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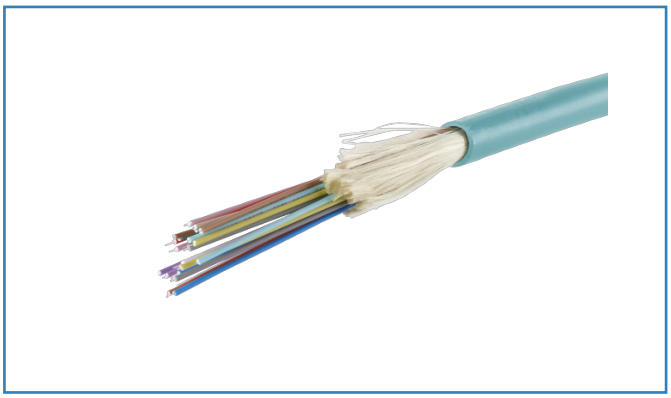
Data sheet

OpDAT mini breakout cable 24x1 OM3 - bend insensitive, class D_{ca} s1 d20 a1

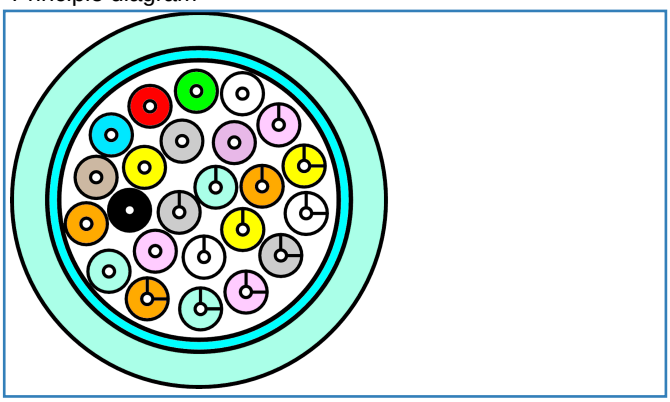
P/N 150M245000000M
EAN 4250184168676

2018-09-01

Illustrations



Principle diagram



See enlarged drawings at the end of document

Product specification

- mini-breakout installation cable U-VQ(ZN)H
- 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
- fire behaviour: Class D_{ca} s1 d0 a1 acc. to EN 50399 (classification acc. to EN 13501-6)

variants:

number of OS2 fibers	4, 12 or 24
number of OM5 fibers	4 or 12
number of OM4 fibers	4, 12 or 24
number of OM3 fibers	4 or 24

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Technical Data

General Data	
Fields of application	
	Structured building cabling, Office Fiber to the Desk, 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	24
Fiber construction	50/125 µm
Weight	72.00 kg/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	8.50 mm
Cable sheath diameter	0.335 in.
Optical characteristics	
Attenuation of the fiber	
Attenuation of the fiber in the cable at 850 nm	max. 3.0 dB/km
Attenuation of the fiber in the cable at 1300 nm	max. 1.0 dB/km
Mechanical characteristics	
strain relief	glasrooving elements
Maximum installation load (max.)	1400 N
Maximum installation load	60.00 mm
Maximum installation load	2.362 in.
Impact resistance	10 J
Crush (compressive strength)	2000 N
Fire load	1240 MJ/km

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Materials and material properties	
Material - Cable jacket	LSHF-FR
Bend insensitivity	yes
Flame retardancy	yes
Halogen free	yes
Metallfrei	yes
UV-resistance	yes
Longitudinal water tightness	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

Approvals	
RoHS	compliant

The product meets the following standards	
Generic cabling systems	
General requirements	ISO/IEC 11801
Optical fibers: Product specifications	
Sectional specification for category A1 multimode fibres	ISO/IEC 60793-2-10 (A1a.2)
Optical fibers: Generic specification	
Cross reference table for optical cable test procedures	ISO/IEC 60794-1-2
Test on gases evolved during combustion of materials from cables	
Determination of the halogen acid gas content	IEC 60754-1
Determination of acidity (by measuring the pH value) and conductivity	IEC 60754-2

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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	ISO/IEC 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 d0 a1 acc. to EN 50399 (classification acc. to EN 13501-6)
ITU-T standard	G.651.1

Classifications	
ETIM 5.0	EC000034
ETIM 6.0	EC000034

Packing details	
Type of packaging	1000 meter / drum
Packaging dimension (W x H x D)	850.00 x 700.00 x 850.00 mm
Packaging dimension (W x H x D)	33.465 x 27.559 x 33.465 in.

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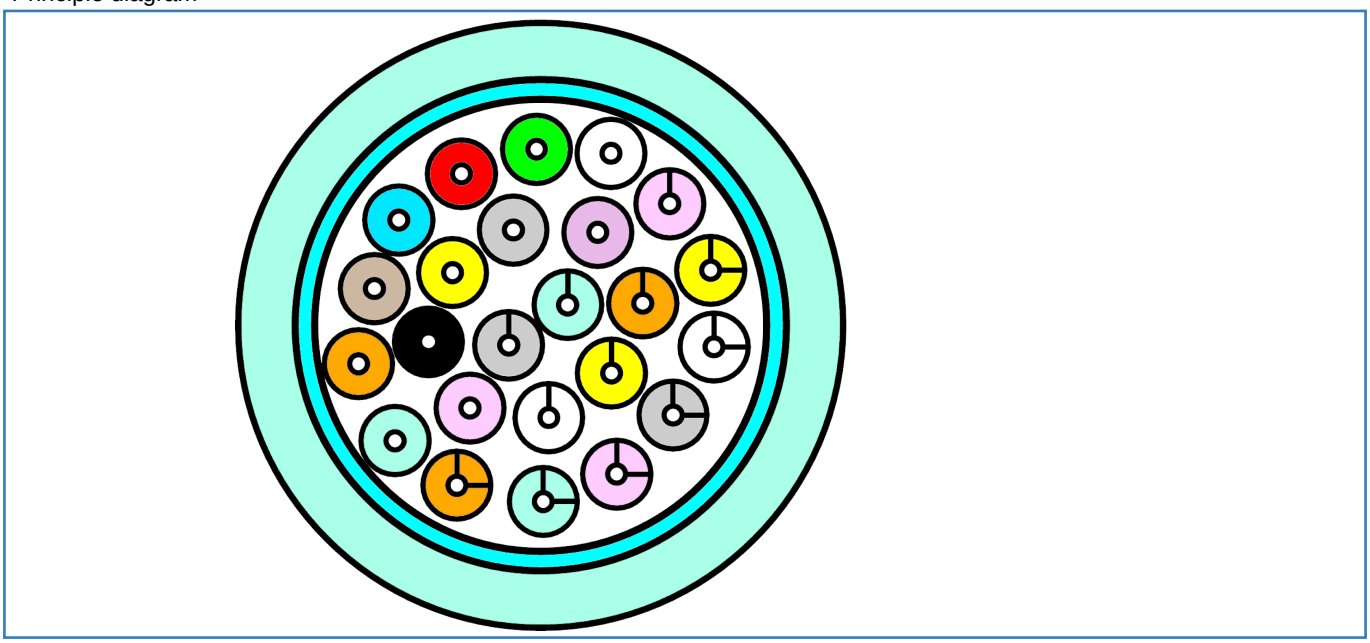
Illustrations

Principle diagram



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Fiber color coding

Fiber color code				
	1	red	13	yellow w/mark per 70 mm
	2	green	14	white w/mark per 70 mm
	3	blue	15	grey w/mark per 70 mm
	4	yellow	16	turquoise w/mark per 70 mm
	5	white	17	orange w/mark per 70 mm
	6	grey	18	pink w/mark per 70 mm
	7	brown	19	yellow w/mark every 35 mm
	8	violet	20	white w/mark every 35 mm
	9	turquoise	21	grey w/mark every 35 mm
	10	black	22	turquoise w/mark every 35 mm
	11	orange	23	orange with w/mark every 35 mm
	12	pink	24	pink w/mark every 35 mm

Data sheet
OpDAT fiber OM3 BR

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150XXX5

2018-09-01

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 10 GBit	IEEE 802.3an
Transmission rate up to 100 GBit	IEEE 802.3ba
Reach	
Reach 1000BASE LX	550 m
Reach 1000BASE SX	1000 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 µm
Core-/ Fiber cladding diameter	125.0 ± 1.0 µm
Primary coating diameter - colored	250 ± 15 µm
Primary coating diameter - uncolored	242 ± 5 µm

Optical characteristics	
Attenuation of the fiber	
Attenuation of the fiber in the cable at 850 nm	max. 2.5 dB/km
Attenuation of the fiber in the cable at 1300 nm	max. 0.8 dB/km
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
Typische durchschnittliche Abziehkraft	1.7 N
Strip force (peak)	1.3 <= Fpeak.strip <= 8.9 N
Fiber cladding non-circularity	max. 0.7 %

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Technical Data

Mechanical characteristics	
Core non-circularity	max. 5 %
Core (MDF)-cladding concentricity error	max. 1 µm
Primary coating concentricity error	max. 5 %
Primary coating-cladding concentricity error	max. 6
Inhomogeneity of OTDR measurement report at 1310 nm und 1550 nm	max. 0.1 dB/km
Group refractive index	
Gruppen-Brechungsindex bei 850 nm	1.482
Gruppen-Brechungsindex bei 1300 nm	1.477
Numerical aperture	0.200 ± 0.015
Materials and material properties	
Bend insensitivity	yes
The product meets the following standards	
Generic cabling systems	
General requirements	ISO/IEC 11801 cat. OM3 | TIA/EIA 568-C
Data centers	ISO/IEC 24764
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
Bandbreite	ISO/IEC 60793-1-41
Numerical aperture	ISO/IEC 60793-1-43
Gruppenlaufzeitdifferenz	ISO/IEC 60793-1-49
Optical fibers: Product specifications	
Sectional specification for category A1 multimode fibres	ISO/IEC 60793-2-10 (A1a.2)
ITU-T standard	G.651.1
TIA/ANSI-492	AAAC

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150XXX5

2018-09-01

Technical Data

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