Rosenberger

PreCONNECT® SEDECIM

PRODUCT INFORMATION





PreCONNECT® SEDECIM solution is available in three end face quality features: BASIC, PURE and LOTUS

Define the end face quality according to your application requirements:



Quality feature BASIC is our well-proven, high-grade, standards compliant product in terms of end face geometry, defect, and cleanness, providing excellent IL and RL performance:

- The PreCONNECT® factory-assembled plug & play system enables quick and reliable, cost efficient, installation and performance
- Harmonized modular components of the quality feature BASIC solution ensure end to end performance of the entire channel



Quality feature PURE is the enhanced version of our quality feature BASIC, but with more stringent defect and cleanliness screening and factory sealed, tamper evident adapter interfaces.

- Guaranteed protection of the polished connector end face against contamination and damage through sealed adapter interfaces,
 enabling time savings during initial installation and commissioning due to the elimination of the need for cleaning and testing*/**.
- Quality feature PURE provides an industry leading low <u>random mate</u> insertion and return loss (mean) which enables up to six (6) mated pairs in a 10G/OM4 application up to 300m.



Quality feature LOTUS builds upon our BASIC and PURE performance by introducing our unique LOTUS end face coating technology that provides dirt, moisture, and grease repellence to maintain cleanliness in initial and subsequent matings.

- Potential long-term time savings by reducing or eliminating the need for cleaning during initial installation and subsequent MACs
- Increased reliability and availability throughout various environmental and contaminate environments

Part numbers:

Quality feature BASIC: The part numbers XXXAXXXX listed in this document are valid for the BASIC quality feature.

Quality feature PURE: Add a "P" to the end of the quality feature BASIC part number (Example: XXXAXXXXP)

Quality feature LOTUS: Add an "L" to the end of the quality feature BASIC part number (Example: XXXAXXXXL)

(Note: PURE trunk cables have factory attached sealed coupling adapters incorporated and thus utilize empty patch panels and enclosures)

^{*} While Rosenberger does not require permanent link or channel testing for warranty registration of PURE installations due to guaranteed performance, certain customers will require testing documentation for their records.

^{**} Only applicable when all components are of quality feature PURE and installed by trained PURE installers.

Applications:

Infrastructure and IT room cabling within data centers

System consists of:

- Factory assembled fiber optic breakout cables, FRNC-LSZH indoor cables, up to 9 x 16 = 144 fibers with connector systems MTP® 16 fiber per MTP® channel
- Port-breakout with MTP® LC harnesses and MTP® module cassettes with LC front
- Three 19" panel systems SMAP-G2 HD, SMAP-G2 UHD and DCP selectable
- Suitable patchcords
- Useful accessories
- Patch location rack

Features:

- For all who already have on minimum one cabling side MPO based parallel optics SR8 transceivers
- Cost and attenuation optimized for SR8 applications



Your benefits at a glance:

- MTP® cabling system perfectly fitting for SR8 applications
- Fast and safe installation through factory assembled plug & play systematic
- Highest quality and cost-efficiency through factory assembling
- PreCONNECT® cabling systems consist of perfectly harmonized modular single components

PreCONNECT® SEDECIM breakout trunk



PreCONNECT® SEDECIM Harness



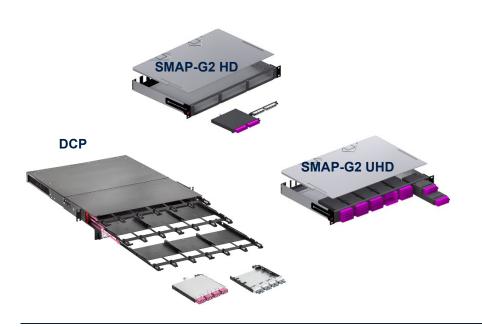
PreCONNECT® SEDECIM patchcord



LC-COMPACT patchcord



19" panel systems







Application:

MTP® (MPO) based data center cabling with 16 fibers per MTP® channel:

Optimized for parallel optics applications:

400GBASE-SR8

Easy migration to 40/100/200 GBASE-SR4.



System description:

Our PreCONNECT® SEDECIM cabling system consists of:

- SEDECIM breakout trunk called factory assembled FO cables with up to 9 SR8 MTP[®] channels (9x16=144 fibers).
- 19" panel systems with part front plates with MTP®/MPO adapters and SEDECIM module cassettes
- SEDECIM patchcords, multijumpers and harnesses
- Useful accessories
- Patch location racks
- Rosenberger OSI brought already 1991 high fibercount factory assembled FO trunk cables to the market. PreCONNECT® STANDARD was the first in Europe developed and manufactured, high fibercount and modular "plug & play" FO cabling system and already 1997 we have been the first manufacturer of MTP® cabling systems in Europe.

Properties:

PreCONNECT® square interface and installation protection:

PreCONNECT® SEDECIM breakout trunks have PreCONNECT® square interfaces on both sides which can be tool-less hooked into the 19" panel systems for tensile and torsion resistant fixing of the trunks.

The trunk connector legs are fitting for the 19" panel systems and are packaged in non-pull resistant dust-proof foil tubes. On request with tensile strength, crush resistant, kink and torsion resistant, installation tubes deliverable.



Installation Tube Indoor IP50 dustproof





Properties:

Connector types:

- To reach reliable high return loss in application, the MTP[®] 16 fiber multimode connectors of PreCONNECT[®] SEDECIM are 8° APC polished and have a white boot as color code. MTP[®] 16 fiber multimode connectors have an off-center key.
- SEDECIM breakout trunks: MTP® 16 fiber, 8° APC, male
- SEDECIM patchcords, multijumpers, harnesses and module cassettes:
 MTP® 16 fiber, 8° APC, female

Adapter type:

■ MTP® 16 MM 8° APC: Off-center key, TIA type A "opposed key" "1 to 1", white

Polarity:

- SEDECIM breakout trunks: TIA Method B "1 to 16"
- SEDECIM patchcords, harnesses and module cassettes: see pages of the products

Cable types:

- SEDECIM breakout trunks: I-F(ZN)HH n x 16 fibers
- SEDECIM patchcords and harnesses I-F(ZN)H and I-F(ZN)H(ZN)H 16 fibers
- Cable data, see separate cable data sheets

Fiber type:

- Multimode OM4 bend-insensitive
- Fiber data, see separate fiber data sheets

Length definition:

Order length = length between the connectors of the longest legs at both sides, not between the PreCONNECT® square interfaces.

Delivery form:

Dependent on the length as cable ring or on cardboard or wooden drum, 100% IL factory measured with measurement protocol, product label with serial number on both sides.





MTP® 16 MM 8° APC connectors



MTP® 16 MM 8° APC adapter



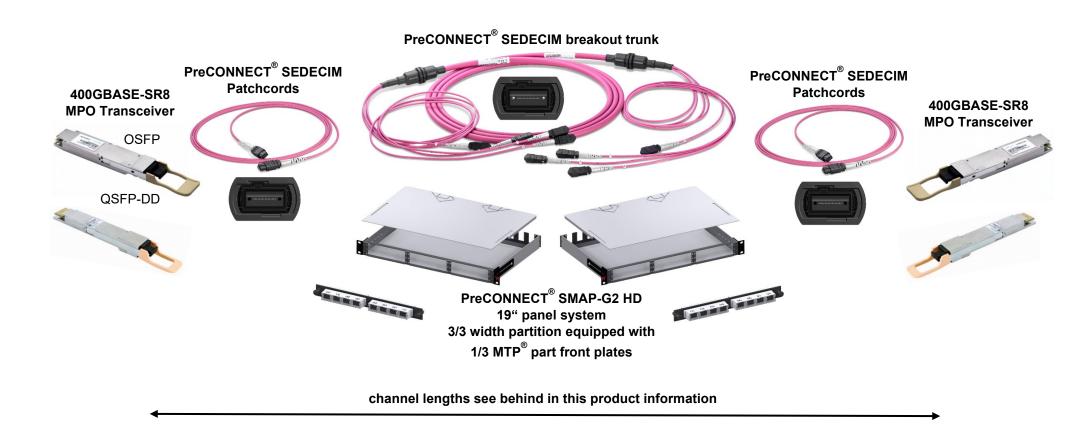
I-F(ZN)HH 6 x 16 fiber breakout cable



PreCONNECT® SEDECIM application case point-to-point:

MULTIMODE

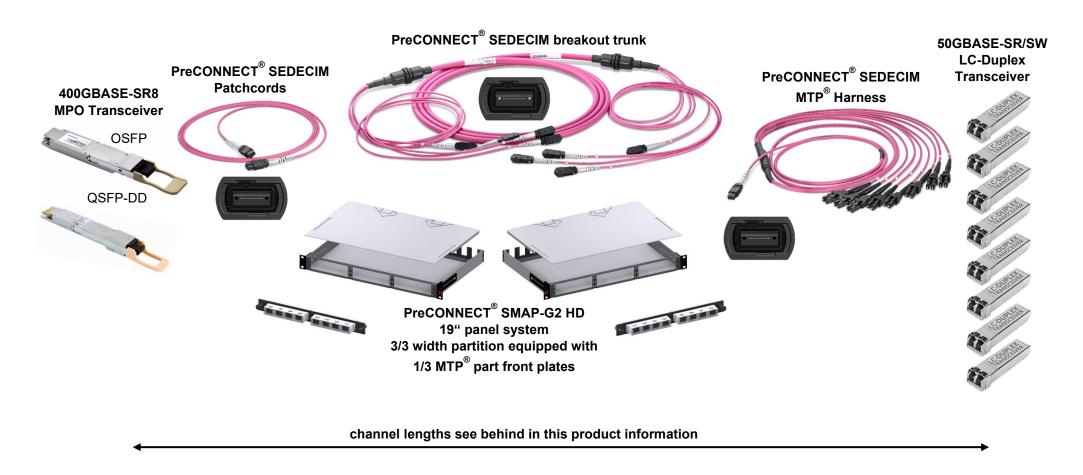
400GBASE-SR8 MPO-MPO



PreCONNECT® SEDECIM application case port breakout with MTP® harness:

MULTIMODE

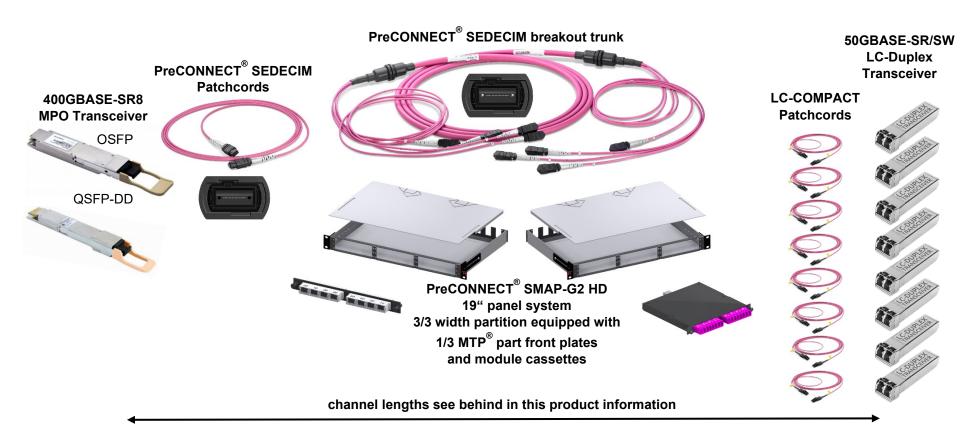
400GBASE-SR8 MPO to 8x 50GBASE-SR LC-Duplex



PreCONNECT® SEDECIM application case port breakout with MTP® module cassette:

MULTIMODE

■ 400GBASE-SR8 MPO to 8x 50GBASE-SR LC-Duplex



PreCONNECT® SEDECIM OM4 breakout trunk:

MULTIMODE

Breakout cable n x 16 OM4 fibers FRNC-LSZH

With PreCONNECT® square interface on both sides

MTP® 16 MM, 8° APC, male

Polarity TIA method B "1 to 16"

MTP® leg-length = standard stepped

Part numbers, length variable:

Number of SEDECIM			Number
channels	Part numbers	Cable structure	of fibers
1	037A2100OM4	1 x 16	16
2	037A2101OM4	2 x 16	32
3	037A2102OM4	3 x 16	48
6	037A2103OM4	6 x 16	96
9	037A2104OM4	9 x 16	144





PreCONNECT® SMAP-G2 High Density (HD) 19" panel system:

Port density:

■ 72 LC-Duplex or MTP® ports per HU

Dimensions:

- Width: 19" ■ Height: 1 HU
- Depth: 200 mm and 300 mm. We recommend 300 mm as shown here, because the space to accommodate trunk cable dividers and connector legs is uncomfortable narrow within 200 mm deep panels.

Part numbers:

SMAP-G2 HD empty distribution panels, RAL9005 black, back plane with 12 PreCONNECT® square interfaces:

■ 1 HU, 3/3 SEDECIM width partition, depth 300 mm: 171H0015

SMAP-G2 UHD panels are not appropriate for PURE trunks.

Find further information in our product information SMAP-G2 HD.

LC-COMPACT Push-Pull-Boot (LCC-PPB) patchcords with cable diameter 2.0 mm or thinner must be used with this panel system, to be found behind in this product information.





SMAP-G2 HD 1/3 HU 1/3 part front plates with matrix numbering:

Part numbers RAL9005 black		
	1/3 HU 1/3 Blind-PFP	170H0003
PFP-Typ	Number and type of ports	
1/3 HU 1/3	8 x MTP [®] 16 MM 8° APC type A "opposed key", white	170H2201

Find part numbers for panels factory assembled with part front plates in our product information SMAP-G2 HD.





SMAP-G2 HD 16 fiber MTP® module cassettes fitting for PreCONNECT® SEDECIM trunks

Properties:

- For Port-Breakout of PreCONNECT® SEDECIM trunks with MTP® connectors
- Fitting in SMAP-G2 HD panel with 3/3 SEDECIM width partition
- Height: 1/3 HUWidth: 1/3Depth: 115 mm
- Depth: 115 mmPolarity: Rx to Tx
- 1 port SEDECIM MTP® 16 MM 8° APC, female, type A "opposed key", white at the rear side
- LC-Duplex ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners



Part numbers RAL9005 black		
Number of	Number of	
16F SEDECIM MTP® female ports	LC-Duplex ports	OM4
at rear side	at front side	
1	1 SEDECIM group = 8	170H1200OM4
	11 1 11 14 14	

Find part numbers for panels factory assembled with MTP® module cassettes in our product information SMAP-G2 HD.

PreCONNECT® SMAP-G2 Ultra High Density (UHD) 19" panel system:

Port density:

■ 96 LC-Duplex or 48 MTP® ports per HU

Dimensions:

- Width: 19" ■ Height: 1 HU
- Depth: 200 mm and 300 mm. We recommend 300 mm as shown here, because the space to accommodate trunk cable dividers and connector legs is uncomfortable narrow within 200 mm deep panels.

Part numbers:

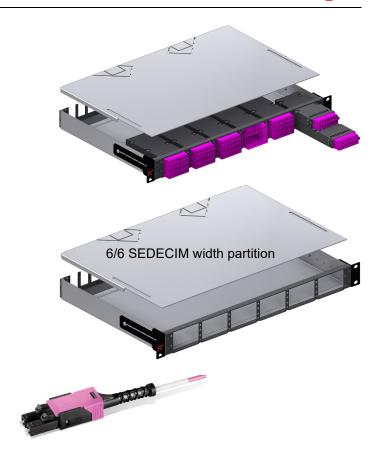
SMAP-G2 UHD empty distribution panels, RAL9005 black, back plane with 16 PreCONNECT® square interfaces:

1 HU, 6/6 SEDECIM width partition, depth 300 mm: 171H0012

SMAP-G2 UHD panels are not appropriate for PURE trunks.

Find further information in our product information SMAP-G2 UHD.

LC-COMPACT Push-Pull-Boot (LCC-PPB) patchcords with cable diameter 2.0 mm or thinner must be used with this panel system, to be found behind in this product information.



SMAP-G2 UHD 1/2 HU 1/6 part front plates:

Part number	rs RAL9005 black	
	1/2 HU 1/6 Blind-PFP	170H3002
PFP-Typ	Number and type of ports	
1/2 HU 1/6	4 x MTP [®] 16 MM 8° APC type A "opposed key", white	170H6105

Find part numbers for panels factory assembled with part front plates in our product information SMAP-G2 UHD.







SMAP-G2 UHD 16 fiber MTP® module cassettes fitting for PreCONNECT® SEDECIM trunks

Properties:

- For Port-Breakout of PreCONNECT® SEDECIM trunks with MTP® connectors
- Fitting in SMAP-G2 UHD panel with 6/6 SEDECIM width partition
- Height: 1/2 HUWidth: 1/6Depth: 115 mm
- Depth: 115 mmPolarity: Rx to Tx
- 1 port SEDECIM MTP® 16 MM 8° APC, female, type A "opposed key", white at the rear side
- LC-Duplex ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners



Part numbers RAL9005 black		
Number of	Number of	
16F SEDECIM MTP® female ports	LC-Duplex ports	OM4
at rear side	at front side	
1	1 SEDECIM group = 8	170H4101OM4
	_	

Find part numbers for panels factory assembled with MTP® module cassettes in our product information SMAP-G2 UHD.

PreCONNECT® Data Center Panel (DCP) 19" panel system:

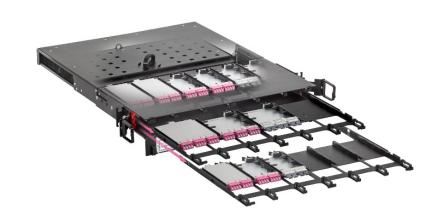
Port density:

■ 72 LC-Duplex or MTP® ports per HU

Dimensions:

Width: 19"Height: 1 HU

■ Depth: see product information DCP



Part numbers:

DCP empty panel, RAL9005 black, inclusive module drawers and universal trunk management according to product information DCP:

1 HU, 3/3 SEDECIM width partition: 165A0011

3/3 SEDECIM width partition



Blind cover to cover the unused slots within module drawers:

Width 1/3, set consisting of 6 pcs.:

165A3009



Modular toolless mountable, height unit neutral patchcord guide. Set consisting of 2 pcs. fitting for 1 HU panels: **165A3006**

DCP panels are not appropriate for PURE trunks.

Find further information in our product information DCP.



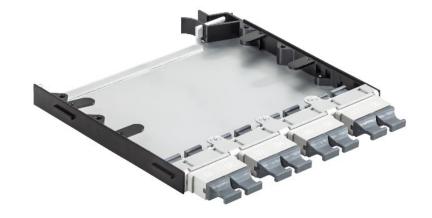
LC-COMPACT (LCC) patchcords with 2.0 mm or thinner cable diameter must be used with this panel system, to be found behind in this product information.



DCP 8 port MTP® adapter inserts fitting for PreCONNECT® SEDECIM trunks:

Properties:

- For direct patch of PreCONNECT® SEDECIM trunks with MTP® connectors
- Fitting in DCP panel with 3/3 SEDECIM width partition
- Height: 1/3 HUWidth: 1/3Depth: 115 mm
- Toolless placement of the inserts into the slots of module drawers of the panel from the front and rear side possible



Part numbers		
Insert type	Number and type of ports	
1/3 HU 1/3	8 x MTP [®] 16 MM 8° APC, type A "opposed key", white	165A2021
Find part numbers for panels factory assembled with adapter inserts in our product		
information DCP.		

DCP 16 fiber MTP® module cassette fitting for PreCONNECT® SEDECIM trunks:

Properties:

- For port breakout of PreCONNECT® SEDECIM trunks with MTP® connectors
- Fitting in DCP panel with 3/3 SEDECIM width partition
- Height: 1/3 HU
 Width: 1/3
 Depth: 115 mm
 Polarity: Rx to Tx
- 1 port SEDECIM MTP® 16 MM 8° APC, female, type A "opposed key", white at the rear side
- LC-Duplex ports at the front side with integrated dust and laser protection shutters
- Toolless placement of the module cassettes into the slots of module drawers of the panel from the front and rear side possible



Part numbers		
Number of	Number of	
16F SEDECIM MTP® female ports	LC-Duplex ports	OM4
at rear side	at front side	
1	1 SEDECIM group = 8	165A1020OM4

Find part numbers for panels factory assembled with MTP® module cassettes in our product information DCP.

SMAP-G2 PURE 19" distribution panels empty:

Part numbers RAL9005 black, 300mm depth	
1 HU	171A0001P
2 HU	172A0001P
3 HU	173A0001P
5 HU	175A0001P

Standard back plane configuration for

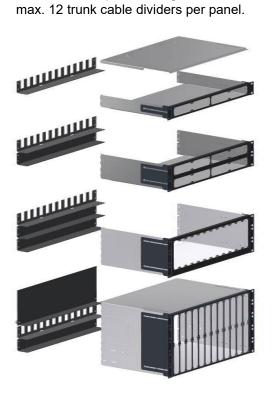


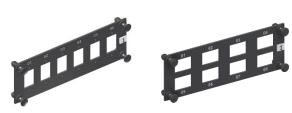


SMAP-G2 PURE part-front-plates PFP

1 HU 1/4 PFP for 6 and 8 MTP® adapter interfaces

1 HU 1/2 PFP for 12 MTP® adapter interfaces









SMAP-G2 PURE 1 HU 1/4 and 1/2 part front plates part numbers RAL9005 black		
PFP type / number of adapter slots	SMAP-G2 PURE part front plates	
	without adapters	
1/4 Blind-PFP	170A0001P	
1/2 Blind-PFP	170A0002P	
1/4 / 6 MTP®	170A0630P	
1/4 / 8 MTP®	170A0140P	
1/2 / 12 MTP®	170A0670P	

PreCONNECT® SEDECIM OM4 patchcords:

MULTIMODE

400GBASE-SR8 transceiver can either have a MTP® 16 MM PC 0° Media Dependent Interface (MDI), or a MTP® 16 MM APC 8°!

To attach 400GBASE-SR8 transceivers with MTP® 16 MM PC 0° MDI to PreCONNECT® SEDECIM trunks, hybride patchcords with MTP® 16 MM female PC 0° at the transceiver side and MTP® 16 MM female APC 8° at the trunk side must be applied.

To attach 400GBASE-SR8 transceivers with MTP® 16 MM APC 8° MDI to PreCONNECT® SEDECIM trunks, patchcords with MTP® 16 MM female APC 8° at both sides must be applied.

Single jacket cable 16 OM4 fibers, diameter 3.0 mm, FRNC-LSZH, polarity TIA method B "1 to 16"

Part numbers, length variable:

MTP® 16 MM female	
version side A / B	Part numbers
APC 8° / APC 8°	080A1145OM4
APC 8° / PC 0°	080A1146OM4
PC 0° / PC 0°	080A1142OM4



Doppelmantelkabel 16 OM4 fibers, diameter 3.0/4.5 mm, FRNC-LSZH, polarity TIA method B "1 to 16" Standard lengths of the 3.0 mm single jacket MTP®-legs = 0.5m, others on request.

Part numbers, length variable:

MTP® 16 MM female	
version side A / B	Part numbers
APC 8° / APC 8°	080A1147OM4
APC 8° / PC 0°	080A1148OM4
PC 0° / PC 0°	080A1054OM4





PreCONNECT® SEDECIM patchcords are suitable for 400GBASE-SR8 transceiver-transceiver direct-attach.

! Verify the transceiver MDI version, whether MTP® 16 MM with 8° APC or 0° PC is required.



PreCONNECT® SEDECIM OM4 MTP® Harness:

MULTIMODE

To cennect a SR8 MPO Transceiver with 8 LC-Duplex Transceivers and for Port-Breakout of SEDECIM Trunks:

400GBASE-SR8 MPO to 8x 50GBASE-SR/SW LC-Duplex

400GBASE-SR8 transceiver can either have a MTP[®] 16 MM PC 0° Media Dependent Interface (MDI), or a MTP[®] 16 MM APC 8°!

For Port-Breakout of PreCONNECT® SEDECIM trunks a harness with MTP® 16 MM female APC 8° must be applied.

Properties:

- Double jacket cable 16 OM4 fibers, diameter 3.0/4.5 mm, FRNC-LSZH
- MTP® 16 MM, APC 8° or PC 0°, female
- Polarity,,Rx to Tx"
- LC-Compact leg-lengths 0.5m, legs numbered 1 to 8, other leg lengths on request
- Order length = total length

Part numbers, length variable:

MTP® 16 MM female version	Part number
PC 0°	076A0176OM4
APC 8°	076A0177OM4

! Verify the transceiver MDI version, whether MTP® 16 MM female with 8° APC or 0° PC is required.





Patchcords:

Properties:

- Kink and crush resistance optimized for environmental conditions
- Suitable for operation in temperatures from -10 °C to +60 °C
- Polarity:

Full-duplex cables with duplex connectors on both sides "crossed" A to B in accordance with ISO/IEC 11801 and EN 50173

Length tolerances:

- Up to 1 m = 50 mm
- 2 m to 3 m = 100 mm
- 4 m to 25 m = 200 mm
- Longer than 25 m = 1 %

Delivery form:

- Attenuation measured in accordance with IEC 61300-3-4 "C" or "Substitution" method, measurement values on request
- Serial number labels at the cable ends on both sides
- Individually packaged in foil bags with product ID label

For our SMAP-G2 HD, SMAP-G2 UHD and DCP 19" panel systems only patchcords with diameter 2.0mm or thinner should be applied.



With LC-COMPACT Push-Pull-Boot (LCC-PPB) connectors for SMAP-G2 HD and UHD 19" panel system

Author: Harald Jungbäck

Part numbers Duplex Patch	cord cable type round I-V(ZN)H				
Cable diameter	Connectors	Length	OM4	SM PC 0°	SM APC 8°
2.0 mm	LC-Compact » LC-Compact	variable	087A6623OM4	087A6620G657A1	087A6622G657A1
2.0 mm	LC-Compact PPB » LC-Compact PPB	variable	087A6737OM4	087A6738G657A1	on request

Accessories:

Description	Part number	Pictures
19" 1 HU universal trunk cable divider holder For the universal installation of multiple trunk cable dividers within 19" racks.	RAL9005 black 099A0085	
19" 1 HU single universal trunk cable divider holder For the universal installation of a single trunk cable dividers within 19" racks.	RAL9005 black 099A0065	
For 19" panel accessories see our product information 19" panel accessories		
	The Walter Hard State of the Control	

Accessories:

Patch location rack:

Applications:

- High density data center infrastructures
- For the construction of ultra high density data center patch locations

Properties:

- Innovative, restriction-free cable management system
- Rack pillars with integrated cable managers to prevent interference with cable routing
- The covers of the cable managers fold in both directions and are completely removable
- Individually selectable feedthroughs in the sides and rear walls of the large volume cable channel for simple vertical and horizontal cable routing
- Professional routing of large cable volumes from the patchfields and storage of cable overlengths in the vertical cable managers
- Particularly suitable for fiber optic cables thanks to the use of cable clips (L-fingers) and finger slots:
 - The rounded L-fingers ensure that the cables are extremely well protected against bending and kinking even when subject to strain.
 - The L-fingers do not have any sharp edges and are extremely strong and resistant to breakage.
 - Because there is plenty of space for them in the large finger slots, the cables are neither squeezed nor kinked.
 - The L-fingers retain the cables in the finger slots whenever you need to work with the covers folded back or removed.
- Dimensions (H x L x W): 213 (46 HU) x 90 x 90 cm
- Material and color: Powder-coated steel, RAL 9005 (black)

Optional:

19" Intermediate rack for the construction of rack rows with uneven numbers of racks on request.

Delivery form:

- Factory mounted on pallet (total height with pallet and packaging: 230 cm)
- Including adjustable feet for on-site installation

Accessories:

Wide range of accessories such as side walls, cable guides, excess cable storage for the top of the rack are available on request



More details in our product information " DC-PLR"

	channel lengths max. [m]			ala anno al attano action mana [alb]
Multimode applications	OM3	OM4	OM5	channel attenuation max. [dB]
40GBASE-SR4	IEEE 802.3 = 100	IEEE 802.3 = 150	IEEE 802.3 = 150	OM3 1.9 / OM4 and OM5 1.5
	R-O = 140	R-O = 170	R-O = 170.	
100GBASE-SR4				
200GBASE-SR4	_			OM3 1.8 / OM4 and OM5 1.9
400GBASE-SR16	<mark>70</mark>	<mark>100</mark>	100	ONIS 1.07 ONI4 and ONIS 1.9
400GBASE-SR8				
400GBASE-SR4.2	70	100	150	OM3 1.8 / OM4 1.9 / OM5 2.0
BROCADE 4x16 GFC	66	100	n.s.	OM3 1.9 / OM4 1.5
BROCADE 4x32 GFC	70	100	n.s.	OM3 1.9 / OM4 1.5
Singlemode applications	channel lengths max. [m]			channel attenuation max. [dB]
100G PSM4	500			3.3
200GBASE-DR4	500			3.0
400GBASE-DR4	500			3.0

R-O = channel lengths possible with Rosenberger OSI OM3 and OM4 fibers / n.s. = not specified

Skew variation of the entire cabling channel (possible through electronic skew compensation):

40/100/200/400GBASE-SRx max. 2.2ns / PSM4 and DR4 max 2.4ns

(Skew = time delay of related parallel running parts of a signal)

About Rosenberger OSI:

Since 1991, Rosenberger Optical Solutions & Infrastructure (Rosenberger OSI) has been an expert in innovative fiber optic cabling infrastructure and service solutions for Data Centers, Local Networks, Telecom and Industrial.

The products and services can be found wherever largest amounts of data have to be transferred quickly and securely. In addition to the development and production of a broad portfolio of fiber optic and copper cabling systems, Rosenberger OSI also offers a variety of services such as planning, installation and maintenance of cabling infrastructure. Rosenberger OSI has been a part of the globally operating Rosenberger Group since 1998, a worldwide leading provider of high-frequency-, high-voltage-, and fiber-optic-connection solutions headquartered in Germany.

For further information, please visit: www.rosenberger.com/osi

Rosenberger

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