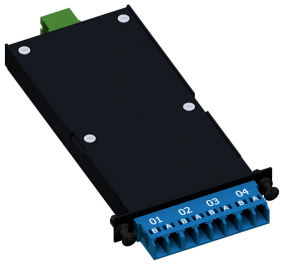
Rosenberger

PRODUCTPROFILE

Catalogue number: 170H1101

Partnumber: 775987

SMAP-G2 HD MTP Module-Cassette 1/3HU 1/6
8 fibers SM
Front: 4 LC-Duplex (1xLC8) SM blue
Back plane: 1 MTP OCTO female SM-APC green
Polarity: OCTO Rx to Tx
RAL9005 black



Related documents:

DS_FASER G657A1_OE	Fiber Data Sheet
DS_I-FZNH_L_OE	Cable Data Sheet
DS_LC_SIMPLEXDUPLEX_STECKER_OI	Steckerdatenblatt
DS_LC8_KUPPLUNG_K04_OE	LC8 Kupplung
PRECONNECT_SMAP-G2-HD_OE	Produktinformation

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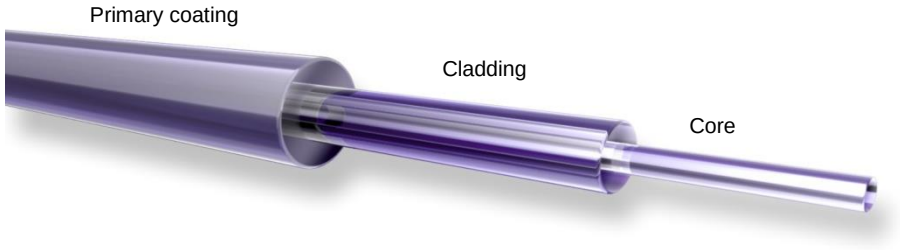
Tel.: +49 821 249249-0
www.rosenberger.com/osi; E-Mail: info-osi@rosenberger.com

Technical Data Sheet	Rosenberger
Optical fiber G.657.A1/G.652.D	059A0478



Standards

Stepped index fiber 9/125µm according to
-ISO/IEC 11801 und EN 50173-1 OS2
-IEC 60793-2-50 type B1.3
-ITU G.657.A1 und G.652.D

Structure

Silica fiber with two layer acrylate primary coating

Geometrical properties

Modefield diameter @1310 nm	**9.2 µm +/- 0.4 µm**
Modefield diameter @1550 nm	**10.4 µm +/- 0.5 µm**
Cladding diameter	**125 µm +/- 0.07 µm**
Cladding non-circularity	**≤ 0.7 %**
Core-Cladding concentricity	**≤ 0.5 µm**
Primary coating diameter	**242 µm +/- 5 µm**
Coating-Cladding concentricity	**< 12 µm**

Mechanical properties

Break strength SCREEN-Test 1 % strain for 1 s @100 kpsi

Thermal properties

Operating temperature range -60 to +85°C

Transmission characteristics

Attenuation:

Cabled fiber tight buffered:	**@ 1310 nm max. 0.38 dB/km** **@ 1550 nm max. 0.28 dB/km**
Cabled fiber loose tube:	**@ 1310 nm max. 0.36 dB/km** **@ 1550 nm max. 0.22 dB/km**
Uncabled fiber:	**@ 1310 nm max. 0.32 dB/km** **@ 1383 nm max. 0.32 dB/km** **@ 1490 nm max. 0.21 dB/km** **@ 1550 nm max. 0.18 dB/km** **@ 1625 nm max. 0.20 dB/km**

Macrobending, induced attenuation, uncabled fiber:
Radius 10 mm, 1 turn, @ 1550 nm ≤ 0.50 dB
Radius 10 mm, 1 turn, @ 1625 nm ≤ 1.50 dB
Radius 15 mm, 10 turns, @ 1550 nm . 0.05 dB
Radius 15 mm, 10 turns, @ 1625 nm ≤ 0.30 dB
Radius 25 mm, 100 turns, @ 1310, 1550 und 1625 nm ≤ 0.01 dB

Dispersion:

@ 1285 - 1330 nm	**≤ 3.0 ps/(nm*km)**
@ 1550 nm	**≤ 18.0 ps/(nm*km)**
@ 1625 nm	**≤ 22.0 ps/(nm*km)**

Polarization Mode Dispersion (PMD):
PMD Link Design Value ≤ 0.04 ps/√km
Maximum individual fiber PMD ≤ 0.1 ps/√km

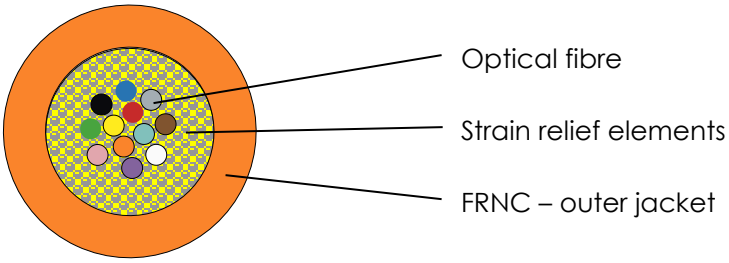
Cut-off-Wavelength: ≤ 1260 nm

Effective group index of refraction:
@ 1310 nm 1.4676
@ 1550 nm 1.4682

Backscatter attenuation @ 1ns pulse width:
@ 1310 nm -77 dB
@ 1550 nm -82 dB
@ 1625 nm -83 dB

Draft	Date	Approved	Date
H. Jungbäck	12-04-15	P. Maier	12-04-15

Rev.	Engineering change number	Name	Date
001	without	H. Jungbäck	12-04-15



Standards

-IEC 60794-2
-EN 50575:2014 +A1:2016 Number of Declaration of Performance:
- 24 fibers B2ca CDEAL0000098-V1
- 8, 12, 16 fibers not tested

Structure

Cable:
-Up to 24 optical fibers within the cable jacket filled with Aramid strain relief elements
-Fiber color code 1 to 12: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink
-Fiber color code 13 to 24: red, green, blue, yellow, white, grey, brown, violet, turquoise, transparent, orange, pink, all with black ring-marking

Outer jacket:
-FRNC-LSZH flame-retardant and halogen-free material
-Standard jacket colors:
Singlemode: yellow
Multimode OM2: orange or green
Multimode OM3: aqua (turquoise)
Multimode OM4: violet
Multimode OM5: fibrous green
-Wall thickness see geometrical properties
-Inkjet marking black acc. to separate drawing

Geometrical properties

Number of fibers	Outer diameter [mm]	Jacket wall thickness [mm]	Weight [kg/km]	Fire load [MJ/m]
8	2,0	0,25	3,8	0,05
8	3.0	0.55	8	0.14
12	3.0	0.55	8	0.14
16	3.0	0.55	8	0.14
24	3.7	0.60	12	0.21

Mechanical properties

-Min. bending radius fixed (static) acc. IEC 60794-1-2 E11A
15 x outside diameter
-Min. bending radius during installation (dynamic) with additional tensile strain acc. IEC 60794-1-2 E6
20 x outside diameter
-Max. tensile force acc. IEC 60794-1-21 E1 long term = 300 N
-Max. crush resistance acc. IEC 60794-1-21 E3 long term = 200 N/dm

Thermal properties

Transport and storage	**- 25°C to + 70°C**
Installation	**- 5°C to + 50°C**
In use acc. IEC 60794-1-2 F1	**- 10°C to + 70°C**

Chemical properties

No resistance to oil, petrol, acid, leach and water

Fire performance

-Flame-retardant acc. to IEC 60332-1-2 and IEC 60332-3-22 Cat. A
-Smoke density acc. to IEC 61034
-Halogen-free acc. to IEC 60754-1
-Acidity of the combustion gases acc. to IEC 60754-2
-Fire Class according EN 13501-6: 24 fibers $B2_{CA}$/s1a/d1/a1, 8, 12, 16 fibers not tested

Transmission characteristics

See fiber data sheets

Applications

Indoor cable particularly appropriate for short MTP®/MPO Patchcords and Harnesses

Deliveryform

On one-way drums

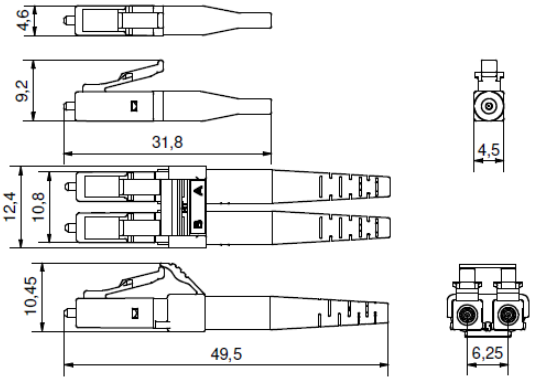
Draft	Date	Approved	Date
H. Jungbäck	2015-11-02	P. Maier	2015-11-02

Rev.	Engineering change number	Name	Date
004	without	H. Jungbäck	2022-06-15

Technical Data Sheet

Rosenberger

LC-Simplex/Duplex connector



Properties and applications

- LC-Simplex/Duplex connectors for fiber optic cabling in broadband networks (telecom, MAN, WAN, CATV, GPON, FTTA, FTTx), building cabling (LAN, campus), data center, industry, laboratory and medical technology
- for cables with single core elements 600/900µm (e.g. buffered fiber for pigtails, breakout, mini breakout, figure "0" and figure "8" cables)
- A/B polarity of duplex connectors easily changeable without tools
- Translucence protection cap, fast and secure to handle and permeable for the light of laser pointers (visual fault locators)

Standards

LC-Simplex/Duplex connector according to IEC/DINEN 61754-20 and EIA/TIA 604-10

Material

- Ferrule:	Zirconia ceramic, Ø 1.25 mm
- Body:	PEI, flammability UL94-V0
- Boot:	TPE, flammability UL94-V0
- Protection cap	POM, flammability UL94-HB

Optical properties

GHMT PVP certificate
No.: c5711X-XX
No.: c5937X-XX

The quality feature of the connector at your product is identified by the part number:
- BASIC: Part numbers like XXXAXXXX
- PURE: Part numbers with “P“ at their end, XXXAXXXXP

Details about PURE see Produktinfo_Qualitätsmerkmal-PURE_od

Insertion Loss IL acc. to IEC61300-3-4, Method B, against reference, maximum [dB]:

Quality feature	BASIC	PURE
- Singlemode SM, 9/125µm	0,30	0,20
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm	0,15	0,15

Insertion Loss IL „random mated“ acc. to IEC61300-3-34, Method 2, [dB:

Qualitätsmerkmal BASIC	Mittelwert	Maximum
- Singlemode SM, 9/125µm	0,13	0,50
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm	0,03	0,27

Insertion Loss IL quality feature PURE “random mated” application limit value, maximum [dB]:

- Singlemode SM, 9/125µm	97%	0,25
- Multimode low IL OM2, OM3, OM4, OM5, 50/125µm	100%	0,40

Optical properties

Return Loss RL acc. to IEC61300-3-6, Method 1, against reference, minimum [dB]:

Quality feature	BASIC	PURE
- Singlemode SM, 9/125µm, PC 0°	45	45
- Singlemode SM, 9/125µm, UPC 0°	55	55
- Singlemode SM, 9/125µm, APC 8°	65	70
- Multimode all 50µ OM classes	35	40

Mechanical properties

- Mating cycles	min. 1000, IL increase < 0.2 dB
- Strain relief	max. 100 N, dependent on cable type

Thermal properties

- Operation temperature range	-40°C to +85°C, dependent on cable type
- Storage temperature range	-40°C to +85°C

Cable diameters

Round cable types	Ø 0,9 bis 3.0 mm
Hotmelt Duplex	Ø 4,8 ~ 7.0mm

Colors

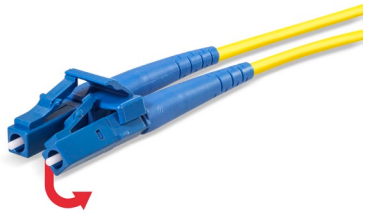
Connector body / boot:

- Singlemode SM, 9/125µm, PC and UPC 0°	blue / blue
- Singlemode SM, 9/125µm, APC 8°	green / green
- Multimode OM2, OM3, OM4, OM5, 50/125µm	black / black

Polarity change

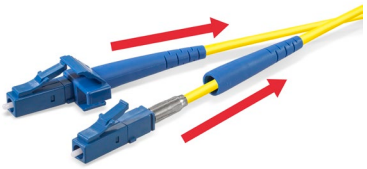
Step 1: Remove duplex clip

- When changing polarity, the release levers should be facing up as shown in the picture.
- Remove one of two simplex connectors from the duplex clip by pressing down and out, supported by a slight tilt movement.
- Then release the second simplex connector from the duplex clip in a similar manner.



Step 2: Reattach duplex clip

- Push back the boot of both simplex connectors
- Reattach the duplex clip over the simplex connectors that have been changed in position and insert the simplex connectors (a click is noticeable).



Step 3: Final assembly duplex connector

- Slide the boot of both simplex connectors to their original position.

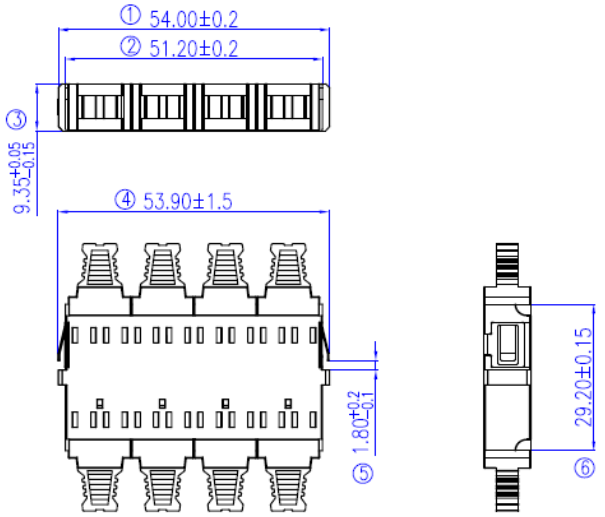
Draft	Date	Approved	Date
S. Wiener	16.03.2021	H. Jungbäck	2021-03-16

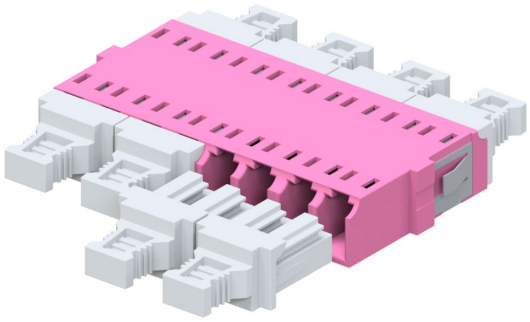
Rev.	Engineering change number	Name	Date
003		H. Jungbäck	2022-10-07

Technical Data Sheet

Rosenberger

LC8 adapter
senior/senior, without flanges





All dimensions are in [mm]; tolerances acc. ISO 2768 m-H

Properties and applications

- LC adapter connect LC-Simplex, LC-Duplex and LC-COMPACT connectors
- senior / senior = at both sides maximum long guidance of the LC connectors within the adapter
- One-piece break-proof adapter body
- Screwless mounting by mounting clip
- In particular appropriate for HIGH-DENSITY (HD) and ULTRA-HIGH-DENSITY (UHD) applications
- Translucence duplex protection cap, even at HD and UHD port densities fast and secure to handle and permeable for the light of laser pointers (visual fault locators)

Standards

IEC/EN 61754-20, TIA/EIA 604-10, REACH and RoHS compliant

Material

- C-Sleeve	Zirconia ceramic
- Adapter body	PEI, flammability UL94 V-0
- Mounting clip	Stainless spring steel
- Duplex protection cap	PVC, flammability UL94 V-0

Optical data

Insertion loss Change over mating cycles	Max. 0.2 dB

Mechanical data

Mating cycles	Min. 500

Thermal properties

- Operation temperature range	-40°C to +85°C
- Storage temperature range	-40°C to +85°C

Colors

aqua for OM3 / violet for OM4 / lime green for OM5 / blue for SM-PC 0° / green for SM-APC 8°

Draft	Date	Approved	Date
H. Jungbäck	2021-01-25	R. Mees	2021-01-25

Rev.	Engineering change number	Name	Date
001	---	---	---

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Rosenberger

PreCONNECT® SMAP-G2 Smart Panel Generation 2 High Denstiy (HD) 19” panel system

PRODUCT INFORMATION

Rosenberger OSI offers with PreCONNECT® SMAP-G2 HD a highly modular and plastic-reduced 19“ Smart Panel SMAP panel system for data center data cabling.

With a port density up to 72 LC-Duplex or MTP® ports, or 144 MDC ports per height unit a very high utilization of the front surface is achieved. A service-friendly assembly of the PFP's or the MTP® module cassettes is possible without tools by quick fasteners. Also the proven PreCONNECT® square-interface enables a toolless fixing of the trunk cables.

Depending on the type of use and assembly of the PreCONNECT® SMAP-G2 HD panels, a multitude of easily exchangeable back planes are available for cable interception. The PreCONNECT® SMAP-G2 HD panel is depth-adjustable by 19" mounting brackets and can therefore be individually adapted to different rack conditions.

Properties:

- Port density: 72 LC-Duplex or MTP® ports, or 144 MDC ports per height unit HU
- Consists of 1 HU and 2 HU empty panels in three different width partitions 6/6, 4/4 and 3/3
- Empty panels are to be equipped with 1/3 HU part front plates PFPs and MTP® module cassettes in 1/6, 1/4 and 1/3 width partitions
- PFPs and cassettes are toolless inserted from the front side and fixed with quick fasteners
- PFPs and cassettes can be pulled out to the front for maintenance
- Through its adjustable 19“ mounting brackets the panel can be depth variable mounted
- Trunk cables can be routed into the panels through their back planes and either side
- At panels with trunk routing through their back planes, which are not fully equipped during their first installation, trunk cables can be retrofitted afterwards and removed for maintenance

Applications:

- Panel system for data center data cabling
- For all IT applications like Ethernet and Fibre Channel
- Appropriate for Spine-Leaf architectures, by default 12, optional up to 16 trunks coming from Leaf Switches can be accommodated per HU within SMAP-G2 distribution panels next to the Spine-Switch

Your benefits at a glance:

- High modularity to configure individual cabling structures
- Fast and easy handling during first installation, retrofit and maintenance, one-man installation possible
- Low complexity, focused on the functional needs
- Simple and low-cost migration to other applications, e.g. from duplex technology to MTP® based Parallel Optics
- Fiber and copper data cabling can be installed together within one panel
- Low fire load through minimized use of plastic

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

Is the High Density (HD) variant of the generation 2 of our since years proved and tested, highly modular and plastics reduced 19“ Smart Panel SMAP system for data center data cabling.

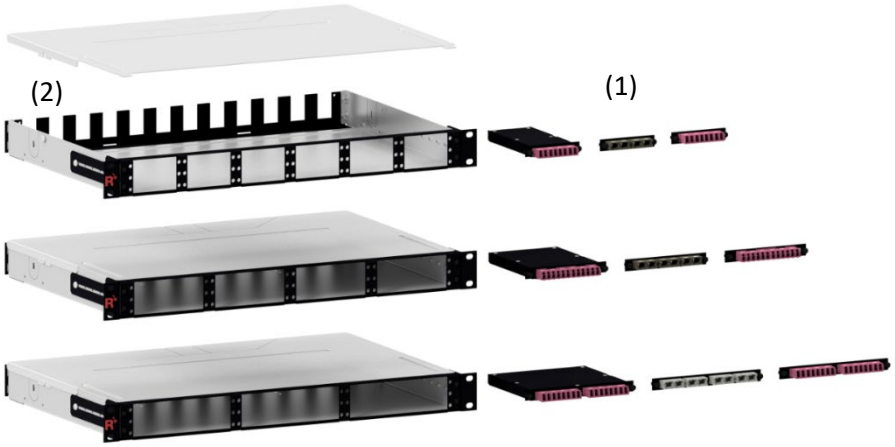
Port density: 72 LC-Duplex or MTP® ports, or 144 MDC ports per height unit HU

PreCONNECT® SMAP-G2 HD consists of 1 HU and 2 HU empty panels in three different width partitions 6/6, 4/4 and 3/3.

The Empty panels are to be equipped with 1/3 HU part front plates PFPs and MTP® module cassettes in 1/6, 1/4 and 1/3 width partitions (1).

The PFPs and cassettes are toolless inserted from the front side and fixed with quick fasteners. By this design they can be pulled out to the front for maintenance.

The modular panel back planes (2) offering highest flexibility to configure cable entries application specific easy and cost-saving. See the configurations of the back planes in the descriptions of the empty panels.



Front granularity 6/6 width partition

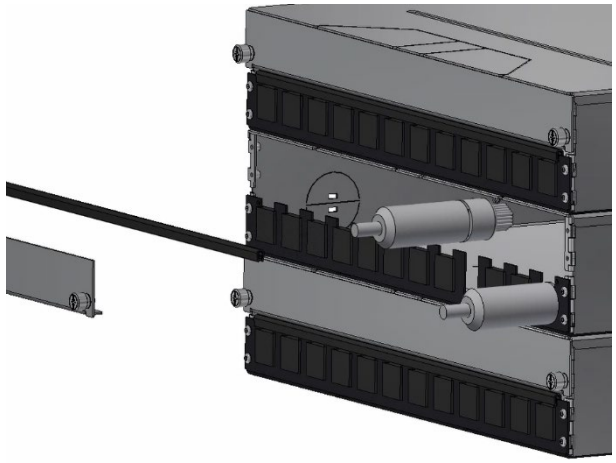
1	4	7	10	13	16
2	5	8	11	14	17
3	6	9	12	15	18

Front granularity 4/4 width partition

1	4	7	10
2	5	8	11
3	6	9	12

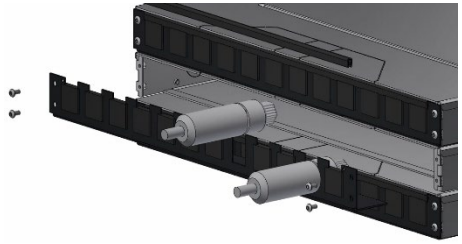
Front granularity 3/3 width partition

1	4	7
2	5	8
3	6	9



Back plane blind covers at 2, 3 and 5 HU panels can be removed by their captive screws for comfortable trunk cable retrofit and maintenance.

The back plane of the 1 HU panel can be removed for retrofit and maintenance of trunk cables.



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

Material and colour:

- Panel body: aluminum silver
- 19“ mounting brackets and front: steel powder coated RAL9005 black

Weight: One of the lowest weight panels of its kind: 1 HU empty distribution panel 1.6 kg

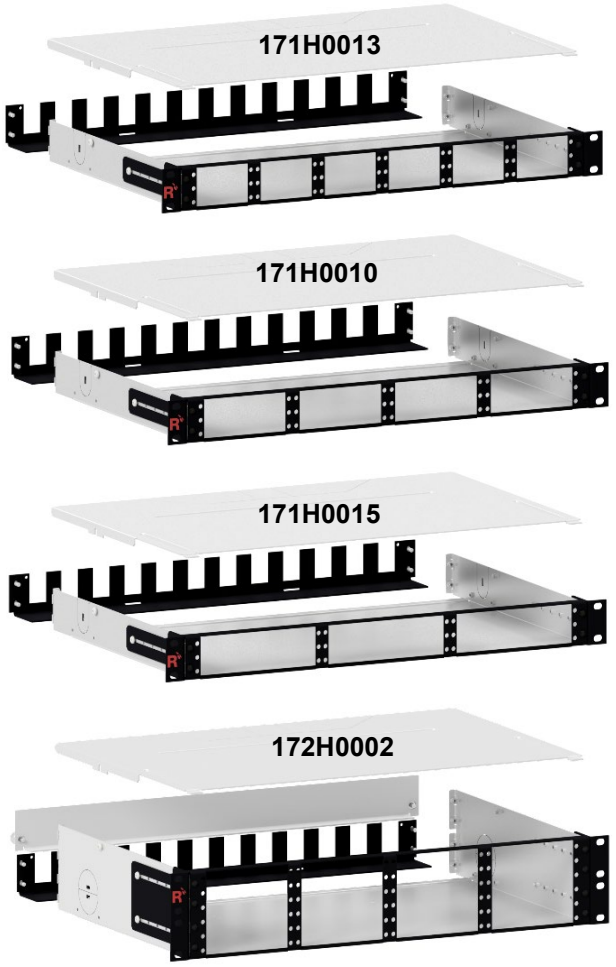
Dimensions:

- Width: 19“
- Height: 1 HU and 2 HU
- Depth: 200 mm and 300 mm. Through the captive screws of their back plane blind covers, the 2, 3 and 5 HU panels are 212 mm and 312 mm deep. We recommend 300 mm as shown here, because the space to accommodate trunk cable dividers and connector legs is enough, but uncomfortable narrow within 200 mm deep panels.

Part numbers:

SMAP-G2 UHD 19“ empty distribution panels, RAL9005 black, back plane with 12 PreCONNECT® square interfaces, as shown here. PreCONNECT® square interfaces dustproof covered with tool less removable blanks, here not shown.

1 HU, 6/6 width partition, depth 300 mm	171H0013
1 HU, 4/4 width partition, depth 300 mm	171H0010
1 HU, 4/4 width partition, depth 200 mm	171H0001
1 HU, 3/3 width partition, depth 300 mm	171H0015
2 HU, 4/4 width partition, depth 300 mm	172H0002
2 HU, 4/4 width partition, depth 200 mm	172H0001

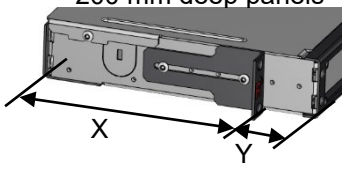


PreCONNECT® SMAP-G2 SD 19“ panel system:

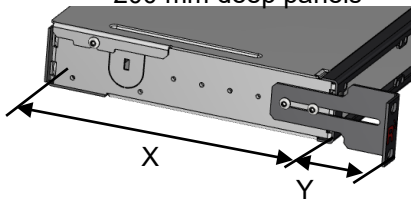
Through their adjustable 19“ mounting brackets, the panels can be stepless mounted to protrude to the front over the 19” level (Position A), or to stay recessed behind it (Position (B).

Position	panel depth	X [mm]	Y [mm]
A: protrusion to the front, over the 19” level	200 mm	160	40
	300 mm	225	75
B: recessed behind the 19” level	200 mm	155	45
	300 mm	255	45

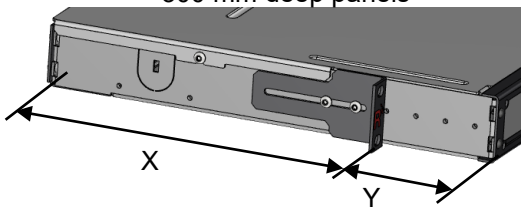
Position A
200 mm deep panels



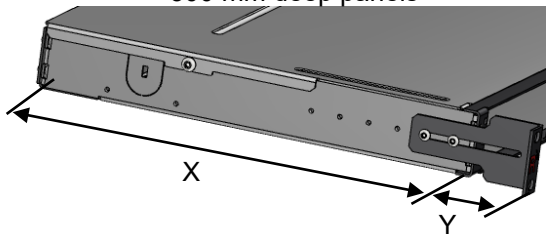
Position B
200 mm deep panels



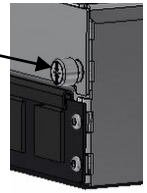
Position A
300 mm deep panels



Position B
300 mm deep panels



Through the captive screws of their back plane blind covers, the 2, 3 and 5 HU panels are 212 mm and 312 mm deep. This must be considered at position A in particular, because the panels in these cases need X + 12 mm more depth space.

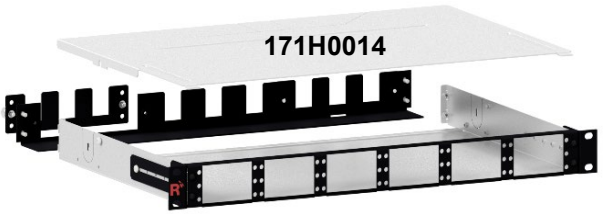


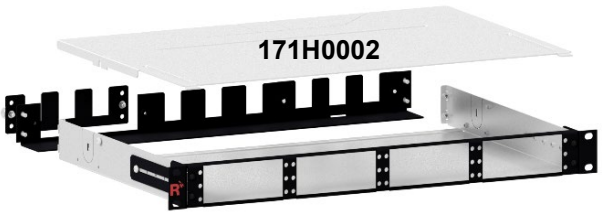
PreCONNECT® SMAP-G2 High Density (HD) 19” panel system:

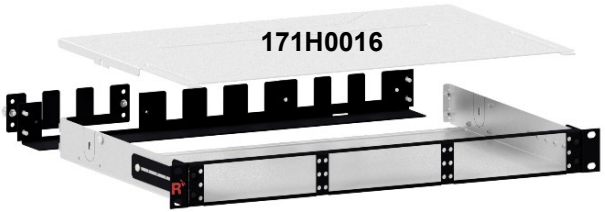
Part numbers:

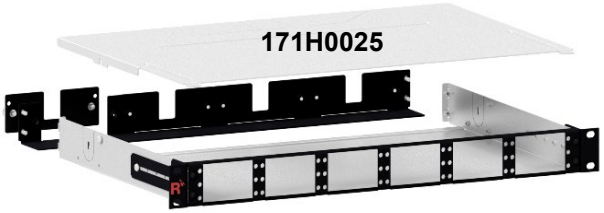
SMAP-G2 HD 19” empty distribution panels, RAL9005 black, with diverse back planes:

Configurations	6/6 width partition	4/4 width partition	3/3 width partition
1 HU, depth 300 mm, with modular back plane 2x3 170A1520	171H0014	171H0002	171H0016
1 HU, depth 300 mm, with modular back plane 4x1 170A1521	171A0025	171H0003	171H0017
See these back plane types separate in our product information SMAP-G2 SD.			

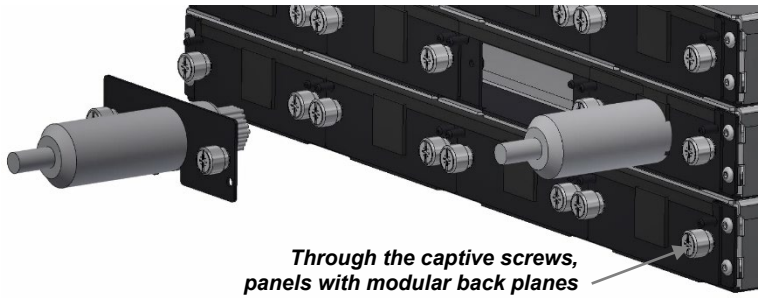








Comfortable trunk cable retrofit
and maintenance in 1 HU panels
Example: modular back plane 4x1 170A1521



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

Part numbers:

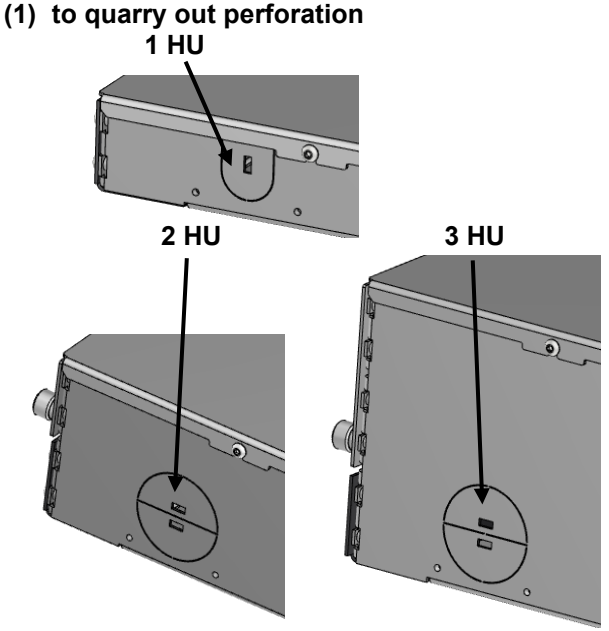
SMAP-G2 HD 19” empty distribution panels, RAL9005 black, with diverse back planes:

Configurations	6/6 width partition	4/4 width partition	3/3 width partition
1 HU, depth 300 mm, with blind back plane 170A1501 and two trunk cable divider holders 170A1523 to route one trunk cable each through either side of the panel	171H0026	171H0004	171H0018

At 1, 2 and 3 HU panels, one trunk cable each can be routed into the panel at either side through to quarry out perforations (1) and can be fixed within internal trunk cable divider holders (2), which can be mounted within the panels.

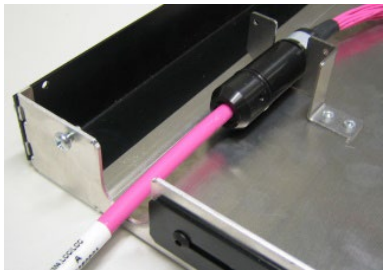
This trunk side entry can`t be applied at panels equipped with MTP® module cassettes.

(1) to quarry out perforation



(2) internal trunk cable divider holder for 1, 2 and 3 HU, can be ordered as accessorie part number: 170A1523

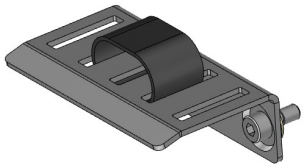
Mounted within 1 HU 200mm



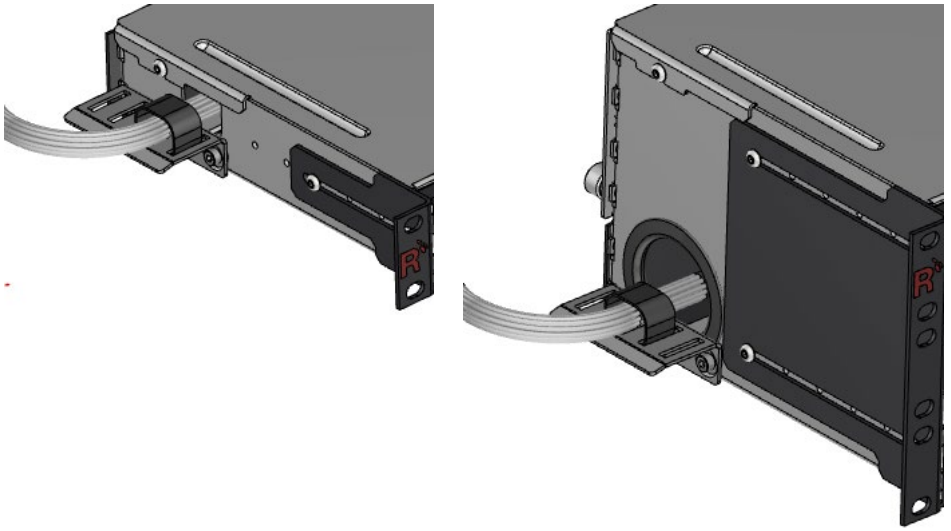
PreCONNECT® SMAP-G2 HD 19“ panel system:

To rout patchcords through the side walls into the 1, 2 and 3 HU panels, the universal cable strain relief (1) is available.

(1) universal cable strain relief for 1, 2 and 3 HU
part number: **170A1526**



Mounted at: 1 HU 200mm 3HU 200mm



We recommend to apply PreCONNECT® STANDARD trunks with LC-COMPACT Push-Pull-Boot (LCC-PPB) connectors in SMAP-G2 HD panels with part front plates with LC adapters, as described in the product information PreCONNECT® STANDARD.

LC-COMPACT Push-Pull-Boot (LCC-PPB) and MDC patchcords with cable diameter 2.0 mm or thinner must be used with this panel system.

LCC-PPB

MDC

Patchcord part numbers
Duplex Patchcord cable type round I-V(ZN)H FRNC-LSZH

Cable diameter	Connectors	Lenght	OM4	SM PC 0°	SM APC 8°
1.6 mm	LC-COMPACT PPB » LC-COMPACT PPB	variable	087A6949OM4	087A6948G657A1	087A6950G657A1
	MDC » LC-COMPACT PPB	variable	092A0012OM4	092A0011G657A1	on request
	MDC » MDC	variable	092A0010OM4	092A0009G657A1	on request
2.0 mm	LC-COMPACT PPB » LC-COMPACT PPB	variable	087A6737OM4	087A6738G657A1	087A6747G657A1
	MDC » LC-COMPACT PPB	variable	092A0008OM4	092A0007G657A1	on request
	MDC » MDC	variable	092A0004OM4	092A0003G657A1	on request
double jacket 2.0 / 4.0 mm	LC-COMPACT PPB » LC-COMPACT PPB	variable	on request	on request	on request
	MDC » LC-COMPACT PPB	variable	on request	on request	on request
	MDC » MDC	variable	on request	on request	on request

SMAP-G2 HD 1/3 HU 1/6 part front plates with matrix numbering:

Fitting into SMAP-G2 HD empty panels with 6/6 width partition. The PFPs are toolless inserted from the front side and fixed with quick fasteners. By this design they can be pulled out to the front for maintenance.

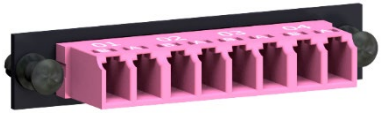
The numbering of the part front plates PFP is a modular numerical matrix.
The LC-Duplex and MTP® ports within the PFPs have a fixed 1 to 4 labeling.

The PFPs can be numbered with their positions they have within the panels with the exchangeable numbering clips the panels are shipped with.

Material and colour: steel powder coated RAL9005 black

1/3 HU 1/6 Blind PFP

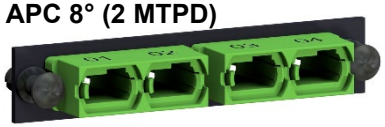
1/3 HU 1/6 PFP 4 LC-Duplex (1 LC8)



1/3 HU 1/6 PFP 4 MTP® (2 MTPD)

1/3 HU 1/6 PFP 4 MTP® 16 MM APC 8° (2 MTPD)

1/3 HU 1/6 PFP 4 MTP® 16 SM APC 8° (2 MTPD)



Part numbers RAL9005 black						
Number of adapter type/fibers	**for fiber type**					
	SM PC 0° blue	**SM APC 8° green**	**OM4 violet**	**MM grey**	**MTP® 16 MM APC 8°white for SEDECIM**	**MTP® 16 SM APC 8°green for SEDECIM**
Blind PFP	**170H0002**					
4 LC-Duplex (1 LC8) / 8F	**170H2100**	**170H2101**	**170H2102OM4**	**---**	**---**	**---**
4 MTP® (2 MTPD)	**---**	**type A "opposed key" 170H2103**	**---**	**type B "aligned key" 170H2104TB**	**type A "opposed key" 170H2105**	**type A "opposed key" 170H2106**
With other adapter types on request.						

SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/6 part front plates with matrix numbering and back plane with 12 PreCONNECT® square interfaces:

Part numbers RAL9005 black				
HU	**Number of PFP and type**	**Number of LC-Duplex ports**	**SM PC 0° blue**	**OM4 violet**
1	**18 x 1/3 HU 1/6 4 LCD**	**72**	**171H1000**	**171H1001OM4**
HU	**Number of PFP and type**	**Number of MTP® Ports**	**SM APC 8° green type A "opposed key"**	**MM grey type B "aligned key"**
1	**18 x 1/3 HU 1/6 4 MTP®**	**72**	**171H1002**	**171H1003TB**
Other HU and configuration on request.				

SMAP-G2 HD 1/3 HU 1/4 part front plates with matrix numbering:

Fitting into SMAP-G2 HD empty panels with 4/4 width partition. The PFPs are toolless inserted from the front side and fixed with quick fasteners. By this design they can be pulled out to the front for maintenance.

The numbering of the part front plates PFP is a modular numerical matrix.
The LC-Duplex and MTP® ports within the PFPs have a fixed 1 to 6 labeling.

The PFPs can be numbered with their positions they have within the panels with the exchangeable numbering clips the panels are shipped with.

Material and colour: steel powder coated RAL9005 black

1/3 HU 1/4 PFP 6 LC-Duplex (1 LC12)

1/3 HU 1/4 PFP 6 MTP® (3 MTPD)

1/3HU 1/4 Blind PFP

Part numbers RAL9005 black				
Number of adapter type/fibers	**for fiber type**			
	SM PC 0° blue	**SM APC 8° green**	**OM4 violet**	**MM grey**
Blind PFP	**170H0001**			
6 LC-Duplex (1 LC12) / 12F	**170H2000**	**170H2001**	**170H2002OM4**	**---**
6 MTP® (3 MTPD)	**---**	**type A "opposed key" 170H2023**	**---**	**type B "aligned key" 170H2013TB**
With other adapter types on request.				

SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/4 part front plates with matrix numbering and back plane with 12 PreCONNECT® square interfaces:

Part numbers RAL9005 black				
HU	**Number of PFP and type**	**Number of LC-Duplex ports**	**SM PC 0° blue**	**OM4 violet**
1	**12 x 1/3 HU 1/4 6 LCD**	**72**	**171H3001**	**171H3000OM4**
2	**24 x 1/3 HU 1/4 6 LCD**	**144**	**172H3003**	**172H3002OM4**
HU	**Number of PFP and type**	**Number of MTP® ports**	**SM APC 8° green type A "opposed key"**	**MM grey type B "aligned key"**
1	**12 x 1/3 HU 1/4 6 MTP®**	**72**	**171H3002**	**171H3003OM4**
Other HU and configuration on request.				

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

Fitting into SMAP-G2 HD empty panels with 3/3 width partition. The PFPs are toolless inserted from the front side and fixed with quick fasteners. By this design they can be pulled out to the front for maintenance.

The numbering of the part front plates PFP is a modular numerical matrix.
The LC-Duplex and MTP® ports within the PFPs have a fixed 1 to 8 labeling.

The PFPs can be numbered with their positions they have within the panels with the exchangeable numbering clips the panels are shipped with.

Material and colour: steel powder coated RAL9005 black

1/3 HU 1/3 PFP 8 LC-Duplex (2 LC8)

1/3 HU 1/3 PFP 8 MTP® 16 MM 8° APC (4 MTPD)

1/3 HU 1/3 PFP 8 MTP® 16 SM (4 MTPD)

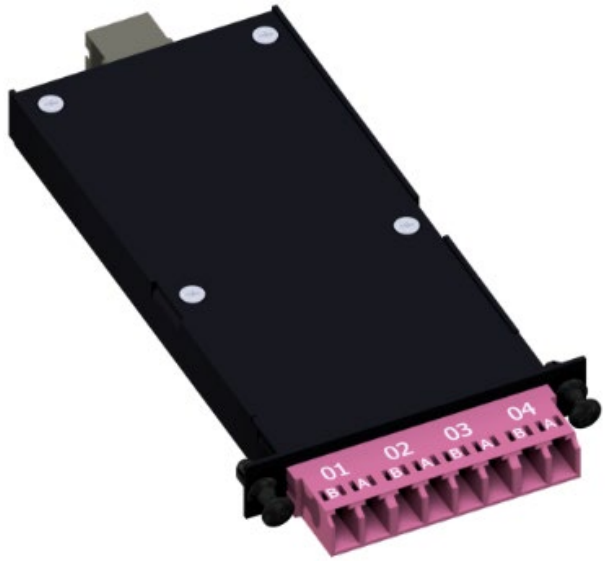
1/3 HU 1/3 Blind PFP

Part numbers RAL9005 black				
Number of adapter type/fibers	for fiber type			
	SM PC 0° blue	SM APC 8° green	OM4 violet	MM white
Blind PFP	170H0003			
8 LC-Duplex (2 LC8) / 16F	170H2202	170H2203	170H2200OM4	---
8 MTP® 16 MM 8° APC type A “opposed key” (4 MTPD)	---	---	---	170H2201
8 MTP® 16 SM type A “opposed key” (4 MTPD)	---	170H2204	---	---
With other adapter types on request.				

SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/3 part front plates with matrix numbering and back plane with 12 PreCONNECT® square interfaces:

HU	Number of PFP and type	Number of LC-Duplex ports	OM4 violet
1	9 x 1/3 HU 1/3 8 LCD	72	171H2000OM4
HU	Number of PFP and type	Number of MTP® ports	MM white
1	9 x 1/3HU 1/3 8 MTP® 16 MM 8° APC type A “opposed key”	72	171H2001
Other HU and configuration on request.			

SMAP-G2 HD 8 fiber MTP®-LC module cassettes fitting for PreCONNECT® OCTO Trunks:



Properties:

- For Port-Breakout of PreCONNECT® OCTO trunks with MTP® connectors, as described in the product information PreCONNECT® OCTO
- Fitting in SMAP-G2 HD panel with 6/6 width partition
- Height: 1/3 HU
- Width: 1/6
- Depth: 115 mm
- Polarity: Rx to Tx
- 1x MTP® female port 4+4F OCTO at the rear side:
  - OM4: Elite quality, MTP® adapter type B „aligned key” grey
  - SM: Standard quality, MTP® adapter type A „opposed key” green
- 4 LC-Duplex ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners
- Material and colour cassette body and front: aluminum powder coated RAL9005 black

Part numbers RAL9005 black				
Number of 4+4F OCTO MTP® female ports at rear side	**Number of LC-Duplex ports at front side**	**OM4**	**SM LC-PC 0°**	**SM LC-APC 8°**
1	**1 OCTO group of 4 = 4**	**170H1100OM4**	**170H1101**	**on request**

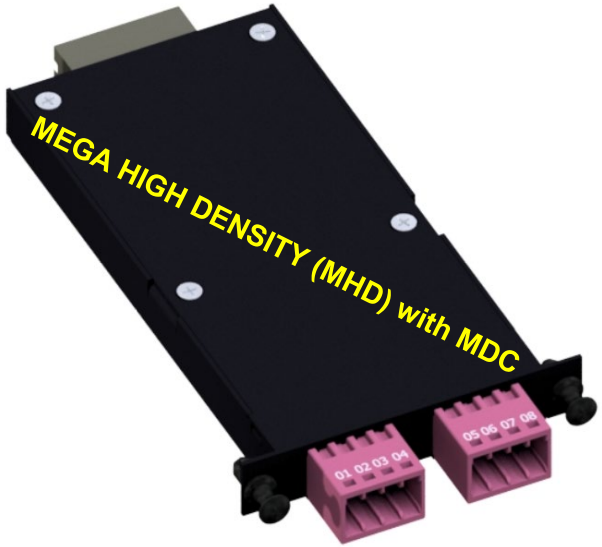
SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/6 MTP®-LC module cassettes 1x OCTO and back plane with 12 PreCONNECT® square interfaces:

Part numbers RAL9005 black				
HU	**Number of cassettes and type**	**Number of LC-Duplex ports**	**OM4**	**SM LC-PC 0°**
1	**18 x 1/3 HU 1/6 4 LCD**	**72**	**171H1200OM4**	**171H1201**
Other HU and configuration on request.				

SMAP-G2 HD 16 fiber MTP®-MDC module cassettes fitting for PreCONNECT® OCTO trunks:

Properties:

- For Port-Breakout of PreCONNECT® OCTO trunks with MTP® connectors, as described in the product information PreCONNECT® OCTO
- Fitting in SMAP-G2 HD panel with 6/6 width partition
- Height: 1/3 HU
- Width: 1/6
- Depth: 115 mm
- Polarity: Rx to Tx
- 2x MTP® female port 4+4F OCTO at the rear side:
  - OM4: Elite quality, MTP® adapter type B „aligned key” grey
  - SM: Standard quality, MTP® adapter type A „opposed key” green
- 8 MDC ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners
- Material and colour cassette body and front: aluminum powder coated RAL9005 black



Part numbers RAL9005 black			
Number of 4+4F OCTO MTP® female ports at rear side	**Number of MDC ports at front side**	**OM4**	**SM MDC-PC 0°**
2	**2 OCTO groups of 4 = 8**	**170H1106OM4**	**170H1105**

SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/6 MTP®-MDC module cassettes 1x OCTO and back plane with 12 PreCONNECT® square interfaces:

Part numbers RAL9005 black				
HU	**Number of cassettes and type**	**Number of MDC ports**	**OM4**	**SM LC-PC 0°**
1	**18 x 1/3 HU 1/6 8 MDC**	**144**	**171H1300OM4**	**171H1302**
Other HU and configuration on request.				

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

Properties:

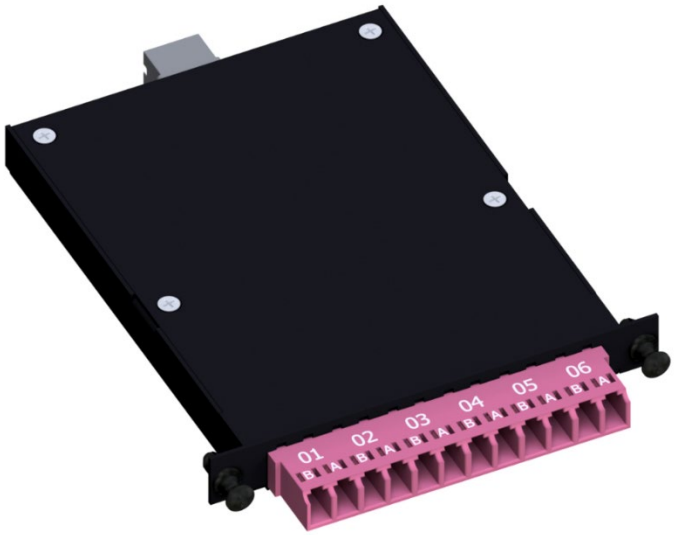
- For Port-Breakout of PreCONNECT® SEDECIM trunks with MTP® connectors, as described in the product information PreCONNECT® SEDECIM
- Fitting in SMAP-G2 HD panel with 6/6 width partition
- Height: 1/3 HU
- Width: 1/6
- Depth: 115 mm
- Polarity: Rx to Tx
- 1 port SEDECIM MTP® 16F female at the rear side:
  - OM4: Elite quality, APC 8°, adapter type A „opposed key” white
  - SM: Elite quality, APC 8°, adapter type A „opposed key” green
- 8 MDC ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners
- Material and colour cassette body and front: aluminum powder coated RAL9005 black

Part numbers RAL9005 black			
Number of 16F SEDECIM MTP® female ports at rear side	**Number of MDC ports at front side**	**OM4**	**SM MDC-PC 0°**
1	**1 SEDECIM group = 8**	**170H4104OM4**	**170H4105**

SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/6 MTP®-MDC module cassettes 1x SEDECIM and back plane with 12 PreCONNECT® square interfaces:

Part numbers RAL9005 black			
HU	**Number of cassettes and type**	**Number of MDC ports**	**OM4**
1	**18 x 1/3 HU 1/6 8 MDC**	**144**	**171H1301OM4**
Other HU and configuration on request.			

SMAP-G2 HD 12 fiber MTP®-LC module cassettes fitting for PreCONNECT® DUODECIM trunks:



Properties:

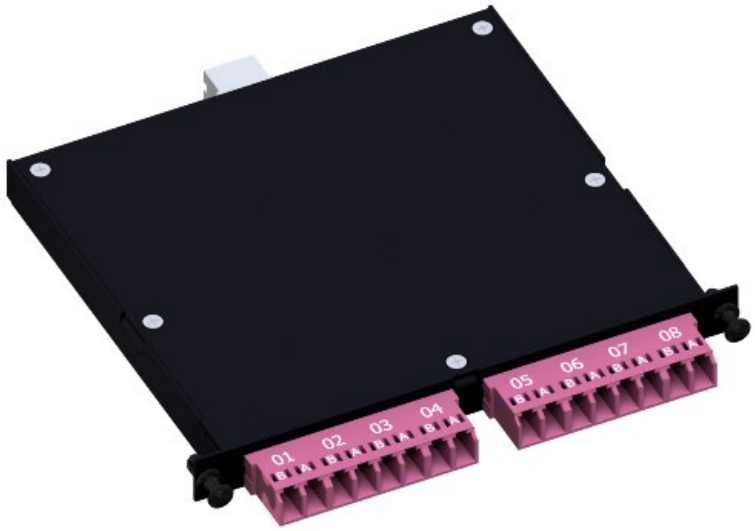
- For Port-Breakout of PreCONNECT® DUODECIM trunks with MTP® connectors, as described in the product information PreCONNECT® DUODECIM
- Fitting in SMAP-G2 HD panel with 4/4 width partition
- Height: 1/3 HU
- Width: 1/4
- Depth: 115 mm
- Polarity: Rx to Tx
- 1x MTP® female port 12F DUODECIM at the rear side:
  - OM4: Elite quality MTP® adapter type B „aligned key” grey
  - SM: Standard quality, MTP® adapter type A „opposed key” green
- 6 LC-Duplex ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners
- Material and colour cassette body and front: aluminum powder coated RAL9005 black

Part numbers RAL9005 black				
Number of 12F DUODECIM MTP® female ports at rear side	**Number of LC-Duplex ports at front side**	**OM4**	**SM LC-PC 0°**	**SM LC-APC 8°**
1	**1 DUODECIM group of 6 = 6**	**170H1005OM4**	**170H1004**	**on request**

SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/4 MTP®-LC module cassettes 1x DUODECIM: and back plane with 12 PreCONNECT® square interfaces:

Part numbers RAL9005 black				
HU	**Number of cassettes and type**	**Number of LC-Duplex ports**	**OM4**	**SM LC-PC 0°**
1	**12 x 1/3 HU 1/4 6 LCD**	**72**	**171H3200OM4**	**171H3201**
Other HU and configuration on request.				

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



Properties:

- For Port-Breakout of PreCONNECT® SEDECIM trunks with MTP® connectors, as described in the product information PreCONNECT® SEDECIM
- Fitting in SMAP-G2 HD panel with 3/3 width partition
- Height: 1/3 HU
- Width: 1/3
- Depth: 115 mm
- Polarity: Rx to Tx
- 1 port SEDECIM MTP® 16F female at the rear side:
  - OM4: Elite quality, APC 8°, adapter type A „opposed key” white
  - SM: Elite quality, APC 8°, adapter type A „opposed key” green
- 8 LC-Duplex ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners
- Material and colour cassette body and front: aluminum powder coated RAL9005 black

Part numbers RAL9005 black			
Number of 16F SEDECIM MTP® female ports at rear side	**Number of LC-Duplex ports at front side**	**OM4**	**SM LC-PC 0°**
1	**1 SEDECIM group = 8**	**170H1200OM4**	**170H1202**

SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/3 MTP®-LC module cassettes 1x SEDECIM: and back plane with 12 PreCONNECT® square interfaces:

Part numbers RAL9005 black			
HU	**Number of cassettes and type**	**Number of LC-Duplex ports**	**OM4**
1	**9 x 1/3 HU 1/3 8 LCD**	**72**	**171H2200OM4**
Other HU and configuration on request.			

SMAP-G2 HD 32 fiber MTP®-MDC module cassettes fitting for PreCONNECT® SEDECIM trunks

Properties:

- For Port-Breakout of PreCONNECT® SEDECIM trunks with MTP® connectors, as described in the product information PreCONNECT® SEDECIM
- Fitting in SMAP-G2 HD panel with 3/3 width partition
- Height: 1/3 HU
- Width: 1/3
- Depth: 115 mm
- Polarity: Rx to Tx
- 2 port SEDECIM MTP® 16F female at the rear side:
  - OM4: Elite quality, APC 8°, adapter type A „opposed key” white
  - SM: Elite quality, APC 8°, adapter type A „opposed key” green
- 16 MDC ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fastenners
- Material and colour cassette body and front: aluminum powder coated RAL9005 black

Part numbers RAL9005 black			
Number of 16F SEDECIM MTP® female ports at rear side	**Number of MDC ports at front side**	**OM4**	**SM MDC-PC 0°**
2	**2 SEDECIM groups = 16**	**170H1201OM4**	**170H1203**

SMAP-G2 HD panels factory assembled, 300mm deep, with 1/3 HU 1/3 MTP®-MDC module cassettes 2x SEDECIM: and back plane with 12 PreCONNECT® square interfaces:

Part numbers RAL9005 black			
HU	**Number of cassettes and type**	**Number of MDC ports**	**OM4**
1	**9 x 1/3 HU 1/3 16 MDC**	**144**	**171H2300OM4**
Other HU and configuration on request.			

SMAP-G2 HD 8 fiber MTP®-LC Port-Breakout-Unit

For port-breakout of a MPO4+4 transceiver to 4 LC-Duplex transceivers, without polarity, pin or debris trouble at unit pack plane, lowest attenuation:

Multimode applications:
- 40GBASE-SR4 MPO4+4 to 4x 10GBASE-SR/SW LC-Duplex
- 100GBASE-SR4 MPO4+4 to 4x 25GBASE-SR/SW LC-Duplex
- 200GBASE-SR4 MPO4+4 to 4x 50GBASE-SR/SW LC-Duplex
- 4x16GFC MPO4+4 to 4x 16GFC LC-Duplex
- 4x32GFC MPO4+4 to 4x 32GFC LC-Duplex
- 4x64GFC MPO4+4 to 4x 64GFC LC-Duplex

Singlemode applications:
- 100GBASE DR4/PSM4 MPO4+4 to 4x 25GBASE-LR LC-Duplex
- 4x10GBASE-LR MPO4+4 to 4x 10GBASE-LR LC-Duplex
- 200GBASE-DR4 MPO4+4 to 4x 50GBASE-LR LC Duplex
- 400GBASE-DR4 MPO4+4 to 4x 100GBASE-LR LC Duplex

Part number:

- Multimode OM4: 170H8000OM4
- Singlemode: 170H8100G657A1

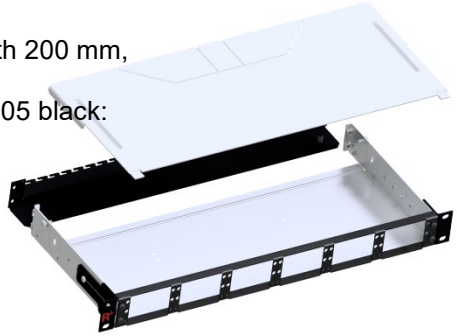
Properties:

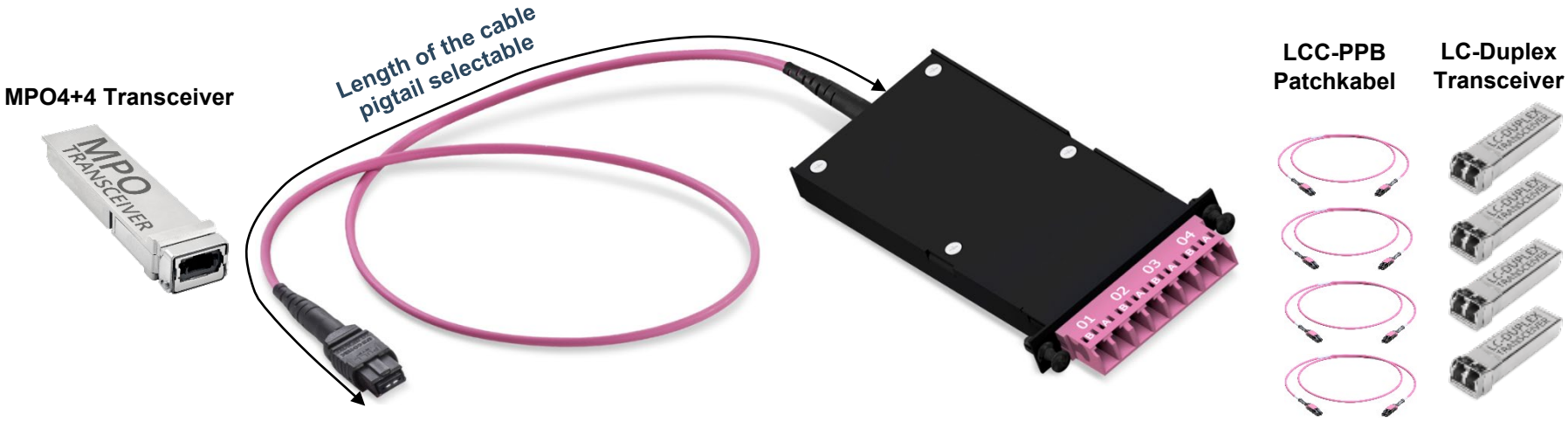
- Fitting in SMAP-G2 HD panel with 6/6 width partition
- Height: 1/3 HU
- Width: 1/6
- Depth: 115 mm
- Polarity: Rx to Tx
- 1x MTP®4+4 OCTO female connector at cable pigtail
- 4 LC-Duplex ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners
- Material and colour cassette body and front: aluminum powder coated RAL9005 black

Recommended empty panel:

SMAP-G2 HD 1 HU, 6/6 width partition, depth 200 mm,
capacity: 6x3=18 Port-Breakout-Units,
with universal back plane 170A1507, RAL9005 black:

Part number: 171H0033





SMAP-G2 HD 16 fiber MTP®-LC Port-Breakout-Unit

For port-breakout of a MPO16 transceiver to 8 LC-Duplex transceivers, without polarity, pin or debris trouble at unit pack plane, lowest attenuation:

Multimode applications:
- 800GBASE-SR8 MPO16 to 8x 100GBASE-SR/SW LC-Duplex

Singlemode applications:
- 800GBASE-DR8/PSM8 MPO16 to 8x 100GBASE-LR LC Duplex

Part number:

- Multimode OM4 with MTP16 female APC 8°: 170H8100OM4
- Multimode OM4 with MTP16 female PC 0°: On request
- Singlemode: 170H8101G657A1

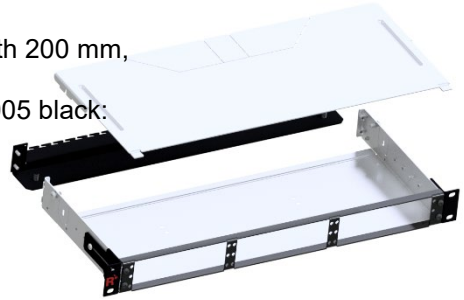
Properties:

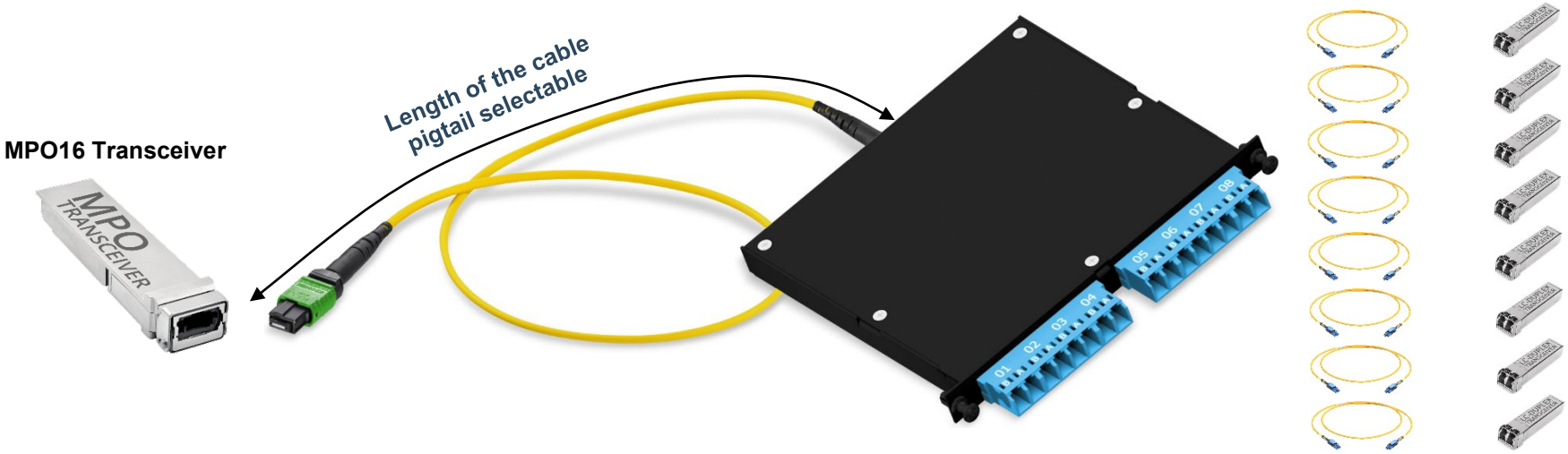
- Fitting in SMAP-G2 HD panel with 3/3 width partition
- Height: 1/3 HU
- Width: 1/3
- Depth: 115 mm
- Polarity: Rx to Tx
- 1x MTP®16 SEDECIM female connector at cable pigtail
- 8 LC-Duplex ports at the front side
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners
- Material and colour cassette body and front: aluminum powder coated RAL9005 black

Recommended empty panel:

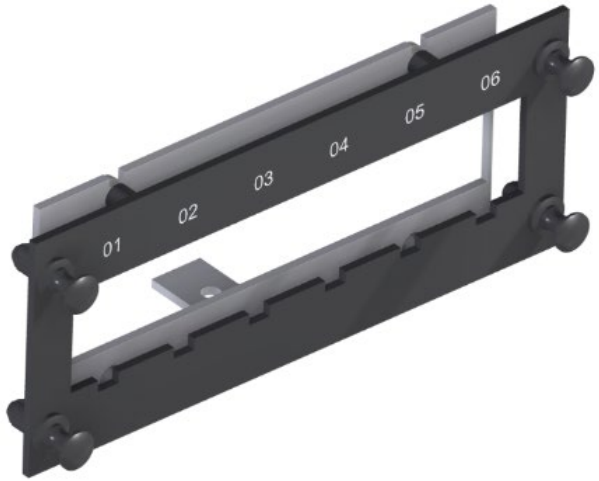
SMAP-G2 HD 1 HU, 3/3 width partition, depth 200 mm,
capacity: 3x3=9 Port-Breakout-Units,
with universal back plane 170A1507, RAL9005 black:

Part number: 171H0034





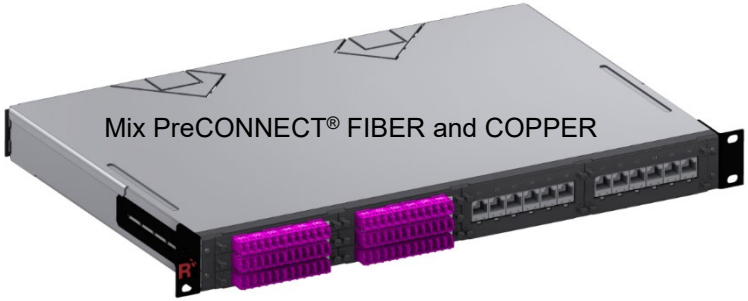
SMAP-G2 HD 6 Port RJ45 Keystone part front plate fitting for PreCONNECT® COPPER trunks with RJ45 Keystone Jacks:



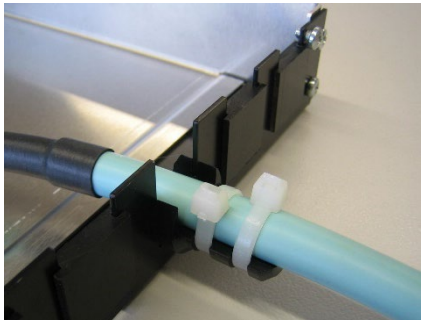
Properties:

- To carry PreCONNECT® COPPER and COPPER ToR-G2 trunks assembled with RJ45 Keystone Jacks, as described in the product information PreCONNECT® COPPER and COPPER ToR-G2
- Fitting in SMAP-G2 HD panel with 4/4 width partition
- For 6 RJ45 Keystone Jacks
- Height: 1 HU
- Width: 1/4
- Toolless placement of the module cassettes into the panel from the front side, fixing with quick fasteners
- Inclusive 2m long grounding cable to connect the PFP, grounding cable is to be routed out of the panel through its back plane and attached at the grounding point of the rack
- Material and colour: steel powder coated RAL9005 black

Part numbers RAL9005 black: 170H7000



PreCONNECT® COPPER and COPPER ToR-G2 trunk



Fixing of PreCONNECT® COPPER trunks at panel back plane using PreCONNECT® universal cable fixture. For cable diameters 6 to 18 mm.

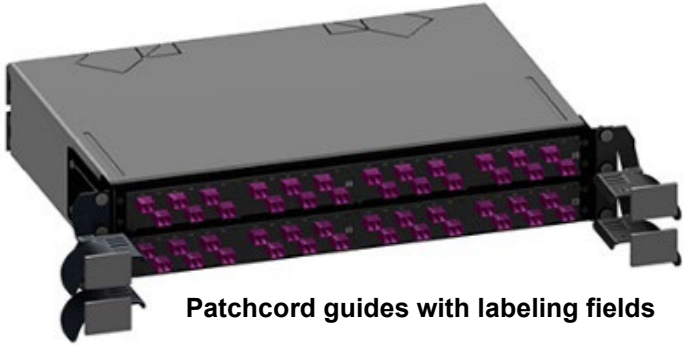
Part number set incl. two cable ties: 111A0650

For 19“ panel accessories see our product information 19“ panel accessories:

Labeling fields

Patchcord manager

- height units saving (0 HU) mountable in front of 19” panels
- with foldaway front cover
- with optional labelling and port address fields



Patchcord guides with labeling fields

For other panel back planes see our product information SMAP-G2 SD:

About Rosenberger OSI:

Since 1991, Rosenberger Optical Solutions & Infrastructure (Rosenberger OSI) has been a recognized expert for fiber-based connectivity, cabling solutions and infrastructure services in the areas of data centers, local area networks, mobile networks and industrial applications. As an integrated solution provider, we have high expertise in the development and operational excellence in the production of system solutions for communication networks. Our comprehensive services enable the secure and efficient operation of digital infrastructures. This combination, combined with our strong customer focus, makes us unique and a strong partner in the global market.

Rosenberger OSI has been part of the globally operating Rosenberger Group since 1998. The Rosenberger Group is a leading global provider of high-frequency, high-voltage and fiber optic connectivity solutions with headquarters in Germany. For further information, please visit: www.rosenberger.com/osi

Rosenberger

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