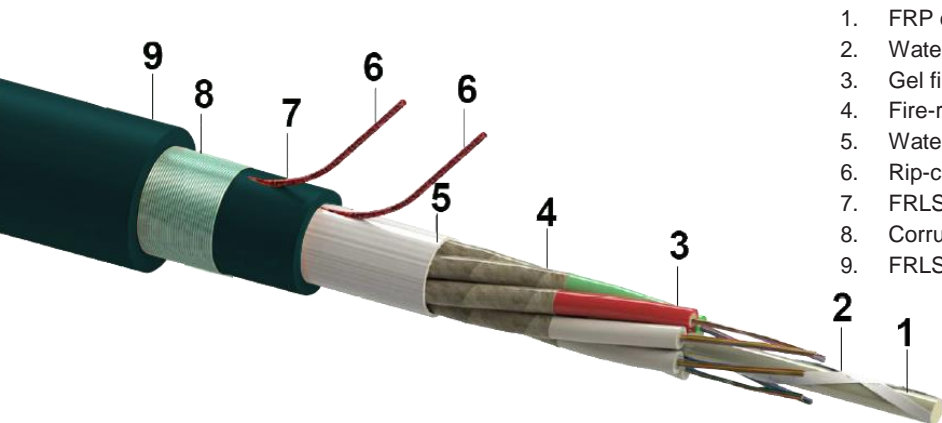


Cable construction code

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

DIN code

J/A-DQ(ZN)H(SR)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-cords
7. FRLSZH UV stable inner jacket
8. Corrugated steel tape armour
9. FRLSZH UV stable outer jacket

Cable general description

Multi-loose-tube fire resistant corrugated steel tape armoured cable with two jackets for indoor or outdoor duct or direct buried installation. This cable construction offers excellent mechanical and full rodent protection.

Construction and dimensions	QT6x2,3EFCF	QT8x2,3EFCF	QT3x2,3EFCF
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
Inner jacket nominal thickness (mm)	1,0	1,0	1,0
Outer jacket nominal thickness (mm)	1,5	1,5	1,5
Cable nominal outer diameter (mm)	16,5	17,5	21,5
Cable informative weight (kg/km)	300	350	500
Standard put-up length (m)	2100/4100 ± 5%	2100/4100 ± 5%	2100 ± 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	900 N	900 N	1100 N	$\Delta\alpha \leq 0,05$ dB $\Delta\alpha \leq 0,05$ dB after test
		short term	3000 N	3000 N	3500 N	
Crush	IEC 60794-1-21:E3A	2500 N/100mm (long term) 5000 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	20 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

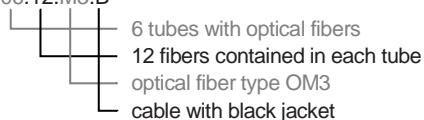
Cable expected lifetime / min. 30 years

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.: QT6x2,3EFCF 06.12.M3.B



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