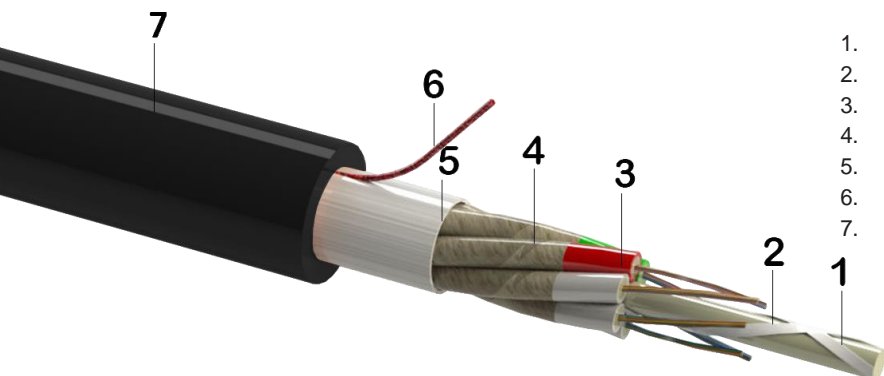


Cable construction code

QT.x2,3GF xx.yy.zz.c

DIN code

J/A-DQ(BN)H wbg nx2,3 fr



1. FRP central strength member
2. Water swell-able yarn
3. Gel filled PBT loose tube with optical fibers
4. Fire-resistant tape
5. Water swell-able e-glass yarn
6. Rip-cord
7. FRLSZH UV stable outer jacket

Cable general description

Multi-loose-tube non-metallic fire-resistant cable with improved rodent protection for indoor or outdoor duct installation.

Construction and dimensions	QT6x2,3GF	QT8x2,3GF	QT3x2,3GF
Max. fibre count (12 fibres/tube)	72	96	144
Loose-tubes count	6	8	12
Loose tube nominal diameter (mm)	2,3	2,3	2,3
FRP/coat. CSM nominal thickness (mm)	2,8	2,5/4,5	2,8/7,8
Outer jacket nominal thickness (mm)	1,8	1,8	1,8
Cable nominal outer diameter (mm)	13,0	14,6	18,0
Cable informative weight (kg/km)	180	225	340
Standard put-up length (m)	2100/4100 ± 5%	2100/4100 ± 5%	2100/4100 ± 5%

Outer jacket

Material	UV stable FRLSZH
Jacket colour	Black. Other colours available on request
Sheath marking	Ink-Jet, white or black depending on the jacket colour
Print legend	Trademark, construction name, cable type, batch-number, meter-marking, CE marking Customer print legend available on request

Optical fibers

Colour coding (IEC 60304)	1.-12.: red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink
Loose-tube colour coding	1.red, 2.green (in each layer), rest of tubes white (fillers uncoloured or black)
Fiber type	Single- and multi-mode fibers (OS2, OM1, OM2, OM3, OM4)

Geometrical and transmission parameters are available at separate generic datasheet

Mechanical characteristics

Test	Test method	Value			Acceptance criteria*	
			QT6x	QT8x		QT3x
Tensile performance	IEC 60794-1-21:E1	long term	1400 N	1400 N	1800 N	$\Delta\alpha \leq 0,05$ dB $\Delta\alpha \leq 0,05$ dB after test
		short term	4500 N	4500 N	6000 N	
Crush	IEC 60794-1-21:E3A	1000 N/100mm (long term) 2000 N/100mm (short term)			$\Delta\alpha \leq 0,05$ dB prior release, no damage $\Delta\alpha \leq 0,05$ dB after release, no damage	
Impact	IEC 60794-1-21:E4	10 Nm, 3 impacts, d=20 mm, R=300 mm			$\Delta\alpha \leq 0,05$ dB after test, no damage	
Repeated bending	IEC 60794-1-21:E6	R=20 x cable diameter, 25 cycles			no damage	
Torsion	IEC 60794-1-21:E7	L=1 m, rotation angle $\pm 180^\circ$, 10 cycles			no damage	
Bend	IEC 60794-1-21:E11A	d=20 x cable diameter, 4 turns, 3 cycles			$\Delta\alpha \leq 0,05$ dB after test, no damage	

Environmental characteristic

Test	Test method	Value	Acceptance criteria*
Temperature cycling	IEC 60794-1-22:F1	-40°C ÷ 70°C	$\Delta\alpha \leq 0,05$ dB
Temperature range of use		-5°C ÷ 50°C	installation
		-40°C ÷ 70°C	operation
		-40°C ÷ 70°C	storage, transport
Moisture resistance	IEC 60794-1-22:F5B	L=3 m, 1 m water height, 24 h	no water leakage under inner sheath

* IEC 60794-3-10, IEC 60794-3-11

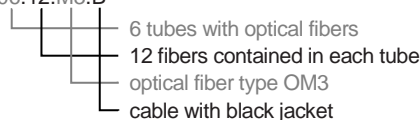
Cable expected lifetime / min. 30 years

Fire performance

Test	Test method	Result
Fire resistance	IEC 60331-25 (180 min at 750°C)	Pass
Flammability - cable bundle	EN 60332-3-22 (cat.A)	Pass
Smoke density	EN 61034-1, EN 61034-2	Pass
Halogen Free, Acid gases	EN 60754-2	Pass
Euro classification to CPR	EN 50575, EN 13501-6	Fca

Order information

Order code e.g.: QT6x2,3GF 06.12.M3.B



Detailed explanation of the FOC constructions coding found in the file *FOC coding*.