

Data sheet

Page 1/9

OpDAT breakout cable 4x1 OS2 - bend insensitive, class D_{ca} s1 d1 a1

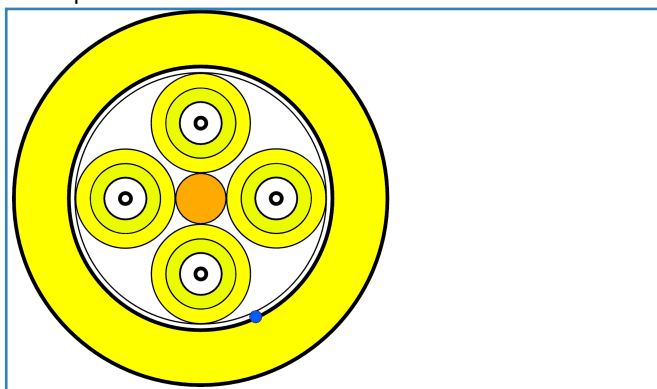
P/N
150B049000000M
EAN 4251122190476

2018-10-01

Illustrations



Prinzipbild 150B049000000M BO



See enlarged drawings at the end of document



Product specification

- connection cable I-V(ZN)HH
- breakout cable for direct connector termination for indoors and outdoors
- bend insensitive fiber
- cable jacket: LSHF-FR
- UV resistant, metal-free, longitudinally watertight
- cable structure: several separately strain relieved cables in one outer jacket
- strain relief: Aramid
- applicable standards: EN 50173-1, ISO 11801 2nd edition, IEC 60794-2, IEC 60794-2-10, EN 187000
- fire behaviour: class D_{ca} s1 d1 a1 acc. to EN 50399 (Klassifizierung nach EN 13501-6)

Variants:

Number of OS2 fibers	4x1, 8x1, 12x1, 24x1
Number of OM5 fibers	4x1, 8x1, 12x1
Number of OM4 fibers	2x1, 4x1, 8x1, 12x1, 24x1
Number of OM3 fibers	4x1, 8x1, 12x1, 24x1



P | Cabling

Data sheet

Page 2/9

OpDAT breakout cable 4x1 OS2 - bend insensitive, class D_{ca} s1 d1 a1

P/N

150B049000000M

EAN 4251122190476

2018-10-01

Technical Data

General Data

Fields of application

	Structured building cabling, Office Fiber to the Desk, yes, Data center breakout cable
Design	Fiber optic
Transmission technology	yellow
Color	see table
Color coding fiber/ wire(s)	Multimode
Mode type of the fiber	OS2 (IEC 60793-2-50 B6_a, B6_b & ITU-T G.657.A2, G.657.B2, G.652.D)
Fiber class	Breakout
Cable Type	1
Number of cables/ cores	4
Number of fibres each cable/ wire	9/125 µm
Fiber construction	60.00 kg/km
Weight	

Connections/interfaces

Connector technology interface 1	Free line end
Connector technology interface 2	Free line end
Cable sheath diameter (min. - max.)	
Cable sheath diameter	7.50 mm
Cable sheath diameter	0.276 in.

Optical characteristics

Attenuation of the fiber	
Attenuation of the fiber in the cable at 1310 nm	max. 0.38 dB/km
Attenuation of the fiber in the cable at 1550 nm	max. 0.23 dB/km
Attenuation of the fiber in the cable at 1625 nm	max. 0.25 dB/km

Mechanical characteristics

strain relief	aramide fibres
Maximum installation load (max.)	900 N
Maximum installation load	75.00 mm
Maximum installation load	2.953 in.
Impact resistance	20 J
Crush (compressive strength)	1500 N



Data sheet

Page 3/9

OpDAT breakout cable 4x1 OS2 - bend insensitive, class D_{ca} s1 d1 a1

P/N

150B049000000M

EAN 4251122190476

2018-10-01

Technical Data

Mechanical characteristics

Fire load	870 MJ/km
-----------	-----------

Materials and material properties

Material - Cable jacket	LSHF-FR
Bend insensitivity	yes
Flame retardancy	yes
Halogen free	yes
Metallfrei	yes
UV-resistance	yes

Environmental conditions

Temperature (min. - max.)	
Temperature - Storage °C	-40 - 70 °C
Temperature - Storage °F	-40 - 158 °F
Temperature - Operating °C	-20 - 70 °C
Temperature - Operating °F	-4 - 158 °F
Temperature - Installation °C	-20 - 70 °C
Temperature - Installation °F	-4 - 158 °F

Approvals

RoHS	compliant
------	-----------

The product meets the following standards

Generic cabling systems	
General requirements	ISO/IEC 11801
Optical fibers: Generic specification	
Cross reference table for optical cable test procedures	ISO/IEC 60794-1-2
Optical fibers: Indoor optical cables	
Sectional specification for class B single-mode fibres	ISO/IEC 60793-2-50 type B6_a/B6_b
Test on gases evolved during combustion of materials from cables	
Determination of acidity (by measuring the pH value) and conductivity	IEC 60754-2



OpDAT breakout cable 4x1 OS2 - bend insensitive, class D_{ca} s1 d1 a1

P/N
150B049000000M
EAN 4251122190476

2018-10-01

Technical Data

The product meets the following standards

Tests on electric and optical fibre cables under fire conditions

Test for vertical flame propagation for a single insulated wire or cable	DIN EN 60332-1-2
Test for vertical flame spread of vertically-mounted bunched wires or cables	ISO/IEC 60332-3-24
Measurement of smoke density of cables burning	ISO/IEC 61034
Common test methods for cables under fire conditions	
Fire behaviour - class	fire behaviour: Class D _{ca} s1 d1 a1 acc. to EN 50399 (classification acc. to EN 13501-6)
ITU-T standard	ITU-T G.657.A2 and G.657.B2, compatible with ITU-T G.652.D

Packing details

Type of packaging	0 meter
Packaging dimension (W x H x D)	0.00 x 0.00 x 0.00 mm



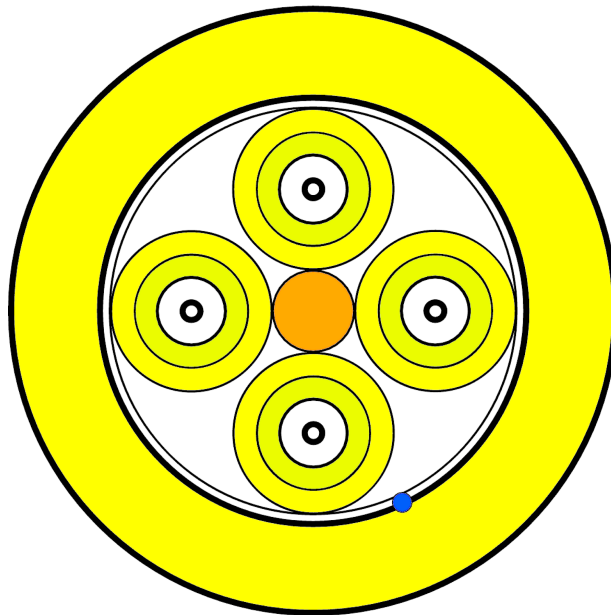
OpDAT breakout cable 4x1 OS2 - bend insensitive, class D_{ca} s1 d1 a1

P/N
150B049000000M
EAN 4251122190476

2018-10-01

Illustrations

Prinzipbild 150B049000000M BO



OpDAT breakout cable 4x1 OS2 - bend insensitive, class D_{ca} s1 d1 a1

P/N
150B049000000M
EAN 4251122190476

2018-10-01

Fiber color coding

Fiber color code		
	1	red
	2	green
	3	blue
	4	yellow



Data sheet OpDAT fiber OS2 BR

Page 7/9

P/N
150XXX9

2018-10-01

Technical Data

General Data

Transmission technology	Fiber optic
Mode type of the fiber	Single mode
Fiber class	OS2 (IEC 60793-2-50 B.1.3, B6_b & ITU-T G.657.A2, G.657.B2, G.652.D)
Fiber construction	9/125 μm

Transmission characteristics

Chromatic dispersion coefficient	
Chromatic dispersion coefficient - In the interval 1285 nm - 1330 nm (max.)	max. 3.7 ps/km * nm
Chromatic dispersion coefficient - At 1550 nm (max.)	max. 18.5 ps/km * nm
Chromatic dispersion coefficient - At 1625 nm (max.)	max. 23.0 ps/km * nm
Dispersion null wavelength, λ_{D0}	1300-1324 nm
Zero dispersion slope (max.)	0.092 ps/(nm ² * km)
Polarisation mode dispersion (PMD) coefficient, cabled (min.)	0.1
PMDQ Link Design Value (min.)	0.06 ps/vkm
Threshold wavelength (max.)	1260

Connections/interfaces

Connector technology interface 1	Free line end
Connector technology interface 2	Free line end
Core-/ Fiber cladding diameter	125.0 $\pm$ 0.7 μm
Primary coating diameter - colored	242 $\pm$ 7 μm

Optical characteristics

Attenuation of the fiber	
Attenuation of the fiber in the cable at 1310 nm	max. 0.38 dB/km
Attenuation of the fiber in the cable at 1383 nm	max. 0.38 dB/km
Attenuation of the fiber in the cable at 1550 nm	max. 0.23 dB/km
Attenuation of the fiber in the cable at 1625 nm	max. 0.25 dB/km

Mechanical characteristics

Proof stress level	min. 0.7 ($\sim$ 1 %) GPa
Strip force (peak)	1.2 $\leq$ F _{peak.strip} $\leq$ 8.9 N
10 turns on a mandrel R= 15 mm, @ 1550 nm	0.03 dB

Technical Data

Mechanical characteristics

10 turns on a mandrel R= 15 mm, @ 1625 nm	0.1 dB
1 turn on a mandrel R= 10 mm, @ 1550 nm	0.1 dB
1 turn on a mandrel R= 10 mm, @ 1625 nm	0.2 dB
1 turn on a mandrel R= 7.5 mm, @ 1550 nm	0.5 dB
1 turn on a mandrel R= 7.5 mm, @ 1625 nm	1.0 dB
Fiber cladding non-circularity	max. 0.7 %
Core (MDF)-cladding concentricity error	max. 0.5 µm
Primary coating concentricity error	max. 5 %
Primary coating-cladding concentricity error	max. 12
Inhomogeneity of OTDR measurement report at 1310 nm und 1550 nm	max. 0.1 dB/km
Group refractive index	
Group refractive index at 1310 nm	1.467
Group refractive index at 1550 nm and 1625 nm	1.468

The product meets the following standards

Generic cabling systems	
General requirements	ISO/IEC 11801 DIN EN 50173-1 : 2007 cat. OS2
Optical fibers: Measuring methods and test procedures	
Fibre geometry	ISO/IEC 60793-1-20
Coating geometry	ISO/IEC 60793-1-21
Length measurement	ISO/IEC 60793-1-22
Fibre proof test	ISO/IEC 60793-1-30
Coating strippability	ISO/IEC 60793-1-32
Attenuation	ISO/IEC 60793-1-40
Chromatic dispersion	ISO/IEC 60793-1-42
Threshold wavelength	ISO/IEC 60793-1-44
Mode field diameter	ISO/IEC 60793-1-45
Macrobending loss	ISO/IEC 60793-1-47
Polarization mode dispersion	ISO/IEC 60793-1-48
Optical fibers: Indoor optical cables	
Sectional specification for class B single-mode fibres	ISO/IEC 60793-2-50 type B6_a/B6_b



Technical Data

The product meets the following standards

Optical fibers: Outdoor optical fibre cables

Outdoor cables ISO/IEC 60794-3

ITU-T standard G.657.A2, G.652.B2, G.652.A, B, C, D

Packing details

Type of packaging 0

Packaging dimension (W x H x D) 0.00 x 0.00 x 0.00 mm

