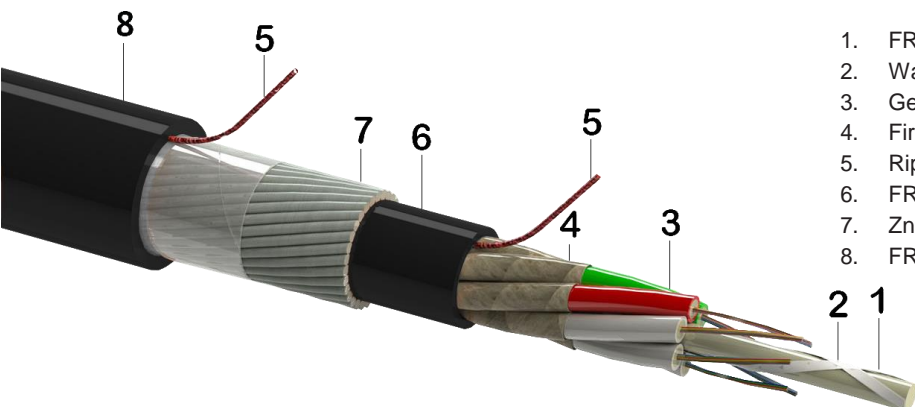


Cable construction code

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

DIN code

J/A-DQHBH (R...vzk) 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. Rip-cords
6. FRLSZH UV stable inner jacket
7. Zn galvanized steel wire armour fixed by PET tape
8. FRLSZH UV stable outer jacket

Cable general description

Multi-loose-tube fire resistant steel wire 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	QT6x2,3FWF	QT8x2,3FWF	QT3x2,3FWF
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
Steel wire nominal diameter (mm)	1,0	1,2	1,4
Outer jacket nominal thickness (mm)	1,4	1,4	1,4
Cable nominal outer diameter (mm)	15,6	17,7	21,1
Cable informative weight (kg/km)	440	570	800
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	N/A	N/A	$\Delta\alpha \leq 0,05$ dB
		short term	5000 N	8000 N	10000 N
Crush	IEC 60794-1-21:E3A	2000 N/100mm (long term) 4000 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	25 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

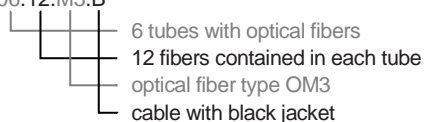
Cable expected lifetime / min. 30 years

**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.: QT6x2,3FWF 06.12.M3.B



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