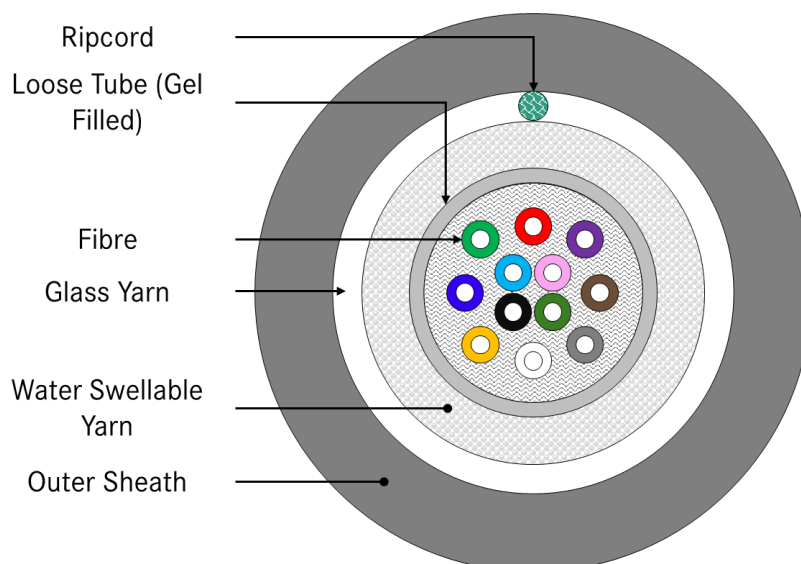


26810908	DATA SHEET	
valid from: 04.08.2025	HITRONIC® BT4K	

Application

Field of use:	Outdoor direct burial G.657.A1 single-mode glass A-DQ(ZN)B2Y fibre optic cable with central loose tube, non-metallic strength elements, very high tensile strength, longitudinally and laterally watertight, rodent protection, robust and halogen-free HD-PE cable sheath
Applications:	For use in wide area data networks such as the Internet, in solar and wind farms, campus backbones, as well as other applications such as metropolitan area networks (MANs), industrial automation systems, and telecommunications infrastructure. Methods of deployment: direct burial
Product Category	Fiber Optic Cables (FOC)



Design

Cable Type	Central gel-filled loose tube, max. 24 fibres
Fiber Types	Single-mode (ITU-T G.657.A1)
Tensile Strength Elements	Reinforced Glass Yarns, Impregnated Glass Fibre Yarns (IGFY)
Ripcords	1 Piece
Gel Filling	Yes, water-blocking
Armouring	Dielectric (non-metallic), rodent protection, Glass Yarn
Optical Fibre containing	Central Loose Tube
Material Loose Tubes	PBT (Poly-Butylene-Therephtalate)
Material Filling Gel	Thixotropic Jelly
Tube Diameter	3.5 ± 0.1 mm up to 24 Fibres
Peripheral Strength Member	Glass Yarn for rodent protection
Outer Sheath Material	HD-PE, Black RAL 9005, Anti Rodent
Number of Ripcords, material	1, Polyester
Cable Outer Diameter	8.7 ± 0.5 mm

Color identification code

UT

based on IEC 60304

Fibre-No.
Colour

Fibre	1	2	3	4	5	6	7	8	9	10	11	12
Colour	RD	GR	BU	YE	WH	GY	BN	VT	AQ	BK	OR	PK

Fibre	13	14	15	16	17	18	19	20	21	22	23	24
Colour	RD*	GR*	BU*	YE*	WH*	GY*	BN*	VT*	AQ*	NT**	OR*	PK*

*Black ring marking on fibres from 13-24 at every 50 mm distance.

**Black ring marked natural fibre instead of white ring marked black fibre

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Article Description	Article Number	Tensile Strength Operation	Tensile Strength Installation	Fibre Count	Number of Fibres per Tube	Number of loose Tubes	Number of Fillers	
HITRONIC BT4K A-DQ(ZN)B2Y 8 G657A1	26810908	3000 N	4000 N	8	8	1	0	
HITRONIC BT4K A-DQ(ZN)B2Y 12 G657A1	26810912	3000 N	4000 N	12	12	1	0	
HITRONIC BT4K A-DQ(ZN)B2Y 24 G657A1	26810924	3000 N	4000 N	24	24	1	0	

Table 1: Tube and Filler Count

Optical Fibre Characteristics

Cable Attenuation @	1310 nm	≤ 0.36 dB/km
	1550 nm	≤ 0.23 dB/km
	1625 nm	≤ 0.26 dB/km
Chromatic Dispersion	1285-1330 nm	≤ 3.5 ps/(nm*km)
	1550 nm	≤ 18 ps/(nm*km)
	1625 nm	≤ 22 ps/(nm*km)
Zero Dispersion Wavelength	1300 -1324 nm	
PMD (Max. Individual)	≤ 0.1 ps/ $\sqrt{\text{km}}$	
PMD (Link design value)	≤ 0.06 ps / $\sqrt{\text{km}}$	
Cable cut off wavelength λ_{cc}	≤ 1260 nm	
MFD	1310 nm = 9.1 ± 0.3 μm 1550 nm = 10.3 ± 0.5 μm	
Bending Induced Attenuation	1 Turn $[\varphi]$ 20xD	1550 nm ≤ 0.75 dB 1625 nm ≤ 1.5 dB
	10 Turn $[\varphi]$ 30xD	1550 nm ≤ 0.25 dB 1625 nm ≤ 1.0 dB
Core-Cladding Concentricity Error	≤ 0.5 μm	
Cladding Diameter	125 ± 0.7 μm	
Cladding Non Circularity	≤ 0.8 %	
Coating Diameter	Natural Fibre	242 ± 5 μm
	Coloured Fibre	250 ± 10 μm

Mechanical and thermal properties

Minimum bending radius acc. to IEC-60794-1-21, E11	Installation:	20× outer diameter
	Operation:	10× outer diameter
Temperature range acc. to IEC-60794-1-22, F1	Installation:	-20 °C up to +50 °C
	Operation:	-40 °C up to +70 °C
	Storage:	-40 °C up to +70 °C
Tensile Strength acc. to IEC-60794-1-21, E1	Installation / short term	4000 N
	Operation / long term	3000 N
Crush Resistance acc. to IEC-60794-1-21, E3	max. 2500 N/ 10 cm	
Impact Strength acc. to IEC-60794-1-21, E4	10 N*m	
Torsion acc. to IEC-60794-1-21, E7	± 180 °/m	

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Water Penetration Test 1 m water head, 3 m sample, 24 hours

acc. to IEC-60794-1-21, F5

Allowed Fibre Elongation (max.)

acc. to IEC60794-1-21, E1

@ short Term Load 0.67 %

4 kN

@ long Term Load 0.5 %

3 kN

General requirements

These cables are classified in accordance with the EU-Regulation no. 305/2011 (Construction Products Regulation).

Environmental information

These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

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