

Data sheet

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OpDAT universal cable 1x8 OS2 - bend insensitive, class E_{ca}

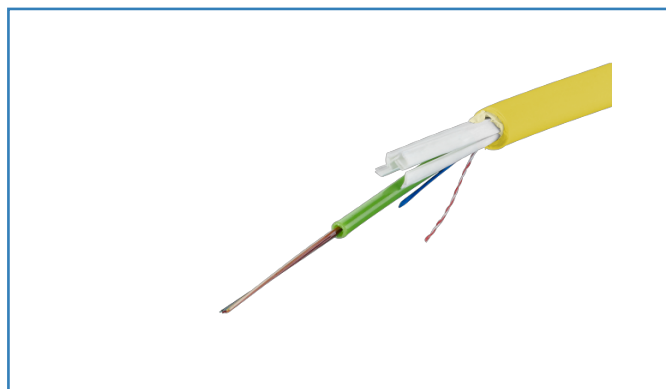
P/N

150U089000000M

EAN 4250184175193

2017-17-10

Illustrations



Product specification

- installation cable U-DQ(ZN)BH
- universal fiber optic cable for indoors/outdoors with central or stranded loose tube
- bend insensitive fiber
- UV-resistant, metal-free, longitudinally waterproof, tensile strength and rodent repellent
- cable jacket: LSHF
- cable structure: filled loose tubes
- cable diameter for central loose tube 7.5 mm with 2 to 12 fibers per loose tube
- cable diameter for central loose tube 8.0 mm with 24 fibers per loose tube
- cable diameter with stranded loose tube 11.0 mm
- strain relief: longitudinally waterproof wrapping, glass roving elements
- stranded loose tubes: loose tubes grouped around a glass fiber reinforced plastic stick with a dia. of 2.5 mm
- for laying in ducts or directly in the ground in a suitable layer of sand
- applicable standards: EN 50173-1, ISO 11801 2nd edition, IEC 60794-1, EN 187000
- fire behaviour: Class E_{ca} (classification acc. to EN 13501-6)

Variants:

Number of OS2 fibers 1x4, 1x8, 1x12, 1x24, 4x12

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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	yellow
Color coding fiber/ wire(s)	see table
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)
Number of cables/ cores	1
Number of fibres each cable/ wire	8
Fiber construction	9/125 µm

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

Mechanical characteristics

strain relief	longitudinally waterproof wrapping, glass roving elements
Maximum installation load (max.)	1500 N
Maximum installation load	60.00 mm
Maximum installation load	2.362 in.
Crush (compressive strength)	2000 N
Fire load	1100 MJ/km



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Materials and material properties

Material - Cable jacket	LSHF
Bend insensitivity	yes
Tensile strength	yes
Rodent protection	yes
Flame retardancy	yes
Halogen free	yes
Metallfrei	yes
UV-resistance	yes
Longitudinal water tightness	pass, no water on free end

Environmental conditions

Temperature (min. - max.)	
Temperature - Storage °C	-40 - 60 °C
Temperature - Storage °F	-40 - 140 °F
Temperature - Operating °C	-30 - 70 °C
Temperature - Operating °F	-22 - 158 °F
Temperature - Installation °C	-15 - 40 °C
Temperature - Installation °F	5 - 104 °F

Approvals

RoHS	compliant
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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	
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 B.1.3 & B6_b
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
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Measurement of smoke density of cables burning	ISO/IEC 61034-2
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Common test methods for cables under fire conditions

Fire behaviour - class



Klasse E_{ca} (Klassifizierung nach EN 13501-6)

Standard colours for insulation for low-frequency cables & wires	IEC 60304
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ITU-T standard	G.657.A2 & B2
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Classifications

ETIM 5.0	EC000034
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ETIM 6.0	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



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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 ± 0.7 µm
Primary coating diameter - colored	242 ± 7 µm

Optical characteristics

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 (~ 1 %) GPa
Strip force (peak)	1.2 ≤ F _{peak.strip} ≤ 8.9 N
10 turns on a mandrel R= 15 mm, @ 1550 nm	0.03 dB
10 turns on a mandrel R= 15 mm, @ 1625 nm	0.1 dB

Technical Data

Mechanical characteristics

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 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
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

