

# Optical Midi-Cable A-DQ(ZN)2Y nx12 G.652D (ZT)



## 1. Construction / Application

<b>Identification</b>	Midi A-DQ(ZN)2Y nx12 E9 G.652D		
<b>Application</b>	Outdoor cable for use in ducts		
<b>View</b>			
<b>Cross-section (not to scale)</b>	<p>72 fibres</p>	<p>144 fibres</p>	<p>288 fibres</p>
<b>Construction</b>	<ul style="list-style-type: none"> <li>- Loose tubes with 12 optical fibres, filled with thixotropic compound</li> <li>- Stranded loose tubes; central strength member made of fibre reinforced plastic (FRP), if applicable incl. overshielding; dummies if required</li> <li>- 192, 216 and 288 fibres: 2-layer construction</li> <li>- Cable strand: Dry, with water-blocking materials</li> <li>- Strength members under the outer sheath: Aramid</li> <li>- Outer sheath: HDPE black, 2 underlying rip cords</li> </ul>		
<b>Temperature range</b>	Storage and transport -40 to +70 °C	Installation -10 to +50 °C	Operation -30 to +70 °C
<b>Standards</b>	IEC 60793-1, IEC 60793-2, IEC 60794-3-10		

## 2. Dimensions

Number of fibres		12	24	48	72	96	144	192	216	288
<b>Loose tubes x fibres</b>		1x12	2x12	4x12	6x12	8x12	12x12	16x12	18x12	24x12
<b>Loose tubes/dummies</b>	1.L 2.L	1 / 4	2 / 3	4 / 1	6 / 0	8 / 0	12 / 0	6 / 0 10 / 2	6 / 0 12 / 0	9 / 0 15 / 0
<b>Loose tube Ø</b>	mm	1.8								
<b>Central strength member / FRP</b>	mm	1.2		1.8	3.1/2.5	5.5/2.8	1.8		3.7/3.0	
<b>Outer sheath thickness</b>	mm	1.0								
<b>Outer diameter (± 5%)</b>	mm	7.3		8.0	9.2	11.7	11.8		13.9	
<b>Weight (± 15%)</b>	kg	45		48	72	112	114		150	

## 3. Mechanical Properties

<b>Max. tensile strength</b>	1500 N	2000 N
<b>Crush resistance</b>	1000 N	
<b>Bending radius (under tension)</b>	20x cable Ø	
<b>Bending radius (without tension)</b>	10x cable Ø	

## 4. Identification

<b>Outer sheath</b>	Colour of outer sheath: black Printing method: ink jet The outer sheath is marked at 1 m spacings as follows:
<b>FABER ZTT OPTICAL CABLE MIDI A-DQ(ZN)2Y &lt;n&gt;x12 G.652D &lt;batch ID&gt; &lt;meter marking &gt;</b>	

### 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

### Colour sequence of Loose tubes

## 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 <sup>2</sup> · 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
071578	12	Midi A-DQ(ZN)2Y 1X12 G.652D 1.5 kN OD7.3 ZT SW
071579	24	Midi A-DQ(ZN)2Y 2X12 G.652D 1.5 kN OD7.3 ZT SW
071580	48	Midi A-DQ(ZN)2Y 4X12 G.652D 1.5 kN OD7.3 ZT SW
071581	72	Midi A-DQ(ZN)2Y 6X12 G.652D 1.5 kN OD8.0 ZT SW
071582	96	Midi A-DQ(ZN)2Y 8X12 G.652D 2.0 kN OD9.2 ZT SW
071583	144	Midi A-DQ(ZN)2Y 12X12 G.652D 2.0 kN OD11.7 ZT SW
071584	192	Midi A-DQ(ZN)2Y 16X12 G.652D 2.0 kN OD11.8 ZT SW
071585	216	Midi A-DQ(ZN)2Y 18X12 G.652D 2.0 kN OD11.8 ZT SW
071586	288	Midi A-DQ(ZN)2Y 24X12 G.652D 2.0 kN OD13.9 ZT SW

## 7. Test Methods

Checked	Conditions	Acceptance criteria
Tensile strength IEC 60794-1-2 E1	Tensile strength: see point 3 Sample length: $\geq 50$ m, Test duration: 1 min	- Fibre strain $<0.6\%$ - Attenuation change $\leq 0.1$ dB after test
Crush resistance IEC 60794-1-2 E3	Crush resistance: see point 3 Test duration: 1 min, number of tests: 3	- Attenuation change $\leq 0.05$ dB after test - No damage
Impact IEC 60794-1-2 E4	Impact energy: 10J R = 300 mm, number of tests: 3	- Attenuation change $\leq 0.05$ dB after test - No damage
Repeated bending IEC 60794-1-2 E6	Bending radius: 20x cable $\varnothing$ 25 cycles	- Attenuation change $\leq 0.05$ dB after test - No damage
Torsion IEC 60794-1-2 E7	Sample length: 2 m $\pm 180^\circ$ , 10 cycles	- Attenuation change $\leq 0.05$ dB after test - No damage
Bend IEC 60794-1-2 E11	Bending radius: 20x cable $\varnothing$ 4 bends, 3 cycles	- Attenuation change $\leq 0.05$ dB after test - No damage
Temperature cycling IEC 60794-1-2 F1	+20 °C .. -30 °C .. +70 °C 12 hours at each temperature step, 2 cycles	- Attenuation $\leq 0.05$ dB/km - 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

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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.