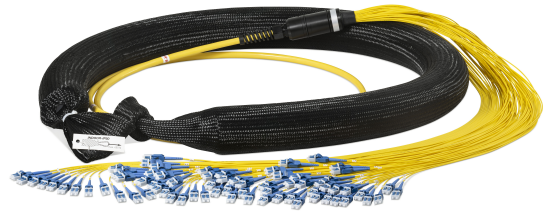# PRODUCTPROFILE

Catalogue number: 024A0108G657A1

Partnumber: 747966

PreCONNECT® STANDARD TRUNK
72 channels, 144 fibers, 9/125µm, yellow
Connector side A: LC-Compact SM
Connector side B: LC-Compact SM
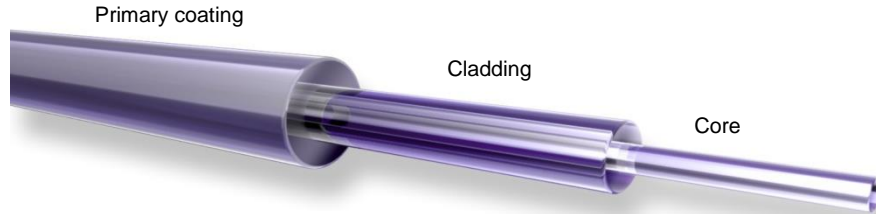Cable I-B(ZN)BH12x12E9/125µmG657A1

Related documents:

DS_FASER G657A1_OE	Fiber Data Sheet
DS_I-BZNBHNX12_B2_L_OE	Kabeldatenblatt
PRECONNECT_STANDARD_OE	Product Information

Primary coating

Cladding

Core

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
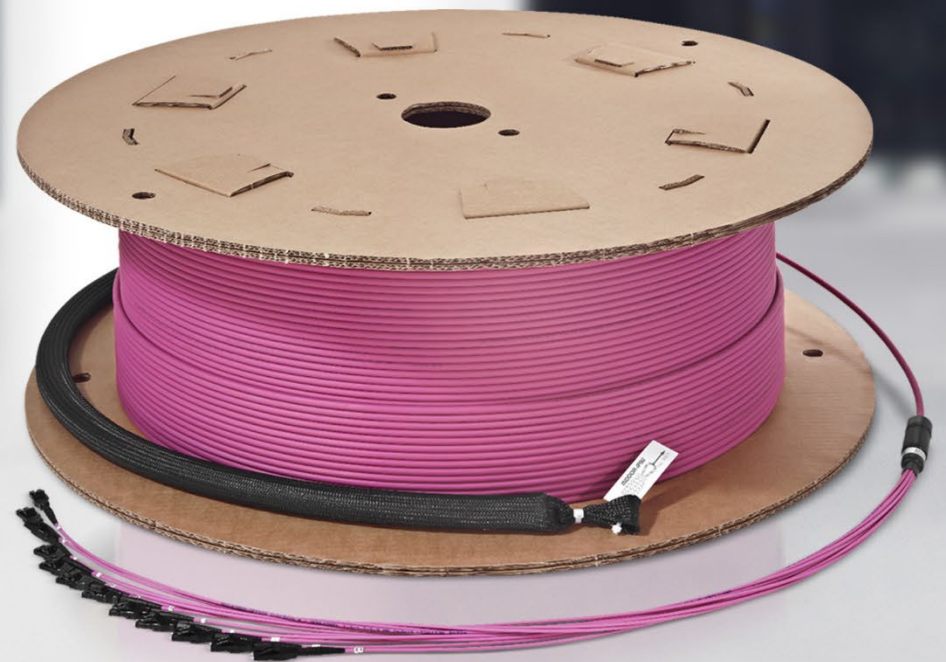**@ 1550 nm 1.4682**

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

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
H. Jungbäck	12-04-15	P. Maier	12-04-15	001	without	H. Jungbäck	12-04-15

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Rosenberger

PreCONNECT® STANDARD

PreCONNECT® STANDARD solution is available in two end face quality features: BASIC and PURE

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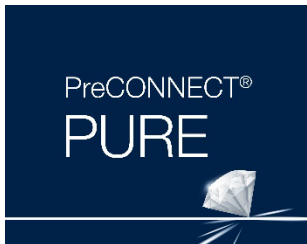
Quality feature PURE is the enhanced version of our quality feature BASIC, but with more stringent defect and cleanliness screening and factory sealed, tamper evident adapter-interfaces.

- 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.

<u>Part numbers:</u>

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: XXXAXXXX**P**)

(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.
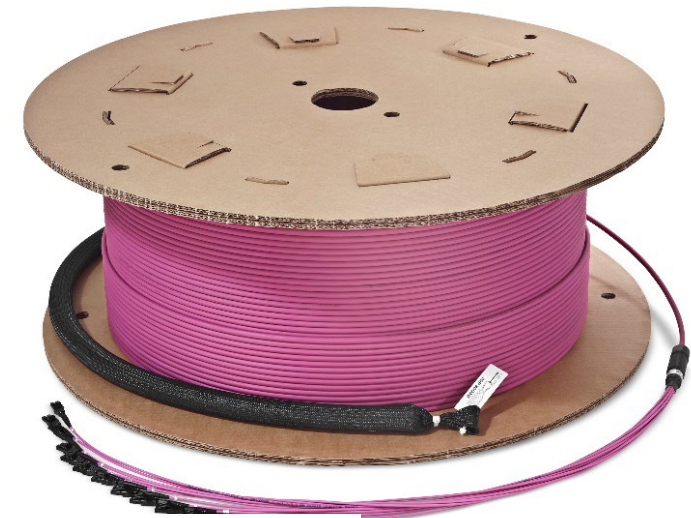
Applications:

Infrastructure cabling within data centers, office buildings and campus

System consists of:

- Factory assembled FO loose tube cables, FRNC-LSZH indoor, universal and HDPE outdoor cables, up to 144 fibers
- With connector systems LC, MDC, SC and E-2000®

Features:

- For larger numbers of fibers and longer lengths:
  - Trunks up to 144 fibers
  - Up to 24 fibers practical lengths: Cost comparison by break-even calculation versus PreCONNECT® BREAKOUT
- Migration to MPO based parallel optics applications possible by using migration-harnesses

Your benefits at a glance:

- Most cost-effective solution for trunks larger 24 fibers and long lengths
- Fast and safe installation trough factory assembled plug & play systematic
- Highest quality and cost-efficiency through factory assembling
- PreCONNECT® cabling systems consist of perfectly harmonized modular single components

Applications:

Infrastructure cabling of data centers, office buildings and campus.

- **Universal to use FO cabling system up to 144 fibers per trunk**

- **Cost and attenuation optimized**

- **Focused on the useful and necessary**

System description:

Our PreCONNECT® STANDARD cabling system consists of:

- Trunk called factory assembled FO loose tube cables up to 144 fibers, with „standard stepped" connector legs
- therefore, explicitly developed 19" panel systems
- a large variety of patchcords and accessories
- and 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.
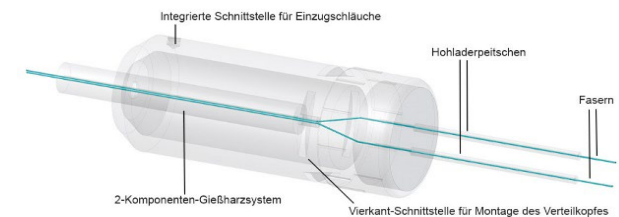
Properties:

Both cable ends of the PreCONNECT® STANDARD trunks are molded within the cable dividers and assembled with „standard stepped" connector legs. The „standard stepped" connector legs are fitting for all PreCONNECT® panel systems.

The PreCONNECT® cable divider is a splice-less furcation to separate the fibers of loose tube cables. He is one of the mechanically and thermally most robust cable dividers for loose tube cables at smallest diameters. With its integrated PreCONNECT® square interface, the cable divider can be tool-less hooked into PreCONNECT® panels for tensile and torsion resistant fixing of the trunks.

Installation protection: The connector legs and cable dividers are equipped with 600 N tensile strength, crush resistant, kink and torsion resistant, installation tubes. Alternatively indoor IP50 dust-proof or outdoor IP67 water-proof deliverable.

Polarity: The connector legs are alpha numerical uniquely coded. The standard polarity is „channel-wise crossed" (pairwise flipped) for full-duplex transmission systems – A1 to B1, A2 to B2, etc. On request „uncrossed" deliverable.

Integrierte Schnittstelle für Einzugschläuche — Hohladerpeitschen — Fasern — 2-Komponenten-Gießharzsystem — Vierkant-Schnittstelle für Montage des Verteilkopfes

Einzugschlauch Outdoor IP67 wasserdicht — Einzugschlauch Indoor IP50 staubdicht

Properties:

Length definition:

- Order-length = length between the connectors of the longest legs at both sides, not between the PreCONNECT® cable dividers.
- Possible order-lengths: From 5 to 2000 meter

Length tolerances:

Trunk length	Tolerance
<= 10m	+/- 50cm
> 10m <= 30m	+/- 100cm
> 30m <= 100m	+/- 150cm
> 100m	+/- 2%

Operating temperature range: -10°C to +60°C

Delivery form:

- Dependent on the length as cable ring or on cardboard or wooden drum
- Insertion loss and return loss measured acc. to IEC 61300-3-4, method B, MM 850/1300nm and SM 1310/1550nm, with measurement protocol
- Product label with serial number at both sides

Standard stepped "A" and "E" leg lengths and installation tube diameters of PreCONNECT® STANDARD trunks, all types of connectors except SC-Duplex [2] Steps channel/fiber 1 to n: 1 = long, n = short									
Number of channels/fibers	4/8	6/12	8/16	12/24	18/36	24/48	36/72	48/96	72/144
"A" leg lenths stepped from to [cm] [1]	45 to 75	45 to 75	45 to 73	45 to 89	45 to 70	45 to 89	45 to 70	45 to 70	45 to 75
"E" leg lenths stepped from to [cm] [1]	77 to 107	77 to 107	77 to 105	77 to 121	77 to 102	77 to 121	77 to 102	77 to 102	77 to 107
Outer diameter installation tube IP50 Indoor and IP67 Outdoor [mm]	30	30	30	30	40	40	55	75	75
[1] Production tolerance – 5 cm / [2] Installation tube diameter of trunks with SC-Duplex on request									

Properties:

Trunk cable types:

PreCONNECT® STANDARD trunks are deliverable with all common loose tube cables up to 144 fibers, mostly used:

- Indoor cable I-B(ZN)BH, CPR class B2ca
- Universal cable U-DQ(ZN)BH, CPR class Dca or Cca dependent on stock
- Outdoor cable A-DQ(ZN)B2Y

Cable data, see separate cable data sheets.

Fiber types:

With all common fiber types deliverable.
Bend-insensitive fibers by default.
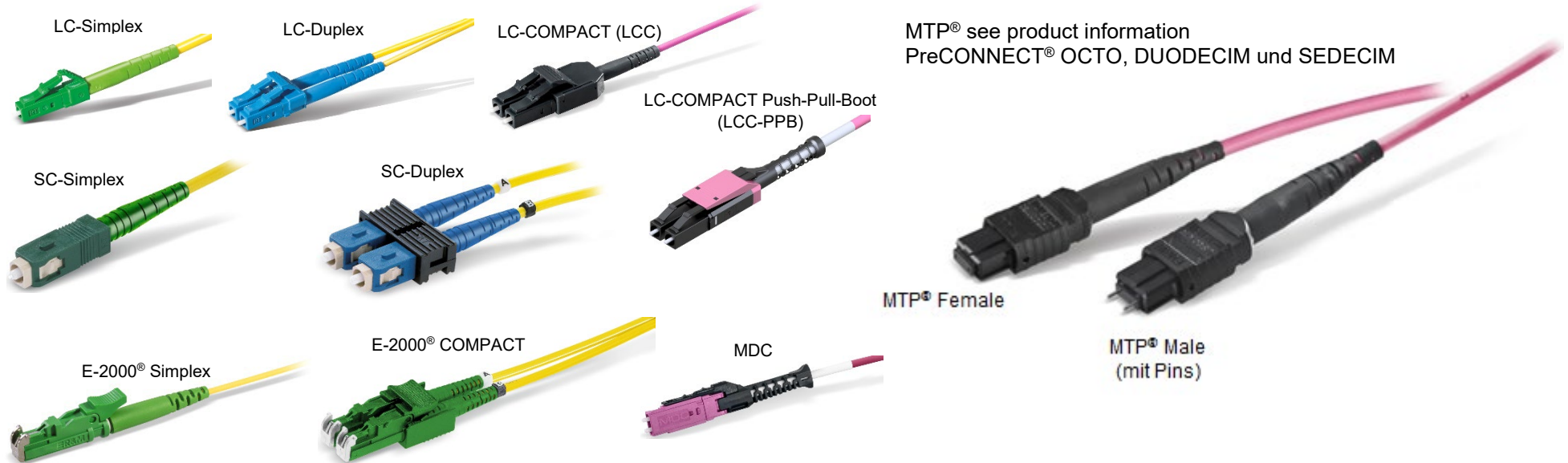Fiber data, see separate fiber data sheets.
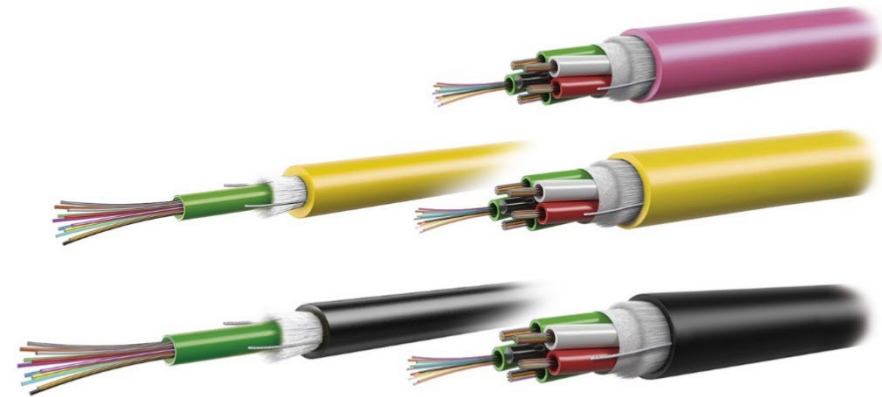
Connector types:

With all common connector types deliverable.
Connector data, see separate connector data sheets.

LC-Simplex

LC-Duplex

LC-COMPACT (LCC)

LC-COMPACT Push-Pull-Boot
(LCC-PPB)

SC-Simplex

SC-Duplex

E-2000® Simplex

E-2000® COMPACT

MDC

MTP® see product information
PreCONNECT® OCTO, DUODECIM und SEDECIM

MTP® Female

MTP® Male
(mit Pins)

Application of PreCONNECT® STANDARD Trunks and Patchcords with LC-COMPACT (LCC) and LC-COMPACT Push-Pull-Boot (LCC-PPB) in our 19" panel systems and Trunk leg lengths:

19" panel systems	LC-Duplex port density per HU	Trunks with LCC	Trunks with LCC-PPB	Patchcords with LCC	Patchcords with LCC-PPB	Trunk leg lengths
SMAP-G2 SD	48	✓	✗	✓	✗	standard stepped "A length legs"
SMAP-G2 HD	72	✓	recommended	✗	✓ required	standard stepped "A length legs"
SMAP-G2 UHD	96	✗	✓ required	✗	✓ required	standard stepped "A length legs"
Conventional	24	✓	✗	✓	✗	standard stepped "A length legs
ODF LARO	144 in 5 ETSI HU	✓	recommended	✗	✓ required	extended stepped "E length legs"

SMAP-G2 SD

SMAP-G2 HD

SMAP-G2 UHD

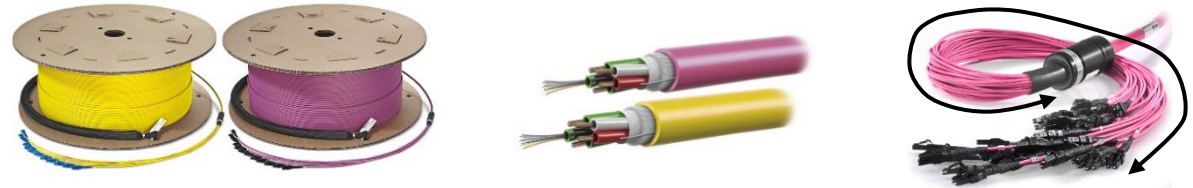**conventional distribution panels**
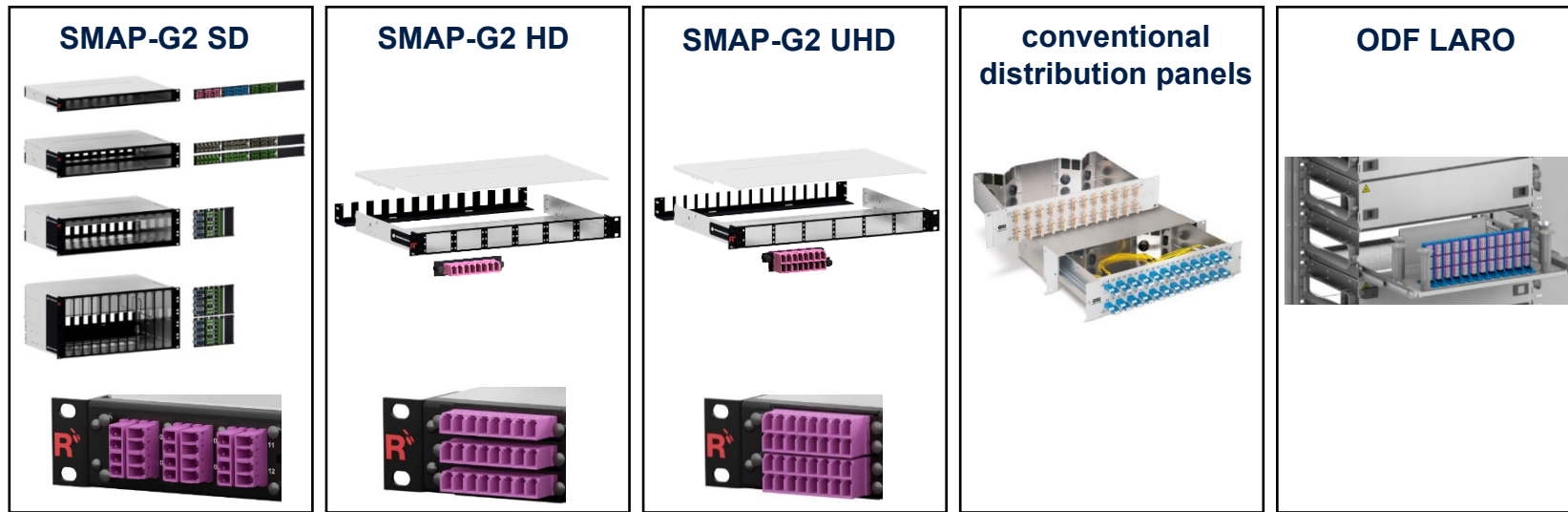
ODF LARO

LC-COMPACT (LCC)

LC-COMPACT Push-Pull-Boot (LCC-PPB)

**PreCONNECT® STANDARD trunks
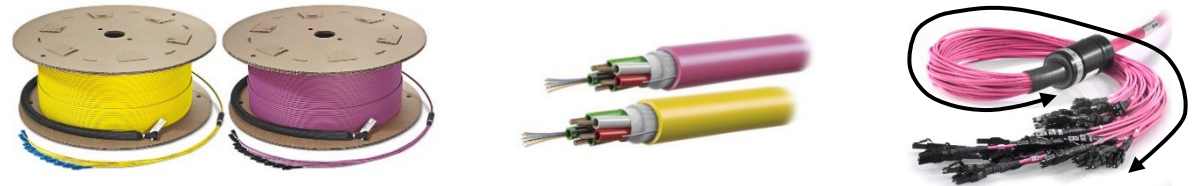with indoor cable I-B(ZN)BH
CPR class B2ca:**

PreCONNECT® STANDARD Trunks with extended stepped „E length legs" must be applied in ODF LARO panels.

Part numbers							
Channels/ Fibers	**Connectors on both sides**	**With standard stepped "A length legs" compatible to all our SMAP and conventional panels**			**With extended stepped "E length legs" compatible to ODF LARO panels**		
		SM PC 0°	**SM APC 8°**	**OM4**	**SM PC 0°**	**SM APC 8°**	**OM4**
6/12	LCC	024A0195G657A1	024A0143G657A1	024A0142OM4	024E0195G657A1	024E0143G657A1	024E0142OM4
	LCC-PPB	024A0225G657A1	024A0226G657A1	024A0227OM4	024E0225G657A1	024E0226G657A1	024E0227OM4
	MDC	on request	on request	on request	on request	on request	on request
8/16	LCC	024A01187G657A1	on request	024A0188OM4	on request	on request	on request
	LCC-PPB	on request	on request	on request	on request	on request	on request
	MDC	024A0260G657A1	auf Anfrage	024A0259OM4	on request	on request	on request
12/24	LCC	024A0175G657A1	024A0144G657A1	024A0127OM4	024E0175G657A1	024E0144G657A1	024E0127OM4
	LCC-PPB	024A0228G657A1	024A0229G657A1	024A0230OM4	024E0228G657A1	024E0229G657A1	024E0230OM4
	MDC	024A0244G657A1	on request	024A0261OM4	on request	on request	on request
16/32	LCC	024A0163G657A1	on request	024A0165OM4	on request	on request	on request
	LCC-PPB	on request	on request	on request	on request	on request	on request
	MDC	024A0262G657A1	on request	024A0263OM4	on request	on request	on request
18/36	LCC	024A0100G657A1	on request	024A0101OM4	on request	on request	on request
	LCC-PPB	on request	on request	on request	on request	on request	on request
	MDC	on request	on request	on request	on request	on request	on request
24/48	LCC	024A0102G657A1	024A0126G657A1	024A0103OM4	024E0102G657A1	024E0126G657A1	024E0103OM4
	LCC-PPB	024A0231G657A1	024A0232G657A1	024A0233OM4	024E0231G657A1	024E0232G657A1	024E0233OM4
	MDC	024A0246G657A1	on request	024A0247OM4	on request	on request	on request
Technical data of connectors, fibers and cables on request via the product profile of your selected trunks.							

**PreCONNECT® STANDARD trunks
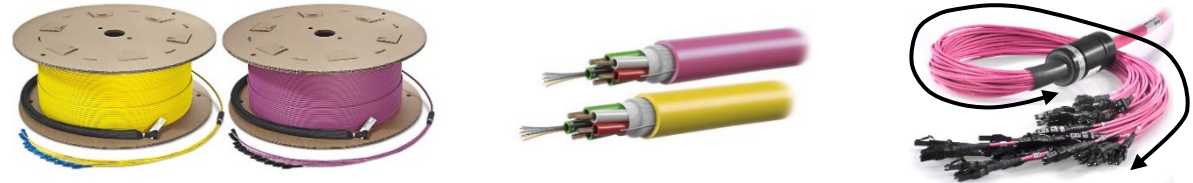with indoor cable I-B(ZN)BH
CPR class B2ca:**

PreCONNECT® STANDARD Trunks with extended stepped „E length legs" must be applied in ODF LARO panels.

Part numbers		With standard stepped "A length legs" compatible to all our SMAP and conventional panels			With extended stepped "E length legs" compatible to ODF LARO panels		
Channels/ Fibers	Connectors on both sides	SM PC 0°	SM APC 8°	OM4	SM PC 0°	SM APC 8°	OM4
32/64	LCC	024A0161G657A1	on request	024A0164OM4	on request	on request	on request
	LCC-PPB	on request	on request	on request	on request	on request	on request
	MDC	024A0256G657A1	on request	024A0248OM4	on request	on request	on request
36/72	LCC	024A0174G657A1	024A0176G657A1	024A0105OM4	on request	on request	on request
	LCC-PPB	on request	on request	on request	on request	on request	on request
	MDC	on request	on request	on request	on request	on request	on request
48/96	LCC	024A0106G657A1	024A0128G657A1	024A0107OM4	024E0106G657A1	024E0128G657A1	024E0107OM4
	LCC-PPB	024A0234G657A1	024A0235G657A1	024A0236OM4	024E0234G657A1	024E0235G657A1	024E0236OM4
	MDC	on request	on request	on request	on request	on request	on request
64/128	LCC	024A0183G657A1	on request	024A0162OM4	on request	on request	on request
	LCC-PPB	on request	on request	on request	on request	on request	on request
	MDC	024A0258G657A1	on request	024A0257OM4	on request	on request	on request
72/144	LCC	024A0108G657A1	024A0129G657A1	024A0109OM4	024E0108G657A1	024E0129G657A1	024E0109OM4
	LCC-PPB	024A0237G657A1	024A0238G657A1	024A0239OM4	024E0237G657A1	024E0238G657A1	024E0239OM4
	MDC	on request	on request	on request	on request	on request	on request
Technical data of connectors, fibers and cables on request via the product profile of your selected trunks.							

**PreCONNECT® STANDARD trunks
with indoor cable I-B(ZN)BH
CPR class B2ca:**

PreCONNECT® STANDARD Trunks with extended stepped „E length legs" must be applied in ODF LARO panels.

Part numbers							
Channels/ Fibers	**Connectors on both sides**	**With standard stepped "A length legs" compatible to all our SMAP and conventional panels**			**With extended stepped "E length legs" compatible to ODF LARO panels**		
		SM PC 0°	**SM APC 8°**	**OM4**	**SM PC 0°**	**SM APC 8°**	**OM4**
6/12	SC-Duplex	on request	on request	on request	on request	on request	on request
	E-2000® Simplex	on request	on request	on request	on request	on request	on request
12/24	SC-Duplex	024A0179G657A1	on request	024A0178OM4	024E0179G657A1	on request	024E0178OM4
	E-2000® Simplex	on request	on request	on request	on request	on request	on request
24/48	SC-Duplex	024A0147G657A1	024A0177G657A1	024A0169OM4	024E0147G657A1	024E0177G657A1	024E0169OM4
	E-2000® Simplex	on request	024A0149G657A1	on request	on request	024E0149G657A1	on request
48/96	SC-Duplex	on request	on request	on request	on request	on request	on request
	E-2000® Simplex	on request	on request	on request	on request	on request	on request
72/144	SC-Duplex	on request	on request	on request	on request	on request	on request
	E-2000® Simplex	on request	on request	on request	on request	on request	on request
Technical data of connectors, fibers and cables on request via the product profile of your selected trunks.							

PreCONNECT® STANDARD trunks with universal cable U-DQ(ZN)BH CPR class Dca or Cca dependent on stock:

PreCONNECT® STANDARD Trunks with extended stepped „E length legs" must be applied in ODF LARO panels.

Part numbers

Channels/ Fibers	Connectors on both sides	With standard stepped "A length legs" compatible to all our SMAP and conventional panels			With extended stepped "E length legs" compatible to ODF LARO panels		
		SM PC 0°	SM APC 8°	OM4	SM PC 0°	SM APC 8°	OM4
6/12	LCC	031A1800G657A1	031A1831G657A1	031A1810OM4	031E1800G657A1	031E1831G657A1	031E1810OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	031A1504G657A1	on request	031A1604OM4	031E1504G657A1	on request	031E1604OM4
	E-2000® Simplex	on request	031A1013G657A1	on request	on request	031E1013G657A1	on request
12/24	LCC	031A1801G657A1	031A1808G657A1	031A1811OM4	031E1801G657A1	031E1808G657A1	031E1811OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	031A1506G657A1	on request	031A1606OM4	031E1506G657A1	on request	031E1606OM4
	E-2000® Simplex	on request	031A1015G657A1	on request	on request	031E1015G657A1	on request
24/48	LCC	031A1803G657A1	031A1807G657A1	031A1813OM4	031E1803G657A1	031E1807G657A1	031E1813OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	031A1508G657A1	on request	031A1608OM4	031E1508G657A1	on request	031E1608OM4
	E-2000® Simplex	on request	031A1016G657A1	on request	on request	031E1016G657A1	on request
48/96	LCC	031A1805G657A1	on request	031A1815OM4	031E1805G657A1	on request	031E1815OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	031A1511G657A1	on request	031A1611OM4	031E1511G657A1	on request	031E1611OM4
	E-2000® Simplex	on request	031A1009G657A1	on request	on request	031E1009G657A1	on request
72/144	LCC	031A1806G657A1	on request	031A1816OM4	031E1806G657A1	on request	031E1816OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	031A1510G657A1	on request	031A1610OM4	031E1510G657A1	on request	031E1610OM4
	E-2000® Simplex	on request	031A1018G657A1	on request	on request	031E1018G657A1	on request
Technical data of connectors, fibers and cables on request via the product profile of your selected trunks.							

PreCONNECT® STANDARD trunks with outdoor cable A-DQ(ZN)B2Y:

PreCONNECT® STANDARD Trunks with extended stepped „E length legs" must be applied in ODF LARO panels.

Part numbers

Chan-nels/ Fibers	Connectors on both sides	With standard stepped "A length legs" compatible to all our SMAP and conventional panels			With extended stepped "E length legs" compatible to ODF LARO panels		
		SM PC 0°	**SM APC 8°**	**OM4**	**SM PC 0°**	**SM APC 8°**	**OM4**
6/12	LCC	010A2079G657A1	on request	010A2080OM4	010E2079G657A1	on request	010E2080OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	010A1504G657A1	on request	010A1604OM4	010E1504G657A1	on request	010E1604OM4
	E-2000® Simplex	on request	010A1013G657A1	on request	on request	010E1013G657A1	on request
12/24	LCC	010A2077G657A1	on request	010A2078OM4	010E2077G657A1	on request	010E2078OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	010A1506G657A1	on request	010A1606OM4	010E1506G657A1	on request	010E1606OM4
	E-2000® Simplex	on request	010A1015G657A1	on request	on request	010E1015G657A1	on request
24/48	LCC	010A1801G657A1	on request	010A1813OM4	010E1801G657A1	on request	010E1813OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	010A1508G657A1	on request	010A1608OM4	010E1508G657A1	on request	010E1608OM4
	E-2000® Simplex	on request	010A1016G657A1	on request	on request	010E1016G657A1	on request
48/96	LCC	010A2075G657A1	on request	010A2076OM4	010E2075G657A1	on request	010E2076OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	010A1511G657A1	on request	on request	010E1511G657A1	on request	on request
	E-2000® Simplex	on request	010A1009G657A1	on request	on request	010E1009G657A1	on request
72/144	LCC	010A1806G657A1	on request	010A1816OM4	010E1806G657A1	on request	010E1816OM4
	LCC-PPB	on request	on request	on request	on request	on request	on request
	SC-Duplex	010A1510G657A1	on request	on request	010E1510G657A1	on request	on request
	E-2000® Simplex	on request	010A1018G657A1	on request	on request	010E1018G657A1	on request

Technical data of connectors, fibers and cables on request via the product profile of your selected trunks.

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

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