNB, the multiswitch is useable as a stand alone device. The polarisations are available at nine cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The stand-by functionality minimizes power consumption by activating the multiswitch only in case the connected STB is turned on.

# Multiswitch 9 inputs, cascade

## DY 1708

PROSWITCH multiswitch 17 in 8, cascade & stand alone, TERR. passive



### Technical Data

#### SAT-IF trunk

Inputs SAT	16 pcs.
Outputs SAT	16 pcs.
Frequency range-SAT	950...2150 MHz
Through loss SAT	1...3 dB
Decoupling SAT -SAT	40 dB typ.
Return loss SAT	>10 dB

#### Terrestrial trunk

Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Through loss TERR	3,5...4,2 dB
Isolation TERR - SAT	40 dB typ.
Return loss TERR	>10 dB

#### Subscriber outputs

Outputs	8 pcs.
Frequency range	5...2150 MHz
TERR type	Passive
Insertion loss SAT	3...-2,2 dB
Insertion TERR	24 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	101 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 2.0
Current consumption from receiver	70 mA

#### Connectors

F-female	42 pcs.
DC supply voltage	F-female
Color code	VL = black; HL = green; VH = red; HH = yellow

### characteristics

- Cascadable multiswitch for the distribution of 16 satellite polarisations and terrestrial signals
- Useable as a stand alone device (DY 70 power supply required)
- Stand-by function with connected power supply, optional permanent operation
- Passive terrestrial path to feed in multimedia content or signals from a cable TV operator
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Stackable chassis for space-saving installation of various devices
- Colour-coded inputs and outputs
- Compatible with MagentaTV Sat, DIVEO and freenet TV

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	405 x 200 x 42 mm
Packaging volume sales unit	3.4 dm <sup>3</sup>
Gross weight sales unit	0.97 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	405 x 200 x 42 mm
Packaging volume shipping package	3,4

The DY 1708 is a cascadable multiswitch with 17 inputs for the distribution of four satellites and terrestrial signals. With the separately power supply DY 70 that powers the LNB, the multiswitch is useable as a stand alone device. The polarisations are available at 17 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 8 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The stand-by functionality minimizes power consumption by activating the multiswitch only in case the connected STB is turned on.

# Multiswitch 17 inputs, cascade

## DY 1716

PROSWITCH multiswitch 17 in 16, cascade & stand alone, TERR. passive



### characteristics

- Cascadable multiswitch for the distribution of 16 satellite polarisations and terrestrial signals
- Useable as a stand alone device (DY 70 power supply required)
- Stand-by function with connected power supply, optional permanent operation
- Passive terrestrial path to feed in multimedia content or signals from a cable TV operator
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Stackable chassis for space-saving installation of various devices
- Colour-coded inputs and outputs
- Compatible with MagentaTV Sat, DIVEO and freenet TV

### Technical Data

#### SAT-IF trunk

Inputs SAT	16 pcs.
Outputs SAT	16 pcs.
Frequency range-SAT	950...2150 MHz
Through loss SAT	1,5...4,5 dB
Decoupling SAT -SAT	40 dB typ.
Return loss SAT	>10 dB

#### Terrestrial trunk

Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Through loss TERR	3,5...4,2 dB
Isolation TERR - SAT	40 dB typ.
Return loss TERR	>10 dB

#### Subscriber outputs

Outputs	16 pcs.
Frequency range	5...2150 MHz
TERR type	Passive
Insertion loss SAT	3...-2,2 dB
Insertion TERR	24 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	101 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB

Control signal 14/18 V, 0/22 kHz, DiSEqC 2.0

Current consumption from receiver 50 mA

#### Connectors

F-female	50 pcs.
DC supply voltage	F-female
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	402 x 265 x 42 mm
Packaging volume sales unit	4.4 dm <sup>3</sup>
Gross weight sales unit	1.29 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	402 x 265 x 42 mm
Packaging volume shipping package	4,4

The DY 1716 is a cascadable multiswitch with 17 inputs for the distribution of four satellites and terrestrial signals. With the separately power supply DY 70 that powers the LNB, the multiswitch is useable as a stand alone device. The polarisations are available at 17 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The stand-by functionality minimizes power consumption by activating the multiswitch only in case the connected STB is turned on.

# Amplifiers PROSWITCH

## DY 40

PROSWITCH SAT amplifier



### Technical Data

#### SAT

Frequency range-SAT	950...2150 MHz
Gain SAT	10...30 dB
Output level	115 dB $\mu$ V (3.order EN50083-3, 35 dB)
Attenuator SAT	0...20 dB
Slope	0,4,8,12 dB
Isolation trunk	40 dB typ.

#### Connectors

F-female	9 pcs.
DC supply voltage	F-female

#### General data

Operating voltage DC	12...18 V DC
Current consumption	200 mA
DC bypass	Yes
Screening factor	Class A, EN 50083-2
Dimensions (width x height x depth)	140 x 85 x 38,5 mm
Operating temperature range	-20...+50 °C
Weight	0,290 kg

### characteristics

- 4 SAT polarizations in a compact form factor
- Gain from 30 dB
- Indendend attenuation of 0...20 dB per input
- Selectable pre equalization to compensate frequency depending cable loss
- Simple extension up to 16 polarizations
- High screening efficiency according to Class A
- Colour-coded inputs and outputs

The DY 40 is a SAT amplifier for 4 polarization planes, perfectly suited for the construction of large multiswitch systems. The gain is 30 dB in the frequency range from 950...2150 MHz. The gain can be reduced by up to 20 dB in 2 dB increments using buttons. A slope setting to compensate for the frequency-related cable attenuation is possible up to 12 dB. Power can be supplied via the trunk lines, or alternatively with the separate power supply unit DY 70. Mechanically compatible to all PROSWITCH devices and the overvoltage protection DL 400.

# Splitter SAT-RF

## DM 50

SAT splitter

### characteristics

- 2-fold tap for multiswitch cascades
- Distribution of a satellite and terrestrial signals
- 13 dB junctionattenuation



## DM 90

SAT splitter



### Technical Data

Frequency range	5...862/950...2400 MHz (TERR/SAT)	5...862/950...2400 MHz (TERR/SAT)
Through loss	1,0...1,8/1,1...2,7 dB (TERR/SAT)	1,5...3,0/2...3,5 dB (TERR/SAT)
TAP loss	13...13,5/12,2...13,7 dB (TERR/SAT)	13...14/14...12 dB (TERR/SAT)
Isolation	35/35 dB (trunk, TERR/SAT)	35/38 dB (trunk, TERR/SAT)
Return loss	10 dB (min., SAT)	10 dB (min., SAT)
<b>Connectors</b>		
F-female	20 pcs.	36 pcs.
<b>General data</b>		
Screening factor	Class A, EN 50083-2	Class A, EN 50083-2
DC Bypass IN/OUT 1A/30V	Yes	Yes

# Accessories PROSWITCH

## DY 70

Wall wart 230 V AC, 13 V DC



### characteristics

- Operating voltage 230 V AC
- Output voltage 13 V DC
- Output current 2.3 A, short-circuit proof

The DY 70 is a short circuit-proofed power supply operating at an input voltage of 230 V AC, 50/60 Hz and provides an output voltage of 13 V DC. It is used in combination with multiswitches of the PRO-SWITCH series, as well as the amplifier DY 40 and surge protector DL 400.

### Technical Data

General data	
F-plug	1 pcs.
Input voltage	100...240 V AC (50/60 Hz)
Operating range	90...264 V AC (50/60 Hz)
Output voltage	13 V DC
Max. output current	2,3 A
Max. output power	<30 W
Average operational efficiency	86,9 %
Low load efficiency (10%)	76,2 %

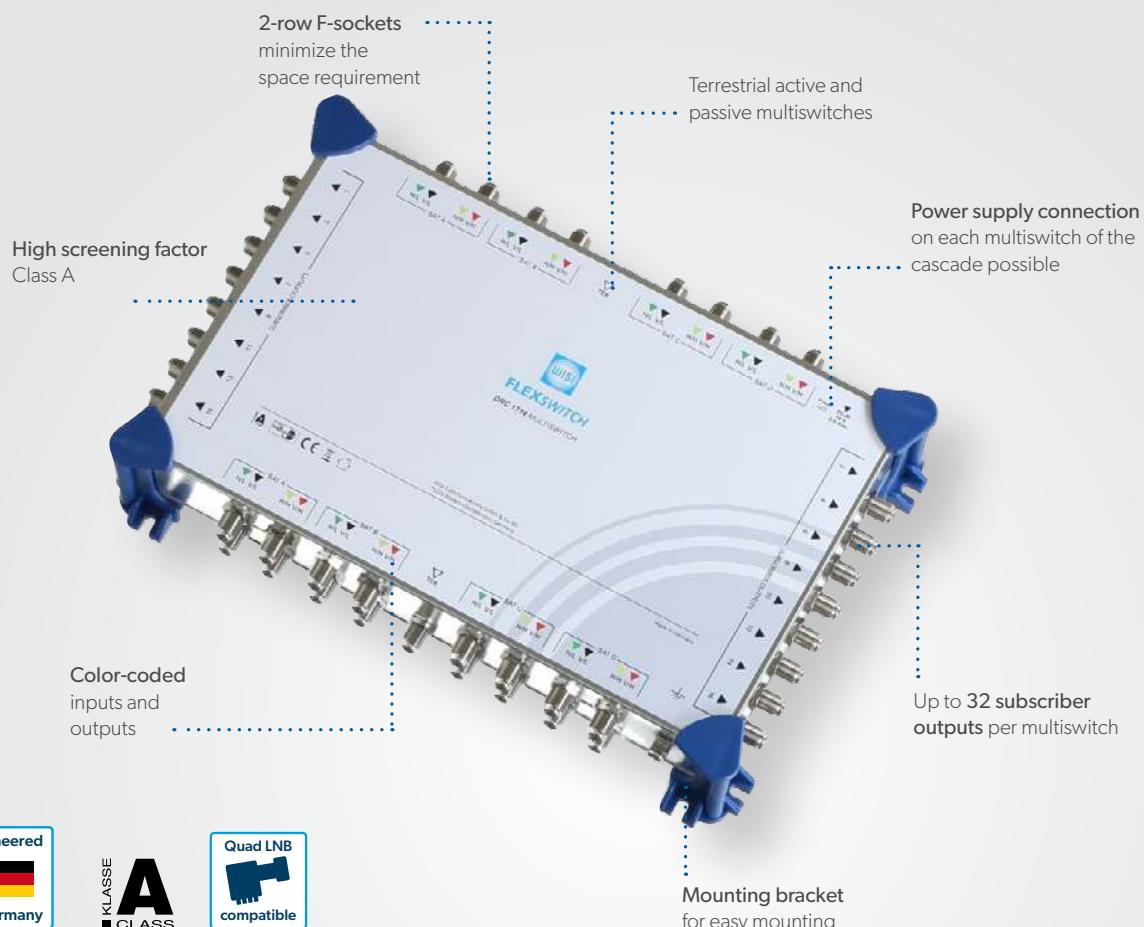
### Technical Data

Max. humidity, non condensing	90 %
Protection class	II
Protection class system EN 60529 (DIN 40050)	IP 41
Electrical safety standard	EN 60065, EN 60950
EMC	EN 50083-2
Dimensions W x H x D	72,2 x 42,2 x 68,2 mm
Operating temperature range	-20...+40 °C
Storage temperature	-20...+80 °C



# Multiswitch systems FLEXSWITCH

WISI Multiswitches:  
**Reliable technology  
for flexible use.**



## At a glance

- Stand alone multiswitch for the distribution of four SAT polarizations and terrestrial signals
- Quad LNB support for easy expansion of existing equipment
- Active terrestrial branch to distribute DVB-T/T2, DAB and FM without additional amplifier
- Integrated SAT amplifier for low attenuation at the subscriber port
- Pre-correction for compensation of cable slope
- Color coded inputs

# Multiswitch 5 inputs, stand alone

## DRS 0508

FLEXSWITCH multiswitch 5 in 8, stand alone



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	8 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	0...-5 dB
Insertion TERR	2 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	90 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	30 mA
<b>Connectors</b>	
F-female	13 pcs.
Color code	VL = black; HL = green; VH = red; HH = yellow
<b>General data</b>	
Power indicator	LED
Quad LNB support	Yes
LNB supply voltage	14 V/18 V (22 kHz)
Current consumption LNB	max. 500 mA

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	330 x 115 x 65 mm
Packaging volume sales unit	2.2 dm <sup>3</sup>
Gross weight sales unit	0.56 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	330 x 115 x 60 mm
Packaging volume shipping package	2,2

The DRS 0508 is a stand alone multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The stand alone device is equipped with an integrated power supply which ensures the LNB powering. Additionally integrated is a 22 KHz generator which allows the usage of Quad-LNBs. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the eight subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRS 0508 is realised through an active terrestrial and satellite path.

### characteristics

- Stand alone multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Quad-LNB support
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, stand alone

## DRS 0512

FLEXSWITCH multiswitch 5 in 12, stand alone



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	12 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	1...4 dB
Insertion TERR	2 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	84 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	30 mA
<b>Connectors</b>	
F-female	17 pcs.
Color code	VL = black; HL = green; VH = red; HH = yellow
<b>General data</b>	
Power indicator	LED
Quad LNB support	Yes
LNB supply voltage	14 V/18 V (22 kHz)
Current consumption LNB	max. 500 mA

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	330 x 115 x 65 mm
Packaging volume sales unit	4.7 dm <sup>3</sup>
Gross weight sales unit	0.7 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	390 x 120 x 60 mm
Packaging volume shipping package	4,7

The DRS 0512 is a stand alone multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The stand alone device is equipped with an integrated power supply which ensures the LNB powering. Additionally integrated is a 22 KHz generator which allows the usage of Quad-LNBs. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 12 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRS 0512 is realised through an active terrestrial and satellite path.

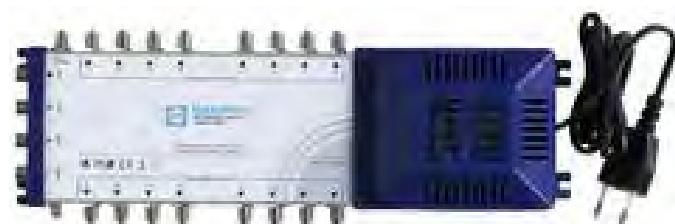
### characteristics

- Stand alone multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Quad-LNB support
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, stand alone

## DRS 0516

FLEXSWITCH multiswitch 5 in 16, stand alone



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	16 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	1...4 dB
Insertion TERR	2 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	84 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	30 mA
<b>Connectors</b>	
F-female	21 pcs.
Color code	VL = black; HL = green; VH = red; HH = yellow
<b>General data</b>	
Power indicator	LED
Quad LNB support	Yes
LNB supply voltage	14 V/18 V (22 kHz)
Current consumption LNB	max. 500 mA

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	390 x 120 x 65 mm
Packaging volume sales unit	4.7 dm <sup>3</sup>
Gross weight sales unit	0.72 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	390 x 120 x 60 mm
Packaging volume shipping package	4,7

The DRS 0516 is a stand alone multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The stand alone device is equipped with an integrated power supply which ensures the LNB powering. Additionally integrated is a 22 KHz generator which allows the usage of Quad-LNBs. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRS 0516 is realised through an active terrestrial and satellite path.

### characteristics

- Stand alone multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Quad-LNB support
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, stand alone

## DRS 0524

FLEXSWITCH multiswitch 5 in 24, stand alone



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	24 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	5...0 dB
Insertion TERR	2 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	84 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	30 mA
<b>Connectors</b>	
F-female	29 pcs.
Color code	VL = black; HL = green; VH = red; HH = yellow
<b>General data</b>	
Power indicator	LED
Quad LNB support	Yes
LNB supply voltage	14 V/18 V (22 kHz)
Current consumption LNB	max. 500 mA

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	370 x 235 x 65 mm
Packaging volume sales unit	6 dm <sup>3</sup>
Gross weight sales unit	1.06 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	370 x 235 x 70 mm
Packaging volume shipping package	6

The DRS 0524 is a stand alone multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The stand alone device is equipped with an integrated power supply which ensures the LNB powering. Additionally integrated is a 22 KHz generator which allows the usage of Quad-LNBs. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 24 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRS 0524 is realised through an active terrestrial and satellite path.

### characteristics

- Stand alone multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Quad-LNB support
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, stand alone

## DRS 0532

FLEXSWITCH multiswitch 5 in 32, stand alone



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	32 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	5...0 dB
Insertion TERR	2 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	84 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	30 mA
<b>Connectors</b>	
F-female	37 pcs.
Color code	VL = black; HL = green; VH = red; HH = yellow
<b>General data</b>	
Power indicator	LED
Quad LNB support	Yes
LNB supply voltage	14 V/18 V (22 kHz)
Current consumption LNB	max. 500 mA

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	390 x 120 x 65 mm
Packaging volume sales unit	6 dm <sup>3</sup>
Gross weight sales unit	1.1 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	370 x 235 x 70 mm
Packaging volume shipping package	6

The DRS 0532 is a stand alone multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The stand alone device is equipped with an integrated power supply which ensures the LNB powering. Additionally integrated is a 22 KHz generator which allows the usage of Quad-LNBs. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 32 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRS 0532 is realised through an active terrestrial and satellite path.

### characteristics

- Stand alone multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Quad-LNB support
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, receiver powered

## DRR 0508

FLEXSWITCH multiswitch, receiver power, 5 in 8



**A**  
KLASSE  
CLASS

Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	8 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	0...-5 dB
Insertion TERR	18 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	30 mA
<b>Connectors</b>	
F-female	13 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow
<b>General data</b>	
Power indicator	LED
Operating voltage	receiver powered
Power consumption max.	<0,5 W

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	115 x 115 x 40 mm
Packaging volume sales unit	0.53 dm <sup>3</sup>
Gross weight sales unit	0.28 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	115 x 115 x 40 mm
Packaging volume shipping package	0,53

The DRR 0508 is a receiver powered multiswitch with five inputs for the distribution of one satellite and terrestrial signals. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the eight subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRR 0508 is realised through an active satellite path. Through the passive terrestrial path, it is possible to feed in multimedia services like "LAN over Coax" or signals from a headend system. The LNB is powered by the switching voltage of the connected receivers and an additional power supply is not required, which reduces the operating costs.

### characteristics

- Receiver powered multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Power supply-free usage
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, receiver powered

## DRR 0516

FLEXSWITCH multiswitch, receiver power, 5 in 16



### Technical Data

SAT-IF trunk	
Inputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
Subscriber outputs	
Outputs	16 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	1...-4 dB
Insertion TERR	24 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	30 mA
Connectors	
F-female	21 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow
General data	
Power indicator	LED
Operating voltage	receiver powered
Power consumption max.	<0,5 W

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	270 x 170 x 65 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.56 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DRR 0516 is a receiver powered multiswitch with five inputs for the distribution of one satellite and terrestrial signals. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRR 0516 is realised through an active satellite path. Through the passive terrestrial path, it is possible to feed in multimedia services like "LAN over Coax" or signals from a headend system. The LNB is powered by the switching voltage of the connected receivers and an additional power supply is not required, which reduces the operating costs.

### characteristics

- Receiver powered multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Power supply-free usage
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, cascade

## DRC 0508

FLEXSWITCH multiswitch 5 in 8, cascade, TERR. active



### Technical Data

SAT-IF trunk	
Inputs SAT	4 pcs.
Outputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	1...2 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Through loss TERR	2 dB ( $\pm 1$ dB)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
Subscriber outputs	
Outputs	8 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	3...0 dB
Insertion TERR	0 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	84 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	35 mA
Connectors	
F-female	18 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	270 x 170 x 65 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.54 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DRC 0508 is a cascadable multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The polarisations are available at five cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the eight subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0508 is realised through an active terrestrial and satellite path. The LNB can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, cascade

## DRC 0512

FLEXSWITCH multiswitch 5 in 12, cascade, TERR. active



KLASSE  
**A**  
CLASS

Technical Data		Packaging Data	
SAT-IF trunk			
Inputs SAT	4 pcs.	Sales unit	1 pcs.
Outputs SAT	4 pcs.	Dimensions (WxHxD) sales unit	270 x 170 x 70 mm
Frequency range-SAT	950... 2400 MHz	Packaging volume sales unit	3.2 dm <sup>3</sup>
Through loss SAT	2...4 dB	Gross weight sales unit	0.7 kg
Decoupling SAT -SAT	30 dB typ.	Shipping unit	1 pcs.
Return loss SAT	>10 dB	Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Terrestrial trunk		Packaging volume shipping package	3,2
Inputs TERR	1 pcs.		
Outputs TERR	1 pcs.		
Frequency range TERR	40... 862 MHz		
Through loss TERR	3 dB ( $\pm 2$ dB)		
Isolation TERR - SAT	30 dB typ.		
Return loss TERR	>10 dB		
Subscriber outputs			
Outputs	12 pcs.		
Frequency range	40...2400 MHz		
TERR type	active		
Insertion loss SAT	4...1 dB		
Insertion TERR	0 dB ( $\pm 3$ dB)		
Max. output level subscriber SAT	102 dB $\mu$ V		
Max. output level subscriber TERR	84 dB $\mu$ V		
Return loss subscriber SAT	>10 dB		
Return loss subscriber TERR	>10 dB		
Control signal	14/18 V, 0/22 kHz		
Current consumption from receiver	35 mA		
Connectors			
F-female	22 pcs.		
DC supply voltage	Connector type DC 5.5/2.1 mm		
Color code	VL = black; HL = green; VH = red; HH = yellow		

The DRC 0512 is a cascadable multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The polarisations are available at five cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 12 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0512 is realised through an active terrestrial and satellite path. The LNB can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, cascade

## DRC 0516

FLEXSWITCH multiswitch 5 in 16, cascade, TERR. active



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	4 pcs.
Outputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...4 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Through loss TERR	3 dB ( $\pm 2$ dB)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
Subscriber outputs	
Outputs	16 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	4...1 dB
Insertion TERR	0 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	84 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	35 mA
Connectors	
F-female	26 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	270 x 170 x 65 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.7 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DRC 0516 is a cascadable multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The polarisations are available at five cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0516 is realised through an active terrestrial and satellite path. The LNB can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, cascade

## DRC 0524

FLEXSWITCH multiswitch 5 in 24, cascade, TERR. active



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	4 pcs.
Outputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...6 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Through loss TERR	2 dB ( $\pm 2$ dB)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	24 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	6...0 dB
Insertion TERR	2 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	91 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	35 mA
<b>Connectors</b>	
F-female	34 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	270 x 170 x 65 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.8 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DRC 0524 is a cascadable multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The polarisations are available at five cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 24 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0524 is realised through an active terrestrial and satellite path. The LNB can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 5 inputs, cascade

## DRC 0532

FLEXSWITCH multiswitch 5 in 32, cascade, TERR. active



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	4 pcs.
Outputs SAT	4 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...6 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	40... 862 MHz
Through loss TERR	2 dB ( $\pm 2$ dB)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	32 pcs.
Frequency range	40...2400 MHz
TERR type	active
Insertion loss SAT	6...0 dB
Insertion TERR	2 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	91 dB $\mu$ V
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz
Current consumption from receiver	35 mA
<b>Connectors</b>	
F-female	42 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	270 x 170 x 50 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.84 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DRC 0532 is a cascadable multiswitch with five inputs for the distribution of one satellite and terrestrial signals. The polarisations are available at five cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 32 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0532 is realised through an active terrestrial and satellite path. The LNB can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 4 satellite polarisations and terrestrial signals
- Active terrestrial path to distribute DVB-T/T2, DAB and FM without an additional amplifier
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 9 inputs, cascade

## DRC 0908

FLEXSWITCH multiswitch 9 in 8, cascade, TERR. passive



KLASSE  
■ CLASS  
**A**

### Technical Data

SAT-IF trunk	
Inputs SAT	8 pcs.
Outputs SAT	8 pcs.
Frequency range-SAT	950...2400 MHz
Through loss SAT	1 dB ( $\pm 1$ dB)
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Through loss TERR	2 dB ( $\pm 2$ dB)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
Subscriber outputs	
Outputs	8 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	0...-2 dB
Insertion TERR	24 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	45 mA
Connectors	
F-female	17 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	270 x 170 x 70 mm
Packaging volume sales unit	3.2 dm <sup>3</sup>
Gross weight sales unit	0.68 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 170 x 70 mm
Packaging volume shipping package	3,2

The DRC 0908 is a cascadable multiswitch with nine inputs for the distribution of two satellites and terrestrial signals. The polarisations are available at nine cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the eight subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0908 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 8 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 9 inputs, cascade

## DRC 0912

FLEXSWITCH multiswitch 9 in 12, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	8 pcs.
Outputs SAT	8 pcs.
Frequency range-SAT	950...2400 MHz
Through loss SAT	1...3 dB ( $\pm 2$ dB)
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Through loss TERR	4 dB ( $\pm 2$ dB)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
Subscriber outputs	
Outputs	12 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	2...0 dB
Insertion TERR	28 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	45 mA
Connectors	
F-female	21 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	370 x 240 x 65 mm
Packaging volume sales unit	6 dm <sup>3</sup>
Gross weight sales unit	0.92 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	370 x 235 x 70 mm
Packaging volume shipping package	6

The DRC 0912 is a cascadable multiswitch with nine inputs for the distribution of two satellites and terrestrial signals. The polarisations are available at nine cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 12 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0912 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 8 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 9 inputs, cascade

## DRC 0916

FLEXSWITCH multiswitch 9 in 16, cascade, TERR. passive



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	8 pcs.
Outputs SAT	8 pcs.
Frequency range-SAT	950...2400 MHz
Through loss SAT	4 dB ( $\pm 2$ dB)
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Through loss TERR	-2 dB ( $\pm 2$ dB)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	16 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	2...0 dB
Insertion TERR	28 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	45 mA
<b>Connectors</b>	
F-female	25 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	370 x 240 x 65 mm
Packaging volume sales unit	6 dm <sup>3</sup>
Gross weight sales unit	0.94 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	370 x 235 x 70 mm
Packaging volume shipping package	6

The DRC 0916 is a cascadable multiswitch with nine inputs for the distribution of two satellites and terrestrial signals. The polarisations are available at nine cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0916 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 8 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 9 inputs, cascade

## DRC 0924

FLEXSWITCH multiswitch 9 in 24, cascade, TERR. passive



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	8 pcs.
Outputs SAT	8 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...4 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	4...6 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	24 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	2...0 dB
Insertion TERR	33 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	45 mA
<b>Connectors</b>	
F-female	33 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	350 x 330 x 65 mm
Packaging volume sales unit	8 dm <sup>3</sup>
Gross weight sales unit	1.28 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	350 x 330 x 70 mm
Packaging volume shipping package	8

The DRC 0924 is a cascadable multiswitch with nine inputs for the distribution of two satellites and terrestrial signals. The polarisations are available at nine cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 24 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0924 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 8 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 9 inputs, cascade

## DRC 0932

FLEXSWITCH multiswitch 9 in 32, cascade, TERR. passive



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	8 pcs.
Outputs SAT	8 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...4 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	4...6 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
<b>Subscriber outputs</b>	
Outputs	32 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	2...0 dB
Insertion TERR	32 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	45 mA
<b>Connectors</b>	
F-female	41 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	370 x 240 x 65 mm
Packaging volume sales unit	8 dm <sup>3</sup>
Gross weight sales unit	1.4 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	350 x 330 x 70 mm
Packaging volume shipping package	8

The DRC 0932 is a cascadable multiswitch with nine inputs for the distribution of two satellites and terrestrial signals. The polarisations are available at nine cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 32 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 0932 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 8 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 13 inputs, cascade

## DRC 1308

FLEXSWITCH multiswitch 13 in 8, cascade, TERR. passive



Technical Data	
<b>SAT-IF trunk</b>	
Inputs SAT	12 pcs.
Outputs SAT	12 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	1...2 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB
<b>Terrestrial trunk</b>	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	2...3 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB
<b>Subscriber outputs</b>	
Outputs	8 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	4...0 dB
Insertion TERR	24 dB ( $\pm 2$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA
<b>Connectors</b>	
F-female	21 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	367 x 235 x 67 mm
Packaging volume sales unit	6 dm <sup>3</sup>
Gross weight sales unit	0.93 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	370 x 235 x 70 mm
Packaging volume shipping package	6

The DRC 1308 is a cascadable multiswitch with 13 inputs for the distribution of three satellites and terrestrial signals. The polarisations are available at 13 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the eight subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1308 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 12 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 13 inputs, cascade

## DRC 1312

FLEXSWITCH multiswitch 13 in 12, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	12 pcs.
Outputs SAT	12 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	1...3 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	2...5 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB
Subscriber outputs	
Outputs	12 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	3...0 dB
Insertion TERR	28 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA
Connectors	
F-female	25 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	370 x 240 x 65 mm
Packaging volume sales unit	6 dm <sup>3</sup>
Gross weight sales unit	1.2 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	370 x 235 x 70 mm
Packaging volume shipping package	6

The DRC 1312 is a cascadable multiswitch with 13 inputs for the distribution of three satellites and terrestrial signals. The polarisations are available at 13 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 12 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1312 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 12 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 13 inputs, cascade

## DRC 1316

FLEXSWITCH multiswitch 13 in 16, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

#### SAT-IF trunk

Inputs SAT	12 pcs.
Outputs SAT	12 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	1...3 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB

#### Terrestrial trunk

Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	2...5 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB

#### Subscriber outputs

Outputs	16 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	3...0 dB
Insertion TERR	28 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA

#### Connectors

F-female	29 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	350 x 350 x 65 mm
Packaging volume sales unit	8 dm <sup>3</sup>
Gross weight sales unit	1.26 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	350 x 330 x 70 mm
Packaging volume shipping package	8

The DRC 1316 is a cascadable multiswitch with 13 inputs for the distribution of three satellites and terrestrial signals. The polarisations are available at 13 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1316 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

#### characteristics

- Cascadable multiswitch for the distribution of 12 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 13 inputs, cascade

## DRC 1324

FLEXSWITCH multiswitch 13 in 24, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	12 pcs.
Outputs SAT	12 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...5 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	3...5 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB
Subscriber outputs	
Outputs	24 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	2...0 dB
Insertion TERR	33 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA
Connectors	
F-female	37 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	350 x 330 x 65 mm
Packaging volume sales unit	8 dm <sup>3</sup>
Gross weight sales unit	1.76 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	350 x 330 x 70 mm
Packaging volume shipping package	8

The DRC 1324 is a cascadable multiswitch with 13 inputs for the distribution of three satellites and terrestrial signals. The polarisations are available at 13 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 24 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1324 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 12 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 13 inputs, cascade

## DRC 1332

FLEXSWITCH multiswitch 13 in 32, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

#### SAT-IF trunk

Inputs SAT	12 pcs.
Outputs SAT	12 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...5 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB

#### Terrestrial trunk

Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	3...5 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB

#### Subscriber outputs

Outputs	32 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	2...0 dB
Insertion TERR	33 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA

#### Connectors

F-female	45 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	350 x 350 x 65 mm
Packaging volume sales unit	8 dm <sup>3</sup>
Gross weight sales unit	1.76 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	350 x 330 x 70 mm
Packaging volume shipping package	8

The DRC 1332 is a cascadable multiswitch with 13 inputs for the distribution of three satellites and terrestrial signals. The polarisations are available at 13 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 32 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1332 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

#### characteristics

- Cascadable multiswitch for the distribution of 12 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 17 inputs, cascade

## DRC 1708

FLEXSWITCH multiswitch 17 in 8, cascade, TERR, passive



KLASSE  
**A**  
CLASS

Technical Data		Packaging Data	
SAT-IF trunk			
Inputs SAT	16 pcs.	Sales unit	1 pcs.
Outputs SAT	16 pcs.	Dimensions (WxHxD) sales unit	350 x 160 x 70 mm
Frequency range-SAT	950... 2400 MHz	Packaging volume sales unit	3.7 dm <sup>3</sup>
Through loss SAT	1...2 dB	Gross weight sales unit	0.86 kg
Decoupling SAT -SAT	30 dB typ.	Shipping unit	1 pcs.
Return loss SAT	> 10 dB	Dimensions (WxHxD) shipping unit	350 x 155 x 70 mm
Terrestrial trunk		Packaging volume shipping package	3,7
Inputs TERR	1 pcs.		
Outputs TERR	1 pcs.		
Frequency range TERR	5... 862 MHz		
Through loss TERR	2...3 dB		
Isolation TERR - SAT	30 dB typ.		
Return loss TERR	> 10 dB		
Subscriber outputs			
Outputs	8 pcs.	The DRC 1708 is a cascadable multiswitch with 17 inputs for the distribution of four satellites and terrestrial signals. The polarisations are available at 17 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the eight subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1708 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.	
Frequency range	5...2400 MHz		
TERR type	Passive		
Insertion loss SAT	2...0 dB		
Insertion TERR	24 dB ( $\pm 2$ dB)		
Max. output level subscriber SAT	102 dB $\mu$ V		
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)		
Return loss subscriber SAT	>10 dB		
Return loss subscriber TERR	>10 dB		
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0		
Current consumption from receiver	55 mA		
Connectors			
F-female	25 pcs.		
DC supply voltage	Connector type DC 5.5/2.1 mm		
Color code	VL = black; HL = green; VH = red; HH = yellow		

### characteristics

- Cascadable multiswitch for the distribution of 16 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 17 inputs, cascade

## DRC 1712

FLEXSWITCH multiswitch 17 in 12, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	16 pcs.
Outputs SAT	16 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	1...3 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	2...5 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB
Subscriber outputs	
Outputs	12 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	3...0 dB
Insertion TERR	28 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA
Connectors	
F-female	29 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	370 x 240 x 65 mm
Packaging volume sales unit	6 dm <sup>3</sup>
Gross weight sales unit	1.22 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	370 x 235 x 70 mm
Packaging volume shipping package	6

The DRC 1712 is a cascadable multiswitch with 17 inputs for the distribution of four satellites and terrestrial signals. The polarisations are available at 17 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 12 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1712 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 16 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 17 inputs, cascade

## DRC 1716

FLEXSWITCH multiswitch 17 in 16, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	16 pcs.
Outputs SAT	16 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	1...3 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	2...5 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB
Subscriber outputs	
Outputs	16 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	3...0 dB
Insertion TERR	28 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA
Connectors	
F-female	33 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	370 x 240 x 65 mm
Packaging volume sales unit	6 dm <sup>3</sup>
Gross weight sales unit	1.22 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	370 x 235 x 70 mm
Packaging volume shipping package	6

The DRC 1716 is a cascadable multiswitch with 17 inputs for the distribution of four satellites and terrestrial signals. The polarisations are available at 17 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 16 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1716 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 16 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 17 inputs, cascade

## DRC 1724

FLEXSWITCH multiswitch 17 in 24, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

#### SAT-IF trunk

Inputs SAT	16 pcs.
Outputs SAT	16 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...5 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB

#### Terrestrial trunk

Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	3...5 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB

#### Subscriber outputs

Outputs	24 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	2...0 dB
Insertion TERR	33 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA

#### Connectors

F-female	41 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	330 x 350 x 67 mm
Packaging volume sales unit	8 dm <sup>3</sup>
Gross weight sales unit	1.79 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	350 x 330 x 70 mm
Packaging volume shipping package	8

The DRC 1724 is a cascadable multiswitch with 17 inputs for the distribution of four satellites and terrestrial signals. The polarisations are available at 17 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 24 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1724 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

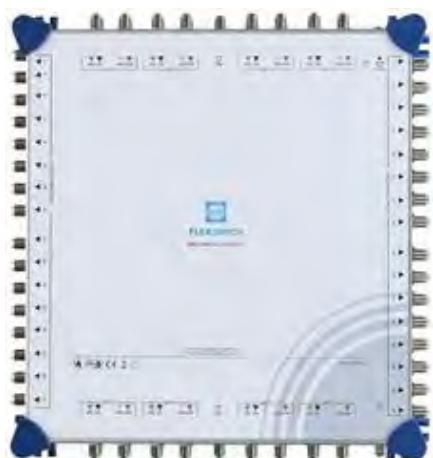
#### characteristics

- Cascadable multiswitch for the distribution of 16 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Multiswitch 17 inputs, cascade

## DRC 1732

FLEXSWITCH multiswitch 17 in 32, cascade, TERR. passive



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	16 pcs.
Outputs SAT	16 pcs.
Frequency range-SAT	950... 2400 MHz
Through loss SAT	2...6 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	> 10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Outputs TERR	1 pcs.
Frequency range TERR	5... 862 MHz
Through loss TERR	3...5 dB
Isolation TERR - SAT	30 dB typ.
Return loss TERR	> 10 dB
Subscriber outputs	
Outputs	32 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	2...0 dB
Insertion TERR	33 dB ( $\pm 3$ dB)
Max. output level subscriber SAT	102 dB $\mu$ V
Max. output level subscriber TERR	50...110 dB $\mu$ V (passive)
Return loss subscriber SAT	>10 dB
Return loss subscriber TERR	>10 dB
Control signal	14/18 V, 0/22 kHz, DiSEqC 1.0
Current consumption from receiver	55 mA
Connectors	
F-female	49 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
Color code	VL = black; HL = green; VH = red; HH = yellow

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	350 x 350 x 65 mm
Packaging volume sales unit	8 dm <sup>3</sup>
Gross weight sales unit	1.82 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	350 x 330 x 70 mm
Packaging volume shipping package	8

The DRC 1732 is a cascadable multiswitch with 17 inputs for the distribution of four satellites and terrestrial signals. The polarisations are available at 17 cascade outputs for the installation of further multiswitches. Commercially available DVB-S/S2 set-top-boxes or TVs with an integrated receiver can be used at the 32 subscriber outputs. Inserted terrestrial signals like DVB-T/T2, DAB or FM are available at each subscriber output as well. The very low insertion loss of the DRC 1732 is realised through an active satellite path. Through the passive terrestrial path it is possible to feed in multimedia services like "LAN over Coax", or signals from a central headend system. The LNBs can be powered by previously installed amplifiers, or the available power supply DRP 1533.

### characteristics

- Cascadable multiswitch for the distribution of 16 satellite polarisations and terrestrial signals
- Passive terrestrial path
- Integrated SAT amplifier for low insertion loss
- Pre-emphasis to compensate the cable loss at high frequencies
- Terrestrial signals available at the receiver without any power supply of the multiswitch
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F-connectors
- Colour-coded inputs and outputs
- Made in Germany
- Compatible with MagentaTV Sat, DIVEO and freenet TV

# Amplifiers FLEXSWITCH

## DRA 0505

FLEXSWITCH line amplifier, for one satellite



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	4 pcs.
Frequency range-SAT	950...2200 MHz
Gain SAT	22...26 dB
Attenuation SAT	0...10 dB
Max. output level SAT	116 dB $\mu$ V (IMA3)
Equalization SAT	4 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	12 dB
Noise figure	8 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Frequency range TERR	10...862 MHz
Gain TERR	20 dB
Attenuation TERR	0...10 dB
Max. output level TERR	110 dB $\mu$ V (IMA3)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	12 dB
Noise figure	5 dB
Connectors	
F-female	10 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
General data	
Operating voltage	12...18 V DC
Current consumption	220 mA
Screening factor	Class A, according to EN 50083-2
Impedance	75 $\Omega$
Operating temperature range	-20...+50 °C
Weight	0,35 kg
Dimensions (width x height x depth)	160 x 127 x 61 mm

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	265 x 170 x 70 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.48 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The DRA 0505 is an amplifier for 4 polarizations of one satellite and terrestrial signals. With a gain of 26 dB the DRA 0505 is optimally suited for use as line amplifier in multi-switch cascades. The gain can be individually reduced by 10 dB at each input, in order to compensate differences in level between the individual polarizations. The supply voltage can be realized either locally, through the optional power supply DRP 1533 or via remote power at the trunk lines.

### characteristics

- Line amplifier for one satellite and terrestrial signals
- Mechanically compatible with DRC 05xx
- Adjustable gain from 16...26 dB at each input
- Remote-powered via the SAT-IF trunk lines
- Switchable DC bypass
- High screening efficiency according to Class A
- Made in Germany

# Amplifiers FLEXSWITCH

## DRA 0909

FLEXSWITCH line amplifier, for two satellites



### Technical Data

SAT-IF trunk	
Inputs SAT	8 pcs.
Frequency range-SAT	950...2200 MHz
Gain SAT	22...26 dB
Attenuation SAT	0...10 dB
Max. output level SAT	116 dB $\mu$ V (IMA3)
Equalization SAT	4 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	12 dB
Noise figure	8 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Frequency range TERR	10...862 MHz
Gain TERR	20 dB
Attenuation TERR	0...10 dB
Max. output level TERR	110 dB $\mu$ V (IMA3)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	12 dB
Noise figure	5 dB
Connectors	
F-female	10 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
General data	
Operating voltage	12...18 V DC
Current consumption	420 mA
Screening factor	Class A, according to EN 50083-2
Impedance	75 $\Omega$
Operating temperature range	-20...+50 °C
Weight	0,41 kg
Dimensions (width x height x depth)	160 x 110 x 61 mm

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	265 x 170 x 70 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.54 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The DRA 0909 is an amplifier for 8 polarizations of two satellite and terrestrial signals. With a gain of 26 dB the DRA 0909 is optimally suited for use as line amplifier in multi-switch cascades. The gain can be individually reduced by 10 dB at each input, in order to compensate differences in level between the individual polarizations. The supply voltage can be realized either locally, through the optional power supply DRP 1533 or via remote power at the trunk lines.

### characteristics

- Line amplifier for 2 satellite and terrestrial signals
- Mechanically compatible with DRC 09xx
- Adjustable gain from 16...26 dB at each input
- Remote-powered via the SAT-IF trunk lines
- Switchable DC bypass
- High screening efficiency according to Class A
- Made in Germany

# Amplifiers FLEXSWITCH

## DRA 1313

FLEXSWITCH line amplifier, for three satellites



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	12 pcs.
Frequency range-SAT	950...2200 MHz
Gain SAT	22...26 dB
Attenuation SAT	0...10 dB
Max. output level SAT	116 dB $\mu$ V (IMA3)
Equalization SAT	4 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	12 dB
Noise figure	8 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Frequency range TERR	10...862 MHz
Gain TERR	20 dB
Attenuation TERR	0...10 dB
Max. output level TERR	110 dB $\mu$ V (IMA3)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	12 dB
Noise figure	5 dB
Connectors	
F-female	10 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
General data	
Operating voltage	12...18 V DC
Current consumption	600 mA
Screening factor	Class A, according to EN 50083-2
Impedance	75 $\Omega$
Operating temperature range	-20...+50 °C
Weight	0,60 kg
Dimensions (width x height x depth)	160 x 247 x 61 mm

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	265 x 170 x 70 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.54 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The DRA 1313 is an amplifier for 12 polarizations of three satellite and terrestrial signals. With a gain of 26 dB the DRA 1313 is optimally suited for use as line amplifier in multi-switch cascades. The gain can be individually reduced by 10 dB at each input, in order to compensate differences in level between the individual polarizations. The supply voltage can be realized either locally, through the optional power supply DRP 1533 or via remote power at the trunk lines.

### characteristics

- Line amplifier for 3 satellite and terrestrial signals
- Mechanically compatible with DRC 13xx
- Adjustable gain from 16...26 dB at each input
- Remote-powered via the SAT-IF trunk lines
- Switchable DC bypass
- High screening efficiency according to Class A
- Made in Germany

# Amplifiers FLEXSWITCH

## DRA 1717

FLEXSWITCH line amplifier, for four satellites



KLASSE  
**A**  
CLASS

### Technical Data

SAT-IF trunk	
Inputs SAT	16 pcs.
Frequency range-SAT	950...2200 MHz
Gain SAT	22...26 dB
Attenuation SAT	0...10 dB
Max. output level SAT	116 dB $\mu$ V (IMA3)
Equalization SAT	4 dB
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	12 dB
Noise figure	8 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Frequency range TERR	10...862 MHz
Gain TERR	20 dB
Attenuation TERR	0...10 dB
Max. output level TERR	110 dB $\mu$ V (IMA3)
Isolation TERR - SAT	30 dB typ.
Return loss TERR	12 dB
Noise figure	5 dB
Connectors	
F-female	10 pcs.
DC supply voltage	Connector type DC 5.5/2.1 mm
General data	
Operating voltage	12...18 V DC
Current consumption	800 mA
Screening factor	Class A, according to EN 50083-2
Impedance	75 $\Omega$
Operating temperature range	-20...+50 °C
Weight	0,65 kg
Dimensions (width x height x depth)	160 x 247 x 61 mm

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	265 x 170 x 70 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.78 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The DRA 1717 is an amplifier for 16 polarizations of four satellite and terrestrial signals. With a gain of 26 dB the DRA 1717 is optimally suited for use as line amplifier in multi-switch cascades. The gain can be individually reduced by 10 dB at each input, in order to compensate differences in level between the individual polarizations. The supply voltage can be realized either locally, through the optional power supply DRP 1533 or via remote power at the trunk lines.

### characteristics

- Line amplifier for 4 satellite and terrestrial signals
- Mechanically compatible with DRC 17xx
- Adjustable gain from 16...26 dB at each input
- Remote-powered via the SAT-IF trunk lines
- Switchable DC bypass
- High screening efficiency according to Class A
- Made in Germany

# Taps/Splitter FLEXSWITCH

## DRX 5002 A

FLEXSWITCH distributor, 2-way for one satellite



### Technical Data

#### SAT-IF trunk

Inputs SAT	4 pcs.
Frequency range-SAT	950...2200 MHz
Decoupling SAT -SAT	40 dB
Return loss SAT	10 dB

#### Terrestrial trunk

Inputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Isolation TERR - SAT	30 dB
Return loss TERR	10 dB

#### Distribution outputs

Outputs SAT	8 pcs.
Outputs TERR	2 pcs.
Frequency range	5...2200 MHz
Distribution loss SAT	3,5...4,1 dB ( $\pm 0,5$ dB)
Distribution loss TERR	3,2...4,1 dB ( $\pm 0,5$ dB)
Return loss	10 dB

#### Connectors

F-female	16 pcs.
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#### General data

Screening factor	Class A, according to EN 50083-2
Impedance	75 Ω
Operating temperature range	-20...+50 °C
Weight	0,39 kg
Dimensions (width x height x depth)	136 x 136 x 31 mm

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	210 x 150 x 55 mm
Packaging volume sales unit	1.7 dm <sup>3</sup>
Gross weight sales unit	0.41 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	210 x 150 x 55 mm
Packaging volume shipping package	1,7

### characteristics

- Passive 2-way splitter for one satellite and terrestrial signals
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F connectors
- Made in Germany

# Taps/Splitter FLEXSWITCH

## DRX 9002

FLEX SWITCH distributor, 2-fold for two satellites



### Technical Data

#### SAT-IF trunk

Inputs SAT	8 pcs.
Frequency range-SAT	950...2200 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	10 dB

#### Terrestrial trunk

Inputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	10 dB

#### Distribution outputs

Outputs SAT	16 pcs.
Outputs TERR	2 pcs.
Frequency range	5...2200 MHz
Distribution loss SAT	6 dB ( $\pm 1$ dB)
Distribution loss TERR	4,5 dB ( $\pm 1$ dB)
Return loss	10 dB

#### Connectors

F-female	27 pcs.
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#### General data

Screening factor	Class A, according to EN 50083-2
Impedance	75 $\Omega$
Operating temperature range	-20...+50 °C
Weight	0,44 kg
Dimensions (width x height x depth)	220 x 71 x 45 mm

### Packaging Data

Dimensions (WxHxD) shipping unit 220 x 80 x 50 mm

Packaging volume shipping package 0,88

The DRX 9002 is a passive 2-way distributor for distributing signals from two satellites and terrestrial signals from one trunk line to two lines. Due to its low distribution attenuation, the distributor is ideal for the construction of multiswitch cascades. If the optional DRP 1533 power supply unit is operated on DRX 9002, the connected LNBs are supplied with DC operating voltage. An additional transmission of this operating voltage to the master line for feeding downstream amplifiers is possible via an integrated switch.

#### characteristics

- Passive 2-way splitter for two satellite and terrestrial signals
- Switchable DC bypass for LNB powering
- High screening efficiency according to Class A
- Compact dimensions paired with installation friendly distance between the F connectors
- Made in Germany

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	280 x 800 x 50 mm
Packaging volume sales unit	0.88 dm <sup>3</sup>
Gross weight sales unit	0.48 kg
Shipping unit	1 pcs.

# Accessories FLEXSWITCH

## ODR 0508

Power supply system, Quattro incl. Multiswitch



### Technical Data

OC 04 D	
Subscriber	Depending on the multiswitch
Type	QUATTRO
Input frequency	10,70...11,70/11,70...12,75 GHz (Low-Band/High-Band)
Oscillator frequency	9,75/10,6 GHz (Low-Band/High-Band)
Output frequency	950...2150 MHz
Connectors	
F-female	4 pcs.
General data	
LNB supply voltage	11...21 V
Power consumption max.	200 mA
Color	Light grey (RAL 7035)
Feed diameter	40 mm
Operating temperature range	-30...+60 °C
DRR 0508	
SAT-IF trunk	
Inputs SAT	4 pcs.
Frequency range-SAT	950...2400 MHz
Decoupling SAT -SAT	30 dB typ.
Return loss SAT	>10 dB
Terrestrial trunk	
Inputs TERR	1 pcs.
Frequency range TERR	5...862 MHz
Isolation TERR - SAT	30 dB typ.
Return loss TERR	>10 dB
Subscriber outputs	
Outputs	8 pcs.
Frequency range	5...2400 MHz
TERR type	Passive
Insertion loss SAT	0...-5 dB

### Packaging Data

Sales unit	pcs.
Dimensions (WxHxD) sales unit	mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

Package consisting of 1x Quattro LNB OC 04 E and 1x receiver powered multiswitch DRR 0508

# Accessories FLEXSWITCH

## DRP 1533

WAll wart 230 V AC, 15 V DC



The DRP 1533 is a wall wart with 230 V AC, 50/60 Hz and has a output power from 15 V DC. It is usable for the FLEXSWITCH series.

### Technical Data

#### General data

Connector	Connector type DC 5.5/2.1 mm
Input voltage	100..240 V AC (50/60 Hz)
Operating range	90...264 V AC (50/60 Hz)
Output voltage	15 V DC
Max. output current	3,3 A
Max. output power	49,5 W
Average operational efficiency	87,8 %
Low load efficiency (10%)	80,6 %
Max. humidity, non condensing	75 %
Protection class	II
Protection class system EN 60529 (DIN 40050)	IP40
Electrical safety standard	EN 60950-1
EMC	EN 50083-2
Dimensions W x H x D	116 x 33 x 51 mm
Operating temperature range	-20...+40 °C
Storage temperature	-10...+80 °C

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	170 x 130 x 52 mm
Packaging volume sales unit	1.1 dm <sup>3</sup>
Gross weight sales unit	0.44 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	170 x 130 x 50 mm
Packaging volume shipping package	1,1

### characteristics

- Operating voltage 230 V AC
- Output power 15 V DC
- Output current 3,3 A



# Optical SAT distribution

WISI Optical SAT distribution:  
**Unlimited distribution  
via fiber optics.**



The new OL series revolutionizes SAT reception and conventional distribution technology. The optical transmission of satellite signals, terrestrial signals and radio signals is particularly convincing ...

- for projects in which the digital signals are centrally and an almost unlimited number of the number of participants is to be made available
- for extensive structures, in which no signal and quality losses may occur.
- through an efficient and cost-oriented installation. Optical cables are faster and more space-saving to install and cheaper than the comparable version with coaxial cables.

## At a glance

- Galvanic separation of the individual building parts/buildings
- Low susceptibility to faults
- Future-proof
- Virtually loss- and interference-free transmission
- Efficient and clean installation
- Consistently good signal quality
- Highest flexibility
- Low Smoke Zero Halogen Compliant (LSZH)
- Reception of all transponders of a satellite
- A reception system for hundreds of participants
- Aesthetic building views, since only one central reception antenna is required
- One fiber optic cable replaces several coaxial cables
- Considerable cost savings compared to alternative channel processing solutions

# Optical Transmitter Kit

## OL 16 1310

Optical Transmitter Kit



Technical Data	
OL 17 1310 / Optical Converter	
<b>Input</b>	
Frequency range-SAT	290...2340 MHz
Impedance	75 Ω
Return loss	20 dB (optical)
Frequency range DVB-T	470...694 MHz
Frequency range DAB	174...240 MHz
Frequency range FM	88...108 MHz
Level range	70...85 dBµV (Satellite); 70 dBµV (Terrestrial)
Ripple	1 dB
Gain variation full band	FM 88...108 MHz <1 dB; -DAB 174...240 MHz<1 dB; Terr. (DVB-T) 479...694 MHz <3...5 dB; SAT <=3 dB; Rejection @4G800 frequencies 791...862 MHz (relative)>30 dB
Connector DVB-T, DAB, FM	1x F-female
Connector SAT	2x F-female
<b>Output</b>	
Wavelength	1310 nm (±20 nm)
Optical power	+ 8 dBm
Connector	FC/PC
<b>General data</b>	
Input voltage	20 V DC
Current consumption	max. 350 mA (without connected devices)
Maximum upstream current	500 mA
Output Voltage Vertical	12 V
Output voltage Horizontal	18 V
Operating temperature	-20...+60 °C
Weight	0.445 kg
Dimensions W x H x D	160 x 25 x 162 mm
<b>Wideband LNB OC07</b>	
<b>Electrical data</b>	
Input frequency	10.70...12.75 GHz
Local Oscillator Frequency	10.41 GHz

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	270 x 190 x 60 mm
Packaging volume sales unit	3.08 dm³
Gross weight sales unit	0.6 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	270 x 190 x 60 mm
Packaging volume shipping package	3,08

### characteristics

- Kit includes Wideband LNB and electrical/optical converter
- Transmission of Satellite, terrestrial and radio signals via one optical fibre
- Insertion of DVB-T/T2, DAB and FM at the terrestrial input
- Optical wavelength 1310 nm
- + 8 dBm optical output power
- Wall or pole mount

Kit for the conversion of one satellite, DVB-T/T2, DAB and FM into an optical output signal. The OL16 1310 kit contains of the wideband LNB OC 07E and the electrical/optical converter OL 17 1310. Designed for outdoor use, the installation can be done directly at the mast pipe (mounting bracket included started from Q2/2022). The optical transmission is done at 1310nm with an optical level of +8 dBm, which enables the distribution of up to 64 termination points. The whole KIT gets powered via the included 20V power supply (EU and UK adapter).

# Optical taps

## OL 92 0010

Optical 90/10 splitter

## OL 92 0020

Optical 80/20 splitter

## OL 92 0030

Optical 70/30 splitter

## OL 92 0040

Optical 60/40 splitter

### characteristics

- FC/PC connectors
- FBT - Technology (Fused Biconical Tapered)
- Wide range splitter 1260...1650 nm
- Max. input power: 25 dBm



### Technical Data

Wavelength	1260...1650 nm	1260...1650 nm	1260...1650 nm	1260...1650 nm
Coupling ratio	90/10	80/20	70/30	60/40
Insertion loss output 1	0,9 dB	1,5 dB	2,1 dB	2,6 dB
Insertion loss output 2	10,6 dB	7,6 dB	5,8 dB	4,4 dB
Operating temperature range	-40...+75 °C	-40...+75 °C	-40...+75 °C	-40...+75 °C
Connector	FC/PC	FC/PC	FC/PC	FC/PC
Dimensions (width x height x depth)	114 x 157 x 20 mm			

# Optical splitter

## OL 91 0002

Optical 2-way splitter

## OL 91 0003

Optical 3-way splitter

## OL 91 0004

Optical 4-way splitter

### characteristics

- FC/PC connectors
- FBT - Technology (Fused Biconical Tapered)
- Dual Window splitter 1310 / 1550 nm
- Max. input power: 25 dBm



### Technical Data

Number of outputs	02	03	04
Wavelength	1310/1550 nm	1310/1550 nm	1260...1650 nm
Insertion loss	3,6 dB	5,6 dB	7 dB
Connector	FC/PC	FC/PC	FC/PC
Operating temperature range	-40...+75 °C	-40...+75 °C	-40...+75 °C
Dimensions (width x height x depth)	114 x 157 x 20 mm	114 x 157 x 20 mm	114 x 157 x 20 mm

# Optical splitter

## OL 91 0008

Optical 8-way splitter



## OL 91 0016

Optical 16-way splitter



## OL 91 0032

Optical 32-way splitter



### characteristics

- FC/PC connectors
- PLC - Technology (Planar Light-wave Circuit)
- Wide range splitter 1260...1650 nm
- Max. input power: 23 dBm

### Technical Data

Number of outputs	08	16	32
Wavelength	1260...1650 nm	1260...1650 nm	1260...1650 nm
Insertion loss	10,2 dB	13,6 dB	16,8 dB
Connector	FC/PC	FC/PC	FC/PC
Operating temperature range	-40...+75 °C	-40...+75 °C	-40...+75 °C
Dimensions (width x height x depth)	114 x 157 x 20 mm	175 x 163 x 50 mm	175 x 163 x 50 mm

# Optical converter

## OL 21 0003

Optical quad converter III



## OL 22 0003

Optical quattro converter III



### Technical Data

Input frequency SAT	0,95...5,45 GHz (stacked)
Return loss	10 dB
Wavelength	1100...1650 nm
Input power	-15...0 dBm
Output frequency	4 x SAT + TERR.
Output level	70 dB $\mu$ V
Control signal	11...14,5 V (vertical)
Control signal	15,5...19 V (horizontal)
Control signal	0/22 kHz (Low / High Band)
Input frequency TERR	88...108/ 174...240/ 470...790 MHz
<b>General data</b>	
Connector input	FC/PC
Output	4 participants outputs
Supply voltage	Receiver, ext. power supply 10...20 V DC (optional)
Current consumption	225 mA @ 10V Output 1/2, 225 mA @ 10V Output 3/4
Output impedance	75 $\Omega$
Ambient temperature	-15...+55 °C

### characteristics

- Back conversion of the optical signal into original frequency position
- Power supply by the subsequently connected devices or optional 20 V DC power supply (OLPS 0230)
- FC/PC - connector
- Direct connection of 4 stb without an additional multiswitch
- Compact design (optimized for the installation in living rooms)
- Simplified installation
- Satellite- and terrestrial signal to each participant output available

Quad converter for the conversion of the optical input signal into 4 independent subscriber outputs. Converted will be all inserted signals (DVB-S/S2, DVB-T/T2, DAB and FM). Re-design in compact form factor and simplified installation. Power supply by the connected stb or TV sets with integrated satellite receiver or the optional power supply OLPS 0230.

### Technical Data

Input frequency SAT	0,95...5,45 GHz (stacked)
Return loss	10 dB
Wavelength	1100...1650 nm
Input power	-15...0 dBm
Output frequency	1xHH, 1xVH, 1xHL, 1xVL, 1xTERR
Output level	80 dB $\mu$ V
Control signal	11...14,5 V (vertical)
Control signal	15,5...19 V (horizontal)
Control signal	0/22 kHz (Low / High Band)
Input frequency TERR	88...108/ 174...240/ 470...790 MHz
<b>General data</b>	
Connector input	FC/PC
Output	Multiswitch
Supply voltage	Multiswitch, ext. power supply 10...20 V DC
Current consumption	400 mA @ 10V
Output impedance	75 $\Omega$
Ambient temperature	-15...+55 °C

### characteristics

- Back conversion of the optical signal into original frequency position
- Output signals: HH, VH, HL, VL and terrestrial
- Power supply by the subsequently connected devices or optional 20 V DC power supply (OLPS 0230)
- FC/PC - connector

Quattro-way back converter for the change of the optical input signal in several HF-areas: SAT (HH,VH,HL,VL) and terrestrial. Application for multiswitch systems or headends. Power supply via multiswitch or via the optional AC adapter OLPS 0230. Redesign in a compact construction for easy mounting.

# Optical cables

## OL 95 1001

Optical cable term. 1 m



## OL 95 1003

Optical cable term. 3 m



## OL 95 1005

Optical cable term. 5 m

### characteristics

- Low-Smoke-Zero-Halogen-compliant (LSZH)
- Galvanic isolation
- No interferences by electro-magnetic fields
- Integrated protection against tensile strengths and rodents



### Technical Data

#### Buffered fiber

Fiber type	G657A	G657A	G657A
Outer diameter	0,9 mm	0,9 mm	0,9 mm
Material	PVC	PVC	PVC
Typical attenuation	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm

#### SS tube

Material	SUS304	SUS304	SUS304
Outer diameter	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm
Width	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm
Thickness	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm
Clearance	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm

#### Aramid yarn

Type	1000dtex	1000dtex	1000dtex
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#### Sheath

Material	LSZH-Compound	LSZH-Compound	LSZH-Compound
Outer diameter	2,9 mm ± 0,05 mm	2,9 mm ± 0,05 mm	2,9 mm ± 0,05 mm

#### General data

Installation	Indoor	Indoor	Indoor
Length	1 m	3 m	5 m
Bending radius	≥ 30 mm	≥ 30 mm	≥ 30 mm

#### Connectors

FC/PC	2 pcs.	2 pcs.	2 pcs.
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# Optical cables

## OL 95 1010

Optical cable term. 10 m



## OL 95 1015

Optical cable term. 15 m



## OL 95 1020

Optical cable term. 20 m



### characteristics

- Low-Smoke-Zero-Halogen-compliant (LSZH)
- Galvanic isolation
- No interferences by electro-magnetic fields
- Integrated protection against tensile strengths and rodents

### Technical Data

#### Buffered fiber

Fiber type	G657A	G657A	G657A
Outer diameter	0,9 mm	0,9 mm	0,9 mm
Material	PVC	PVC	PVC
Typical attenuation	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm

#### SS tube

Material	SUS304	SUS304	SUS304
Outer diameter	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm
Width	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm
Thickness	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm
Clearance	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm

#### Aramid yarn

Type	1000dtex	1000dtex	1000dtex
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#### Sheath

Material	LSZH-Compound	LSZH-Compound	LSZH-Compound
Outer diameter	2,9 mm ± 0,05 mm	2,9 mm ± 0,05 mm	2,9 mm ± 0,05 mm

#### General data

Installation	Indoor	Indoor	Indoor
Length	10 m	15 m	20 m
Bending radius	≥ 30 mm	≥ 30 mm	≥ 30 mm

#### Connectors

FC/PC	2 pcs.	2 pcs.	2 pcs.
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# Optical cables

## OL 95 1030

Optical cable term. 30 m



## OL 95 1040

Optical cable term. 40 m



## OL 95 1050

Optical cable term. 50 m



### characteristics

- Low-Smoke-Zero-Halogen-compliant (LSZH)
- Galvanic isolation
- No interferences by electro-magnetic fields
- Integrated protection against tensile strengths and rodents

### Technical Data

#### Buffered fiber

Fiber type	G657A	G657A	G657A
Outer diameter	0,9 mm	0,9 mm	0,9 mm
Material	PVC	PVC	PVC
Typical attenuation	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm

#### SS tube

Material	SUS304	SUS304	SUS304
Outer diameter	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm
Width	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm
Thickness	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm
Clearance	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm

#### Aramid yarn

Type	1000dtex	1000dtex	1000dtex
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#### Sheath

Material	LSZH-Compound	LSZH-Compound	LSZH-Compound
Outer diameter	2,9 mm ± 0,05 mm	2,9 mm ± 0,05 mm	2,9 mm ± 0,05 mm

#### General data

Installation	Indoor	Indoor	Indoor
Length	30 m	40 m	50 m
Bending radius	≥ 30 mm	≥ 30 mm	≥ 30 mm

#### Connectors

FC/PC	2 pcs.	2 pcs.	2 pcs.
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# Optical cables

## OL 95 1075

Optical cable term.  
75 m



## OL 95 1100

Optical cable term.  
100 m



## OL 95 1150

Optical cable term.  
150 m



## OL 95 1200

Optical cable term.  
200 m



### characteristics

- Low-Smoke-Zero-Halogen-compliant (LSZH)
- Galvanic isolation
- No interferences by electro-magnetic fields
- Integrated protection against tensile strengths and rodents

### Technical Data

#### Buffered fiber

Fiber type	G657A	G657A	G657A	G657A
Outer diameter	0,9 mm	0,9 mm	0,9 mm	0,9 mm
Material	PVC	PVC	PVC	PVC
Typical attenuation	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm

#### SS tube

Material	SUS304	SUS304	SUS304	SUS304
Outer diameter	1,65 mm ± 0,05 mm			
Width	0,85 mm ± 0,05 mm			
Thickness	0,25 mm ± 0,02 mm			
Clearance	0,25 mm ± 0,02 mm			

#### Aramid yarn

Type	1000dtex	1000dtex	1000dtex	1000dtex
Sheath				

Material	LSZH-Compound	LSZH-Compound	LSZH-Compound	LSZH-Compound
Outer diameter	2,9 mm ± 0,05 mm			

#### General data

Installation	Indoor	Indoor	Indoor	Indoor
Length	75 m	100 m	150 m	200 m
Bending radius	≥ 30 mm	≥ 30 mm	≥ 30 mm	≥ 30 mm

#### Connectors

FC/PC	2 pcs.	2 pcs.	2 pcs.	2 pcs.
-------	--------	--------	--------	--------

# Optical cables

## OL 95 2030

Optical twin cable term. 30 m

## OL 95 2040

Optical twin cable term. 40 m

### characteristics

- Special resistant PE-jacket
- UV-resistant
- Galvanic isolation
- No interferences by electro-magnetic fields
- Special gel protect the fibers from damaged caused by water



### Technical Data

#### Buffered fiber

Fiber type	G657A	G657A
Outer diameter	0,9 mm	0,9 mm
Material	LSZH-Compound	LSZH-Compound
Typical attenuation	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm

#### SS tube

Material	SUS304	SUS304
Outer diameter	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm
Width	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm
Thickness	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm
Clearance	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm

#### Aramid yarn

Type	1000dtex	1000dtex
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#### Sheath

Material	PE-HD	Outdoor
Outer diameter	5,9 mm (±0,05 mm)	40 m

#### General data

Installation	Outdoor	45 kg/km
Length	30 m	
Bending radius	≥ 30 mm	4 pcs.
Cable weight	45 kg/km	
Connectors		

#### Connectors

FC/PC	4 pcs.	
-------	--------	--

# Optical cables

## OL 95 2050

optical twin cable term. 50 m



## OL 95 2075

Optical twin cable term. 75 m



## OL 95 2100

Optical twin cable term. 100 m



### characteristics

- Special resistant PE-jacket
- UV-resistant
- Galvanic isolation
- No interferences by electro-magnetic fields
- Special gel protect the fibers from damaged caused by water

### Technical Data

#### Buffered fiber

Fiber type	G657A	G657A	G657A
Outer diameter	0,9 mm	0,9 mm	0,9 mm
Material	LSZH-Compound	LSZH-Compound	LSZH-Compound
Typical attenuation	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm
SS tube			
Material	SUS304	SUS304	SUS304
Outer diameter	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm
Width	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm
Thickness	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm
Clearance	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm
Aramid yarn			
Type	1000dtex	1000dtex	1000dtex
General data			
Installation	Outdoor	Outdoor	Outdoor
Length	50 m	75 m	100 m
Bending radius	≥ 30 mm	≥ 30 mm	≥ 30 mm
Cable weight	45 kg/km	45 kg/km	45 kg/km
Connectors			
FC/PC	4 pcs.	4 pcs.	4 pcs.

# Optical cables

## OL 95 2150

Optical twin cable term. 150 m

## OL 95 2200

Optical twin cable term. 200 m

## OL 95 4300

Optical quad cable term. 300 m

### characteristics

- Special resistant PE-jacket
- UV-resistant
- Galvanic isolation
- No interferences by electro-magnetic fields
- Special gel protect the fibers from damaged caused by water



### Technical Data

#### Buffered fiber

Fiber type	G657A	G657A	G657A
Outer diameter	0,9 mm	0,9 mm	0,9 mm
Material	LSZH-Compound	LSZH-Compound	LSZH-Compound
Typical attenuation	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm
SS tube			
Material	SUS304	SUS304	SUS304
Outer diameter	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm	1,65 mm ± 0,05 mm
Width	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm	0,85 mm ± 0,05 mm
Thickness	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm
Clearance	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm	0,25 mm ± 0,02 mm
Aramid yarn			
Type	1000dtex	1000dtex	1000dtex
General data			
Installation	Outdoor	Outdoor	Outdoor
Length	150 m	200 m	300 m
Bending radius	≥ 30 mm	≥ 30 mm	≥ 30 mm
Cable weight	45 kg/km	45 kg/km	45 kg/km
Connectors			
FC/PC	4 pcs.	4 pcs.	8 pcs.

# Optical multiswitch

## OL 41 0008

Fiber Switch + PSU, 8 outputs



### Technical Data

#### Technical specifications

Frequency range	950...2150 MHz
Impedance	75 Ω
Return loss	10 dB
Output level	80 dBµV Depending on the signal level of the satellites
Signal to noise ratio @ max. amplification	5 dB
SAT decoupling	35 dB

#### DVB-T, DAB & FM (electric)

Frequency range DVB-T	470...790 MHz
Frequency range DAB	174...240 MHz
Frequency range FM	88...108 MHz
Impedance	75 Ω
Return loss	10 dB
Output level for DVB-T	70 dBµV For 6 multiplexes
Signal to noise ratio @ max. amplification	5 dB
Terrestrial decoupling	30 dB

#### DVB-T, DAB, FM & SAT (Optic)

Wavelength	1100...1650 nm
Input level	-14...-3 dBm

#### DC specifications

Input voltage	11...20 V DC
DiSEqC	1.0

#### Connectors

Input	FC/PC connector
Outputs	F-female
Power supply	2,1 mm connector
Operating temperature range	-20...+50 °C

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	305 x 205 x 75 mm
Packaging volume sales unit	dm³
Gross weight sales unit	1.7 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	305 x 205 x 75 mm
Packaging volume shipping package	

Basic-multiswitch with an optical input, for 8 subscribers. Conversion of one satellite. Power supply in delivery included.

### characteristics

- Multi switch with optical input
- Upgradeable to 2, 3 or 4 satellite + TV / Radio
- All units operate with only one power supply
- Space-saving design
- 8 subscriber outputs

# Optical multiswitch

## OL 41 0016

Fiber Switch + PSU, 16 outputs



Technical Data	
<b>Technical specifications</b>	
Frequency range	950...2150 MHz
Impedance	75 Ω
Return loss	10 dB
Output level	80 dBµV Depending on the signal level of the satellites
Signal to noise ratio @ max. amplification	5 dB
SAT decoupling	35 dB
<b>DVB-T, DAB &amp; FM (electric)</b>	
Frequency range DVB-T	470...790 MHz
Frequency range DAB	174...240 MHz
Frequency range FM	88...108 MHz
Impedance	75 Ω
Return loss	10 dB
Output level for DVB-T	70 dBµV For 6 multiplexes
Signal to noise ratio @ max. amplification	5 dB
Terrestrial decoupling	30 dB
<b>DVB-T, DAB, FM &amp; SAT (Optic)</b>	
Wavelength	1100...1650 nm
Input level	-14...-3 dBm
<b>DC specifications</b>	
Input voltage	11...20 V DC
DiSEqC	1.0
<b>Connectors</b>	
Input	FC/PC connector
Outputs	F-female
Power supply	2,1 mm connector
Operating temperature range	-20...+50 °C
Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	305 x 205 x 75 mm
Packaging volume sales unit	dm³
Gross weight sales unit	1.84 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	305 x 205 x 75 mm
Packaging volume shipping package	

Basic-multiswitch with an optical input, for 16 subscribers. Conversion of one satellite. Power supply in delivery included.

### characteristics

- Multi switch with optical input
- Upgradeable to 2, 3 or 4 satellite + TV / Radio
- All units operate with only one power supply
- Space-saving design
- 16 subscriber outputs

# Optical multiswitch

## OL 42 0008

Fiber Switch + 1 SAT, 8 outputs



### Technical Data

#### Technical specifications

Frequency range	950...2150 MHz
Impedance	75 Ω
Return loss	10 dB
Output level	80 dBµV Depending on the signal level of the satellites
Signal to noise ratio @ max. amplification	5 dB
SAT decoupling	35 dB

#### DVB-T, DAB & FM (electric)

Frequency range DVB-T	470...790 MHz
Frequency range DAB	174...240 MHz
Frequency range FM	88...108 MHz
Impedance	75 Ω
Return loss	10 dB
Output level for DVB-T	70 dBµV For 6 multiplexes
Signal to noise ratio @ max. amplification	5 dB

#### Terrestrial decoupling

30 dB

#### DVB-T, DAB, FM & SAT (Optic)

Wavelength	1100...1650 nm
Input level	-14...-3 dBm

#### DC specifications

Input voltage	11...20 V DC
DiSEqC	1.0

#### Connectors

Input	FC/PC connector
Outputs	F-female
Power supply	2,1 mm connector
Operating temperature range	-20...+50 °C

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	260 x 115 x 65 mm
Packaging volume sales unit	dm³
Gross weight sales unit	1.1 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	260 x 115 x 65 mm
Packaging volume shipping package	

Extension-multiswitch with an optical input, for 8 subscriber. Conversion of one satellite. Power supply by the connected basic switch OL 41 0008.

#### characteristics

- Multi switch with optical input
- Upgradeable to 2, 3 or 4 satellite + TV / Radio
- All units operate with only one power supply
- Space-saving design

# Optical multiswitch

## OL 42 0016

Fiber Switch + 1 SAT, 16 outputs



### Technical Data

#### Technical specifications

Frequency range	950...2150 MHz
Impedance	75 Ω
Return loss	10 dB
Output level	80 dBµV Depending on the signal level of the satellites
Signal to noise ratio @ max. amplification	5 dB
SAT decoupling	35 dB

#### DVB-T, DAB & FM (electric)

Frequency range DVB-T	470...790 MHz
Frequency range DAB	174...240 MHz
Frequency range FM	88...108 MHz
Impedance	75 Ω
Return loss	10 dB
Output level for DVB-T	70 dBµV For 6 multiplexes
Signal to noise ratio @ max. amplification	5 dB
Terrestrial decoupling	30 dB

#### DVB-T, DAB, FM & SAT (Optic)

Wavelength	1100...1650 nm
Input level	-14...-3 dBm

#### DC specifications

Input voltage	11...20 V DC
DiSEqC	1.0

#### Connectors

Input	FC/PC connector
Outputs	F-female
Power supply	2,1 mm connector
Operating temperature range	-20...+50 °C

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	260 x 115 x 65 mm
Packaging volume sales unit	dm³
Gross weight sales unit	1.1 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	260 x 115 x 65 mm
Packaging volume shipping package	

Extension-multiswitch with an optical input, for 16 subscriber. Conversion of one satellite. Power supply by the connected basic switch OL 41 0016.

#### characteristics

- Multi switch with optical input
- Upgradeable to 2, 3 or 4 satellite + TV / Radio
- All units operate with only one power supply
- Space-saving design

# Optical mounting accessories

## OL 51 0000

Optical test transmitter



## OL 55 0000

Optical measurement device



### Technical Data

#### Output

Wavelength	1310/1550 nm
Output power	typ. -7 dBm
Modulation	CW / 270 Hz, 1 KHz, 2 KHz
Fibre Type	singlemode, multimode
Connector	FC/PC, SC/PC
Supply voltage	3x 1,5 V AA, 9 V power supply
Battery life time	45 h
Operating temperature range	-10...+60 °C
Dimensions (width x height x depth)	190 x 100 x 50 mm
Weight	0,37 kg

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	240 x 160 x 80 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.62 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	240 x 160 x 80 mm
Packaging volume shipping package	

### characteristics

- Automatic switch-off functionality
- Illuminated LCD for handling in dark environments
- Easy control by three buttons
- Delivery with power supply and carry bag

Test transmitter for measurements in the optical distribution network.  
Perfect for testing the passive components before the installation.

### Technical Data

#### Input

Wavelength	800...1700 nm
Measurement range	-50...+30 dBm
Fibre Type	singlemode, multimode
Connector	FC/PC, SC/PC
Supply voltage	3x 1,5 V AA, 9 V power supply
Battery life time	140 h
Operating temperature range	-10...+60 °C
Dimensions (width x height x depth)	190 x 100 x 50 mm
Weight	0,37 kg

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	240 x 160 x 80 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.64 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	240 x 160 x 80 mm
Packaging volume shipping package	

### characteristics

- Automatic switch-off functionality
- Illuminated LCD for handling in dark environments
- Convenient use by the compact design
- For reference measurements zero-calibration possible
- Delivery with power supply and carry bag

Optical measurement device for testing the optical power. Perfect for system documentation or troubleshooting. As signal source will be used the optical test transmitter OL 51 0000 or the optical LNB (OL 11 000 / OL 12 0000 and OL 16 1310 Transmitter Kit).

# Optical mounting accessoires

## OL 57 0002

Cleaning cassette



## OL 57 0003

Replacement tape for OL 57 0002



## OL 57 0001

Cleaning pen for FC and PC connectors



### characteristics

- Cleaning connector surface of optical cables
- Cleaning section relockable
- 500 cleaning cycles
- Cleaning tape exchangeable

### characteristics

- Cleaning reel - refill pack for OL 57 002
- 500 cleaning cycles
- Easy cassette change

### characteristics

- Cleaning connector surface of optical cables and sockets
- 2,5 mm diameter, suitable for FC and SC connectors
- 800 cleaning cycles

## OL 82 0002

N-interconnection  
cable 2 m



## OL 82 0003

N-interconnection  
cable 3 m



## OL 82 0005

N-interconnection  
cable 5 m



## OL 82 0010

N-interconnection  
cable 10 m



### characteristics

- 50 Ohm coaxial cable
- Weather-resistant design
- N connection on both sides

### Technical Data

Connector	N	N	N	N
Length	2 m	3 m	5 m	10 m
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Diameter	10 mm	10 mm	10 mm	10 mm

# Optical mounting accessories

## OL 93 0001

FC/PC coupling



## OL 93 0002

FC to SC adapter



### characteristics

- Typical insertion loss: < 0,3 dB
- Reliable connection of two optical fiber cables of the OL series
- FC/PC connection on both sides

### Technical Data

Connector

FC/PC

FC/PC to SC/PC

## OL 94 0005

Optical attenuator 5 dB



## OL 94 0010

Optical attenuator 10 dB



## OL 94 0015

Optical attenuator 15 dB



### characteristics

- Optical attenuator for OL retrans-formers
- 5 dB Attenuation
- Simple installation without additional adapter

### Technical Data

Loss

5 dB

10 dB

15 dB

Connector

FC/PC

FC/PC

FC/PC

# Optical mounting accessories

## OLPS 0230

Power supply 20V/1.2A



### Technical Data

Operating voltage	230 V AC (50/60 Hz)
Output voltage	20 V DC
Output current	1,2 A (Short circuit proof)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	160 x 125 x 50 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.21 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	160 x 125 x 50 mm
Packaging volume shipping package	

### characteristics

- Operating voltage 230 V AC
- Output voltage 20 V DC
- Output current 1,2 A

Optional power supply for optical converter OL 21 xxxx and OL 22 xxxx.

## OL 95 0001

Optical connection cable, FC/PC pigtail, 1 m



### Technical Data

Buffered fiber	
Fiber type	G657A2
Outer diameter	0,9 mm
Material	LSZH-Compound
Typical attenuation	<0,25 dB/km @ 1550 nm; <0,4 dB/km @ 1310 nm

### General data

Installation	Indoor
Length	1 m
Bending radius	≥ 30 mm

### Connectors

FC/PC	1 pcs.
-------	--------

### Packaging Data

Sales unit	1 m
Dimensions (WxHxD) sales unit	200 x 170 x 5 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.02 kg
Shipping unit	1 m
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

### characteristics

- Low-Smoke-Zero-Halogen-compliant (LSZH)
- Galvanic isolation
- No interferences by electro-magnetic fields
- One-way FC/PC connector

Fiber optic connection cable for installation on an incoming fiber optic cable without connector. 1 fiber, FC/PC connector on one side, length 1 m.



# Channel processing Micro Headend

WISI Micro Headend:  
**Big performance  
in tiny spaces.**



## High functionality in smallest design

The versatile WISI Micro-Headends OM 10 (DVB-S/S2 > DVB-C/T) and OM 11 (DVB-C/T/T2 > DVB-C/T) set new standards for ultra-compact headends. These meet the high demands of hotels, hospitals, retirement homes and other gated communities in terms of user-friendliness, cost-effectiveness and flexibility.

## At a glance

- Transmodulator of 6 DVB-S/S2 or DVB-T/T2/C channels into 8x DVB-C or DVB-T channels
- Built-in antenna distribution matrix
- 4 CI slots for central decryption
- PID Remapping enables static service ID assignment at the outbound channel
- LCN/NIT Processing
- Multiplex functionality at the input and at the output
- Video content player via USB or LAN
- Programming via web interface
- Bluetooth access for Smartphone and Tablet

# DVB-T/DVB-C Channel Processing

## OM 10 0646

Transmodulator 6x DVB-S/S2 – 6x COFDM + 4 CI



Technical Data		Packaging Data	
<b>Input</b>		Sales unit	1 pcs.
Number of tuner	6 pcs.	Dimensions (WxHxD) sales unit	340 x 285 x 175 mm
Modulation type	DVB-S/S2	Packaging volume sales unit	dm <sup>3</sup>
Impedance	75 Ω	Gross weight sales unit	2.59 kg
Input frequency range	950...2150 MHz	Shipping unit	1 pcs.
Input frequency steps	1 MHz	Dimensions (WxHxD) shipping unit	mm
Input level range	50...90 dBµV	Packaging volume shipping package	
Symbol rate	1...53 MS/s MS/s		
DiSEqC	DiSEqC 1.0		
Compliance	DVB-S (EN 300 421), DVB-S2 (EN 302 307-1)		
<b>CI Processing</b>			
Number of PCMCIA slots	4		
<b>TS Processing</b>			
TS stuffing	Yes		
SI-Table handling	Yes		
NIT handling	Yes		
PID remapping	Yes		
<b>COFDM Processing</b>			
Constellations	QPSK, 16-, 64-QAM		
FEC	1/2,2/3,3/4,5/6,7/8		
Guard Interval	1/8, 1/16, 1/32		
FFT Mode	2k, 8k		
MER	>40 dB		
<b>Output</b>			
Impedance	75 Ω		
Output frequency range	110...862 MHz		
Output frequency steps	1 MHz		
Output level	85...100 dBµV		
Number of Channels	6 pcs.		
Channel allocation	adjacent (1 x 6)		

The OM 10 0646 is a micro headend which can transmodulate 6 DVB-S/S2 transponders into 6 DVB-T (COFDM) packages. As it comes with 4 CI slots, it is perfectly suited for the central decryption of pay-tv services. There is also the possibility to create a multiplex before the CI slots allowing the user to combine services from different transponders but to decrypt them by only one smartcard, hereby guaranteeing the efficient usage of professional CAMs. Additionally the OM 10 supports the deletion of unwanted services from a transponder and enables the reduction of output channels by using the output multiplex functionality. As a transport stream, external video content can be fed in via USB or the LAN connection.

### characteristics

- Transmodulator of 6 DVB-S/S2 transponders to 6 DVB-T packages
- The integrated 4 in 6 switch matrix reduces the installation effort and DiSEqC 1.0 is increasing the flexibility by controlling up to 4 satellites
- 4 CI slots for central decryption
- PID remapping allows setting of static service IDs at the output. It is no longer necessary for the TV set to make a scan if there is any transponder modification at the input
- LCN / NIT processing
- Multiplex functionality at the input and output
- USB - interface to feed in any video content
- Programming via web interface
- Integrated DHCP server enables an automatic connection to a PC
- Smartphone and tablet access via Bluetooth

# DVB-T/DVB-C Channel Processing

## OM 10 0648

Transmodulator 6x DVB-S/S2/S2X - 8x QAM/COFDM + 4 CI



Technical Data	
<b>Input</b>	
Number of tuner	6 pcs.
Modulation type	DVB-S/S2/S2X
Impedance	75 Ω
Input frequency range	950...2150 MHz
Input frequency steps	1 MHz
Input level range	50...90 dBµV
Symbol rate	1...53 MS/s
DiSEqC	DiSEqC 1.0
Compliance	DVB-S (EN 300 421), DVB-S2 (EN 302 307-1), DVB-S2X (EN 302 307-2)
<b>CI Processing</b>	
Number of PCMCIA slots	4
<b>TS Processing</b>	
TS stuffing	Yes
SI-Table handling	Yes
NIT handling	Yes
PID remapping	Yes
<b>QAM Processing</b>	
Constellations	64-, 256- QAM
Symbol rate	4,45...7,20 Mbaud
MER	>40 dB
<b>COFDM Processing</b>	
Constellations	QPSK, 16-, 64-QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/8, 1/16, 1/32
FFT Mode	2k, 8k
MER	>40 dB
<b>Output</b>	
Impedance	75 Ω
Output frequency range	110...862 MHz (COFDM); 50...862 MHz (QAM)

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	345 x 290 x 170 mm
Packaging volume sales unit	dm³
Gross weight sales unit	2.98 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The OM 10 0648 is a micro headend which can transmodulate 6 DVB-S/S2/S2X transponders into 8 DVB-C (QAM) or 8 DVB-T (COFDM) channels. As it comes with 4 CI slots, it is perfectly suited for the central decryption of pay-tv services. There is also the possibility to create a multiplex before the CI slots allowing the user to combine services from different transponders but to decrypt them by only one smart-card, hereby guaranteeing the efficient usage of professional CAMs. Additionally the OM 10 supports the deletion of unwanted services from a transponder and enables the reduction of output channels by using the output multiplex functionality. As a transport stream, external video content can be fed in via USB or the LAN connection.

### characteristics

- Transmodulator of 6 DVB-S/S2/S2X transponders to 8 DVB-C or DVB-T channels
- The integrated 4 in 6 switch matrix reduces the installation effort and DiSEqC 1.0 is increasing the flexibility by controlling up to 4 satellites
- 4 CI slots for central decryption
- PID remapping allows setting of static service IDs at the output. It is no longer necessary for the TV set to make a scan if there is any transponder modification at the input
- LCN / NIT processing
- Multiplex functionality at the input and output
- USB - interface to feed in any video content
- Programming via web interface
- Integrated DHCP server enables an automatic connection to a PC
- Smartphone and tablet access via Bluetooth

# DVB-T/DVB-C Channel Processing

## OM 11 0648

Transmodulator 6x DVB-T/T2/C - 8x QAM/COFDM + 4 CI



Technical Data		Packaging Data	
<b>Input</b>			
Impedance	75 Ω	Sales unit	1 pcs.
Input frequency range	42...1002 MHz	Dimensions (WxHxD) sales unit	345 x 290 x 170 mm
Input frequency steps	250 kHz	Packaging volume sales unit	dm <sup>3</sup>
Input level range	55...95 dBµV	Gross weight sales unit	3 kg
Bandwidth	6, 7, 8 MHz	Shipping unit	1 pcs.
Modulation DVB-T/T2	COFDM / OFDM (EN 300 744)	Dimensions (WxHxD) shipping unit	mm
Symbol rate DVB-T/T2	according modulation standard	Packaging volume shipping package	
Modulation DVB-C	16-, 64-, 256 QAM (EN 300 429)		
Symbol rate DVB-C	1...7,2 Mbaud		
FEC DVB-T	RS 204, 1885,8 / Convolution		
FEC DVB-T2	LDPC / BCH		
FEC DVB-C	RS 204-16		
<b>CI Processing</b>			
Number of PCMCIA slots	4		
<b>TS Processing</b>			
TS stuffing	Yes		
SI-Table handling	Yes		
NIT handling	Yes		
PID remapping	Yes		
<b>QAM Processing</b>			
Constellations	64-, 256- QAM		
Symbol rate	4,45...7,20 MSymb/s		
MER	>40 dB		
<b>COFDM Processing</b>			
Constellations	QPSK, 16-, 64-QAM		
FEC	1/2, 2/3, 3/4, 5/6, 7/8		
Guard Interval	1/8, 1/16, 1/32		
FFT Mode	2k, 8k		
MER	>40 dB		

The OM 11 0648 is a micro headend which can transmodulate 6 DVB-T/T2/C channels into 8 DVB-C (QAM) or 8 DVB-T (COFDM) channels. As it comes with 4 CI slots, it is perfectly suited for the central decryption of pay-tv services. There is also the possibility to create a multiplex before the CI slots allowing the user to combine services from different channels but to decrypt them by only one smartcard, hereby guaranteeing the efficient usage of professional CAMs. Additionally the OM 11 supports the deletion of unwanted services from a channel and enables the reduction of output channels by using the output multiplex functionality. As a transport stream, external video content can be fed in via USB or the LAN connection.

### characteristics

- Transmodulator of 6 DVB-T/T2/C channels to 8 DVB-C or DVB-T channels
- Integrated switch matrix reduces installation effort. Parallel insertion of DVB-T/T2 and DVB-C possible (Input 1 -> Tuner 1...2 / Input 2 -> Tuner 1...6 / Input 3 -> Tuner 3....6)
- 4 CI slots for central decryption
- PID remapping allows setting of static service PIDs at the output. It is no longer necessary for the TV set to make a scan if there is any transponder modification at the input
- LCN / NIT processing
- Multiplex functionality at the input and output
- USB-interface to feed in any video content
- Programming via web interface
- Integrated DHCP server enables an automatic connection to a PC
- Smartphone and tablet access via Bluetooth

# DVB-T/DVB-C Channel Processing

## OM 20 064S

IP-Streamer 6x DVB-S/S2/S2X - 128x SPTS, 4x CI



### Technical Data

Input	
Number of tuner	6 pcs.
Modulation type	DVB-S/S2/S2X
Impedance	75 Ω
Input frequency range	950...2150 MHz
Input frequency steps	1 MHz
Input level range	50...90 dBµV
Symbol rate	1...53 MS/s
DiSEqC	DiSEqC 1.0
Compliance	DVB-S (EN 300 421), DVB-S2 (EN 302 307-1), DVB-S2X (EN 302 307-2)
CI Processing	
Number of PCMCIA slots	4
TS Processing	
TS stuffing	Yes
Advanced PSI/SI regeneration	Yes
NIT handling	Yes
PID filtering and remapping	Yes
PCR correction and de-jitter	Yes
Compliance	ETSI EN 300 468
Streaming output	
IP-Outputs	Up to 128x SPTS
IP-Compliance	ISO/IEC 13818
IP-Output protocol	UDP/RTP/Unicast and Multicast
IP-TS-Output format	SPTS VBR1
IP-Packet format	MPEG over UDP/IP and RTP/IP
IP-Packet size	188 Byte
SAP (Session Announcement Protocol)	Yes
Data rate	1Gbps (netto 560 Mbps)
IGMP Querier	No
SNMP	No

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	340 x 285 x 175 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	2.6 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The OM 20 064S is a micro headend which generates up to 128 SPTS services from 6 DVB-S/S2/S2X transponders. The SPTS services can be fed directly into an IP network and received by IPTV-capable devices. A M3U table allows the easy handling of a service list. The OM 20 064S is perfectly suited for the IPTV provisioning e.g. in hotels or hall of residences and supports by the integrated 4 CI slots the central decryption of pay-tv content. There is also the possibility to create a multiplex before the CI slots allowing the user to combine services from different transponders but to decrypt them by only one smart-card, hereby guaranteeing the efficient usage of professional CAMs. As a transport stream, external video content can be fed in via USB or the LAN connection.

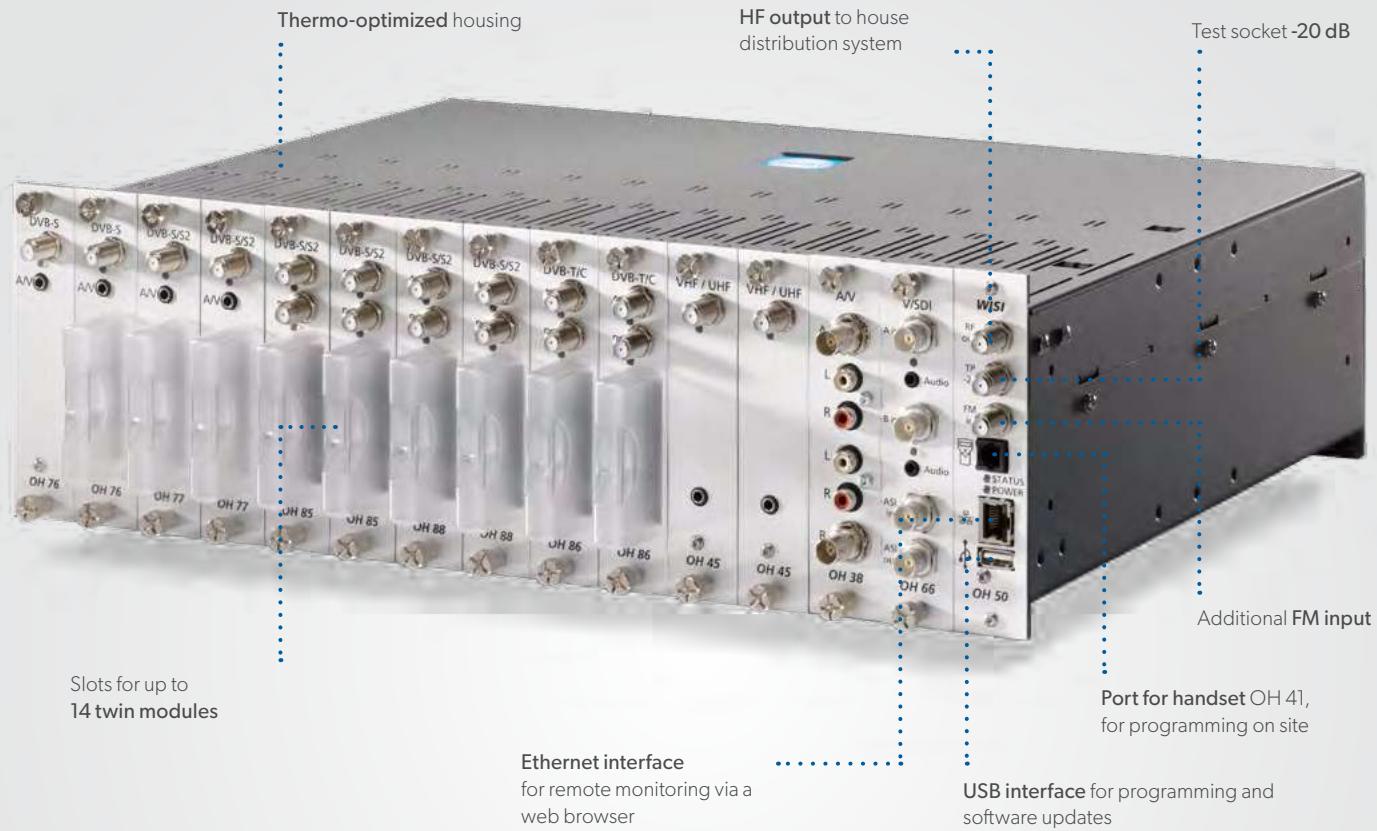
### characteristics

- IP-Streamer of 128 SPTS services from 6 DVB-S/S2/S2X transponders
- The integrated 4 in 6 switch matrix reduces the installation effort and DiSEqC 1.0 is increasing the flexibility by controlling up to 4 satellites
- 4 CI slots for central decryption
- Freely selectable IP addresses at the output
- Automatical generation of M3U tables
- USB - interface to feed in any video content
- Programming via web interface
- Integrated DHCP server enables an automatic connection to a PC
- Smartphone and tablet access via Bluetooth



# Channel processing Compact Headend

WISI Compact Headend:  
**Compact, modular  
and extremely flexible.**



Wall mounting of the  
WISI Compact Headends OH.



Powerful in technology, compact in footprint, modular and flexibly expandable, the new **WISI Compact Headend System OH** combines all the advantages of a future-proof and economical headend.

**WISI Compact Headend OH** holds up to 14 modules and thus offers an optimal and space-saving channel processing for up to 28 digital or analogue channels in a 3HE 19" housing.

**WISI Compact Headend OH** is equipped with a high performance power supply. The modules have a low power consumption to keep operating costs low. The USB connection and the RJ45 socket can be used to update the software of the basic unit and individual modules as well as to save their configuration. All functions can also be set up remotely via a web browser.

# Base units

## OH 40 A

Compact Headend basic unit, 230 V AC, 3 HE, for 7 modules



Technical Data	
Frequency range TV	47...862 MHz (output combiner/amplifier)
Frequency range FM	87,5...108 MHz (FM-amplifier)
Input level FM	70...100 dB $\mu$ V
Gain FM	25 dB
Attenuator FM	0...30 dB (1 dB-steps)
Output level	110 dB $\mu$ V
Output attenuator	0...15 dB
Output test point	-20 dB
Connectors	
Module slots	7 pcs. (OH-module)
F-female	3 pcs. (FM-input, output, output measurement socket)
USB	1 pcs. (Software-Update, Konfiguration)
RJ11	1 pcs. (OH 41)
RJ45	1 pcs. (remote monitoring and programming)
General data	
Operating voltage AC	180...265 V
Power consumption	<185 W
LNB supply voltage	12,5 V
LNB electrical power supply	1,2 A
Dimensions (width x height x depth)	276 x 159 x 385 mm
Operating temperature range	-20...+50 °C

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	445 x 305 x 190 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	5.45 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	23.5

Powerful technology, compact dimensions, modular and flexibly expandable; the WISI COMPACT HEADEND System OH combines all the advantages of an innovative and affordable headend. WISI Compact Headend OH is easy to configure. With up to 7 module slots it offers channel processing for 7 analogue or 28 digital channels in one chassis. WISI Compact Headend OH operates on a high efficiency power supply, with low consumption modules in order to make a minimum ecological impact and a low operational cost. The USB connection and the RJ45 interface can be used to execute software updates for the basic unit as well as for the modules. Furthermore, all functions can be furnished from a distance per web browser.

### characteristics

- Base unit for analogue and digital channel processing
- Slots for up to 7 modules ( 7 analog bzw. 28 digital channels)
- Wall mounting
- Integrated FM amplifier
- Programable with OH 41 hand-set
- Update via USB-connection (USB memory stick)
- Integrated remote supervision moduel OH 51 A (license optional)
- High output power

# Base units

## OH 50 A

Compact Headend basic unit, 230 V AC, 19", 3 HE, for 14 modules



Technical Data	
Frequency range TV	47...862 MHz (output combiner/amplifier)
Frequency range FM	87,5...108 MHz (FM-amplifier)
Input level FM	70...100 dB $\mu$ V
Gain FM	25 dB
Attenuator FM	30 dB (1 dB-steps)
Output level	110 dB $\mu$ V
Output attenuator	0...15 dB
Output test point	-20 dB
Connectors	
Module slots	14 pcs. (OH-module)
F-female	3 pcs. (FM-input, output, output measurement socket)
USB	1 pcs. (Software-Update, Konfiguration)
RJ11	1 pcs. (OH 41)
RJ45	1 pcs. (remote monitoring and programming)
General data	
Operating voltage AC	180...265 V (47...63 Hz)
Power consumption	<185 W
LNB supply voltage	12,5 V
LNB electrical power supply	1,2 A
Dimensions (width x height x depth)	443 x 132 x 351 mm (3 HE)
Operating temperature range	-20...+50 °C

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	475 x 475 x 140 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	7.5 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	31.5

Powerful technology, compact dimensions, modular and flexibly expandable; the WISI COMPACT HEADEND System OH combines all the advantages of an innovative and affordable headend. WISI Compact Headend OH is easy to configure. With up to 14 module slots it offers channel processing for 14 analogue or 28 digital channels in a 3 HU 19" rack chassis. WISI Compact Headend OH operates on a high efficiency power supply, with low consumption modules in order to make a minimum ecological impact and a low operational cost. The USB connection and the RJ45 interface can be used to execute software updates for the basic unit as well as for the modules. Furthermore, all functions can be furnished from a distance per web browser.

### characteristics

- Base unit for analogue and digital channel processing
- Slots for up to 14 modules (14 analog or 56 digital channels)
- 19" rack-mounting or wall mounting
- Integrated FM amplifier
- Simple programming with handset OH 41 (OK 41 A)
- Preprogramming via USB-connection (USB-Stick)
- Integrated remote supervision moduel OH 51 A (license optional)
- High output power

# Modulators

## OH 38

Twin A/V-Modulator



### Technical Data

#### Input

Video input level	1 V (1Vss, $\pm 0,4$ V)
Video input bandwidth	20 Hz...5 MHz
Audio input impedance	600/10000 $\Omega$
Audio input level	-4 dBm/1 kHz
Audio input level range	-6...+6 dB
Audio input bandwidth	40...15000 Hz

#### Output

Output frequency range	45...862 MHz
Output frequency steps	250 kHz
Frequency stability	$\pm 0,030$ MHz
Output channel bandwidth	7/8 MHz
Output level	90...105 dB $\mu$ V
Spurious suppression	>55 dB
TV standards	B/G, D/K, I, L, M
Audio format	Mono/Stereo/Dual
S/N Video	>57 dB
S/N Audio	>50 dB
Amplitude response (O-E)	$\pm 1,5$ dB
Group delay time	<80 ns

#### Connectors

Chinch-socket	4 pcs.
BNC-socket	2 pcs.

#### General data

Power consumption	<10 W
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### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	325 x 150 x 55 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.59 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	2.681

Powerful technology, compact dimensions, modular and flexibly expandable; the WISI COMPACT HEADEND System OH combines all the advantages of an innovative and affordable headend. WISI Compact Headend OH is easy to configure. With up to 14 module slots it offers channel processing for 14 analogue or 28 digital channels in a 3 HU 19" rack chassis. WISI Compact Headend OH operates on a high efficiency power supply, with low consumption modules in order to make a minimum ecological impact and a low operational cost. The USB connection and the RJ45 interface can be used to execute software updates for the basic unit as well as for the modules. Furthermore, all functions can be furnished from a distance per web browser.

#### characteristics

- Modulation of 2 A/V signals into 2 analogue TV channels
- Multi-standard
- Stereo capable vestigial sideband modulator, independently adjustable in 250 kHz steps
- Video / audio interfaces in BNC/RCA
- Output frequency range 45...862 MHz

# Digital modules

## OH 84

Reception of 4 DVB-S/S2 signals and transmodulation into 4 DVB-C channels



Technical Data	
<b>Input</b>	
Input frequency range	950...2150 MHz
Input frequency steps	1 MHz
Return loss IN	>8 dB
Isolation internal multiswitch	>30 dB
Input level range	47...90 dBµV
AFC	±10 MHz
Modulation	QPSK (EN300421), QPSK 8PSK (EN302307)16APSK, 32APSK
Symbol rate	QPSK: 1...53 MS/s; 8PSK: 1...45 MS/s; 16APSK: 1...35 MS/s; 32APSK: 1...28 MS/s
Spectral inversion	normal or inverted
FEC outer DVB-S	RS 204-16
FEC inner DVB-S	1/2, 2/3, 3/5, 5/6, 7/8
FEC outer DVB-S2	BCH
FEC inner DVB-S2	(1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 (QPSK) /5, 2/3, 3/4, 5/6, 8/9, 9/10 (8PSK))
<b>Output</b>	
Output frequency range	45...862 MHz
Output frequency steps	250 kHz
Frequency stability	±30 kHz
Output channel bandwidth (coupled)	4 x 8 MHz
Output level	88...103 dBµV
Amplitude response (O-E)	1 dB
Modulation type	32-, 64-, 128-, 256-QAM
Symbol rate	4,48...7,20 MS/s
Spurious suppression	>50 dB (at QAM 256)
SNR	≥45 dB
MER	≥40 dB
Bit stuffing	Yes
SI-Table handling	Yes
PID filtering	Yes
LCN	Yes

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	340 x 170 x 70 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0.587 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	2.681

Powerful technology, compact dimensions, modular and flexibly expandable; the WISI COMPACT HEADEND System OH combines all the advantages of an innovative and affordable headend. WISI Compact Headend OH is easy to configure. With up to 14 module slots it offers channel processing for 14 analogue or 28 digital channels in a 3 HU 19" rack chassis. WISI Compact Headend OH operates on a high efficiency power supply, with low consumption modules in order to make a minimum ecological impact and a low operational cost. The USB connection and the RJ45 interface can be used to execute software updates for the basic unit as well as for the modules. Furthermore, all functions can be furnished from a distance per web browser.

### Short description

- Reception of 4 DVB-S/S2 signals and transmodulation into 4 DVB-C channels
- Input frequency range 950...2150 MHz
- Output frequency range 47...862 MHz
- Integrated distribution matrix
- DiSEqC 1.0
- PID filtering
- NIT and LCN generation
- MPEG2 and MPEG4 compatible

# Digital modules

## OH 85 H

Twin DVB-S/S2 – QAM transmodulator with CI



### Technical Data

Input	
Input frequency range	950...2150 MHz
Input frequency steps	1 MHz
Input level range	47...70 dBµV
AFC	±10 MHz
Modulation	QPSK, 8PSK
Symbol rate	QPSK: 1...53 MS/s; 8PSK: 1...45 MS/s; 16APSK: 1...35 MS/s; 32APSK: 1...28 MS/s
Spectral inversion	normal or inverted
FEC outer DVB-S	RS 204, 188, 16
FEC inner DVB-S	Conv. 1/2, 2/3, 3/4, 5/6, 7/8
FEC outer DVB-S2	BCH
FEC inner DVB-S2	LDPC 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
Output	
Output frequency range	45...862 MHz
Output frequency steps	500 kHz
Frequency stability	±30 kHz
Output channel bandwidth (coupled)	2 x 8 MHz
Output level	85...103 dBµV
Amplitude response (O-E)	1 dB
Modulation type	16-, 32-, 64-, 128-, 256- QAM
Symbol rate	3.45...6.9 MS/s
Spurious suppression	>50 dB
SNR	≥45 dB
MER	≥40 dB
Bit stuffing	Yes
PCR correction	Yes
PID filtering	Yes
LCN	Yes
NIT generation	Yes

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	340 x 170 x 70 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0.587 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	2.681

Powerful technology, compact dimensions, modular and flexibly expandable; the WISI COMPACT HEADEND System OH combines all the advantages of an innovative and affordable headend. WISI Compact Headend OH is easy to configure. With up to 14 module slots it offers channel processing for 14 analogue or 28 digital channels in a 3 HU 19" rack chassis. WISI Compact Headend OH operates on a high efficiency power supply, with low consumption modules in order to make a minimum ecological impact and a low operational cost. The USB connection and the RJ45 interface can be used to execute software updates for the basic unit as well as for the modules. Furthermore, all functions can be furnished from a distance per web browser.

### characteristics

- Reception of two DVB-S/S2-signals and transmodulation into two DVB-C channels
- 2x CI slots for central decryption
- Input frequency range 950...2150 MHz
- Output frequency range 47...862 MHz
- MPEG 2 and MPEG 4 compatible
- PID filtering
- NIT and LCN generation

# Digital modules

## OH 86 2

Twin DVB-C/-T2 - QAM transmodulator with CI



Technical Data		Packaging Data	
<b>Input</b>			
Input frequency range	45...878 MHz	Sales unit	1 pcs.
Input frequency steps	1 kHz	Dimensions (WxHxD) sales unit	340 x 170 x 70 mm
Channel bandwidth	6/7/8 MHz	Packaging volume sales unit	dm <sup>3</sup>
channel bandwidth DVB-T2	1,7 / 5 / 6 / 7 / 8 MHz	Gross weight sales unit	0.49 kg
Input level range	47...90 dBμV	Shipping unit	pcs.
FEC DVB-C	Conv., RS 188, 204	Dimensions (WxHxD) shipping unit	mm
QAM-Modulationsart	QPSK, 16QAM, 64QAM, 128QAM, 256QAM	Packaging volume shipping package	2.681
QAM Symbolrate	1...7,2 Mbaud		
FEC DVB-T	Conv., K=7, G=1/2, 2/3, 3/4, 4/5, 5/6, 7/8		
Modulation schema DVB-T	QPSK, 16-, 64-QAM		
Guard Intervall DVB-T	1/4, 1/8, 1/16, 1/32		
FFT DVB-T	2k, 8k switchable		
FEC DVB-T2	LDPC/BCH-Code 1/2, 2/3, 3/4, 4/5, 5/6, 3/5		
Modulation scheme DVB-T2	QPSK, 16QAM, 64QAM, 256QAM		
Guard Intervall DVB-T2	1/4, 1/8, 1/16, 1/32, 1/128, 19/128, 19/256		
FFT DVB-T2	1k, 2k, 4k, 8k, 16k, 32k		
<b>Output</b>			
Output frequency range	45...870 MHz (channel A)		
Output frequency steps	1000 kHz		
Frequency stability	±30 kHz		
Output channel bandwidth (coupled)	2 x 8 MHz		
Output level	85...103 dBμV (Depending on QAM-symbol rate)		
Amplitude response (O-E)	±1 dB		
Spurious suppression	≥50 dB		
S/N	≥45 dB		
MER	≥40 dB		
Modulation	16-, 32-, 64-, 128-, 256-QAM		
Symbol rate	3,45...6,9 MS/s		
Spectral inversion	normal or inverted		

Powerful technology, compact dimensions, modular and flexibly expandable; the WISI COMPACT HEADEND System OH combines all the advantages of an innovative and affordable headend. WISI Compact Headend OH is easy to configure. With up to 14 module slots it offers channel processing for 14 analogue or 28 digital channels in a 3 HU 19" rack chassis. WISI Compact Headend OH operates on a high efficiency power supply, with low consumption modules in order to make a minimum ecological impact and a low operational cost. The USB connection and the RJ45 interface can be used to execute software updates for the basic unit as well as for the modules. Furthermore, all functions can be furnished from a distance per web browser.

### characteristics

- Reception of two DVB-T / T2 / C signals and transmodulation into two QAM-TV channels (coupled)
- 2x CI slots for central decryption
- MPEG 2 and MPEG 4 compatible
- PID filtering
- NIT and LCN generation

# Digital modules

## OH 88 H

Twin DVB-S/S2 – COFDM transmodulator with CI



### Technical Data

Input	
Input frequency range	950...2150 MHz
Input frequency steps	1 MHz
Input level range	47...70 dBµV
AFC	±10 MHz
Modulation type	QPSK, 8PSK
Symbol rate	QPSK: 1...53 MS/s; 8PSK: 1...45 MS/s; 16APSK: 1...35 MS/s; 32APSK: 1...28 MS/s
FEC outer DVB-S	BCH
FEC inner DVB-S	Conv. 1/2, 2/3, 3/4, 5/6, 7/8
FEC outer DVB-S2	BCH
FEC inner DVB-S2	LDPC 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
Output	
Output frequency range	47...862 MHz
Output frequency steps	500 kHz
Frequency stability	±30 kHz
Output channel bandwidth (coupled)	2 x 7/8 MHz
Output level	95...105 dBµV
Amplitude response (O-E)	±1 dB
Spurious suppression	>50 dB
S/N	>41 dB
MER	>37 dB
Modulation	QPSK, 16-, 64-QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
FFT modus	2 k/8 k
Bit stuffing	Yes
PCR correction	Yes
PID filtering and remapping	Yes
Connectors	
F-female	3 pcs.

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	340 x 170 x 70 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0.5 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	4.04

Powerful technology, compact dimensions, modular and flexibly expandable; the WISI COMPACT HEADEND System OH combines all the advantages of an innovative and affordable headend. WISI Compact Headend OH is easy to configure. With up to 14 module slots it offers channel processing for 14 analogue or 28 digital channels in a 3 RU 19" rack chassis. WISI Compact Headend OH operates on a high efficiency power supply, with low consumption modules in order to make a minimum ecological impact and a low operational cost. The USB connection and the RJ45 interface can be used to execute software updates for the basic unit as well as for the modules. Furthermore, all functions can be furnished from a distance per web browser.

### characteristics

- Reception of two DVB-S/S2 signals and transmodulation into two COFDM-TV channels
- 2x CI slots for central decryption
- MPEG 2 and MPEG 4 compatible
- PID filtering
- NIT and LCN generation

# Digital modules

## OH 89 2

Twin DVB-C/-T/-T2 - COFDM transmodulation with CI



Technical Data	
<b>Input</b>	
Input frequency range	45...862 MHz
Input frequency steps	1 kHz
Channel bandwidth	6/7/8 MHz
channel bandwidth DVB-T2	1,7 / 5 / 6 / 7 / 8 MHz
Input level range	47...90 dBµV
FEC DVB-C	Conv., RS 188, 204
QAM-Modulationsart	QPSK, 16QAM, 64QAM, 128QAM, 256QAM
QAM Symbolrate	1...7,2 Mbaud
FEC DVB-T	Conv., K=7, G=1/2, 2/3, 3/4, 4/5, 5/6, 7/8
Modulation schema DVB-T	QPSK, 16-, 64-QAM
Guard Intervall DVB-T	1/4, 1/8, 1/16, 1/32
FFT DVB-T	2k, 8k switchable
FEC DVB-T2	LDPC/BCH-Code 1/2, 2/3, 3/4, 4/5, 5/6, 3/5
Modulation scheme DVB-T2	QPSK, 16QAM, 64QAM, 256QAM
Guard Intervall DVB-T2	1/4, 1/8, 1/16, 1/32, 1/128, 19/128, 19/256
FFT DVB-T2	1k, 2k, 4k, 8k, 16k, 32k
<b>Output</b>	
Output frequency range	45...862 MHz (channel A)
Output frequency steps	250 kHz
Frequency stability	±30 kHz
Output channel bandwidth (coupled)	2 x 7/8 MHz
Output level	82...97 dBµV (Depending on QAM-symbol rate)
Amplitude response (O-E)	±1 dB
Spurious suppression	≥50 dB
S/N	≥41 dB
MER	≥37 dB
Modulation	QPSK, 16-, 64-QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32

Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	340 x 170 x 70 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.494 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	2.681

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### characteristics

- Reception of two DVB-T / T2 / C signals and transmodulation into two COFDM-TV channels (coupled)
- 2x CI slots for central decryption
- MPEG 2 and MPEG 4 compatible
- PID filtering
- NIT and LCN generation

# Input distribution panels

## DC 28 3S1T

Input splitter for 3x7 SAT-outputs and 1x7 terrestrial outputs

## DC 28 4SOT

Input splitter for 4x7 Sat outputs

### characteristics

- 3x 7 SAT-outputs, 1x 7 terrestrial outputs
- DC-bypass for the LNB-supply (SAT)
- 19" input distributor for channel processing systems



### Technical Data

#### Input

Numer SAT	21 pcs.	28 pcs.
Number TERR	7 pcs.	- pcs.
Frequency range-SAT	920...2150 MHz	920...2150 MHz
Frequency range TERR	45...862 MHz	- MHz

#### Output

Output return loss	>12/>15 dB (SAT/TERR)	>12 dB
Through loss	<14/<13 dB (SAT: ±2,5 dB/TERR: ±1 dB)	<14 dB (±2,5 dB)

#### Isolation

Isolation	>23/>25 dB (SAT/TERR)	>23 dB
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#### Connectors

F-female	32 pcs.	32 pcs.
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#### General data

Power passing	<21 V DC (only SAT)	<21 V DC
Power passing	<1,5 A (only SAT)	<1,5 A
Dimensions (width x height x depth)	483 x 44 x 51 mm	483 x 44 x 51 mm
Operating temperature range	-20...+55 °C	-20...+55 °C

### Packaging Data

Sales unit	1 pcs.	1 pcs.
Dimensions (WxHxD) sales unit	520 x 65 x 0065 mm	520 x 65 x 0065 mm
Packaging volume sales unit	dm <sup>3</sup>	dm <sup>3</sup>
Gross weight sales unit	1.7 kg	1.7 kg
Shipping unit	pcs.	pcs.
Dimensions (WxHxD) shipping unit	mm	mm
Packaging volume shipping package	2.2	2.2

# Output collector

## DM 17 A

Passive headend combiner



# Mounting accessories

## ZG 80

Mounting set for input splitter DC 28 to basic unit OH 50



### Technical Data

Frequency range	5...1000 MHz
Input impedance	75 Ω
Input return loss	>18 dB typ., min. 14 dB
Number of taps	12
Output impedance	75 Ω
Output return loss	>18 dB typ., min 13 dB
Tap loss IN-Out	1...12 < 18 dB ( $\pm 1,5$ dB)
Amplitude response (O-E)	<1,5 dB
Isolation Out-Out	>40 dB typ., min. 36 dB
Test Port	-20 dB
RF-screening	>110 dB
Power passing	- V DC
<b>General data</b>	
Dimensions (width x height x depth)	483 x 44 x 124 mm
Temperature range	-20...+55 °C
<b>Connectors</b>	
Output	1x F-connector
Input	12x F-connector
Test	1x F-connector

### Technical Data

<b>General data</b>	
Dimensions (width x height x depth)	80 x 37 x 20 mm

### characteristics

- 19" Mountingangle
- Suitable for basic unit OH 50 A and DC 28
- Scope of delivery 1 pair

The ZG 80 is a mounting kit to attach the input splitter DC 28 on the basic unit OH 50.

### characteristics

- Compact design, rack mounted
- High isolation
- Low insertion loss
- full bandwidth from 5...1000 MHz
- Front panel test port for easy monitoring

A DM 17 A is a passive headend combiner. Because of its compact construction it is possible to install it in a cabinet. The frequency range is 5...1000 MHz and it has a low insertion loss. The input and output impedance amounts to 75 Ohm. A test connection in F-technology is available on the front for easy monitoring.

# HDMI Modulator

## OE 01

Encoder Modulator HDMI in DVB-C/T; ATSC-T/C; DTMB



### Technical Data

HDMI-Input	
HDMI number of ports	1 pcs. (HDMI)
Input format HDMI	1080i50/60, 720p50/60, 576p50, 480p60, 576i50, 480i60
HDCP Support	No
Video Encoding	
Encoding capacity	1x HD MPEG-4
Video system	1x MPEG-4 HD
Picture size	1080i50/60, 720p50/60, 576p50, 480p60, 576i50, 480i60
Bit rate	2...23 Mbps
Subtitle DVB Support	No
Subtitle OP47 Support	No
Frame rate conversion	No
Test pattern	No
Audio Encoding	
Audio-system	ISO 11173-3 (MPEG-1 L2)
Sampling frequency	44.1, 48 kHz
Bit rate	32...320 Kbps
Processing	
PID filtering and remapping	Yes
Advanced PSI/SI regeneration	Yes
NIT generation	Yes
Output	
Output level	59...99 dB $\mu$ V (adjustable)
Connectors	
F-socket RF- output	2 pcs.
HDMI input	1 pcs. (for type A connector)
General data	
Supply voltage	12 V DC (600 mA)
Power consumption	max. ≤6 W
HDMI status LED	Green

### characteristics

- 1 HDMI input supporting all resolutions up to 1080p60.
- 1 HF loop-through input for feeding in existing DVB-C/T signals
- MPEG4 Videocompression
- Switchable output modulation (DVB-C, DVB-T, DTMB and ATSC-T/C)
- Freely adjustable output frequency up to 1218 MHz
- User-friendly programming without additional software/hardware
- Adjustable NIT/LCN parameters
- Compact dimensions and easy assembly

# Handset

## OH 41

Handset



### Technical Data

Display	
Kind of display	LCD Dot Matrix
control panel	
buttons	4 pcs.
Connectors	
RJ11	1 pcs.
General data	
Power supply	5 V DC
Dimensions (width x height x depth)	130 x 76 x 23 mm
length of connection cable	1.2 m (max.)
Operating temperature range	0...+50 °C

### characteristics

- Programming device for OH 50 A and OH 40 A
- Handy dimensions
- Integrated LED for ambient lighting

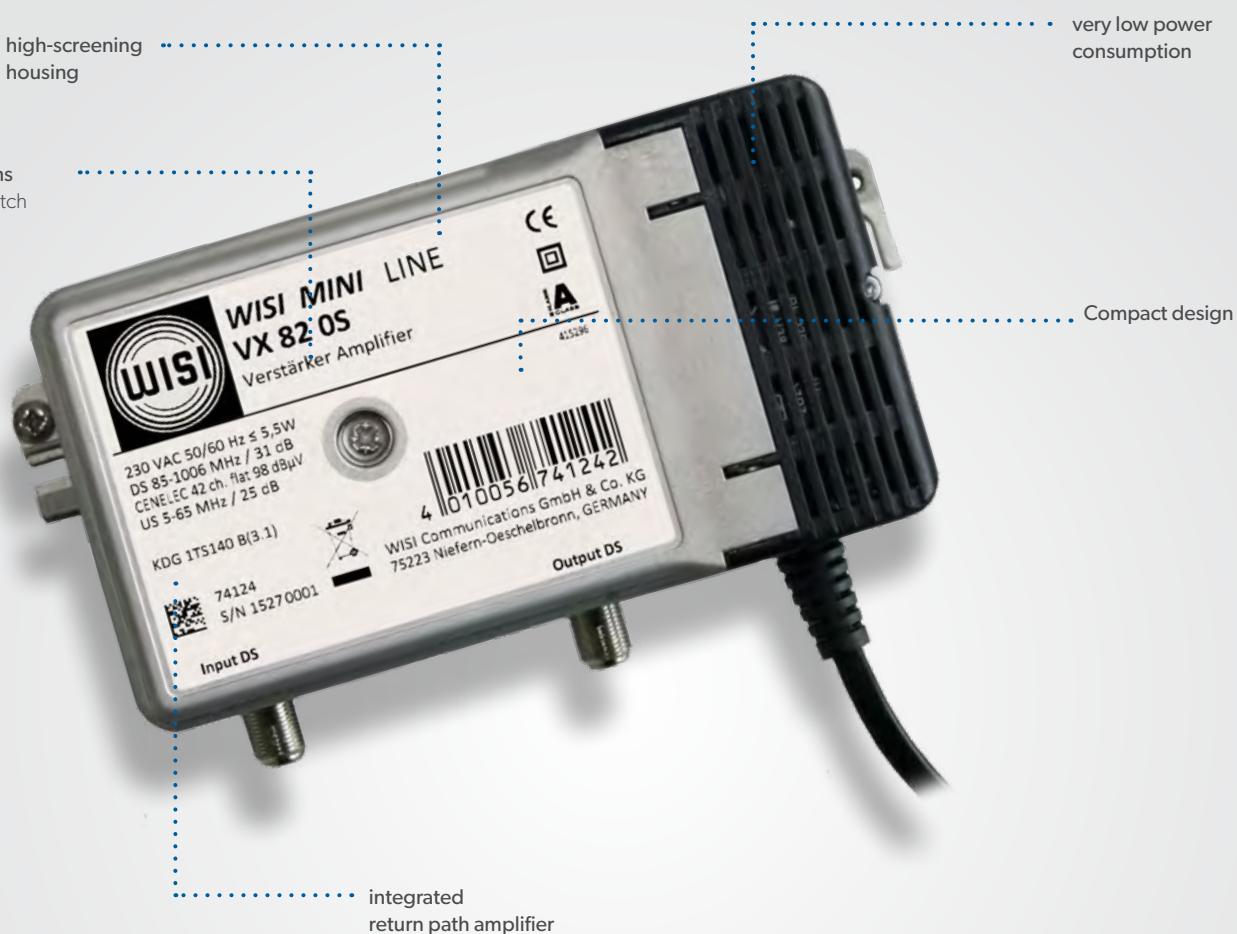
Handset for programming of COMPACT HEADEND module with data storage





# Amplifiers

WISI Amplifiers:  
**Strong types  
for every application.**



WISI in-house distribution amplifiers meet all requirements. From connection in a single-family house or in multiple-family homes WISI has the right type with the right performance for you.

All amplifiers have a robust, corrosion-resistant zinc die-cast housing with fins for excellent air circulation and heat dissipation, are multimedia capable and meet class A requirements.

WISI in-house distribution amplifiers convince with most modern technology and are approved by the cable network operators for installation.

## At a glance

- certified by the network operators
- high efficiency
- compact design
- low power consumption

# Mini Line In-house distribution amplifier

## VX 81 OS

Homeamplifier, 1 GHz, KDG  
1TS140



## VX 82 OS

Homeamplifier, 1 GHz, KDG  
1TS140



## VX 83 OS

Homeamplifier, 1 GHz, KDG  
1TS140



### characteristics

- Compact housing MiniLine
- All RF connections F-connector
- setting elements with rotary switch
- Flap-lid for easy handling
- Approved by Vodafone Kabel Deutschland

### Technical Data

#### Down-Stream / DS

Frequency range downstream	85...1006 MHz	85...1006 MHz	85...1006 MHz
Gain downstream	21 dB	31 dB	31 dB
Frequency response	$\leq \pm 0,8$ dB	$\leq \pm 0,8$ dB	$\leq \pm 0,8$ dB
Output level	$\geq 98$ dB $\mu$ V (CENELEC 42 Ch, flat, CTB/CSO $\geq 60$ dB)	$\geq 98$ dB $\mu$ V (CENELEC 42 Ch, flat, CTB/CSO $\geq 60$ dB)	$\geq 102$ dB $\mu$ V (CENELEC 42 Ch, flat, CTB/CSO $\geq 60$ dB)
IN-ATT (adjuster)	0...20 dB	0...20 dB	0...20 dB
IN-EQ (adjuster)	0...20 dB	0...20 dB	0...20 dB
Interstage-EQ (fix)	3 dB	3 dB	3 dB
Noise figure	$\leq 7$ dB	$\leq 6,5$ dB	$\leq 6,5$ dB
<b>Upstream (US)</b>			
US frequency range	5...65 MHz	5...65 MHz	5...65 MHz
Gain upstream	16 dB	25 dB	25 dB
Frequency response upstream	$\leq \pm 0,8$ dB	$\leq \pm 0,8$ dB	$\leq \pm 0,8$ dB
Output level	120 dB $\mu$ V (KDG TS140 medium load; BER <1e 10-6)	120 dB $\mu$ V (KDG TS140 medium load; BER <1e 10-6)	120 dB $\mu$ V (KDG TS140 medium load; BER <1e 10-6)
IN-ATT (adjuster)	0...20 dB	0...20 dB	0...20 dB
Noise figure	$\leq 7$ dB	$\leq 4,5$ dB	$\leq 4,5$ dB

#### General data

HF-connections	F	F	F
Impedance	75 $\Omega$	75 $\Omega$	75 $\Omega$
Return loss	$\geq 14$ dB (>40 MHz - 1,5 dB Oktave $\geq 10$ dB)	$\geq 14$ dB (>40 MHz - 1,5 dB Oktave $\geq 10$ dB)	$\geq 14$ dB (>40 MHz - 1,5 dB Oktave $\geq 10$ dB)
Lightning protection	1 kV (severity 1 / EN60728-3)	1 kV (severity 1 / EN60728-3)	1 kV (severity 1 / EN60728-3)
EMC	EN50083-2	EN50083-2	EN50083-2
Dimensions (width x height x depth)	163 x 90 x 50 mm	163 x 90 x 50 mm	163 x 90 x 50 mm
Supply voltage	230 V ( $\pm 10$ %)	230 V ( $\pm 10$ %)	230 V ( $\pm 10$ %)
Power consumption max.	$\leq 4,5$ W	$\leq 5,5$ W	$\leq 5,5$ W
Ambient temperature	-20...+55 °C	-20...+55 °C	-20...+55 °C
Storage temperature	-25...+75°C	-25...+75°C	-25...+75°C
Protection class	IP20	IP20	IP20

# Mini Line In-house distribution amplifier

## VX 86

In-house amplifier



### Technical Data

Downstream	
Inputs	1 pcs.
Frequency range downstream	47...862 MHz
Gain downstream	18...21 dB
Noise figure downstream	<8 dB
Attenuator downstream	0...18 dB
Equalizer downstream	3...18 dB
Interstage equalizer downstream	3 dB (constant)
Output level 1	96 dB $\mu$ V (DS, CENELEC 42 channels, flat)
Output level 2	98.5 dB $\mu$ V (DS, CENELEC 42 channels, 6 dB slope)
Output level 3	114 dB $\mu$ V (DS, EN50083-5, 3.Oнд.)
Upstream	
Frequency range upstream	5...30 MHz (passive)
Connectors	
F-female	2 pcs.
General data	
Operating voltage AC	230 V (50/60 Hz)
Power consumption	3,5 W
EMC	Class A, EN 50083-2
Dimensions (width x height x depth)	163 x 90 x 47 mm
Operating temperature range	-20...+55 °C
Protection class	IP20
Lightning protection	1 kV (EN61000-4-5, 1,2/50 $\mu$ s pulse)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	166 x 143 x 50 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.871 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	1.2

Broadband in-house amplifier for use in coaxial networks recommended for 1-3 households

### characteristics

- With passive return path
- Adjustable level and equalizer
- F-connectors
- Wall mounting
- Metal housing

# Mini Line In-house distribution amplifier

## VX 87

In-house amplifier



### Technical Data

<b>Downstream</b>	Eingaenge Technische_Attribute 1 pcs.
Frequency range downstream	47862
Gain downstream 2831	dB
Noise figure downstream <8	Decibel
Attenuator downstream	18 dB
Equalizer downstream	318 dB
Interstage equalizer downstream	3 dB (constant)
Output level 1	96 (DS, CENELEC 42 channels, flat)
Output level 2	985 (DS, CENELEC 42 channels, 6 dB slope)
Output level 3	114 (DS, EN50083-5, 3.Ord.)
<b>Upstream</b>	
Frequency range upstream	530 (passive)
<b>Connectors</b>	
F-female	2 pcs.
<b>General data</b>	
Operating voltage AC	230 V (50/60 Hz)
Power consumption 3.5	W
EMC Class A, EN 50083-2	
Dimensions (width x height x depth) 163 x 90 x 47	mm
Operating temperature range -20...+55	Celsius
Protection class IP20	
Lightning protection 1	Kilovolt (EN61000-4-5, 1,2/50 µs pulse)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	166 x 143 x 50 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	12

With passive return path

### characteristics

- Adjustable level and equalizer
- F-connectors
- Wall mounting
- Metal housing

# Mini Line In-house distribution amplifier 4 outputs

## VX 67 B

In-house amplifier



### Technical Data

Downstream	
Inputs	1 pcs.
Frequency range downstream	85...1006 MHz
Gain downstream	6 dB
Output level 1	≥87 dBµV (CENELEC 42 channels, flat, at CSO/CTB >60 dB)
Upstream	
Frequency range upstream	5...65 MHz
Gain upstream	1 dB
Noise figure upstream	≤18 dB
Output level 4	116 dBµV (DIN. IMA2/3 >50 dB)
Connectors	
F-female	5 pcs.
General data	
Operating voltage AC	230 V (±10 %)
Power consumption	3 W
Screening factor	Class A, EN 50083-2
Dimensions (width x height x depth)	165x105x45 mm
Operating temperature range	-25...+75 °C
Protection class	IP20

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	166 x 150 x 50 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.87 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	1.2

Broadband in-house amplifier for use in coaxial networks with direct connection for up to 4 antenna outlets.

### characteristics

- Adjustable level and equalizer
- F-connectors
- Wall mounting
- Metal housing

# Midi Line In-house distribution amplifier

## VX 88 OP

In-house/distribution amplifier, locally supplied



KLASSE  
**A**  
CLASS

### Technical Data

#### Down-Stream / DS

Frequency range downstream	85...1006 MHz
Gain downstream	30 dB
Attenuator downstream	0...20 dB
Equalizer downstream	0...20 dB
Interstage equalizer downstream	0/6 dB
Output level 1	100 dB $\mu$ V
Noise figure downstream	$\leq$ 7,0 dB

#### Upstream (US)

Frequency range upstream	5...65 MHz
Gain upstream	25 dB
Attenuator upstream input	0...20 dB
Equalizer US	0/3/6/9 dB
Noise figure upstream	$\leq$ 5 dB
Output level	120 dB $\mu$ V
Input test point (bidirectional)	-20 dB
Output test point (directional coupler)	-20 dB

#### General data

Impedance	75 $\Omega$
Operating voltage	230 V AC ( $\pm$ 10%, LED green)
Power consumption	$\leq$ 5,5 W
Operating temperature range	-20...+55 °C
Storage temperature	-25...+75 °C
Protection class	IP20
Electro Magnetic Compatibility (EMC)	EN50083-2
Lightning protection	1 kV (EN60728-2-1, 2/50 $\mu$ s pulse)
Dimensions (width x height x depth)	163 x 90 x 50 mm

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	166 x 143 x 50 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.726 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

MIDI-LINE distribution amplifier in zinc diecast housing, flap cover for easy handling, attenuators and equaliser configurable via PADs and jumper. Measuring points on the input and output. Return path amplifier on the main board, low power input and high power output. Classification: VX 88 OP: KDG 1TS140 B (3.2)

### characteristics

- Zinc die-cast housing
- Flap-lid for easy handling
- Configuration of attenuators and equalizers via PADs and jumpers
- Measuring points at the input and output
- Return path amplifier on the circuit board
- Low power consumption, high output level
- Classification: KDG 1TS140 C (3.2)

# Midi Line In-house distribution amplifier

## VX 12 K4432

Cascadable Amplifier 1.2 GHz



### Technical Data

#### Down-Stream / DS

Frequency range downstream	258...1218 MHz
Gain downstream	44/36 dB
Frequency response	±0.8 dB
Return loss IN, OUT	≥ 16.5 dB -1.5 dB/Oct.
Noise figure	≤ 6 dB
Output level	≥ 109 dB $\mu$ V (all QAM 120 x 256 QAM, BER ≤ 1x10-9, 7 dB slope)
Attenuator downstream	0...20 dB (Pad XP...)
cable simulator	0...8 dB (Pad XP...)
Input equalizer	0...14 dB (Pad XP...)
Interstage Slope	0/7 dB (Jumper)

#### Upstream (US)

Frequency range upstream	5...204
Gain upstream	32 dB
Frequency Response	± 0.8 dB
In/Output return loss	≥ 18 dB (10...204 MHz)
Noise figure upstream	≤ 5 dB
Output level	≥ 108 dB $\mu$ V (24x QAM256, BER ≤ 1x10-9, flat)
Interstage attenuator 0/6	dB (Jumper)
Attenuator upstream input	0...20 dB (Pad XP...)
Output equalizer	0...10 dB (Pad XP...)
Output attenuator	0...20 dB (Pad XP...)
Options	ICS-Receiver module 0/6/Off according to EN60728-14 -> VT21

#### General data

Compliance	VF TS4002
RF Connector Amplifier	F
Impedance	75 Ω
Input RF test point	-20 dB +- 1 dB (10...204 MHz) -20dB +-2.5 dB (258...1218 MHz)
DS RF test point	-20 dB dB (±1 dB)
Supply voltage	230 V AC

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	178 x 61 x 131 mm
Packaging volume sales unit	1.42 dm <sup>3</sup>
Gross weight sales unit	0.68 kg
Shipping unit	1 pcs.

Compact 1.2 GHz cascadable house amplifier with one active output

### characteristics

- Aluminium die-casting housing
- Function control LED
- External test points for input and output
- Measurement setup and procedure according to EN 60728-3
- Very low power consumption
- Interface for optional VT21 module
- Vodafone certified

# Home Line In-house distribution amplifier

## VX 2015

Building CATV Amplifier 1,2 GHz



### Technical Data

Downstream	
Frequency range	85...1218 MHz
Gain	15 dB ( $\pm 0,7$ dB)
Ripple	$\leq \pm 0,8$ dB
Noise figure	<7,0 dB @ 1 GHz, <8,0 dB @ 1,2 GHz
Output level	101 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB $\geq 60$ dB), flat)
Output level	100 dB $\mu$ V (110 Ch/QAM 256, flat, BER <1 E-9)
Output level	100 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, flat)
Input cable simulator	0/5/10 dB (Jumper)
Input attenuator	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB
Input equalizer	0...30 dB / 1218 MHz Drehpunkt (Rotary switch 15 Steps)
Step size	2 dB
Interstage equalizer (Slope)	0/2/4 dB (Jumper)
Test point	-20 dB
Upstream	
Frequency range	5...65/...204 MHz (depending on return path amplifier VX 201 065/ VX 201 204)
High pass filter pluggable (optional)	15 MHz (WISI - XE04/0150)
Gain	21 dB ( $\pm 0,7$ dB)
Ripple	$\pm 0,5$ dB
Noise figure	<8,5 dB
Output level	110 dB $\mu$ V (6 x 256 QAM)
Interstage attenuator	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB
Interstage equalizer	0/2/4/6/8 dB (Jumper)
Output attenuator	0/10 dB (Jumper)
Output equalizer	0/6 dB (Jumper)
Ingress control switch (optional)	nach ICS EN 60728-14
Test point	-20 dB

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	175 x 175 x 50 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.72 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The VX 2015 is a location feeding in-house amplifier with a frequency range up to 1.2 GHz. It has an active output and a measuring socket on the input and output. Diplex filter and return path amplifier are grouped together on a module (VX201-xxx) and available in the versions 65 MHz, 85 MHz and 204 MHz. All settings are done without interruption with Q-step switch or jumper. In addition, a high pass filter XE-xx can be plugged in the return path to influence the ingress influences.

### characteristics

- High output level up to 1.2 GHz, with low power consumption
- Active single output
- Measuring socket for input and output
- All settings (gain, slope etc.) by rotary switch and Jumper
- Diplex filters, return amplifier pluggable on one module
- Optional - receiver according to EN 60728-14 for ICS-settings
- Optional - pluggable high pass filter at the return path channel
- Low power input <6 W

# Home Line In-house distribution amplifier

## VX 45 OP

In-house/distribution amplifier, locally supplied



### Technical Data

#### Down-Stream / DS

Frequency range downstream 85...1006 MHz

Gain downstream 38 dB

Attenuator downstream 0...20 dB

Equalizer downstream 0...20 dB

Interstage equalizer downstream 0/6 dB

Output level 1 107 dB $\mu$ V

Noise figure downstream  $\leq$ 6,0 dB

#### Upstream (US)

Frequency range upstream 5...65 MHz

Gain upstream 28 dB

Attenuator upstream input 0...20 dB

Equalizer US 0/3/6/9 dB

Noise figure upstream  $\leq$ 5 dB

Output level 120 dB $\mu$ V

Input test point (bidirectional) -20 dB

Output test point (directional coupler) -20 dB

#### General data

Impedance 75  $\Omega$

Operating voltage 230 V AC ( $\pm$  10%, LED green)

Power consumption  $\leq$ 6,0 W

Operating temperature range -20...+55 °C

Storage temperature -25...+75 °C

Protection class IP20

Electro Magnetic Compatibility (EMC) EN50083-2

Lightning protection 1 kV (EN60728-3: - 1,2/50  $\mu$ s pulse)

Dimensions (width x height x depth) 163 x 90 x 50 mm

### Packaging Data

Sales unit 1 pcs.

Dimensions (WxHxD) sales unit 170 x 150 x 55 mm

Packaging volume sales unit dm<sup>3</sup>

Gross weight sales unit 0.726 kg

Shipping unit pcs.

Dimensions (WxHxD) shipping unit mm

Packaging volume shipping package

Home-Line distribution amplifier in zinc diecast housing, flap cover for easy handling, attenuators and equaliser configurable via PADs and jumper. Measuring points on the input and output. Return path amplifier on the main board, low power input and high power output. Classification: KDG 1TS140 C (4.3)

### characteristics

- Zinc die-cast housing
- Flap-lid for easy handling
- Configuration of attenuators and equalizers via PADs and jumpers
- Measuring points at the input and output
- Return path amplifier on the circuit board
- Low power consumption, high output level
- Classification: KDG 1TS140 C (4.3)

# Home Line In-house distribution amplifier

## VX 45 D 3830

In-house amplifier



### Technical Data

Downstream	
Inputs	1 pcs.
Input measurement socket	20 dB (resistance)
Frequency range downstream	85...1006 MHz
Gain downstream	38 dB
Noise figure downstream	<7,5 dB
Attenuator downstream	0...15 dB (1 dB-steps)
Equalizer downstream	0...22,5 dB (1,5 dB-steps)
Interstage attenuator downstream	0/6 dB (Jumper)
Interstage equalizer downstream	0/6 dB (Jumper)
Output level 1	≥107 dBµV (CENELEC 42 channels, flat, at CSO/CTB >60 dB)
Output test point	20 dB (directional coupler)
Upstream	
Frequency range upstream	5...65 MHz
Gain upstream	30 dB
Noise figure upstream	<6 dB
Attenuator upstream input	0...15 dB (1 dB-steps)
Attenuator upstream output	0/10 dB (Jumper)
Equalizer US	0/3/6/9 dB (Jumper)
Output level 4	120 dBµV (3 x 64 QAM-signals)
Connectors	
F-female	4 pcs.
General data	
Operating voltage AC	230 V
Power consumption	6 W
Screening factor	dB Class A, EN 50083-2
Dimensions (width x height x depth)	163 x 90 x 47 mm
Operating temperature range	-20...+55 °C
Protection class	IP20
Lightning protection	1 kV (EN61000-4-5, 1,2/50 µs pulse)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	170 x 150 x 55 mm
Packaging volume sales unit	dm³
Gross weight sales unit	0.67 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	1.2

Broadband in-house amplifier for use in coaxial networks recommended for 7 to 18 households.

### characteristics

- Zinc die-cast housing
- Return path amplifier and diplexer on board
- External test points
- Alignment by uninterruptible rotary switch and jumper
- Passive return path (jumper)

# Home Line In-house distribution amplifier

## VX 45 E

In-house amplifier



### Technical Data

Downstream	
Inputs	1 pcs.
Input measurement socket	20 dB (resistance)
Frequency range downstream	47...862 MHz
Gain downstream	36 dB
Noise figure downstream	7.5 dB
Attenuator downstream	0...15 dB (1 dB steps)
Equalizer downstream	0...22,5 dB (1,5 dB-steps)
Interstage attenuator downstream	0/6 dB (Jumper)
Interstage equalizer downstream	0/6 dB (Jumper)
Output level 1	107 dB <sub>µ</sub> V (CENELEC 42 channels, 6 dB slope, at CSO/CTB >60 dB)
Output test point	20 dB (directional coupler)
Connectors	
F-female	4 pcs.
General data	
Operating voltage AC	230 V
Power consumption	5 W
Screening factor	Class A, EN 50083-2
Dimensions (width x height x depth)	163 x 90 x 47 mm
Operating temperature range	-20...+55 °C
Protection class	IP20
Lightning protection	4 kV (EN61000-4-5, 1,2/50 µs pulse)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	170 x 150 x 55 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.726 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	1.2

Broadband in-house amplifier for use in coaxial networks recommended for 7 to 18 households

### characteristics

- high quality downstream amplifier with band 1
- Zinc die-cast housing
- External test points
- Alignment by uninterruptible rotary switch

# Value Line In-house distribution amplifier

## VX 26 BH 60A

Value Line CATV Amplifier, remote powered, 1,2 GHz



### Technical Data

#### Down-Stream / DS

Frequency range	85...1218/ 258...1218 (F1/F2)
Noise figure	9 dB
Gain	44 dB ( $\pm 1$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...20 dB (0,5 dB steps)
Interstage cable simulator	0/5/10 dB
Interstage attenuator	0...20 dB (0,1 dB steps)
Interstage equalizer	0...25 dB (0,1 dB steps)
Interstage Slope	0...15 dB (1 dB steps)
Output level	110 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, flat)
Output level	112 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, 12 dB slope)
Output level	113 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB $\geq$ 60 dB), flat)
Output level	115 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB $\geq$ 60 dB), 12 dB slope)
ALSC Mode	off/one pilot/two pilots Pilot frequency 40...1002 MHz / 0.1 dB steps
Input test point (bidirectional)	-20 dB ( $\pm 1,5$ dB to 858 MHz / $\pm 2$ dB 1218 MHz)
Output test point (directional coupler)	-20 dB ( $\pm 0,75$ dB)

#### Upstream (US)

Frequency range	5...65/5...204 MHz (F1/F2)
Gain	32 dB ( $\pm 0,75$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...15 dB (0,5 dB steps)
Interstage equalizer	0...12 dB (1 dB steps)
Interstage attenuator	0...15 dB (0,5 dB steps)
Noise figure	8 dB
Output level	113 dB $\mu$ V ((8 x 256 QAM), BER <1E-9, US 65 MHz)

### Technical Data

Output level	107 dB $\mu$ V ((24 x 256 QAM), BER <1E-9, US 204 MHz)
NPR >50 dB	>50dB (60 MHz load / -7dB $\mu$ V / dyn. $\geq$ 22 dB)
NPR >50 dB	>50dB (192 MHz load / -7dB $\mu$ V / dyn. $\geq$ 16 dB)
Ingress Control Switch (ICS)	0/ -6/ <-45 dB (Opt.with Receiver-mod)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	350 x 290 x 175 mm
Packaging volume sales unit	17.8 dm <sup>3</sup>
Gross weight sales unit	2.1 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	350 x 290 x 175 mm
Packaging volume shipping package	17.8

High output level up to 1,2 GHz

### characteristics

- All settings (Gain, slope etc.) via WISI bluetooth App
- Auto Alignment for automatic level adjustment
- Automatic Level and Slope Control (ALSC) with adjustable pilot frequencies
- WISI FlexAccess technology for diplex switchover via Bluetooth or handheld
- Two integrated diplex filters (65 MHz and 204 MHz)
- Interface for optional Fostra module

# Value Line In-house distribution amplifier

## VX 29 BH 60A

Value Line CATV Amplifier, remote powered, 1,2 GHz



### Technical Data

#### Down-Stream / DS

Frequency range	85...1218/ 258...1218 (F1/F2)
Noise figure	9 dB
Gain	44 dB ( $\pm 1$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...20 dB (0,5 dB steps)
Interstage cable simulator	0/5/10 dB
Interstage attenuator	0...20 dB (0,1 dB steps)
Interstage equalizer	0...25 dB (0,1 dB steps) / pivot point 1218 MHz
Interstage Slope	0...15 dB (1 dB steps) / pivot point 1218MHz
Output level	110 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, flat)
Output level	112 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, 12 dB slope)
Output level	113 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB $\geq$ 60 dB), flat)
Output level	115 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB $\geq$ 60 dB), 12 dB slope)
ALSC Mode	off/one pilot/two pilots Pilot frequency 40...1002 MHz / 0.1 dB steps
Input test point (bidirectional)	-20 dB ( $\pm 1,5$ dB to 858 MHz / $\pm 2$ dB 1218 MHz)
Output test point (directional coupler)	-20 dB ( $\pm 0,75$ dB)
<b>Upstream (US)</b>	
Frequency range	5...65/5...204 MHz (F1/F2)
Gain	32 dB ( $\pm 0,75$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...15 dB (0,5 dB steps)
Interstage equalizer	0...12 dB (1 dB steps)
Interstage attenuator	0...15 dB (0,5 dB steps)
Noise figure	8 dB

### Technical Data

Output level	113 dB $\mu$ V ((8 x 256 QAM), BER <1E-9, US 65 MHz)
Output level	107 dB $\mu$ V ((24 x 256 QAM), BER <1E-9, US 204 MHz)
NPR >50 dB	>50dB (60 MHz load / -7dBuV / dyn. $\geq$ 22 dB)
NPR >50 dB	>50dB (192 MHz load / -7dBuV / dyn. $\geq$ 16 dB)
Ingress Control Switch (ICS)	0/ -6/ <-45 dB (Opt.with Receiver-mod)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	236 x 80 x 144 mm
Packaging volume sales unit	2.7 dm <sup>3</sup>
Gross weight sales unit	1.8 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	300 x 92 x 189 mm
Packaging volume shipping package	5.2

High output level up to 1,2 GHz

### characteristics

- All settings (Gain, slope etc.) via WISI bluetooth App
- Auto Alignment for automatic level adjustment
- Automatic Level and Slope Control (ALSC) with adjustable pilot frequencies
- WISI FlexAccess technology for diplex switchover via Bluetooth or handheld
- Two integrated diplex filters (65 MHz and 204 MHz)
- Interface for optional VT21 module, XM input and output modules  
Optional ICS receiver according to EN 60728-14

# Value Line In-house distribution amplifier

## VX 29 BH 80A

Value Line CATV Amplifier, remote powered, 1,2 GHz



### Technical Data

#### Down-Stream / DS

Frequency range	108...1218/ 258...1218 (F1/F2)
Noise figure	9 dB
Gain	44 dB ( $\pm 0,75$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...20 dB (0,5 dB steps)
Interstage cable simulator	0/5/10 dB
Interstage attenuator	0...20 dB (0,1 dB steps)
Interstage equalizer	0...25 dB (0,1 dB steps) / pivot point 1218MHz
Interstage Slope	0...15 dB (1 dB steps) / pivot point 1218MHz
Output level	110 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, flat)
Output level	112 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, 12 dB slope)
Output level	113 dB $\mu$ V (Cenelec 41 Ch,CTB/ CSO >60 dB)
Output level	115 dB $\mu$ V (Cenelec 41 Ch,CTB/ CSO >60 dB slope 12 dB)
Input test point (bidirectional)	-20 dB ( $\pm 1,5$ dB to 858 MHz / $\pm 2$ dB 1218 MHz)
Output test point (directional coupler)	-20 dB ( $\pm 0,75$ dB)

#### Automatic level and slope control (ALSC)

ALSC Mode	
Pilot frequencies	40...1002 MHz / 0.1 MHz
<b>Upstream (US)</b>	
Frequency range	5...85/5...204 MHz (F1/F2)
Gain	32 dB ( $\pm 0,75$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...15 dB (0,5 dB steps)
Interstage equalizer	0...12 dB (1 dB steps)
Interstage attenuator	0...15 dB (0,5 dB steps)
Noise figure	8 dB

### Technical Data

#### Output level

F1 / 8 QAM256 BER <1E-9	>113 dB $\mu$ V
NPR >50 dB	60 MHz load / -7 dB $\mu$ V / dyn. >22 dB

#### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	236 x 80 x 144 mm
Packaging volume sales unit	2.7 dm <sup>3</sup>
Gross weight sales unit	1.8 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	300 x 92 x 189 mm
Packaging volume shipping package	5.2

High output level up to 1,2 GHz

#### characteristics

- All settings (Gain, slope etc.) via WISI bluetooth App
- Auto Alignment for automatic level adjustment
- Automatic Level and Slope Control (ALSC) with adjustable pilot frequencies
- WISI FlexAccess technology for diplex switchover via Bluetooth or handheld
- Integrated diplex filters (85 MHz and 204 MHz)
- Interface for optional VT21 module, XM input and output modules  
Optional ICS receiver according to EN 60728-14

# Value Line In-house distribution amplifier

## VX 29 BH 82A

Value Line CATV Amplifier, remote powered, 1,2 GHz



### Technical Data

#### Down-Stream / DS

Frequency range	108...1218/ 258...1218 (F1/F2)
Noise figure	9 dB
Gain	44 dB ( $\pm 0,75$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...20 dB (0,5 dB steps)
Interstage cable simulator	0/5/10 dB
Interstage attenuator	0...20 dB (0,1 dB steps pivot point 1218 MHz)
Interstage equalizer	0...25 dB (0,1 dB steps)
Interstage Slope	0...15 dB (1 dB steps) / pivot point 1218MHz
Output level	110 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, flat)
Output level	112 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, 12 dB slope)
Output level	113 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB > 60 dB), flat)
Output level	115 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB > 60 dB), 12 dB slope)
ALSC Mode	off/one pilot/two pilots Pilot frequency 40...1002 MHz / 0.1 MHz steps
Input test point (bidirectional)	-20 dB ( $\pm 1,5$ dB to 858 MHz / $\pm 2$ dB 1218 MHz)
Output test point (directional coupler)	-20 dB ( $\pm 0,75$ dB)
<b>Upstream (US)</b>	
Frequency range	5...85/5...204 MHz (F1/F2)
Gain	32 dB ( $\pm 0,75$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...15 dB (0,5 dB steps)
Interstage equalizer	0...12 dB (1 dB steps)
Interstage attenuator	0...15 dB (0,5 dB steps)
Noise figure	8 dB

### Technical Data

Output level	113 dB $\mu$ V ((8 x 256 QAM), BER <1E-9, US 85 MHz)
Output level	107 dB $\mu$ V ((24 x 256 QAM), BER <1E-9, US 204 MHz)
NPR >50 dB	>50dB (60 MHz load / -7dB $\mu$ V / dyn. $\geq$ 22 dB)
NPR >50 dB	>50dB (192 MHz load / -7dB $\mu$ V / dyn. $\geq$ 16 dB)
Ingress Control Switch (ICS)	0/ -6/ <-45 dB (Opt.with Receiver-mod)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	197 x 86 x 158 mm
Packaging volume sales unit	2.7 dm <sup>3</sup>
Gross weight sales unit	1.6 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	285 x 90 x 180 mm
Packaging volume shipping package	4.6

High output level up to 1,2 GHz

### characteristics

- All settings (Gain, slope etc.) via WISI bluetooth App
- Auto Alignment for automatic level adjustment
- Automatic Level and Slope Control (ALSC) with adjustable pilot frequencies
- WISI FlexAccess technology for diplex switchover via Bluetooth or handheld
- Two integrated diplex filters (85 MHz and 204 MHz)
- Interface for optional VT21 module, XM input and output modules  
Optional ICS receiver according to EN 60728-14

# Value Line In-house distribution amplifier

## VX 29 BL 80A

Value Line CATV Amplifier, remote powered, 1,2 GHz



### Technical Data

#### Down-Stream / DS

Frequency range	108...1218/ 258...1218 (F1/F2)
Noise figure	9 dB
Gain	44 dB ( $\pm 0,75$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...20 dB (0,5 dB steps)
Interstage cable simulator	0/5/10 dB
Interstage attenuator	0...20 dB (0,1 dB steps pivot point 1218 MHz)
Interstage equalizer	0...25 dB (0,1 dB steps)
Interstage Slope	0...15 dB (1 dB steps) / pivot point 1218MHz
Output level	106 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, flat)
Output level	108 dB $\mu$ V (all QAM (138 x 256 QAM), BER <1e-9, 12 dB slope)
Output level	111 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB > 60 dB), flat)
Output level	113 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB > 60 dB), 12 dB slope)
ALSC Mode	off/one pilot/two pilots Pilot frequency 40...1002 MHz / 0.1 MHz steps
Input test point (bidirectional)	-20 dB ( $\pm 1,5$ dB to 858 MHz / $\pm 2$ dB 1218 MHz)
Output test point (directional coupler)	-20 dB ( $\pm 0,75$ dB)
<b>Upstream (US)</b>	
Frequency range	5...85/5...204 MHz (F1/F2)
Gain	32 dB ( $\pm 0,75$ dB)
Frequency response	$\pm 0,75$ dB
Input attenuator	0...15 dB (0,5 dB steps)
Interstage equalizer	0...12 dB (1 dB steps)
Interstage attenuator	0...15 dB (0,5 dB steps)
Noise figure	8 dB

### Technical Data

Output level	113 dB $\mu$ V ((8 x 256 QAM), BER <1E-9, US 85 MHz)
Output level	107 dB $\mu$ V ((24 x 256 QAM), BER <1E-9, US 204 MHz)
NPR >50 dB	>50dB (60 MHz load / -7dB $\mu$ V / dyn. $\geq$ 22 dB)
NPR >50 dB	>50dB (192 MHz load / -7dB $\mu$ V / dyn. $\geq$ 16 dB)
Ingress Control Switch (ICS)	0/ -6/ <-45 dB (Opt.with Receiver-mod)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	236 x 80 x 144 mm
Packaging volume sales unit	2.7 dm <sup>3</sup>
Gross weight sales unit	1.8 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	232 x 158 x 86 mm
Packaging volume shipping package	5.2

High output level up to 1,2 GHz

### characteristics

- All settings (Gain, slope etc.) via WISI bluetooth App
- Auto Alignment for automatic level adjustment
- Automatic Level and Slope Control (ALSC) with adjustable pilot frequencies
- WISI FlexAccess technology for diplex switchover via Bluetooth or handheld
- Two integrated diplex filters (85 MHz and 204 MHz)
- Interface for optional VT21 module, XM input and output modules  
Optional ICS receiver according to EN 60728-14

# Value Line In-house distribution amplifier

## VX 16 C 0650

In-house/distribution amplifier, locally supplied



### Technical Data

Downstream	
Inputs	1 pcs.
Input measurement socket	-20 dB
Input return loss	≥18 dB (-1,5 dB/Okt., 14 dB)
Frequency range downstream	85...1006 MHz
Gain downstream	40/32 dB
Noise figure downstream	≤5 dB
Attenuator downstream	0...20 dB (PAD)
Equalizer downstream	0...20 dB (PAD)
Interstage attenuator downstream	0...8 dB (PAD, 6 dB by 32 dB amplifier)
Interstage equalizer downstream	0/7/10 dB (Jumper, 1006 MHz)
cable simulator downstream	0...10 dB (PAD)
Output level 1	111 dB $\mu$ V (CENELEC 42 channels, flat, at CSO/CTB >60 dB/>60 dB)
Output test point	-20 dB
Output splitter	pcs. optional, by distribution module XM...2. Output can be switched

### Upstream

Frequency range upstream	5...65 MHz
Gain upstream	22/32 dB (return channel full channel load)
Noise figure upstream	≤5 dB
Attenuator upstream input	0...20 dB (PAD)
Attenuator upstream output	0...20 dB (PAD)
Equalizer US	0...15 dB (PAD)
Output level 3	120 dB $\mu$ V (1 TS 140 average load QAM64 MER >35, BER <1 x 10-8)
Output level 4	110 dB $\mu$ V (US, EN50083-5/2.Ord)
Upstream test point	-20 dB

### Connectors

F-female	2 pcs.
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### General data

Operating voltage AC	230 V
Power consumption	<11,5/<12,5 W (Amplifying 32 dB/40 dB, + 2 W with return channel amplifier)

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	310 x 180 x 90 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	1.8 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

Broadband distribution amplifier for use in coaxial networks.

### characteristics

- Vodafone KDG certified
- Unitymedia certified

# Value Line In-house distribution amplifier

## VX 2022

Building CATV Amplifier 1,2 GHz



### Technical Data

Downstream	
Frequency range	85...1218 MHz
Gain	22 dB ( $\pm 0,8$ dB)
Ripple	$\leq \pm 0,8$ dB
Noise figure	<7,5 dB @ 1 GHz, <8,0 dB @ 1,2 GHz
Output level	106 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB $\geq 60$ dB), flat)
Output level	103 dB $\mu$ V (110 Ch/QAM 256, flat, BER <1 E-9)
Output level	102 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, flat)
Input cable simulator	0/5/10 dB (Jumper)
Input attenuator	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB
Input equalizer	0...30 dB/1218 Drehpunkt (Rotary switch 15 Steps)
Step size	2 dB
Interstage equalizer (Slope)	0/2/4/6 dB (Jumper)
Test point	-20 dB
Upstream	
Frequency range	5...65/5...204 MHz (depending on return path amplifier VX 201 065/ VX 201 204)
High pass filter pluggable (optional)	15 MHz (WISI - XE 04 0150)
Gain	21 dB ( $\pm 0,8$ dB)
Ripple	$\pm 0,5$ dB
Noise figure	<8,5 dB
Output level	110 dB $\mu$ V (6 x 256 QAM)
Interstage attenuator	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB
Interstage equalizer	0...8 dB (Jumper 4 Steps)
Output attenuator	0/10 dB (Jumper)
Output equalizer	0/6 dB (Jumper)
Ingress control switch (optional)	nach ICS EN 60728-14
Test point	-20 dB

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The VX 2022 is a location feeding in-house amplifier with a frequency range up to 1.2 GHz. It has an active output and a measuring socket on the input and output. Diplex filter and return path amplifier are grouped together on a module (VX201-xxx) and available in the versions 65 MHz, 85 MHz and 204 MHz. All settings are done without interruption with Q-step switch or jumper. In addition, a high pass filter XE-xx can be plugged in the return path to influence the ingress influences.

### characteristics

- High output level up to 1.2 GHz, with low power consumption
- Active single output
- Measuring socket for input and output
- All settings (gain, slope etc.) by rotary switch and Jumper
- Diplex filters, return amplifier pluggable on one module
- Optional - receiver according to EN 60728-14 for ICS-settings
- Optional - pluggable high pass filter at the return path channel
- Low power input <13 W

# Value Line In-house distribution amplifier

## VX 2030

Building CATV Amplifier 1,2 GHz



### Technical Data

Downstream	
Frequency range	85...1218 MHz
Gain	30 dB ( $\pm 1$ dB)
Ripple	$\leq \pm 0,8$ dB
Noise figure	<7,5 dB @ 1 GHz, <8,0 dB @ 1,2 GHz
Output level	112 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB $\geq$ 60 dB), flat)
Output level	107 dB $\mu$ V (110 Ch/QAM 256, flat, BER <1 E-9)
Output level	106 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, flat)
Input cable simulator	0/5/10 dB (Jumper)
Input attenuator	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB
Input equalizer	0...30 dB/ 1218 MHz Drehpunkt (Rotary switch 15 Steps)
Step size	2 dB
Interstage equalizer (Slope)	0/2/4/6/8 dB (Jumper)
Interstage attenuation	0/2/4/6 dB
Test point	-20 dB
Upstream	
Frequency range	5...65/5...204 MHz (depending on return path amplifier VX 201 065/ VX 201 204)
High pass filter pluggable (optional)	15 MHz (WISI - XE 04 0150)
Gain	29 dB ( $\pm 1$ dB)
Ripple	$\pm 0,5$ dB
Noise figure	< 6,5 dB
Output level	110 dB $\mu$ V (6 x 256 QAM)
Interstage attenuator	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB
Interstage equalizer	0/2/4/6/8 dB (Jumper)
Output attenuator	0/10 dB (Jumper)
Output equalizer	0/6 dB (Jumper)
Ingress control switch (optional)	nach ICS EN 60728-14
Test point	-20 dB

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The VX 2030 is a location feeding in-house amplifier with a frequency range up to 1.2 GHz. It has an active output and a measuring socket on the input and output. Diplex filter and return path amplifier are grouped together on a module (VX201-xxx) and available in the versions 65 MHz, 85 MHz and 204 MHz. All settings are done without interruption with Q-step switch or jumper. In addition, a high pass filter XE-xx can be plugged in the return path to influence the ingress influences.

### characteristics

- High output level up to 1.2 GHz, with low power consumption
- Active single output
- Measuring socket for input and output
- All settings (gain, slope etc.) by rotary switch and Jumper
- Diplex filters, return amplifier pluggable on one module
- Optional - receiver according to EN 60728-14 for ICS-settings
- Optional - pluggable high pass filter at the return path channel
- Low power input <18 W

# Value Line In-house distribution amplifier

## VX 2035

Building CATV Amplifier 1,2 GHz



### Technical Data

Downstream	
Frequency range	85...1218 MHz
Gain	35 dB ( $\pm 1$ dB)
Ripple	$\leq \pm 0,8$ dB
Noise figure	<7,5 dB @ 1 GHz, <8,0 dB @ 1,2 GHz
Output level	115 dB $\mu$ V (CENELEC 41 Ch. (CSO/CTB $\geq$ 60 dB), flat)
Output level	111 dB $\mu$ V (110 Ch/QAM 256, flat, BER <1 E-9)
Output level	110 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, flat)
Input cable simulator	0/5/10 dB (Jumper)
Input attenuator	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB
Input equalizer	0...30 dB/1218 MHz (Rotary switch 15 Steps)
Step size	2 dB
Interstage equalizer (Slope)	0/2/4/6/8/10 dB (Jumper)
Interstage attenuation	0/2/4/6 dB
Test point	-20 dB
Upstream	
Frequency range	5...65/5...204 MHz (depending on return path amplifier VX 201 065/ VX 201 204)
High pass filter pluggable (optional)	15 MHz (WISI - XE04/0150)
Gain	29 dB ( $\pm 1$ dB)
Ripple	$\pm 0,5$ dB
Noise figure	< 6,5 dB
Output level	110 dB $\mu$ V (6 x 256 QAM)
Interstage attenuator	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB
Interstage equalizer	0/2/4/6/8 dB (Jumper)
Output attenuator	0/10 dB (Jumper)
Output equalizer	0/6 dB (Jumper)
Ingress control switch (optional)	nach ICS EN 60728-14
Test point	-20 dB

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The VX 2035 is a location feeding in-house amplifier with a frequency range up to 1.2 GHz. It has an active output and a measuring socket on the input and output. Diplex filter and return path amplifier are grouped together on a module (VX201-xxx) and available in the versions 65 MHz, 85 MHz and 204 MHz. All settings are done without interruption with Q-step switch or jumper. In addition, a high pass filter XE-xx can be plugged in the return path to influence the ingress influences.

### characteristics

- High output level up to 1.2 GHz, with low power consumption
- Active single output
- Measuring socket for input and output
- All settings (gain, slope etc.) by rotary switch and Jumper
- Diplex filters, return amplifier pluggable on one module
- Optional - receiver according to EN 60728-14 for ICS-settings
- Optional - pluggable high pass filter at the return path channel
- Very low power consumption <22 W.

# Value Line accessories

## VX 201 065

Return amplifier

## VX 201 085

Return path amplifier 85 MHz,  
for VX 20xx

## VX 201 204

Return amplifier

### characteristics

- Diplex filters, return amplifier pluggable on one module
- Optional - receiver according to EN 60728-14 for ICS-settings
- Optional - pluggable high pass filter at the return path channel for VX 2015, VX 2022, VX 2030 and VX 2035



### Technical Data

#### Downstream

Frequency range	85...1218 MHz	108...1218 MHz	258...1218 MHz
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#### Upstream

Frequency range	5...65 MHz	5...85 MHz	5...204 MHz
High pass filter pluggable	15 MHz (WISI - XE04/0150)	15 MHz (WISI - XE04/0150); 18 MHz (WISI - XE04/0180); 40 MHz (WISI - XE04/0400)	15 MHz (WISI - XE04/0150)
Gain	VX 2015/2022: 21 dB ( $\pm 0,8$ dB), VX 2030/2035: 29 dB ( $\pm 1$ dB)	VX 2015/2022: 21 dB ( $\pm 0,8$ dB), VX 2030/2035: 29 dB ( $\pm 1$ dB)	VX 2015/2022: 21 dB ( $\pm 0,8$ dB), VX 2030/2035: 29 dB ( $\pm 1$ dB)
Ripple	$\pm 0,5$ dB	$\pm 0,5$ dB	$\pm 0,5$ dB
Noise figure	VX 2015/2022: <8,5 dB, VX 2030/2035: <6,5 dB	VX 2015/2022: <8,5 dB, VX 2030/2035: <6,5 dB	VX 2015/2022: <8,5 dB, VX 2030/2035: <6,5 dB
Output level	110 dB $\mu$ V (6 x 256 QAM)	107 dB $\mu$ V (24 x 256 QAM)	107 dB $\mu$ V (24 x 256 QAM)
Interstage attenuator	0...15 dB (Rotary switch 15 Steps)	0...15 dB (Rotary switch 15 Steps)	0...15 dB (Rotary switch 15 Steps)
Step size	1 dB	1 dB	1 dB
Interstage equalizer	0/2/4/6/8 dB (Jumper)	0/2/4/6/8 dB (Jumper)	0/2/4/6/8 dB (Jumper)
Output attenuator	0/10 dB (Jumper)	0/10 dB (Jumper)	0/10 dB (Jumper)
Output equalizer	0/6 dB (Jumper)	0/6 dB (Jumper)	0/6 dB (Jumper)
Ingress control switch ICS EN 60728	0/-6/-45 dB	0/-6/-45 dB	0/-6/-45 dB

# Value Line accessories

## XP 0000 ... 0020

Attenuator path, 0 to 20 dB



### Technical Data

Through loss	0 bis 20 dB
Frequency range	5...1006 MHz

### characteristics

- Permanent attenuation value from 0 to 20 dB
- Use in amplifiers of VX-Series
- Simple pluggable design

## XP BOX 01

attenuator pad set 0...20 dB



### Technical Data

Through loss	0...20 dB (single Pads with the measurements 0...20 dB)
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### characteristics

- Box consisting of damping pads with 0...20 dB
- Ideal basic equipment with 10 or 20 pieces per damping value
- Use in amplifiers VX 16 and VX 19

## XPU 020

attenuator pad, 0...20 dB, adjustable



### Technical Data

Through loss	0...20 dB (adjustable)
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### characteristics

- Attenuation control from 0...20 dB
- Use in amplifiers VX 16 and VX 19
- Flexible adjustment of the transmission damping

## XE 54 A

System equalizer



### Technical Data

Equalization	2 dB Boost in the frequency range 65...90/125...430/430...850 MHz
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## XE 29

power supply connector for VX 29



# Compact Line HFC amplifier

## VX 52 B

Compact Line CATV Amplifier



### Technical Data

#### Down-Stream / DS

Frequency range downstream	85...1218 MHz (1 GHz/1,2 GHz equalizer switchable)
Gain downstream	46 dB ( $\pm 0,75$ dB), (single output)
Frequency response	$\leq \pm 0,5$ dB
Noise figure	$\leq 6,5$ dB @ 1 GHz, $\leq 8,0$ dB @ 1,2 GHz
Output level	115 dB $\mu$ V (CENELEC 42 Ch. (CSO/CTB $\geq 60$ dB), flat)
Output level	118 dB $\mu$ V (CENELEC 42 Ch. (CSO/CTB $\geq 60$ dB), 9 dB slope @ 862 MHz)
Output level	109 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, flat)
Output level	111 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, 12 dB slope @ 1218 MHz)
Input return loss	$\geq 20$ dB (-1,5 dB/Oct.)
Attenuator downstream	0...20 dB (0,1 dB steps)
Interstage attenuator downstream	0...20 dB (1 dB steps)
Equalizer downstream	0...15 dB (0,1 dB steps)
Interstage equalizer downstream	0...15 dB (1 dB steps)
RF test points	-20 dB
<b>Upstream (US)</b>	(optional accessory VX50Bxxxx)
Frequency range upstream	5...65/85/204 MHz
High pass filter switchable	12 MHz
Gain upstream	30 dB
Frequency response upstream	$\leq \pm 0,5$ dB
Noise figure upstream	$\leq 5,5$ dB
Output level	115 dB $\mu$ V (CLC/TS50083-3-3 (BER $\leq 1$ E-8, MER $\geq 35$ dB), 5...65 MHz (6 x 64 QAM))
Output level	111 dB $\mu$ V (CLC/TS50083-3-3 (BER $\leq 1$ E-8, MER $\geq 35$ dB), 5...204 MHz (22 x 64 QAM))
NPR (>50 dB) EN60728-3	16 dB $\mu$ V/Hz (max. input level (60 MHz load), 26 dB dyn. range)
NPR (>50 dB) EN60728-3	12 dB $\mu$ V/Hz (max. Input level (200 MHz load), 23 dB dyn. range)
Return loss upstream (in / output)	$\geq 20$ dB (-1,5 dB/Oct.)
Attenuator upstream input	0...30 dB (1 dB steps)

### Technical Data

Attenuator upstream output	0...30 dB (1 dB steps)
Equalizer US	0...15 dB (0,5 dB steps)
ICS, US	0/ -6/ < -45 dB

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	350 x 290 x 175 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	3.95 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	15

The VX 52 B is a local feeding universal line and distribution amplifier that has one active output and additional slots for return channel amplifiers, control modules, diplex filter modules and splitter/tap modules. All settings can be accessed via an OH 41 handset or an Android app via Bluetooth.

### characteristics

- Compact 1 GHz / 1,2 GHz high level CATV amplifier
- Locally supplied
- All settings (gain, slope etc.) by WISI control unit (OH 41 Handset) or Android app via bluetooth
- Includes interface for NMS functionality: HMS or DOCSIS
- Management functionality according to EN 60728-14 available (ICS setting)
- Diplex filters and splitter / tap modules pluggable
- High level upstream amplifier pluggable
- ALSC module pluggable (VX 58B)
- Additional universal plug in modules

# Compact Line HFC amplifier

## VX 53 B

Compact Line CATV Amplifier



### Technical Data

#### Down-Stream / DS

Frequency range downstream	85...1218 MHz (1 GHz/1,2 GHz equalizer switchable)
Gain downstream	46 dB ( $\pm 0,75$ dB), (single output)
Frequency response	$\leq \pm 0,5$ dB
Noise figure	$\leq 6,5$ dB @ 1 GHz, $\leq 8,0$ dB @ 1,2 GHz
Output level	115 dB $\mu$ V (CENELEC 42 Ch. (CSO/CTB $\geq 60$ dB), flat)
Output level	118 dB $\mu$ V (CENELEC 42 Ch. (CSO/CTB $\geq 60$ dB), 9 dB slope @ 862 MHz)
Output level	109 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, flat)
Output level	111 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, 12 dB slope @ 1218 MHz)
Input return loss	$\geq 20$ dB (-1,5 dB/Oct.)
Attenuator downstream	0...20 dB (0,1 dB steps)
Interstage attenuator downstream	0...20 dB (1 dB steps)
Equalizer downstream	0...15 dB (0,1 dB steps)
Interstage equalizer downstream	0...15 dB (1 dB steps)
RF test points	-20 dB
<b>Upstream (US)</b>	(optional accessory VX50Bxxxx)
Frequency range upstream	5...65/85/204 MHz
High pass filter switchable	12 MHz
Gain upstream	30 dB
Frequency response upstream	$\leq \pm 0,5$ dB
Noise figure upstream	$\leq 5,5$ dB
Output level	115 dB $\mu$ V (CLC/TS50083-3-3 (BER $\leq 1$ E-8, MER $\geq 35$ dB), 5...65 MHz (6 x 64 QAM))
Output level	111 dB $\mu$ V (CLC/TS50083-3-3 (BER $\leq 1$ E-8, MER $\geq 35$ dB), 5...204 MHz (22 x 64 QAM))
NPR (>50 dB) EN60728-3	16 dB $\mu$ V/Hz (max. input level (60 MHz load), 26 dB dyn. range)
NPR (>50 dB) EN60728-3	12 dB $\mu$ V/Hz (max. Input level (200 MHz load), 23 dB dyn. range)
Return loss upstream (in / output)	$\geq 20$ dB (-1,5 dB/Oct.)
Attenuator upstream input	0...30 dB (1 dB steps)

### Technical Data

Attenuator upstream output	0...30 dB (1 dB steps)
Equalizer US	0...15 dB (0,5 dB steps)
ICS, US	0/ -6/ < -45 dB

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	350 x 290 x 175 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	0.355 kg
Shipping unit	1 pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	15

The VX 53 B is a remote feeding universal line and distribution amplifier that has one active output and additional slots for return channel amplifiers, control modules, diplex filter modules and splitter/tap modules. All settings can be accessed via an OH 41 handset or an Android app via Bluetooth.

### characteristics

- Compact 1 GHz / 1,2 GHz high level CATV amplifier
- Remote powered
- All settings (gain, slope etc.) by WISI control unit (OH 41 Handset) or Android app via bluetooth
- Includes interface for NMS functionality: HMS or DOCSIS
- Management functionality according to EN 60728-14 available (ICS setting)
- Diplex filters and splitter / tap modules pluggable
- High level upstream amplifier pluggable
- ALSC module pluggable (VX 58B)
- Additional universal plug in modules

# Compact Line HFC amplifier

## VX 56 B

Compact Line CATV Amplifier



### characteristics

- Compact 1 GHz/1,2 GHz high level CATV amplifier with two active high level outputs
- Locally supplied
- All settings (gain, slope etc.) by WISI control unit (OH 41 Handset) or Android app via bluetooth
- Includes interface for NMS functionality: HMS or DOCSIS
- Management functionality according to EN 60728-14 available (ICS setting)
- Diplex filters and splitter / tap modules pluggable
- High level upstream amplifier pluggable
- ALSC modul pluggable
- Additional universal plug in modules

### Technical Data

#### Down-Stream / DS

Frequency range downstream	85...1218 MHz (1 GHz/1,2 GHz equalizer switchable)
Gain downstream	2 x 44 dB ( $\pm 0,75$ dB)
Frequency response	$\leq \pm 0,5$ dB
Noise figure	<6,5 dB @ 1 GHz, <8,0 dB @ 1,2 GHz
Output level	115 dB $\mu$ V (CENELEC 42 Ch. (CSO/CTB $\geq$ 60 dB), flat)
Output level	118 dB $\mu$ V (CENELEC 42 Ch. (CSO/CTB $\geq$ 60 dB), 9 dB slope @ 862 MHz)
Output level	109 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, flat)
Output level	111 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, 12 dB slope @ 1218 MHz)
Input return loss	$\geq$ 20 dB (-1,5 dB/Oct.)
Attenuator downstream	0...20 dB (0,1 dB steps)
Interstage attenuator downstream	0...20 dB (1 dB steps)
Equalizer downstream	0...15 dB (0,1 dB steps)
Interstage equalizer downstream	0...15 dB (1 dB steps)
RF test points	- 20 dB
<b>Upstream (US)</b>	(optional accessory VX50Bxxxx)
Frequency range upstream	5...65/85/204 MHz
High pass filter switchable	12 MHz
Gain upstream	26 dB
Frequency response upstream	$\pm 0,5$ dB
Noise figure upstream	$\leq 8,5$ dB
Output level	115 dB $\mu$ V (CLC/TS50083-3-3 (BER $\leq 1$ E-8, MER $\geq$ 35 dB), 5...65 MHz (6 x 64 QAM))
Output level	111 dB $\mu$ V (CLC/TS50083-3-3 (BER $\leq 1$ E-8, MER $\geq$ 35 dB), 5...204 MHz (22 x 64 QAM))
NPR (>50 dB) EN60728-3	16 dB $\mu$ V/Hz (max. Input level (60 MHz load), 22 dB dyn. range)
NPR (>50 dB) EN60728-3	12 dB $\mu$ V/Hz (max. input level (200 MHz load), 19 dB dyn. range)

### Technical Data

Return loss upstream (in / output)  $\geq$  20 dB (-1,5 dB/Oct.)

Attenuator upstream input 0...30 dB (1 dB-steps)

Attenuator upstream output 0...30 dB (1 dB-steps)

Equalizer range 0...15 dB (0,5 dB steps)

ICS, US 0/ -6/ < -45 dB

Upstream test point -20 dB

RF injection point -20 dB

#### General data

RF connectors PG11/F

Impedance 75  $\Omega$

Supply voltage 180...265 V AC

Power consumption 38,0 W

Remote power current in and outputs < 8 A

Surge protection power supply 2 kV (1,2/50  $\mu$ s pulse EN61000-4-5)

Hum modulation @ 8A, f > 15 MHz > 70 dB

Ambient temperature -20...+65 °C

Protection class IP67

EMC EN 50083-2

Surge protection RF ports 6 kV (1,2/50  $\mu$ s pulse EN61000-4-5)

#### NMS / Handset / BT App Functionality

#### Downstream

Monitoring: control level deviation, attenuator, equalizer, slope settings, pilot level state, pilot frequency, RF power level, 5V/24V supply voltage

Configuration: input attenuator, interstage attenuator, input equalizer, interstage slope, attenuator output 1, ALSC adjustment, equalizer frequency 1/1,2 GHz

Alarms: pilot level too high/low, control level deviation

# Compact Line HFC amplifier

## VX 57 B

Compact Line CATV Amplifier



### characteristics

- Compact 1 GHz/1,2 GHz high level CATV amplifier with two active high level outputs
- Remote powered
- All settings (gain, slope etc.) by WISI control unit (OH 41 Handset) or Android app via bluetooth
- Includes interface for NMS functionality: HMS or DOCSIS
- Management functionality according to EN 60728-14 available (ICS setting)
- Diplex filters and splitter / tap modules pluggable
- High level upstream amplifier pluggable
- ALSC module pluggable (VX 58B)
- Additional universal plug in modules

### Technical Data

#### Down-Stream / DS

Frequency range downstream	85...1218 MHz (1 GHz/1,2 GHz equalizer switchable)
Gain downstream	2 x 44 dB ( $\pm 0,75$ dB)
Frequency response	$\leq \pm 0,5$ dB
Noise figure	<6,5 dB @ 1 GHz, <8,0 dB @ 1,2 GHz
Output level	115 dB $\mu$ V (CENELEC 42 Ch. (CSO/CTB $\geq$ 60 dB), flat)
Output level	118 dB $\mu$ V (CENELEC 42 Ch. (CSO/CTB $\geq$ 60 dB), 9 dB slope @ 862 MHz)
Output level	109 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, flat)
Output level	111 dB $\mu$ V (all QAM (138 x 256 QAM), EN60728-3-1, 12 dB slope @ 1218 MHz)
Input return loss	$\geq 20$ dB (-1,5 dB/Oct.)
Attenuator downstream	0...20 dB (0,1 dB steps)
Interstage attenuator downstream	0...20 dB (1 dB steps)
Equalizer downstream	0...15 dB (0,1 dB steps)
Interstage equalizer downstream	0...15 dB (1 dB steps)
RF test points	-20 dB
<b>Upstream (US)</b>	(optional accessory VX50Bxxxx)
Frequency range upstream	5...65/85/204 MHz
High pass filter switchable	12 MHz
Gain upstream	26 dB
Frequency response upstream	$\pm 0,5$ dB
Noise figure upstream	$\leq 8,5$ dB
Output level	115 dB $\mu$ V (CLC/TS50083-3-3 (BER $\leq 1$ E-8, MER $\geq 35$ dB), 5...65 MHz (6 x 64 QAM))
Output level	111 dB $\mu$ V (CLC/TS50083-3-3 (BER $\leq 1$ E-8, MER $\geq 35$ dB), 5...204 MHz (22 x 64 QAM))

### Technical Data

NPR (>50 dB) EN60728-3	16 dB $\mu$ V/Hz (max. Input level (60 MHz load), 22 dB dyn. range)
NPR (>50 dB) EN60728-3	12 dB $\mu$ V/Hz (max. input level (200 MHz load), 19 dB dyn. range)
Return loss upstream (in / output)	$\geq 20$ dB (-1,5 dB/Oct.)
Attenuator upstream input	0...30 dB (1 dB-steps)
Attenuator upstream output	0...30 dB (1 dB-steps)
Equalizer range	0...15 dB (0,5 dB steps)
ICS, US	0/-6/-45 dB

# Compact Line accessories

## XE 51 A

Equalizer module



## XE 52 A

Equalizer module



### Technical Data

Frequency range	47...1006 MHz	47...1006 MHz
Equalization	3/9 dB	12/18 dB
Impedance	75 Ω	75 Ω

## XE 52 B

Equalizer module 12/18 dB



## XE 51 B

Equalizer module 3/9 dB



### characteristics

- Suitable for WISI Compact Line Amplifiers
- Supports automatic module detection

### Technical Data

Frequency range	85...1218 MHz	85...1218 MHz
Equalization	12/18 dB	3/9 dB
Impedance	75 Ω	75 Ω
Return loss	>15 dB (Input/Output)	>15 dB (Input/Output)

## XM 56 B

Tap 18/1 dB



## XM 55 B

Tap 13/1 dB



## XM 53 B

TAp 8/2 dB



## XM 51 B

Splitter 4/4 dB



### characteristics

- Suitable for WISI Compact Line Amplifiers
- Supports automatic module detection

### Technical Data

Frequency range	5...1218 MHz	5...1218 MHz	5...1218 MHz	5...1218 MHz
TAP loss	<19 dB	<13,5 dB	<9 dB	75 Ω
Through loss	<1,4 dB	<1,4 dB	<2 dB	<4,5 dB
Isolation	>28 dB	>28 dB	> 25 dB	≥ 20 dB
Return loss 5...1006 MHz	>18 dB	>18 dB	>18 dB	>18 dB
Return loss 1006...1218 MHz	>16 dB	>16 dB	>16 dB	>16 dB

# Compact Line accessories

## XE 20 B 0650

Diplexer 65/85 MHz



## XE 20 B 0850

Diplexer 85/108 MHz



## LB 01

Bluetooth antenna



### Technical Data

Frequency range high-pass	85...1218 MHz
Frequency range low-pass	5...65 MHz
Impedance	75 Ω
Return loss	>20 dB
Rejection	>50 dB

### characteristics

- Downstream (DS) compatible up to 1.2 GHz

### Technical Data

Frequency range high-pass	108...1218 MHz
Frequency range low-pass	5...85 MHz
Impedance	75 Ω
Return loss	>20 dB
Rejection	>50 dB

### characteristics

- Downstream (DS) compatible up to 1.2 GHz

### characteristics

- PG11 gland, for use with WISI Nodes and VX5xB amplifiers

## XE 50 B 0650

Diplexer 65/85 MHz



## XE 50 B 0850

Diplexer 85/108 MHz



## XE 50 B 2040

Diplexfilter 204/258 MHz



### Technical Data

Frequency range high-pass	85...1218 MHz
Frequency range low-pass	5...65 MHz
Impedance	75 Ω
Return loss	>20 dB
Rejection	>50 dB

### characteristics

- Suitable for WISI Compact Line Amplifiers
- Supports automatic module detection

### Technical Data

Frequency range high-pass	108...1218 MHz
Frequency range low-pass	5...85 MHz
Impedance	75 Ω
Return loss	>20 dB
Rejection	>50 dB

### characteristics

- Suitable for WISI Compact Line Amplifiers
- Supports automatic module detection

### Technical Data

Upstream	
Frequency range low-pass	5...204 MHz
Through loss	<1 dB
Return loss	>20 dB
Rejection	>40 dB
Group delay time	<3 ns/2 MHz
Downstream	
Frequency range high-pass	258...1218 MHz
Through loss	<1 dB
Return loss	>20 dB

# Compact Line accessories

## VX 58 B

ALSC Module



## VX 50 B 0650

65 MHz return path module



## VX 50 B 2040

204 MHz return path module



### Technical Data

Frequency range pilot L (low)	45...1002 MHz (50 kHz steps)
Frequency ranges pilot H (high)	45...1002 MHz (50 kHz steps)
Input level range for pilot frequencies	50...90 dBµV
Regulation accuracy @ pilot	≤0,25 dB
Control range	max. ± 0,9 dB (47 MHz)
Max. control range for one pilot regulation (ASC)	470 MHz ± 2,9 dB; 606 MHz ± 3,4 dB; 862 MHz ± 4,0 dB; 1002 MHz ± 4,4 dB; (1218 MHz ± 4,9 dB)
Max. control range for two pilot regulation (ALSC)	47...1218 MHz ± 4,9 dB ≤ 0,1 dB
Regulation deviation modulated/unmodulated TV carrier	
<b>General data</b>	
Supply voltage	5,0 V DC
Power consumption max.	<1,3 W
Ambient temperature	-10...+80 °C
Dimensions (width x height x depth)	61 x 64 x 6 mm

### Technical Data

Upstream (US)	
Frequency range upstream	5...65 MHz
Gain upstream	30 dB (VX52B/53Bxxxx), 26 dB (VX56B/57Bxxxx)
Frequency response upstream	± 0,5 dB
Output level	114 dBµV (CLC/TS50083-3-3 (BER ≤1 E-8, MER ≥35 dB), 5...65 MHz (6 x 64 QAM))
Output level	110 dBµV (CLC/TS50083-3-3 (BER ≤1 E-8, MER ≥35 dB), 5...204 MHz (22 x 64 QAM))
Return loss upstream (in / output)	≥ 20 dB (-1,5 dB/Oct.)
Equalizer range	0...15 dB (0,5 dB steps)
<b>General data</b>	
Impedance	75 Ω
Power consumption	2,5...3,5 W
Dimensions (width x height x depth)	58 x 60 x 20 mm

### Technical Data

Upstream (US)	
Frequency range upstream	5...204 MHz
Gain upstream	30 dB (VX52B/53Bxxxx), 26 dB (VX56B/57Bxxxx)
Frequency response upstream	± 0,5 dB
Output level	114 dBµV (CLC/TS50083-3-3 (BER ≤1 E-8, MER ≥35 dB), 5...65 MHz (6 x 64 QAM))
Output level	110 dBµV (CLC/TS50083-3-3 (BER ≤1 E-8, MER ≥35 dB), 5...204 MHz (22 x 64 QAM))
Return loss upstream (in / output)	≥ 20 dB (-1,5 dB/Oct.)
Equalizer range	0...15 dB (0,5 dB steps)
<b>General data</b>	
Impedance	75 Ω
Power consumption	2,5...3,5 W
Dimensions (width x height x depth)	58 x 60 x 20 mm

### characteristics

- Auto Alignment allows the automatic adjustment of the amplifier
- ALSC (Automatic Level and Slope Control) controls permanently the output level and realign settings in case of deviation
- Control via Bluetooth by the WISI HFC Manager application or the handset OH 41
- Two freely selectable measurement channels (pilot carriers) in the range of 45...1002 MHz
- Usage in VX 5xB amplifiers of the WISI Compact Line series
- Pluggable version

# Compact Line accessories

## VT 21

Microreceiver for fiber nodes and VX2x amplifiers



### Technical Data

Frequency range	868,3 MHz
Monitoring-Status LED	Green: 0/6/45 dB, DS on/off, Burst Mode on/off
Bandwidth	200 kHz
Secondary transmission	<10 dBµV
Input level	30...75 dBµV
Data rate	9600 Bps
Interface	RS-232
Supply voltage	6...24 V (<0,4 W @ 24 V / <0,18 W @ 12 V)
Dimensions (width x height x depth)	25 x 24 x 8 mm
Weight	0,02 kg

### characteristics

- Monitoring function: DS on/off, Burst Mode on/off, Ingress Detection Switch 0/6/45 dB
- Intelligent integration into the network management system
- FSK based, robust and no return necessary

The VT 21 is a microreceiver for fiber nodes and amplifiers. Manage your network cost efficiently with the VT 21.

## VT 51 A

HMS-Transponder



### Technical Data

Downstream	
Frequency range	48...162 MHz
Frequency tuning	fully agile, 100 kHz steps
Impedance	75 Ω
Input level	40...80 dBµV
Return loss	> 12 dB
C/N for BER <10-6	20 dB
Modulation	FSK
Deviation	± 67 kHz
Data format	asynchronous, NRZ
Data rate	38,4 kbit/s
Upstream	
Frequency range	5...21 MHz
Frequency tuning	fully agile, 100 kHz steps
Impedance	75 Ω
Output level	85...105 dBµV (2 dB-steps)
Return loss	> 12 dB
Level accuracy	± 3 dB
Spurious radiation	> 55 dBc
Frequency accuracy	± 10 kHz
Modulation	FSK
Deviation	± 67 kHz
Data format	asynchronous, NRZ
Data rate	38,4 Kbps
General data	
Craft interface for local control	D-Sub 9
Backplane Connector to VX board	2 x 5 Pins
Ambient temperature	-40...+85 °C
Power supply	5...24 V
Power consumption	2 W

### characteristics

- For Compact Amplifiers VX 5x(A); LR54(A);LR43(A,C,D)
- Hardware compliant with SCTE HMS physical layer ANSI/SCTE 25-1
- Software compliant with SCTE HMS-MAC layer ANSI/SCTE 25-2
- Update capability over HMS RF layer
- Advanced and customizable Automatic Channel

# Multiband amplifier

## VS 35 PRO

Programmable filter amplifier



Technical Data	
<b>Downstream</b>	
Inputs	4 pcs.
Frequency range input 1	FM: 88...108 MHz
Frequency range input 2	VHF: 174...240 MHz
Frequency range input 3	UHF: 470...862 MHz
Frequency range input 4	UHF: 470...862 MHz
Gain inputs 1...4	FM: 35 dB; VHF: >60 dB; UHF: >60 dB
Output level	113 dB $\mu$ V (6 DVB-T Channels); 113 dB $\mu$ V IMA3 (FM)
Number of filters	15 pcs.
Channel conversion	Yes
Attenuator	0...20 dB
Interstage equalizer (Slope)	0...9 dB
Selectivity	50 dB / 1 MHz
MER	VHF/UHF: 35 dB
Output test point	-30 dB
<b>Connectors</b>	
F-female	6 pcs.
<b>General data</b>	
Operating voltage AC	100...240 V
Power consumption	12 W
Dimensions (width x height x depth)	217 x 165 x 59 mm
Weight	0,8 kg
Packaging Data	
Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	270 x 230 x 70 mm
Packaging volume sales unit	4.35 dm <sup>3</sup>
Gross weight sales unit	1 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	270 x 230 x 70 mm
Packaging volume shipping package	4,35

The VS 35 PRO is a programmable terrestrial filter with an integrated amplifier. Four antennas (1x FM, 1x DAB/VHF, 2x UHF) can be connected via four F-connectors. 15 freely selectable channels can be programmed - a number that may be increased up to 50 by extending the channel bandwidth. The high selectivity ensures a high signal quality of the converted channels. All settings are done by the control unit OH 41 (not included in the delivery scope). The LTE 700 / LTE 800 MHz protection is done automatically by the device itself. Moreover, the received terrestrial channels can be relocated to any required frequency, hence the VS 35 PRO is usable as a channel converter.

### characteristics

- Filters and amplifies 15 terrestrial channels (number can be increased up to 50 by extending the channel bandwidth)
- Completely free assignment of the filters to the desired input
- Very high selectivity of the filters (>50 dB to adjacent channels)
- Integrated AGC (Automatic Gain Control) to compensate level differences at the input
- Level indication of the received channels

# Multiband amplifier

## VS 50 PRO

Programmable filter amplifier, channel converter



### Technical Data

Downstream	
Inputs	5 pcs.
Frequency range input 1	FM: 88...108 MHz
Frequency range input 2	VHF: 174...240 MHz; UHF: 470...862 MHz
Frequency range input 3	
Frequency range input 4	VHF: 174...240 MHz; UHF: 470...862 MHz
Frequency range input 5	VHF: 174...240 MHz; UHF: 470...862 MHz
Gain input 1	FM: 35 dB
Gain inputs 2...5	VHF: >45 dB; UHF: >55 dB
Output level	118 dB $\mu$ V (6 DVB-T channels); 113 dB $\mu$ V IMA3 (FM)
Attenuator	0...20 dB
Interstage equalizer (Slope)	0...9 dB
AGC control range	0...20 dB
Selectivity	50 dB / 1 MHz
MER	VHF/UHF: 35 dB
Output test point	-20 dB
Connectors	
F-female	7 pcs.
General data	
Operating voltage DC	12 V DC
Power consumption	20 W
Dimensions (width x height x depth)	232 x 166 x 55 mm
Weight	0,8 kg

### Packaging Data

Sales unit	1 pcs.
Dimensions (WxHxD) sales unit	280 x 200 x 100 mm
Packaging volume sales unit	dm <sup>3</sup>
Gross weight sales unit	98 kg
Shipping unit	pcs.
Dimensions (WxHxD) shipping unit	mm
Packaging volume shipping package	

The VS 50 PRO is a programmable terrestrial filter with an integrated amplifier. Four VHF/UHF antennas can be connected via four F connectors, and one additional F connector is available for insertion of FM. Also, 32 freely selectable channels can be programmed - a number that may be doubled to 64 by extending the channel bandwidth. Moreover, the received terrestrial channels can be relocated to any required frequency, hence the VS 50 PRO is usable as a channel converter, to relocate UHF channels to a lower frequency range. The high selectivity ensures a high signal quality of the converted channels. All settings are done by the control unit OH 41 (not included in the delivery scope).

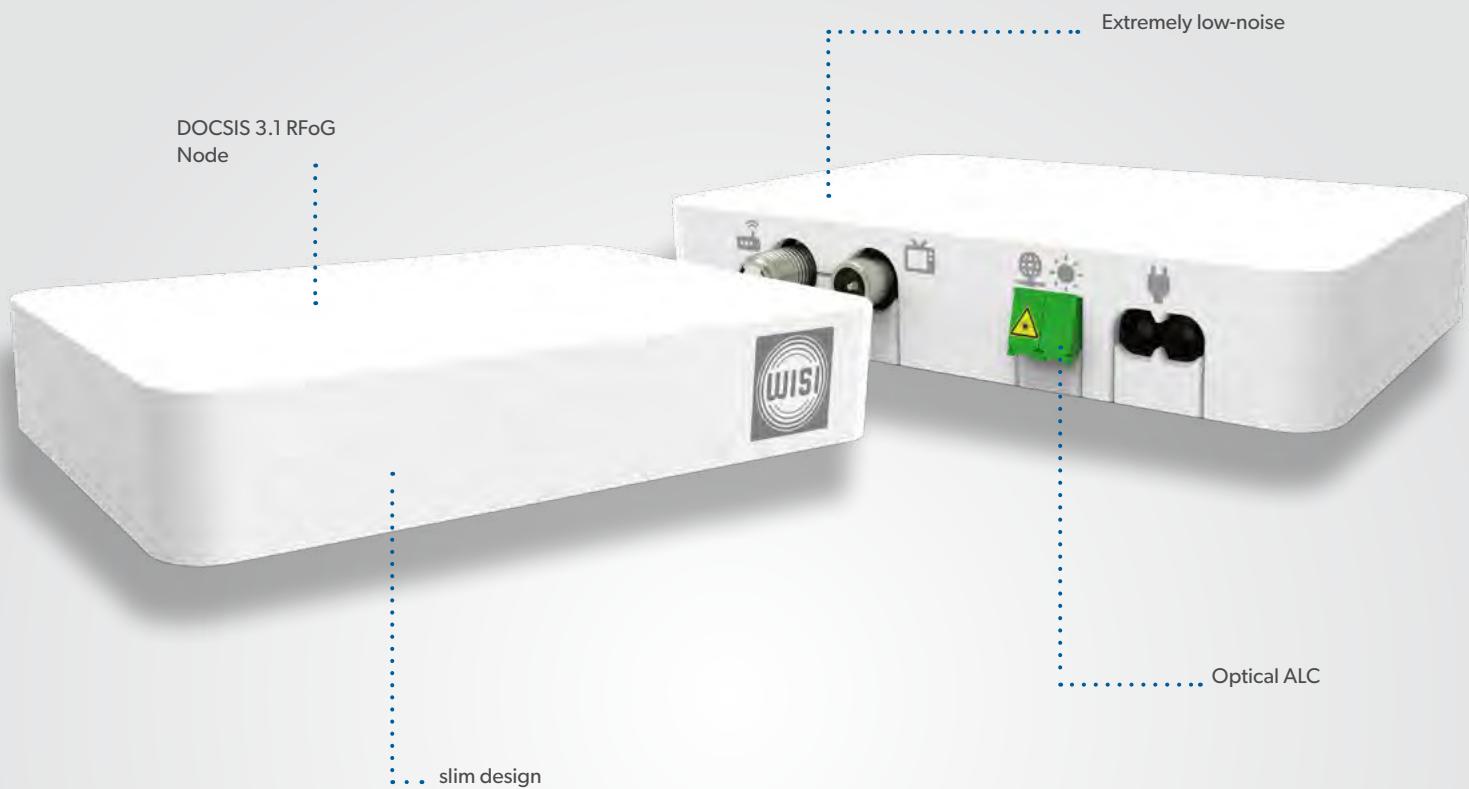
### characteristics

- 32 freely selectable channels (max. 64 by increasing the channel bandwidth)
- Very high selectivity of the filters
- Integrated AGC (Automatic Gain Control) to compensate level differences at the input
- Very high output level of 118 dB $\mu$ V
- Level indication of the received channels



# Optical mesh terminations

WISI network terminations for FTTH based RFoG networks:  
**Always the right one**



## Optical Network Termination for FTTH based RFoG Networks

The LR11 is a very compact RFoG (RF over Glass) based fiber node for connecting FTTH customers in cable networks. The slim design is adapted to modern living spaces to enable a discreet installation. With its optimized switching times for fast scanning of the return path laser, it achieves optimal transmission performance.

### At a glance

- RFoG ONU for FTTH fiber rollout
- Low power consumption
- Upstream with 65 MHz or 204 MHz fixed or remote switchable between 65/204 MHz
- Optical ALC for easy rollout & operation
- „Single Fiber“ solution

# Micro Line

## LR 10 K LB02

FTTH network termination with 2 LC/APC connectors



### Technical Data

Connectors	
Splice tray	For crimped and heat-shrunk splice protectors
Fiber type	Single-mode Fiber
LC/APC connector	2 pcs.
General data	
Dimensions (width x height x depth)	88 x 88 x 21 mm

The LR 10 FTTH platform provides an independent solution for fiber termination and receiving several optical signals like RF Overlay reception of CATV and satellite TV signals as well as return-channel capable HFC applications or Ethernet media converters. The base plate for easy wall mounting offers enough space for up to four fibers either with pluggable or spliced connectors. The range of extension modules starts from pure CATV / SAT-TV reception, incl. two RF outputs and ALC (Automatic Level Control) via return-channel capable HFC fiber nodes as well as media converters for Point-to-Point Ethernet applications. In conjunction with a deliberately designed flat cover, the LR 10 platform is an ultra-compact, living room compatible and totally unobtrusive system for easy fiber termination with expansion options. Whereby the modular extension towards active components could also take place later (migration) what in turn represents an economic advantage, as opposed to all-in-one solutions.

### characteristics

- Modular platform for easy migration with extension modules
- Wall-mounted FTTH network termination
- LC/APC Ports

## LR 11 A OH50

RFoG Node for FTTH deployments



### Technical Data

Downstream	
Wavelength	1535...1565 nm
Optical return loss	>40 dB
Output return loss	≥18 dB
Frequency range	
Output level single port flat (121 x QAM256), (EN60728-3-1)	2x 60 dB $\mu$ V (BER <1 exp-9), (@ 2,5% OMI)
Optical input power	-6...+3 dBm
Amplitude response	≤ ±1 dB
Equivalent noise input	max. 4,5 pA/ $\sqrt{\text{Hz}}$
Upstream	
Laser	Isolated DFB-Laser
Wavelength	1610 nm
Optical power	3 dBm (±1 dB)
Frequency range	15...204 MHz
RF input level	95 dB $\mu$ V (5% OMI)
Amplitude response	±1 dB
Input return loss	≥18 dB
Interfaces	
Optical connector	duplex LC/APC
RF connector	2x F
General data	
Supply voltage	230 V AC
Power consumption	≤4,5 W
Output impedance	75 Ω
Dimensions (width x height x depth)	150 x 111 x 31 mm
Electro Magnetic Compatibility (EMC)	EN50083-2
Ambient temperature	0...40 °C

### characteristics

- FTTH Node for RFoG Systems
- Living room adopted case design
- DOCSIS 3.1 ready: US up to 204 MHz, DS 1218 MHz
- 1610 nm Upstream
- two F-female ports
- Single fiber operation
- Extremely low-noise receiver
- Optical ALC
- Optical input range -6 ... +3 dBm

# Micro Line

## LR 11 A 1H10

RFoG Node for FTTH deployments



## LR 11 C 0H20

RFoG Node for FTTH deployments



### Technical Data

Downstream	
Wavelength	1535...1565 nm
Optical return loss	>40 dB
Output return loss	≥18 dB
Frequency range	85...1218 MHz/ 258...1218 MHz
Outputlevel single port flat (121 x QAM256), (EN60728-3-1)	2x 60 dB $\mu$ V (BER <1 exp-9), (@ 2,5% OMI)
Optical input power	-6...+3 dBm
Amplitude response	≤ ±1 dB
Equivalent noise input	max. 4,5 pA $\sqrt{\text{Hz}}$
Upstream	
Laser	Isolated DFB-Laser
Wavelength	1610 nm
Optical power	3 dBm (±1 dB)
Frequency range	15...65 MHz/ 15...204 MHz
RF input level	95 dB $\mu$ V (5% OMI)
Amplitude response	±1 dB
Input return loss	≥18 dB
Interfaces	
Optical connector	duplex LC/APC
RF connector	2x F
General data	
Supply voltage	230 V AC
Power consumption	≤4,5 W
Output impedance	75 Ω
Dimensions (width x height x depth)	150 x 111 x 31 mm
Electro Magnetic Compatibility (EMC)	EN50083-2
Ambient temperature	0...40 °C

### characteristics

- FTTH Node for RFoG Systems
- Living room adopted case design
- DOCSIS 3.1 ready: US up to 204 MHz, DS 1218 MHz
- Optional Remote Control feature according to EN 60728-14, 862 MHz
- 1610 nm Upstream
- two F-female ports
- Single fiber operation
- Extremly low-noise receiver
- Optical ALC
- Optical input range -6 ... +3 dBm

### Technical Data

Downstream	
Wavelength	1535...1565 nm
Optical return loss	>40 dB
Output return loss	≥18 dB
Frequency range	85...1218 MHz
Outputlevel single port flat (121 x QAM256), (EN60728-3-1)	2x 60 dB $\mu$ V (BER <1 exp-9), (@ 2,5% OMI)
Optical input power	-6...+3 dBm
Amplitude response	≤ ±1 dB
Equivalent noise input	max. 4,5 pA $\sqrt{\text{Hz}}$
Upstream	
Laser	Isolated DFB-Laser
Wavelength	1610 nm
Optical power	3 dBm (±1 dB)
Frequency range	15...65 MHz
RF input level	95 dB $\mu$ V (5% OMI)
Amplitude response	±1 dB
Input return loss	≥18 dB
Interfaces	
Optical connector	duplex LC/APC
RF connector	IEC male & F
General data	
Supply voltage	230 V AC
Power consumption	≤4,5 W
Output impedance	75 Ω
Dimensions (width x height x depth)	150 x 111 x 31 mm
Electro Magnetic Compatibility (EMC)	EN50083-2
Ambient temperature	0...40 °C

### characteristics

- FTTH Node for RFoG Systems
- Living room adopted case design
- DOCSIS 3.1 ready: US up to 204 MHz, DS 1218 MHz
- 1610 nm Upstream
- IEC male & F
- Single fiber operation
- Extremly low-noise receiver
- Optical ALC
- Optical input range -6 ... +3 dBm

# Micro Line

## LR 11 C OH50

RFoG Node for FTTH deployments



## LR 11 C 1H10

RFoG Node for FTTH deployments



### Technical Data

#### Downstream

Wavelength	1535...1565 nm
Optical return loss	>40 dB
Output return loss	≥18 dB
Frequency range	258...1218 MHz
Output level single port flat (121 x QAM256), (EN60728-3-1)	2x 60 dB $\mu$ V (BER <1 exp-9), (@ 2,5% OMI)
Optical input power	-6...+3 dBm
Amplitude response	≤ ±1 dB
Equivalent noise input	max. 4,5 pA $\sqrt{\text{Hz}}$

#### Upstream

Laser	Isolated DFB-Laser
Wavelength	1610 nm
Optical power	3 dBm (±1 dB)
Frequency range	15...204 MHz
RF input level	95 dB $\mu$ V (5% OMI)
Amplitude response	±1 dB
Input return loss	≥18 dB

#### Interfaces

Optical connector	duplex LC/APC
RF connector	IEC male & F
<b>General data</b>	
Supply voltage	230 V AC
Power consumption	≤4,5 W
Output impedance	75 Ω
Dimensions (width x height x depth)	150 x 111 x 31 mm
Electro Magnetic Compatibility (EMC)	EN50083-2
Ambient temperature	0...40 °C

#### characteristics

- FTTH Node for RFoG Systems
- Living room adopted case design
- DOCSIS 3.1 ready: US up to 204 MHz, DS 1218 MHz
- 1610 nm Upstream
- IEC male & F
- Single fiber operation
- Extremly low-noise receiver
- Optical ALC
- Optical input range -6 ... +3 dBm

### Technical Data

#### Downstream

Wavelength	1535...1565 nm
Optical return loss	>40 dB
Output return loss	≥18 dB
Frequency range	85...1218 MHz/ 258...1218 MHz
Output level single port flat (121 x QAM256), (EN60728-3-1)	2x 60 dB $\mu$ V (BER <1 exp-9), (@ 2,5% OMI)
Optical input power	-6...+3 dBm
Amplitude response	≤ ±1 dB
Equivalent noise input	max. 4,5 pA $\sqrt{\text{Hz}}$

#### Upstream

Laser	Isolated DFB-Laser
Wavelength	1610 nm
Optical power	3 dBm (±1 dB)
Frequency range	15...65 MHz/ 15...204 MHz
RF input level	95 dB $\mu$ V (5% OMI)
Amplitude response	±1 dB
Input return loss	≥18 dB

#### Interfaces

Optical connector	duplex LC/APC
RF connector	IEC male & F
<b>General data</b>	
Supply voltage	230 V AC
Power consumption	≤4,5 W
Output impedance	75 Ω
Dimensions (width x height x depth)	150 x 111 x 31 mm
Electro Magnetic Compatibility (EMC)	EN50083-2
Ambient temperature	0...40 °C

#### characteristics

- FTTH Node for RFoG Systems
- Living room adopted case design
- DOCSIS 3.1 ready: US up to 204 MHz, DS 1218 MHz
- Optional Remote Control feature according to EN 60728-14, 862 MHz
- 1610 nm Upstream
- IEC male & F
- Single fiber operation
- Extremly low-noise receiver
- Optical ALC
- Optical input range -6 ... +3 dBm

# Micro Line

## LR 11 E 1H10

RFoG Node for FTTH deployments



# Micro Line accessories

## LRPS A230

Plug-in power supply for LR 10



Technical Data	
<b>Downstream</b>	
Wavelength	1535...1565 nm
Optical return loss	>40 dB
Output return loss	≥18 dB
Frequency range	85...1218 MHz / 258...1218 MHz
Output level single port flat (121 x QAM256), (EN60728-3-1)	2x 60 dB $\mu$ V (BER <1 exp-9), (@ 2,5% OMI)
Optical input power	-6...+3 dBm
Amplitude response	≤ ±1 dB
Equivalent noise input	max. 4,5 pA $\sqrt{\text{Hz}}$
<b>Upstream</b>	
Laser	Isolated DFB-Laser
Wavelength	1610 nm
Optical power	3 dBm (±1 dB)
Frequency range	15...65 MHz / 15...204 MHz
RF input level	95 dB $\mu$ V (5% OMI)
Amplitude response	±1 dB
Input return loss	≥18 dB
<b>Interfaces</b>	
Optical connector	duplex LC/APC
RF connector	IEC male & IEC female
<b>General data</b>	
Supply voltage	230 V AC
Power consumption	≤4,5 W
Output impedance	75 Ω
Dimensions (width x height x depth)	150 x 111 x 31 mm
Electro Magnetic Compatibility (EMC)	EN50083-2
Ambient temperature	0...40 °C

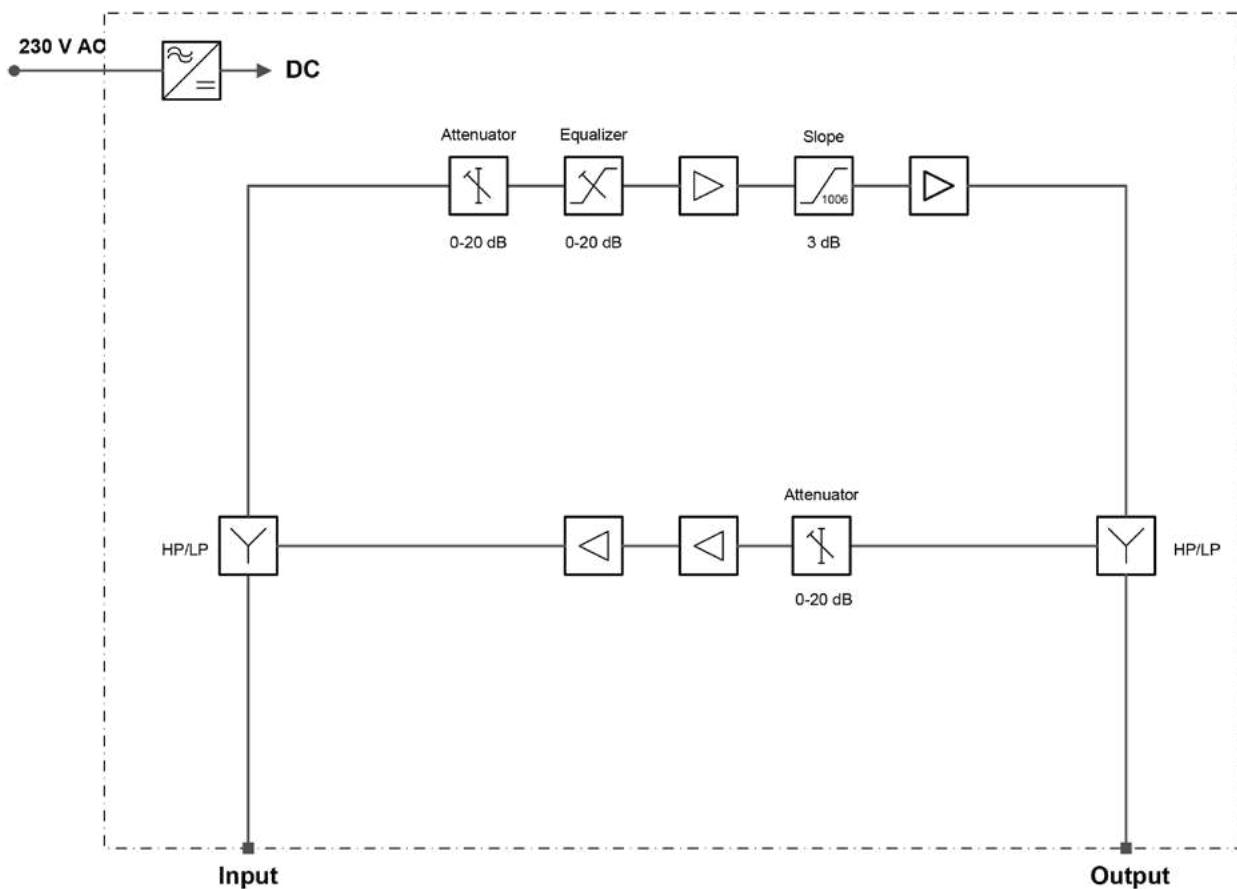
### characteristics

- FTTH Node for RFoG Systems
- Living room adopted case design
- DOCSIS 3.1 ready: US up to 204 MHz, DS 1218 MHz
- Optional Remote Control feature according to EN 60728-14, 862 MHz
- 1610 nm Upstream
- IEC male & IEC female
- Single fiber operation
- Extremely low-noise receiver
- Optical ALC
- Optical input range -6 ... +3 dBm

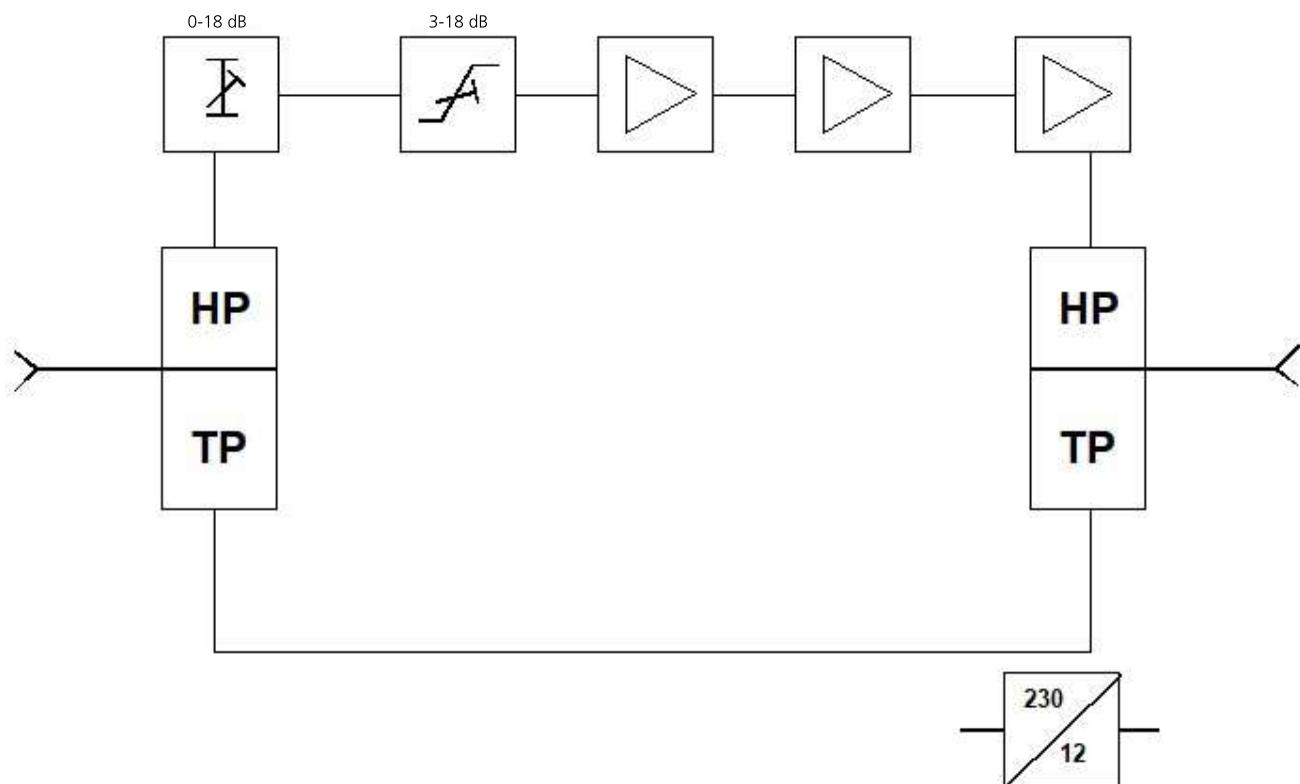


# Block diagrams

VX 81 OS, VX 82 OS, VX 83 OS

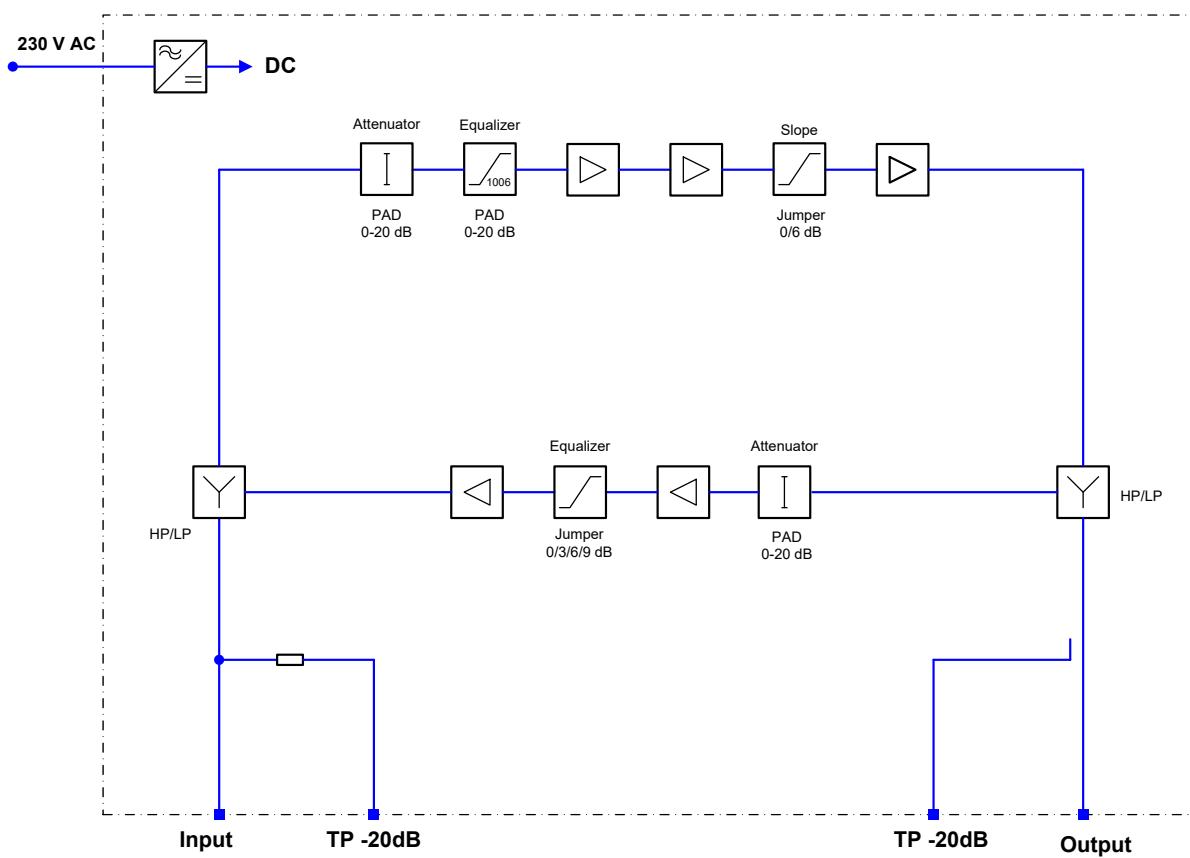


VX 86, VX 87

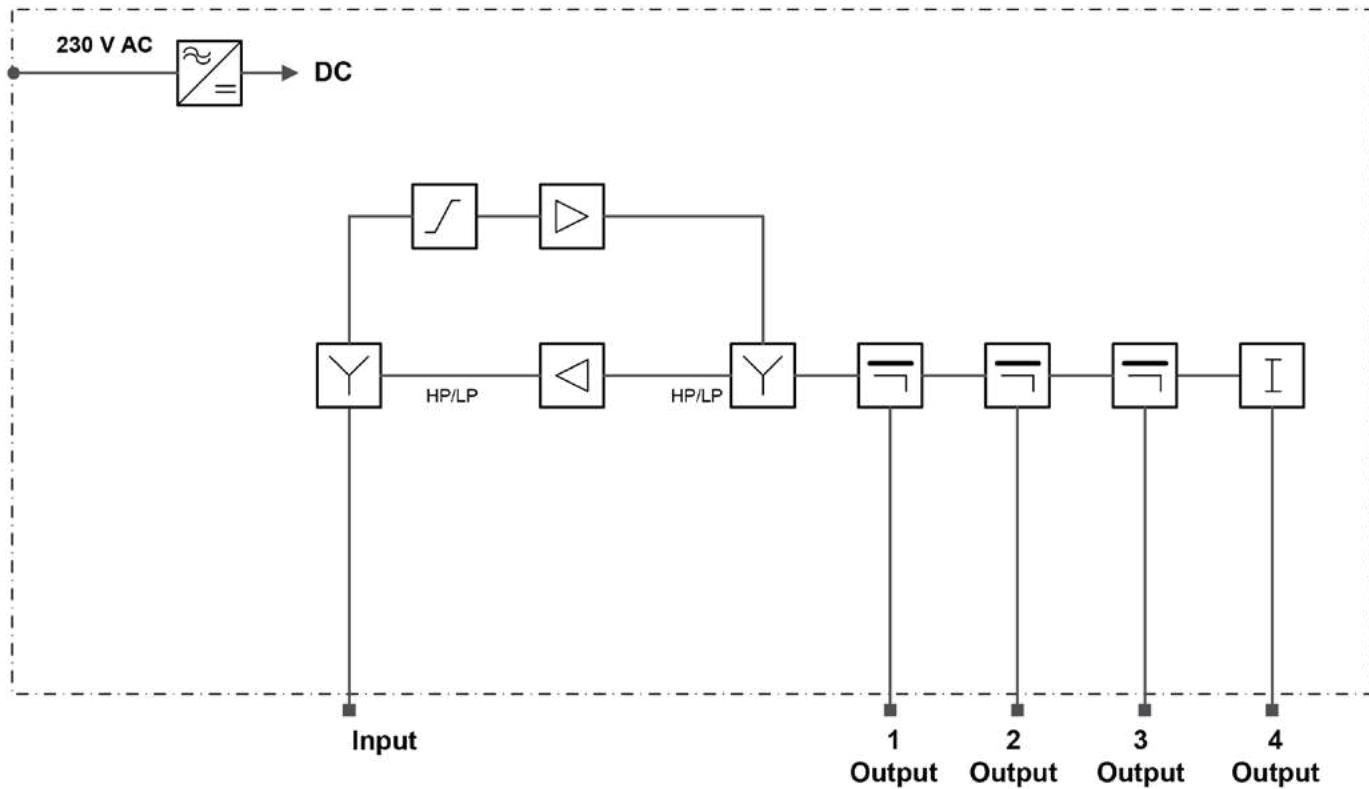


# Block diagrams

VX 88 OP

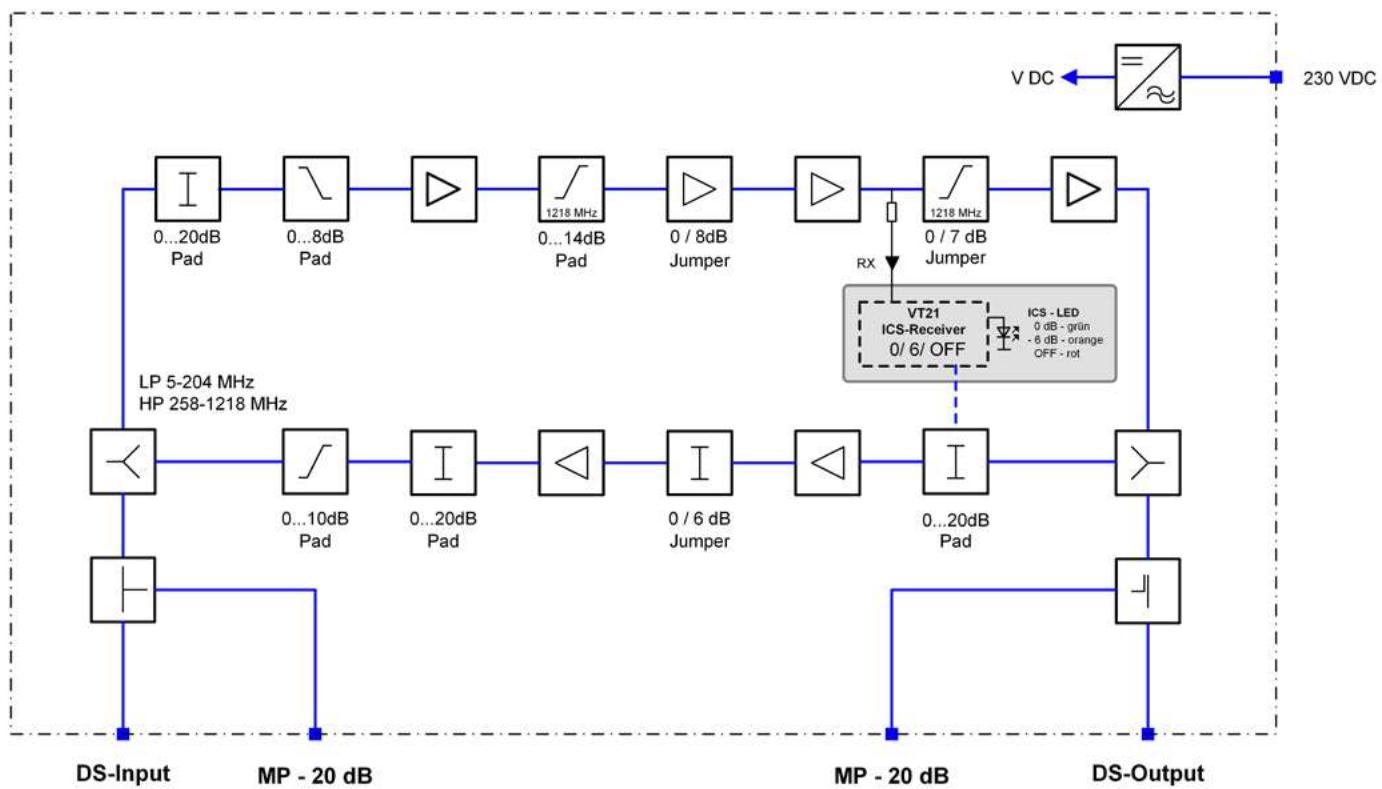


VX 67 B

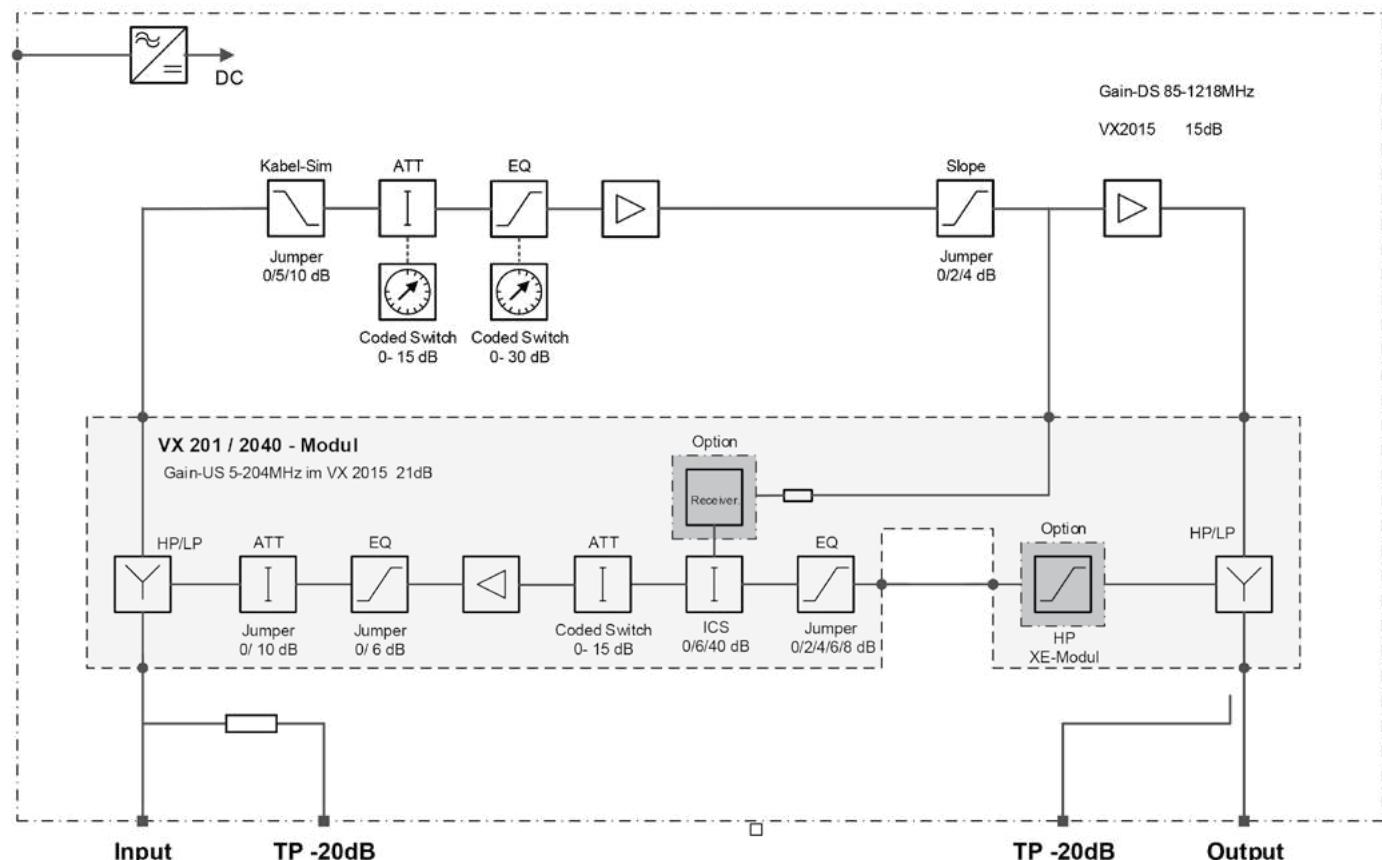


# Block diagrams

VX 12 K4432

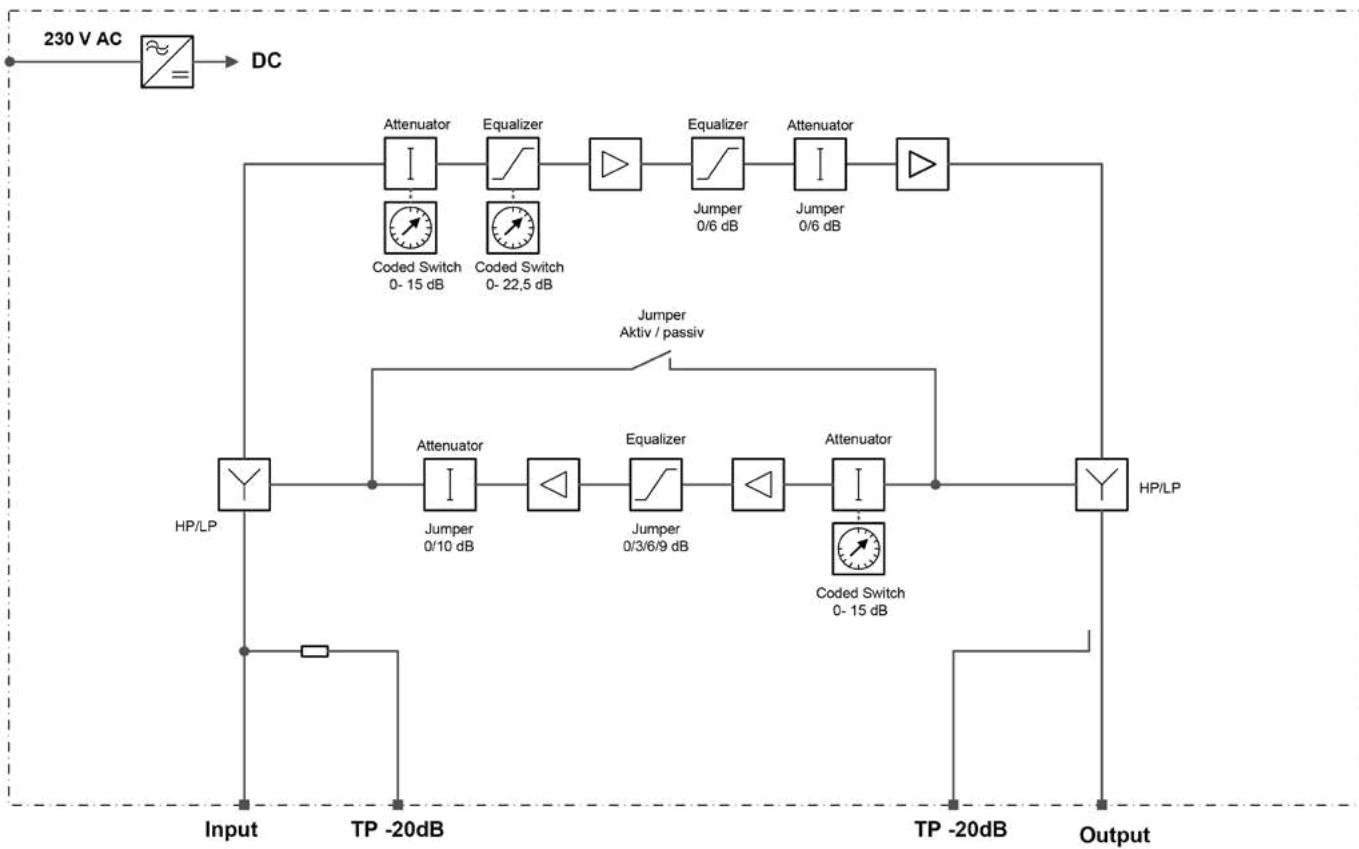


VX 2015

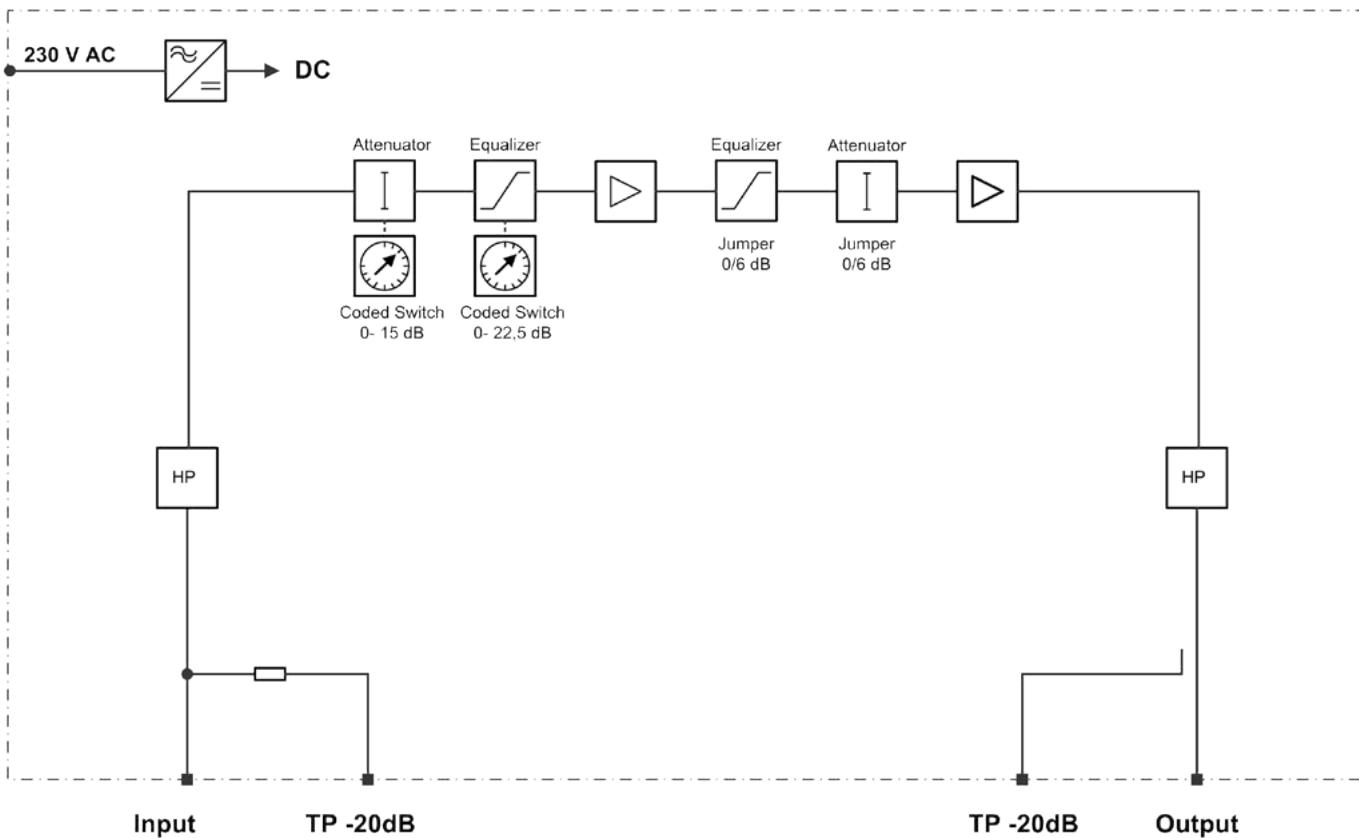


# Block diagrams

VX 45 D 3830

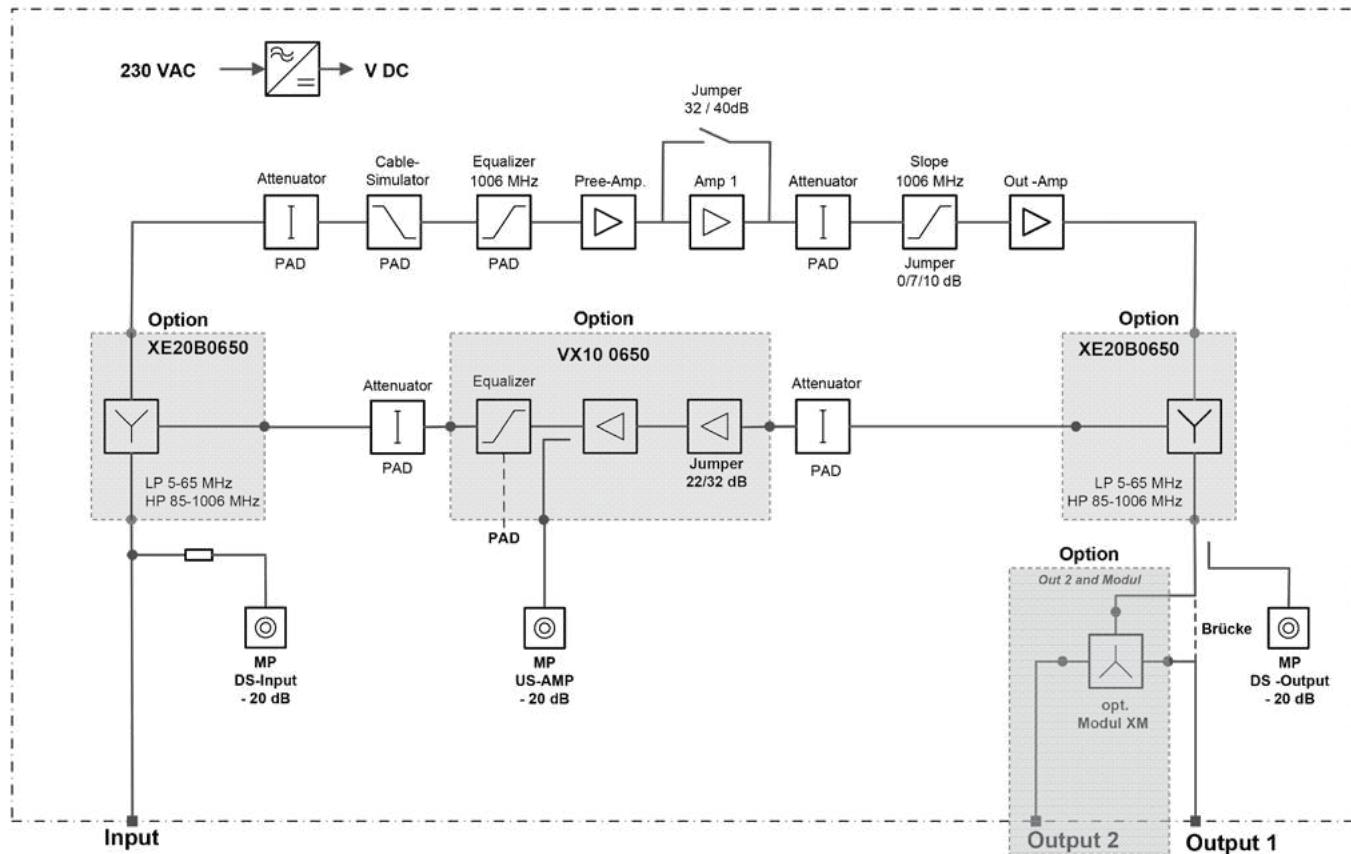


VX 45 E

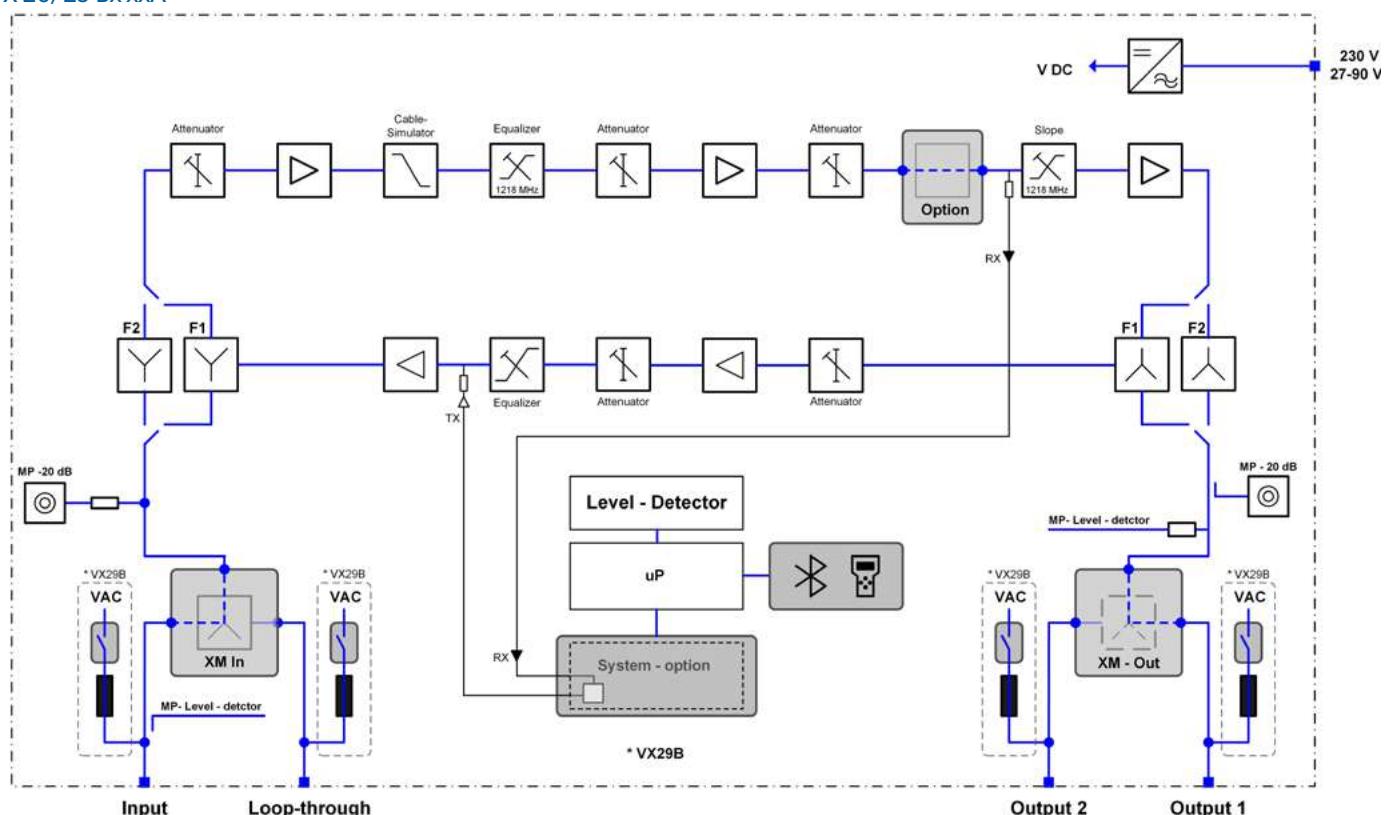


# Block diagrams

VX 16 C 0650

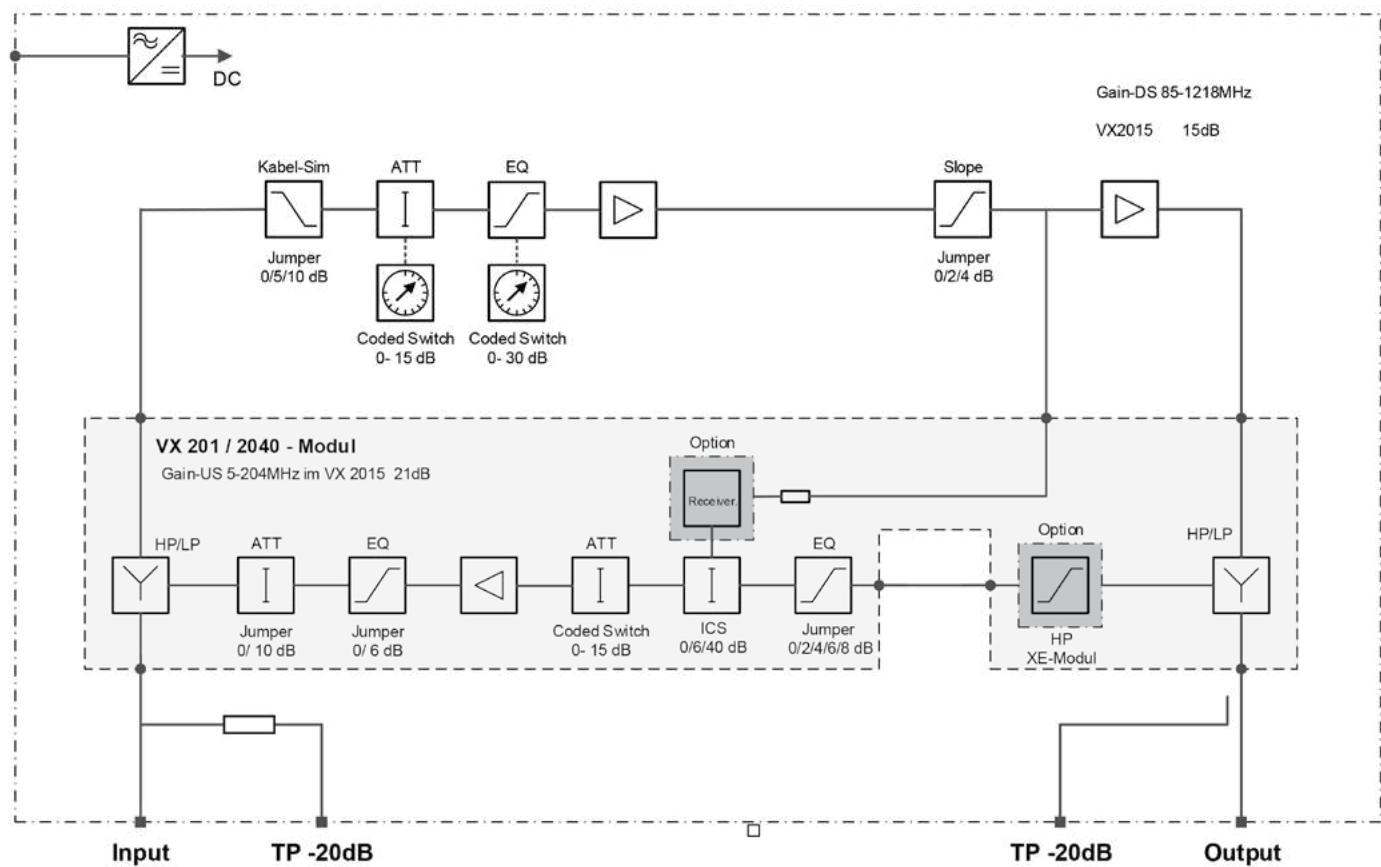


VX 26/29 Bx xxA

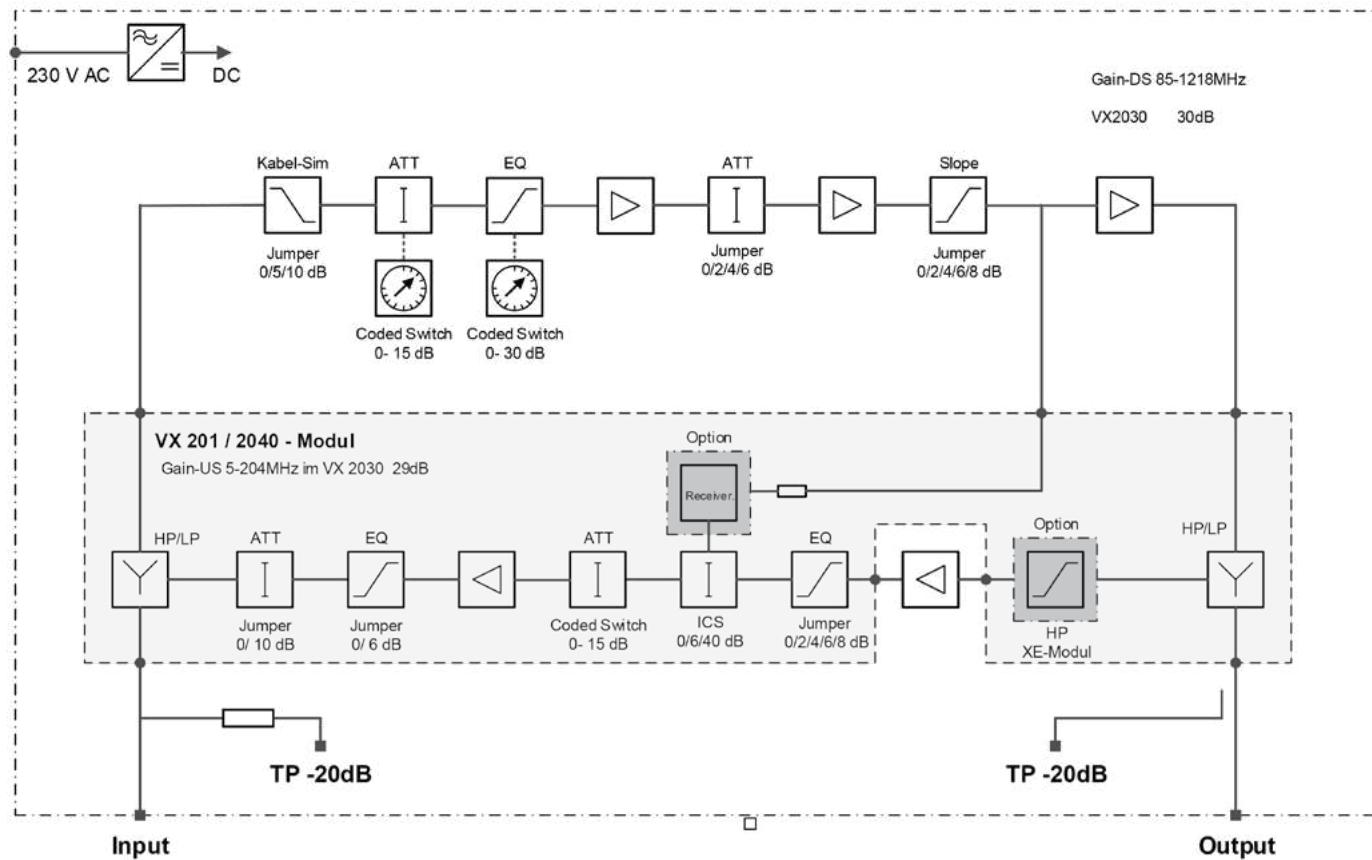


# Block diagrams

VX 2022

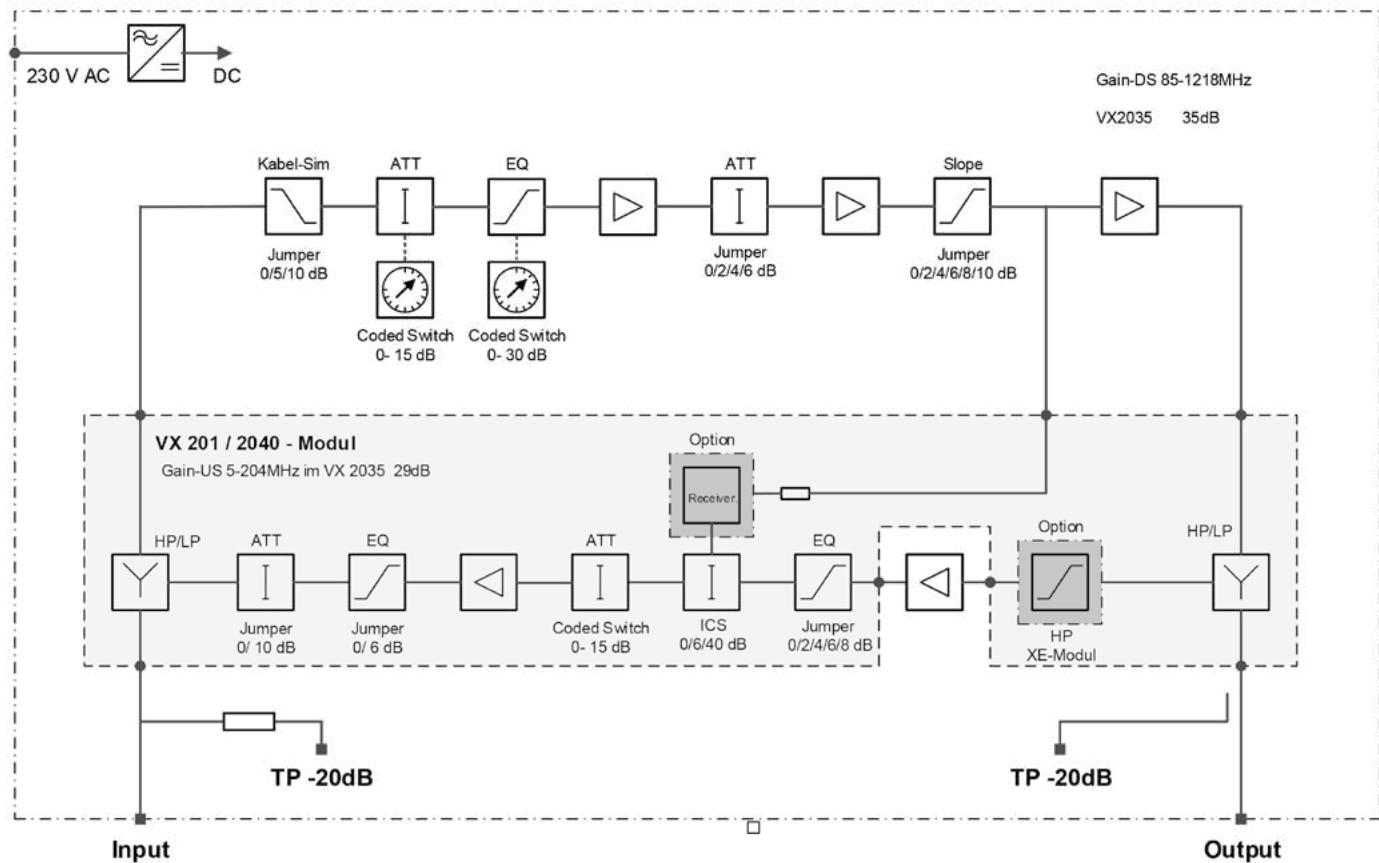


VX 2030

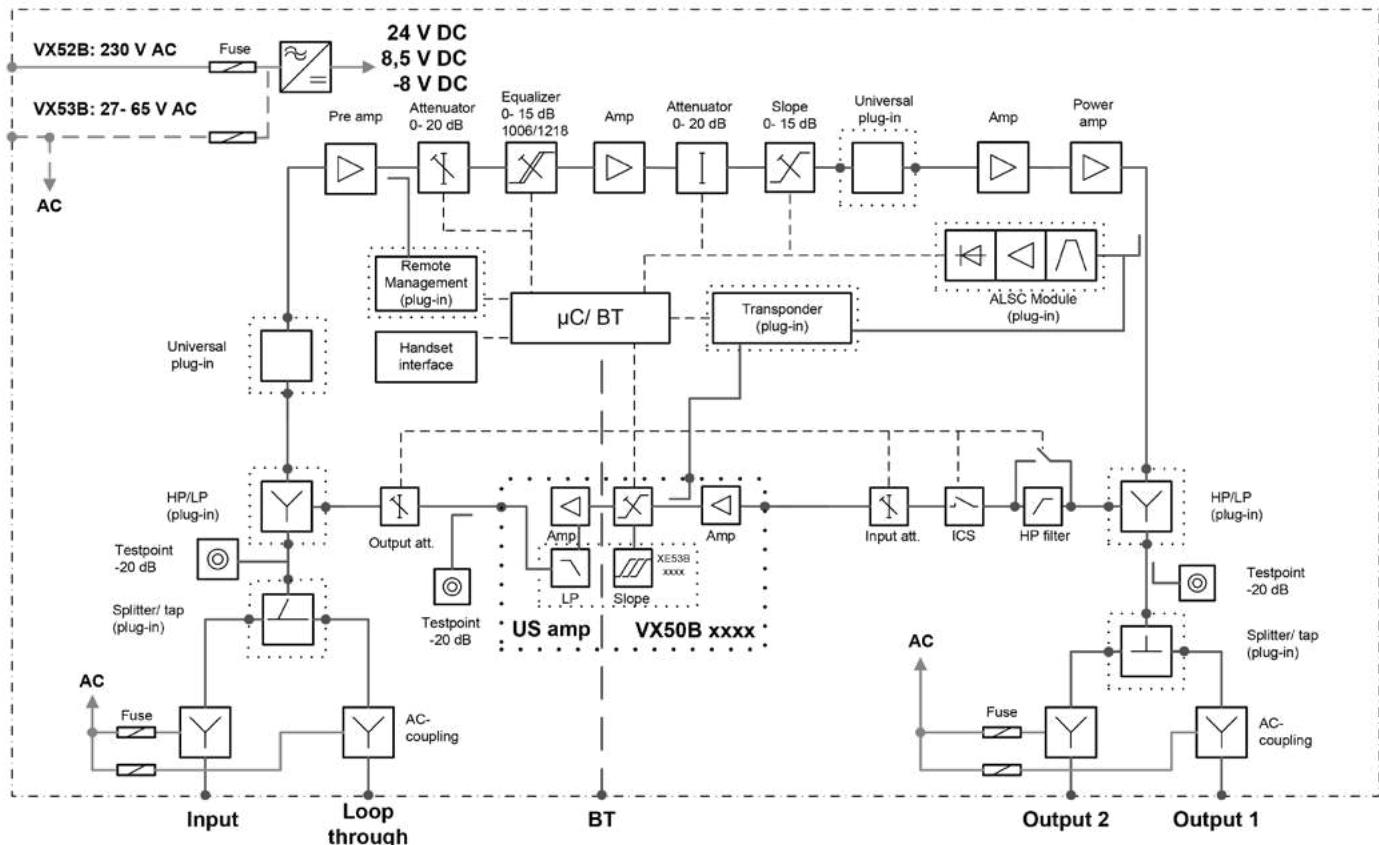


# Block diagrams

VX 2035

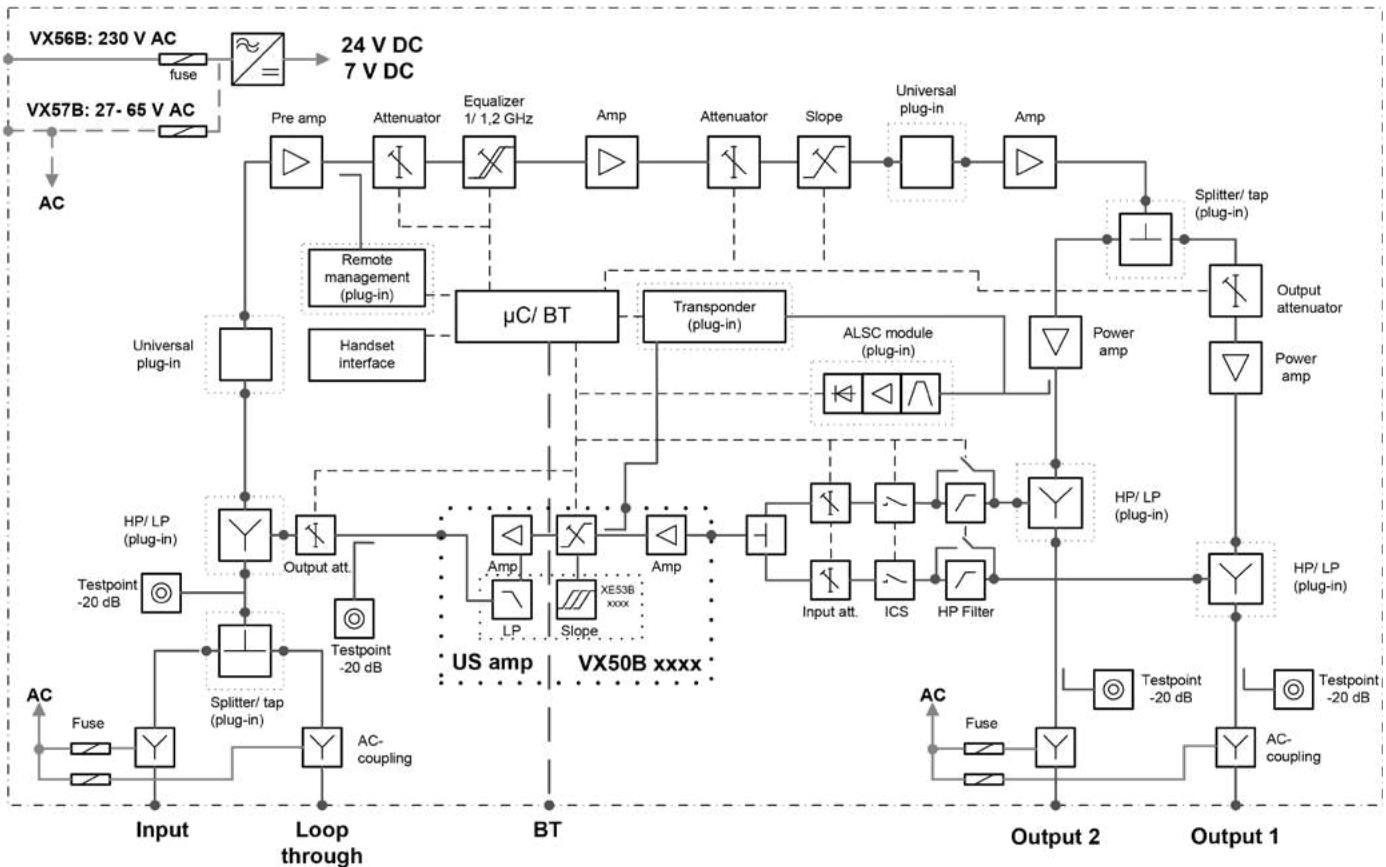


VX 52 B, VX 53 B



# Block diagrams

VX 56 B, VX 57 B



# Space for your notes

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Notes

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