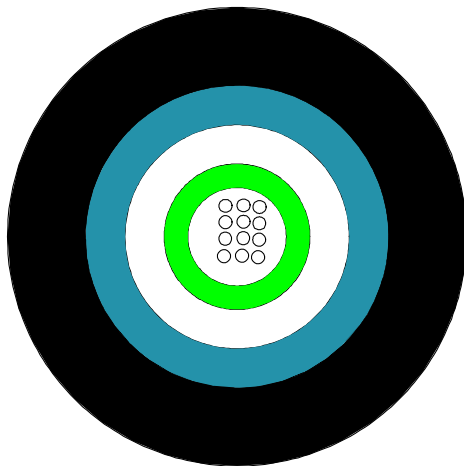


Universal central tube cable, black version

1000N armoured central tube cable w. 2 – 24 fibres, glass yarns, steel armouring and black FireBur® sheath. DIN/VDE U-DQ(ZN) (SR)H



Application and installation

This cable can be used for LAN and WAN backbones, telecom access lines, fibre to business and fibre to the building drop connections; as well as fibre to the home drop and access connections.

With its FireBur® sheathing this cable is ideal for indoor/outdoor mixed installation.

The cable, having a corrugated steel tape armouring is rodent proof.

The cable is well suited for installation in ducts and on trays, indoor as well as outdoor.

The cable is excellent for direct burial with proper sand back filling.

Standards

ISO 11801 2nd edition, EN 50173-1:2002, IEC 60794-1

Flame resistance

IEC 60332-1-2, IEC 60754-1, IEC 60754-2, IEC 61034-2

Construction

Loose tube	ø2.8 mm jelly filled loose tube with 2 – 16 fibres; ø3.5 mm loose tube with 24 fibres		
Fibre colour 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 w/mark every 35 mm

Universal central tube cable, black version

	12 Pink	24 Pink w/mark every 35 mm
Strength member	E-Glass yarns	
Armouring	0.15 mm corrugated steel tape	
Sheath	1.5 mm black FireBur sheath, UV stabilised, EN 50290-2-27	
Sheath marking	Draka I/O CT N MA LSHF 1.0 kN <Fibre count> <Fibre type><Fibre brand><Item No>05<Batch Number><Meter mark> U-DQ(ZN)(SR)H <Fibre count> <Fibre family> <Mode field diameter> /125 <Transmission Class>	

Physical properties

Nominal outer diameter	-	2 - 16 fibres: 8.5 mm 24 fibres: 8.5 mm
Nominal weight	-	2 - 16 fibres: 75 kg/km 24 fibres: 85 kg/km
Tensile strength (dynamic)	E1	1000 N
Tensile strength (permanent)	E1	500 N
Compressive strength (crush)	E3	2000N
Torsion	E7	5 cycles ± 1 turn
Kink	E10	The cables do not form a kink when a loop is drawn together to a diameter of 100 mm
Min. bending radius	E11	R = 55 mm
Temperature range	F1	Storage and installation: -40°C to +70°C Operation: -40°C to +70°C The max. attenuation variation in the operational temperature range is: For M6 and M5 fibres: 0.5 dB/km For SM fibres: 0.2 dB/km
Heat of combustion		2-16 fibres: 1200 MJ/km 0.33 kWh/m 24 fibres: 1300 MJ/km 0.36 kWh/m

Product codes – ordering information

Prysmian group material code	Prysmian Group material description	Draka Material code	Fibre count	Fibre type	Fibre data sheet

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Properties of cable with standard Enhanced SM fibre

ESMF, low water peak single mode fibre G652D, OS2

General and application

The optical fibres are made of a high grade doped silica core surrounded by a silica cladding.

They are coated with a dual layer, UV cured acrylate based coating.

This enhanced single mode fibre provides improved performance across the entire 1260 nm to 1625 nm wavelength spectrum due to its low attenuation in 1383 nm, the water-peak region.

Standards and Norms

IEC / EN 60793-2-50 Category B.1.3	EN 50 173-1:2007, cat. OS2 and OS1
ITU-T Recommendation G.652.D and C, B, A	ISO / IEC 11801:2002, cat. OS2 and OS1
IEEE 802.3 – 2002 incl. 802.3ae	ISO / IEC 24702: 2006, cat. OS2 and OS1

Optical properties

Attribute	Measurement method	Units	Limits
Mode field diameter at 1310 nm	IEC/EN 60793-1-45	µm	9.0 ± 0.4
Mode field diameter at 1550 nm		µm	10.1 ± 0.5
Chromatic dispersion coefficient:	IEC/EN 60793-1-42		
In the interval 1285 nm – 1330 nm		ps/km • nm	≤ 3
At 1550 nm		ps/km • nm	≤ 18.0
At 1625 nm		ps/km • nm	≤ 22.0
Zero dispersion wavelength, λ ₀		nm	1300 - 1322
Zero dispersion slope		ps/(nm ² • km)	≤ 0.090
Cut-off wavelength	IEC/EN 60793-1-44	λ _{cc} nm	≤ 1260 *
Polarisation mode dispersion (PMD) coefficient	IEC/EN 60793-1-48	ps/√km	≤ 0.5
PMD ₀ Link Design Value (computed with Q=0.01%, N=20)	IEC/EN 60794-3	ps/√km	≤ 0.2

* guaranteed value according to the ITU-T (ATM G650) method

Attenuation

Attribute	Measurement method	Units	Limits
Maximum attenuation value of cable in the interval 1310 nm – 1625 nm	IEC/EN 60793-1-40	dB/km	≤ 0.39
Maximum attenuation value of cable at 1550 nm	IEC/EN 60793-1-40	dB/km	≤ 0.25
Local discontinuity at 1310 and 1550 nm	IEC/EN 60793-1-40	dB	Max. 0.1

Attenuation variation vs Bending

Attribute	Measurement method	Units	Limits
100 turns on a R=25 mm mandrel at 1310 & 1550 nm	IEC/EN 60793-1-47	dB	≤ 0.05
100 turns on a R=30 mm mandrel at 1625 nm	IEC/EN 60793-1-47	dB	≤ 0.05

Group index of refraction

Attribute	Measurement method	Units	Values
1310 nm	IEC/EN 60793-1-22	-	1.467
1550 nm	IEC/EN 60793-1-22	-	1.468
1625 nm	IEC/EN 60793-1-22	-	1.468

Geometrical properties

Attribute	Measurement method	Units	Limits
Cladding diameter	IEC/EN 60793-1-20	µm	125.0 ± 0.7
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 0.7
Core (MDF) -cladding concentricity error	IEC/EN 60793-1-20	µm	≤ 0.5
Primary coating diameter – ColorLock ^{XS} and natural	IEC/EN 60793-1-21	µm	242 ± 7
Primary coating non-circularity	IEC/EN 60793-1-21	%	≤ 5
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	µm	≤ 12

Mechanical properties

Attribute	Measurement method	Units	Limits
Proof stress level	IEC/EN 60793-1-30	GPa	≥ 0.7 (≈ 1 %)
Strip force (peak)	IEC/EN 60793-1-32	N	1.2 ≤ F _{peak.strip} ≤ 8.9
Dynamic fatigue resistance aged and unaged	IEC / EN 60793-1-33	(N _d)	≥ 20
Static fatigue, aged	IEC / EN 60793-1-33	(N _s)	≥ 23

All measurements in accordance with ITU-T G650 recommendations

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