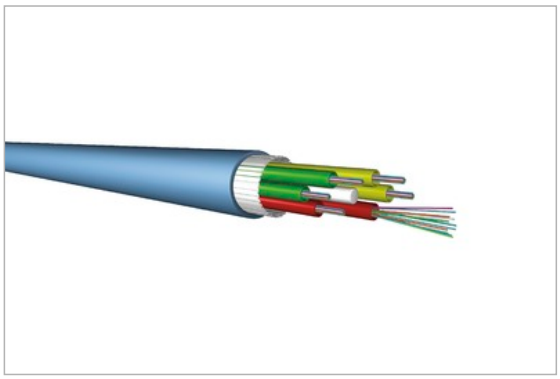
FO Universal Cable 96G50/125µm OM3 6.0kN with non-metallic rodent protection

trans data elektronik GmbH

Description

This cable can be used for LAN and WAN backbones, telecom access lines, fiber to business and fiber to the building drop connections as well as fiber to the home drop and access connections. With its FireBur® LSHF sheathing this cable is ideal for mixed indoor and outdoor installation. This cable features a high tensile strength and a degree of rodent protection, effective in many cases. It is equally suited for installation in ducts and on trays. The cable is suited for installation in tubes by blowing and flooding. The cable may be used for direct burial with proper sand back filling.



Technical Data

Standards

ISO 11801 2nd edition	EN 187 000
IEC 60794-2	IEC 60794-2-20
EN 50 173-1	IEC 60794-2-21

Construction

Cabletype	Universal U-DQ(ZN)BH for indoor and outdoor use
Central strength member	ø2.5 mm FRP rod
Lose tube	ø2.3 mm jelly filled loose tubes, with 2 – 12 fibers each, up to 22 tubes in two layers, for lay-up
Water blocking	The core is water blocked using swellable tape and tread
Wrapping	Polyester nonwoven
Strain Relief	Glasroving elements
Ripcord	Polyester ripcord for easy slitting of the sheath
Sheath	1.5 mm blue FireBur®, UV stabilized, EN 50290-2-27

Fire rating

IEC 60332-1-2	Single vertical wire test
IEC 60754-1	No halogens
IEC 60754-2	No acid matters
IEC 61034-2	No dense smoke

Vers. 09.08.2018

tde – trans data elektronik GmbH
Network components,
Cable technology and Fibre optics

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Heat of combustion

Fiber count; 6 fiber/tube	Fiber count; 8 fiber/tube	Fiber count; 12 fiber/tube	MJ/km	KWh/m
6-36	8-48	12-72	2200	0.61
42-48	56-64	84-96	2900	0.81
54-60	72-80		3700	1.03
66-72	88-96		4600	1.28
78-84			5600	1.56
90-108			4300	1.19

Physical properties

Tensile strength (dynamic)	E1	6000 N
Tensile strength (permanent)	E1	4000 N
Compressive strength (crush)	E3	3000N
Impact	E4	25 Nm
Torsion	E7	5 cycles ± 1 turn
Kink	E10	The cables do not form a kink when a loop is drawn together to a diameter 12 times the cable nominal diameter
Temperature range	F1	The cables can bear temperature cycling between -40°C to +70°C.
		The cables will operate without any attenuation variation (≤0.05 dB) in the temperature interval -30°C to +60°C.
		The cables will operate with a maximum attenuation variation of 0.1 dB/km in the temperature interval -40°C to +70°C.
Water penetration	F5B	No water on free end

Mechanical properties

Fiber count; 6 fiber/tube	Fiber count; 8 fiber/tube	Fiber count; 12 fiber/tube	Nominal diameter	Nominal cable weight	Minimum bending radius
6-36	8-48	12-72	13.0mm	145 kg/km	160mm
42-48	56-64	84-96	14.5mm	180 kg/km	175mm
54-60	72-80		16.0mm	230 kg/km	190mm
66-72	88-96		17.5mm	270 kg/km	210mm
78-84			19.0mm	315 kg/km	220mm
90-108			18.0mm	260 kg/km	215mm

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FO Fiber

Type	Draka OM3 50/125µm bend-insensitive multimode fiber (C31)

Standards and Norms	IEC 60793-2-10: type A1a.2	ITU G.651.1	TIA/EIA-492 AAAC
	ISO/IEC 11801 category OM3	EN 60793-2-10: type A1a.2	ANSI/TIA/EIA-568.C
	ISO/IEC 24764	EN 50173-1 category OM3	IEEE 802.3

Cable attenuation according to IEC 60793-1

Maximum value of cable at 850 nm	≤ 3.0 dB/km
Maximum value of cable at 1300 nm	≤ 1.0 dB/km
Attenuation limit according to IEC 60793-2-10, 850 nm	≤ 2.5 dB/km
Attenuation limit according to IEC 60793-2-10, 1300 nm	≤ 0.8 dB/km
Inhomogeneity of OTDR trace for any two 1000 metre fiber lengths	Max. 0.1 dB/km
Fiber bending loss R=7.5 mm 850/1300 nm	≤ 0.2 dB / ≤ 0.5 dB
Fiber bending loss R=15 mm 850/1300 nm	≤ 0.1 dB / ≤ 0.3 dB

Bandwidth according to IEC 60793-1

Overfilled (OFL) modal bandwidth at 850 nm	≥ 1500 MHz*km
Overfilled (OFL) modal bandwidth at 1300 nm	≥ 500 MHz*km
Effective Modal Bandwidth (EMB) at 850 nm (Assured by means of differential mode delay (DMD) measurement as specified in IEC 60793-1-49)	≥ 2000 MHz*km

Other properties according to IEC 60793-1

Attribute	Measurement method	Limits
Core diameter	IEC/EN 60793-1-20	50 ± 2 µm

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Cladding diameter	IEC/EN 60793-1-20	125.0 ± 1.0 µm
Cladding non-circularity	IEC/EN 60793-1-20	≤ 0.7%
Core non-circularity	IEC/EN 60793-1-20	≤ 5%
Core -cladding concentricity error	IEC/EN 60793-1-20	≤ 1 µm
Primary coating diameter - uncoloured	IEC/EN 60793-1-21	242 ± 5 µm
Primary coating diameter - coloured	IEC/EN 60793-1-21	250 ± 15 µm
Primary coating non-circularity	IEC/EN 60793-1-21	≤ 5%
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	≤ 6 µm
Group index of refraction at 850 nm	IEC/EN 60793-1-22	1.482
Group index of refraction at 1300 nm	IEC/EN 60793-1-22	1.477
Proof stress level	IEC/EN 60793-1-30	≥ 0.7 (≈ 1 %)
Typical average strip force	IEC/EN 60793-1-32	1.7 N
Strip force (peak)	IEC/EN 60793-1-32	1.3 N ≤ Fpeak.strip ≤ 8.9 N
Numerical aperture	IEC/EN 60793-1-43	0.200 ± 0.015

Art.-No.	Description
L-U-DQ(ZN)BH096G50-3	FO Universal Cable 96G50/125µm OM3 6.0kN with non-metallic rodent protection

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