

Data sheet

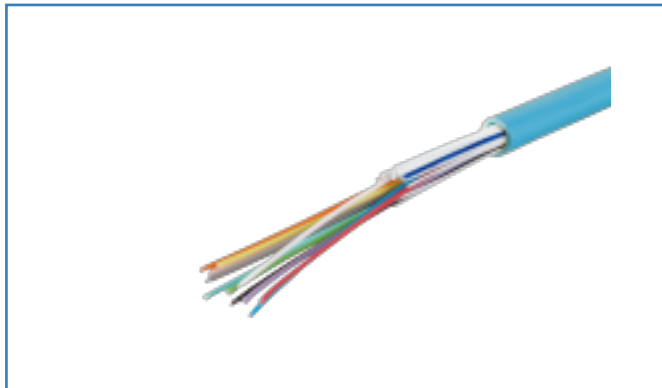
OpDAT mini breakout cable 12x1 OM3 - bend insensitive

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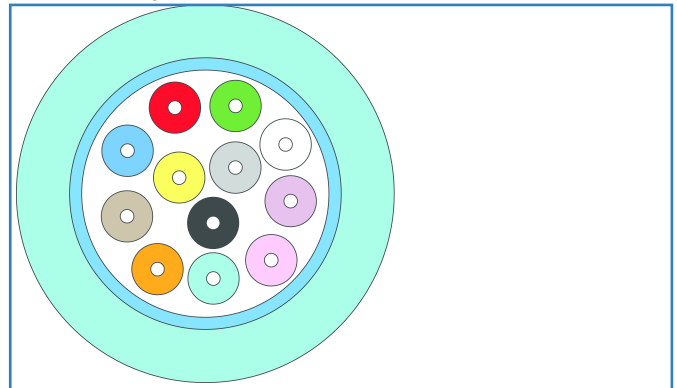
P/N
150M12500000M
EAN 4250184145431

2015-08-07

Illustrations



Principle diagram



Product specification

- mini-breakout installation cable (MBO) for universal cabling systems
- laser-optimized, bend insensitive fiber
- UV-resistant, metal-free, waterproof and moisture-resistant
- longitudinally water blocked and suitable for operation down to -40 °C
- cable sheath: LSHF-FR (low smoke halogen free - flame retardant)
- cable structure: 4, 12 or 24 tight buffered fibers (dia. 0.9 mm)
- strain relief: glasroving elements
- to be laid in tubes and cable ducts indoors and outdoors
- applicable standards: EN 50173-1, ISO 11801 2nd edition, IEC 60794-2, IEC 60794-2-20, EN 187000

variants:

number of OS2 fibers	4, 12 or 24
number of OM4 fibers	4, 12 or 24
number of OM3 fibers	4, 12 or 24

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Technical Data

General Data

Fields of application	Structured building cabling, Office Data center
Design	Installation cables
Transmission technology	Fiber optic
Color	aqua
Color coding fiber/ wire(s)	see table
Mode type of the fiber	Multimode
Fiber class	OM3 (ISO/IEC 11801/EN 50173 & IEC 60793-2-10/EN 60793-2-10 A1.a.2)
Cable Type	Mini breakout
Number of cables/ cores	1
Number of fibres each cable/ wire	12
Fiber construction	50/125 µm

Transmission characteristics

Reach	
Reach 100BASE	2000 m
Reach 1000BASE LX	550 m
Reach 1000BASE SX	1000 m
Reach 10GBASE LX4	300 m
Reach 10GBASE SW/SR	300 m
Reach 40GBASE SR4	100 m
Overfilled (OFL) modal bandwidth at 850 nm (min.)	1500 MHz * km
Overfilled (OFL) modal bandwidth at 1300 nm (min.)	500 MHz * km
Effective modal bandwidth (EMB) at 850 nm (min.)	2000 MHz * km

Connections/interfaces

Connector technology interface 1	Free line end
Connector technology interface 2	Free line end
Cable sheath diameter (min. - max.)	
Cable sheath diameter	7.1 mm
Cable sheath diameter	0.27953 in.

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Mechanical characteristics

Strain relief	glasrooving elements
Permanent tensile strength	450 N
Minimum bending radius	7.50 mm
Minimum bending radius	0.30 in.
Maximum installation load	50.00 mm
Maximum installation load	1.97 in.
Maximum operating bending radius	100.00 mm
Maximum operating bending radius	3.94 in.
Fire load	765 MJ/km

Materials and material properties

Bend insensitivity	yes
UV-resistance	yes
Longitudinal water tightness	Swellable tread
Laser-optimized	yes

Environmental conditions

Temperature (min. - max.)	
Temperature - Storage °C	-40 - 70 °C
Temperature - Storage °F	-40 - 158 °F
Temperature - Operating °C	-40 - 70 °C
Temperature - Operating °F	-40 - 158 °F
Temperature - Installation °C	-20 - 60 °C
Temperature - Installation °F	-4 - 140 °F

Certifications

Gost Certification	yes
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Approvals

RoHS	compliant
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Technical Data

The product meets the following standards

Generic cabling systems	
General requirements	ISO/IEC 11801 DIN EN 50173-1
Optical fibers: Sectional specification	
Indoor cables	ISO/IEC 60794-2
Optical fibers: Product specifications	
Sectional specification for category A1 multimode fibres	ISO/IEC 60793-2-10 (A1a.2)
Optical fibers: Indoor optical cables	
Family specification for multi-fibre optical cables	ISO/IEC 60794-2-20
Tests on electric and optical fibre cables under fire conditions	
Test for vertical flame propagation for a single insulated wire or cable	ISO/IEC 60332-1-2
Test for vertical flame spread of vertically-mounted bunched wires or cables	ISO/IEC 60332-3-24
TIA/ANSI-492	AAAC

Classifications

ETIM 5.0	EC000034
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Packing details

Type of packaging	Meter / drum
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Fiber color coding

Fiber color code		
	1	red
	2	green
	3	blue
	4	yellow
	5	white
	6	grey
	7	brown
	8	violet
	9	turquoise
	10	black
	11	orange
	12	pink

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Technical Data

General Data

Transmission technology	Fiber optic
Mode type of the fiber	Multimode
Fiber class	OM3 (ISO/IEC 11801/EN 50173 & IEC 60793-2-10/EN 60793-2-10 A1.a.2)
Fiber construction	50/125 µm

Transmission characteristics

Transmission rate up to 100 GBit	IEEE 802.3ba
Reach	
Reach 100BASE	2000 m
Reach 1000BASE LX	550 m
Reach 1000BASE SX	1000 m
Reach 10GBASE LX4	300 m
Reach 10GBASE SW/SR	300 m
Reach 40GBASE SR4	100 m
Overfilled (OFL) modal bandwidth at 850 nm (min.)	1500 MHz * km
Overfilled (OFL) modal bandwidth at 1300 nm (min.)	500 MHz * km
Effective modal bandwidth (EMB) at 850 nm (min.)	2000 MHz * km

Connections/interfaces

Connector technology interface 1	Free line end
Connector technology interface 2	Free line end
Fiber core diameter	50 ± 2.0 µm
Fiber cladding diameter	125.0 ± 1.0 µm
Primary coating diameter - colored	242 ± 0.5 µm
Primary coating diameter - uncolored	250 ± 15 µm

Electrical characteristics

Maximum value of cable attenuation at 850 nm	3.0 dB/km
Maximum value of cable attenuation at 1300 nm	1.0 dB/km

Mechanical characteristics

Proof stress level	min. 0.7 (~ 1 %) GPa
Strip force (peak)	1.3 = F _{peak.strip} max. 8.9 N
Fiber bending loss R=7.5 mm 850/1300 nm	max. 0.2 / = 0.5 dB
Fiber bending loss R=15 mm 850/1300 nm	max. 0.1 / = 0.3 dB

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OpDAT fiber OM3 BR

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150XXX5

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Mechanical characteristics

Fiber cladding non-circularity	max. 0.7 %
Core non-circularity	max. 5 %
Core (MDF)-cladding concentricity error	max. 1.0 µm
Primary coating concentricity error	max. 5 %
Primary coating-cladding concentricity error	max. 6
Inhomogeneity of OTDR trace for any two 1000 metre fiber length	max. 0.1 dB/km
Group refractive index at 1310 and 1550 nm	1.482
Group refractive index at 1625 nm	1.477
Numerical aperture	0.200 ± 0.015

Materials and material properties

Bend insensitivity	yes
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The product meets the following standards

Generic cabling systems	
General requirements	ISO/IEC 11801 DIN EN 50173-1
Optical fibers: Generic specification - basic test procedures for optical cables	
General and definitions	ISO/IEC 60794-1-20
Mechanical Tests Methods	ISO/IEC 60794-1-21
Optical fibers: Measuring methods and test procedures	
Fibre proof test	ISO/IEC 60793-1-30
Coating strippability	ISO/IEC 60793-1-32
Numerical aperture	ISO/IEC 60793-1-43
Optical fibers: Indoor optical cables	
Family specification for simplex and duplex cables	ISO/IEC 60793-2-10 (A1a.2)
TIA/ANSI-492	AAAC