

LWL-Standard-Außenkabel A-DQ(ZN)B2Y 6,0 kN



1. Construction / Application

Identification	A-DQ(ZN)B2Y nxm E9 G.652D 6.0 kN		
Application	Outdoor cable for universal use		
Cross-section (not to scale)	144 fibres	288 fibres (24x12)	288 fibres (12x24) 576 fibres
Construction	<ul style="list-style-type: none"> - Loose tubes with 12 or 24 optical fibres, filled with thixotropic compound - Stranded loose tubes; central strength member made of fibre reinforced plastic (FRP), if applicable incl. oversheathing; dummies if required - 288 (24x12), 432 (18x24) and 576 (24x24) fibres: 2-layer construction - Cable strand: Dry, with water-blocking materials - Strength members / metal-free reinforcement: Glass yarns - Outer sheath: HDPE, 2 underlying rip cords 		
Temperature range	Storage and transport -40 to +70 °C	Installation -10 to +50 °C	Operation -30 to +70 °C
Standards	IEC 60793-1, IEC 60793-2, IEC 60794-3-10		

2. Dimensions

Number of fibres		24	48	72	96	144	288		432	576
Loose tubes x fibres		2x12	4x12	6x12	8x12	12x12	24x12	12x24	18x24	24x24
Loose tubes/dummies	1.L 2.L	2 / 4	4 / 2	6 / 0	8 / 0	12 / 0	9 / 0 15 / 0	12 / 0	6 / 0 12 / 0	9 / 0 15 / 0
Loose tube Ø	mm	2.3						2.8		
Central strength member / FRP	mm	2.5			3.1	7.0/3.8	4.7/3.8	8.6/3.8	3.0	5.8/3.8
Outer sheath thickness	mm	1.3			1.5					
Outer diameter (± 5%)	mm	10.8			12.2	15.2	18.0	17.9	18.3	21.0
Weight (± 15%)	kg	113			135	195	252	260		330

Sizes and values without tolerances are reference values.

3. Mechanical Properties

Max. tensile strength (Installation)	6000 N
Max. tensile strength (Operation)	2000 N
Crush resistance / 10 cm	3000 N
Bending radius (under tension)	20x cable Ø
Bending radius (without tension)	10x cable Ø

see point 7: Test Methods

4. Identification

Outer sheath	Colour of outer sheath: black Printing method: hot foil printing The outer sheath is marked at 1 m spacings as follows:
FABER ZTT OPTICAL CABLE A-DQ(ZN)B2Y <n>x<m> G.652D 6kN <batch ID> <meter marking >	

Colour sequence of fibres											
1	2	3	4	5	6	7	8	9	10	11	12
red	green	blue	yellow	white	grey	brown	violet	cyan	black	orange	pink
13	14	15	16	17	18	19	20	21	22	23	24
red	green	blue	yellow	white	grey	brown	violet	cyan	natural	orange	pink

Colour sequence of Loose tubes	Each layer beginning with 1; from the 13th Loose tube only white Dummies are natural coloured
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5. Optical Fibre

Standard	ITU-T G.652D		
Fibre manufacturer	ZTT		
Optical-	Fibre attenuation .. cabled .. bare fibre	@1310 nm ≤0.36 dB/km ≤0.34 dB/km	@1550 nm ≤0.22 dB/km ≤0.20 dB/km
	Mode field diameter (MFD)	9.0 ± 0.4 µm	10.4 ± 0.6 µm
	Zero dispersion wavelength	1300 ~ 1324 nm	
	Zero dispersion slope	≤0.092 ps/nm ² · km	
	Polarisation mode dispersion (PMD)	≤0.2 ps/√km	
	Cut-off wavelength	≤1260 nm	
	Macro bending loss (100 turns Ø50 mm)	@1550 nm ≤0.05 dB	@1625 nm ≤0.10 dB
Geometric-	Outer diameter	245 ± 10 µm	
	Cladding diameter	125 ± 1 µm	
	Core/clad concentricity error	≤0.6 µm	
	Cladding non-circularity	≤ 1.0 %	
Mechanical-	Proof stress	≥ 0.69 Gpa	

6. Order informations

part no.	Number of fibres	part name
071727	24	Premium A-DQ(ZN)B2Y 2X12 G.652D 6.0 kN OD10.8 ZT SW
071728	48	Premium A-DQ(ZN)B2Y 4X12 G.652D 6.0 kN OD10.8 ZT SW
071729	72	Premium A-DQ(ZN)B2Y 6X12 G.652D 6.0 kN OD10.8 ZT SW
071730	96	Premium A-DQ(ZN)B2Y 8X12 G.652D 6.0 kN OD12.2 ZT SW
071731	252	Premium A-DQ(ZN)B2Y 12X12 G.652D 6.0 kN OD15.2 ZT SW
071732	288	Premium A-DQ(ZN)B2Y 24X12 G.652D 6.0 kN OD18.0 ZT SW
071733	288	Premium A-DQ(ZN)B2Y 12X24 G.652D 6.0 kN OD17.9 ZT SW
071734	432	Premium A-DQ(ZN)B2Y 18X24 G.652D 6.0 kN OD18.3 ZT SW
071735	576	Premium A-DQ(ZN)B2Y 24X24 G.652D 6.0 kN OD21.0 ZT SW

7. Test Methods

Checked	Conditions	Acceptance criteria
Tensile strength IEC 60794-1-2 E1	Tensile strength (installation): see point 3 Sample length: ≥ 50 m. Test duration: 1 min	- Fibre strain $< 0.6\%$ - Attenuation change reversible - No damage
Tensile strength IEC 60794-1-2 E1	Tensile strength (operation): see point 3 Sample length: ≥ 50 m, Test duration: 1 min	- Fibre strain $\leq 0.05\%$ - Attenuation change reversible ≤ 0.05 dB
Crush resistance IEC 60794-1-2 E3	Crush resistance: see point 3 Test duration: 15 min, number of tests: 3	- Attenuation change ≤ 0.05 dB after test - No damage
Impact IEC 60794-1-2 E4	Impact energy: 10J R = 300 mm, number of tests: 3	- Attenuation change ≤ 0.05 dB after test - No damage
Repeated bending IEC 60794-1-2 E6	Bending radius: 20x cable \varnothing 35 cycles, 100 N	- Attenuation change ≤ 0.05 dB after test - No damage
Torsion IEC 60794-1-2 E7	Sample length: 2 m $\pm 180^\circ$, 100 N, 10 cycles	- Attenuation change ≤ 0.05 dB - No damage
Bend IEC 60794-1-2 E11	Bending radius: 20x cable \varnothing 4 bends, 3 cycles	- Attenuation change ≤ 0.05 dB - No damage
Temperature cycling IEC 60794-1-2 F1	+20 °C .. -30 °C .. +70 °C 12 hours at each temperature step, 2 cycles	- Attenuation ≤ 0.05 dB - Attenuation reversible
Water penetration IEC 60794-1-2 F5	Sample length: 3 m, water column height: 1 m Test duration: 24 h	- No water leakage

All optical measurements at 1550 nm

ZTT 18-88539

The products and information presented here are for technical calculation only. They are subject to technical progress and in no way represent the ability of shipment. Outer diameters are approximately.