Fire resistant QFCI F101

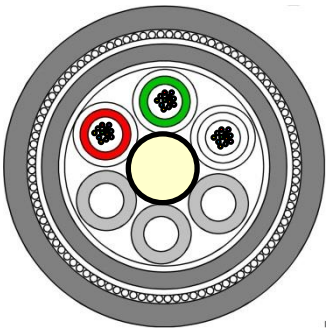
QFCI

Indoor and outdoor.
Fire resistant
Flame retardant halogen-free
Loose tube

NEK TS 606:2016 Code F101[2)]

Optical cable for indoor and outdoor use in vital communication and emergency systems that need to be operational during fire. The cable has a design that ensures operation for more than 3 hours in fires up to 1000ºC.
The unique design features eXtended Fire Resistant properties (XFR) which secure operation during fire test with bending and impact from hammer shock. In addition, also with water spray and water jet (BS 8491[1)]) during and directly after the fire. The cable is halogen free and flame retardant to protect against secondary damage to electronic equipment during and after fire. Outer sheath is made from black UV-stabilized and weather resistant material and may be exposed for shorter periods to fluids such as diesel and mineral oils. The resistance to these fluids is according to IEC60811-404. The cable is reinforced with a steel wire braiding. The fibres are protected in jelly filled loose tubes stranded around a FRP central strength member to ensure optimum performance and long life. Each fibre and loose tube is colour coded for easy identification during splicing and termination. The outer sheath is marked to show fibre type and cable type.

[1)] Simulating water fire fighting jet
[2)] Code F1 in the NEK TS 606:2009



1. FRP-central strength member
2. Fiber in filled tubes
3. Wrapping
4. Inner LSHF sheath
5. Galvanized steel wire braid(GSWB)
6. Outer sheath(SHF1)

Weight and dimensions

Number of fibres	Number of fibres in each tube	Number of tubes + fillers	Loose tube diameter (mm)	Outer diameter (mm)	Weight (kg/km)	Heat release (MJ/km)
4	4	1+5	2,2	13,5	230	1500
8	8	1+5	2,2	13,5	230	1500
12	12	1+5	2,2	13,5	230	1500
24	12	2+4	2,2	13,5	230	1500
36	12	3+3	2,2	13,5	230	1500
48	12	4+2	2,2	13,5	230	1500
60	12	5+1	2,2	13,5	230	1500
72	12	6+0	2,2	13,5	230	1500

Other fibre counts are available on request.

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Cable properties

Tensile strength (IEC 60794-1-21, E1)		**Chemical resistance**	
Max tensile load during installation	1500 N	Mineral oils IRM 902 (IEC60811-404)	- 7 days/23°C - 4 hours/70°C
Max tensile load during operation	500 N	Diesel - IRM 903 (IEC60811-404)	- 7 days/23°C - 4 hours/70°C
Crush (IEC 60794-1-21, E3)	3000 N/10cm	**Fire and smoke classifications*)**	
Impact (IEC 60794-1-21, E4)	30J	IEC 60331-25 (750°C, 90 minutes)	<1.0 dB excess loss
Torsion (IEC 60794-1-21, E7)	±1 turn/1m	Upgraded IEC 60331-25 (1000°C, 3 hours)	<1.5 dB excess loss
Cable bending		IEC 60331-1(830°C, 120 minutes incl. hammer shock, followed by water jet acc. to BS 8491:2008)	<1,5 dB excess loss
Minimum bending diameter	250 mm	IEC 60331-2 (830°C, 90 minutes incl. hammer shock) followed by water spray acc. to EN 50200	<1,5 dB excess loss
Cable bend (IEC 60794-1-21, E11)	<0.1dB/ ±5 turn	IEC 60331-2 (830°C, 90 minutes incl. hammer shock)	<1,5 dB excess loss
Temperature window(IEC 60794-1-22, F1)		IEC 61034	
Operation	-40°C to +70°C	IEC 60332-3-22 (Cat. A)	
Installation	-10°C to +70°C	IEC 60332-3-24 (Cat. C)	
Storage	-40°C to +70°C	IEC 60754-1	
		IEC 60754-2	

*)-These are examples of tests performed.

Ordering information

Part no	Number of fibres	Cabe Type	Fiber type	Fiber data sheet
20184651	4	G4-9/125 QFCI-I/O/RM-JM/-	OS2 Single mode	C03e
20184655	8	G8-9/125 QFCI-I/O/RM-JM/-	OS2 Single mode	C03e
20184659	12	G12-9/125 QFCI-I/O/RM-JM/-	OS2 Single mode	C03e
20184663	24	G24-9/125 QFCI-I/O/RM-JM/-	OS2 Single mode	C03e
20184642	48	G48-9/125 QFCI-I/O/RM-JM/-	OS2 Single mode	C03e
*)	60	G60-9/125 QFCI-I/O/RM-JM/-	OS2 Single mode	C03e
20184647	72	G72-9/125 QFCI-I/O/RM-JM/-	OS2 Single mode	C03e
20184652	4	G4-50/125 QFCI-I/O/RM-JM/-	OM2 50/125 multi mode	C34
20184656	8	G8-50/125 QFCI-I/O/RM-JM/-	OM2 50/125 multi mode	C34
20184660	12	G12-50/125 QFCI-I/O/RM-JM/-	OM2 50/125 multi mode	C34
20184664	24	G24-50/125 QFCI-I/O/RM-JM/-	OM2 50/125 multi mode	C34
20184643	48	G48-50/125 QFCI-I/O/RM-JM/-	OM2 50/125 multi mode	C34
*)	60	G60-50/125 QFCI-I/O/RM-JM/-	OM2 50/125 multi mode	C34
20184648	72	G72-50/125 QFCI-I/O/RM-JM/-	OM2 50/125 multi mode	C34

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Part no	Number of fibres	Cabe Type	Fiber type	Fiber data sheet
20184654	4	G4-50/125OM3 QFCI-I/O/RM-JM/-	OM3 MaxCap-OM3	C31
20184658	8	G8-50/125OM3 QFCI-I/O/RM-JM/-	OM3 MaxCap-OM3	C31
20184662	12	G12-50/125OM3 QFCI-I/O/RM-JM/-	OM3 MaxCap-OM3	C31
20184641	24	G24-50/125OM3 QFCI-I/O/RM-JM/-	OM3 MaxCap-OM3	C31
20184645	48	G48-50/125OM3 QFCI-I/O/RM-JM/-	OM3 MaxCap-OM3	C31
*)	60	G60-50/125OM3 QFCI-I/O/RM-JM/-	OM3 MaxCap-OM3	C31
20184650	72	G72-50/125OM3 QFCI-I/O/RM-JM/-	OM3 MaxCap-OM3	C31
*)	4	G4-50/125OM4 QFCI-I/O/RM-JM/-	OM4 MaxCap-OM4	C32
*)	12	G12-50/125OM4 QFCI-I/O/RM-JM/-	OM4 MaxCap-OM4	C32
*)	24	G24-50/125OM4 QFCI-I/O/RM-JM/-	OM4 MaxCap-OM4	C32
20184646	48	G48-50/125OM4 QFCI-I/O/RM-JM/-	OM4 MaxCap-OM4	C32
*)	60	G60-50/125OM4 QFCI-I/O/RM-JM/-	OM4 MaxCap-OM4	C32
*)	72	G72-50/125OM4 QFCI-I/O/RM-JM/-	OM4 MaxCap-OM4	C32
20184653	4	G4-62.5/125 QFCI-I/O/RM-JM/-	OM1 62.5/125 multi mode	C02
20184657	8	G8-62.5/125 QFCI-I/O/RM-JM/-	OM1 62.5/125 multi mode	C02
20184661	12	G12-62.5/125 QFCI-I/O/RM-JM/-	OM1 62.5/125 multi mode	C02
20184665	24	G24-62.5/125 QFCI-I/O/RM-JM/-	OM1 62.5/125 multi mode	C02
20184644	48	G48-62.5/125 QFCI-I/O/RM-JM/-	OM1 62.5/125 multi mode	C02
*)	60	G60-62.5/125 QFCI-I/O/RM-JM/-	OM1 62.5/125 multi mode	C02
20184649	72	G72-62.5/125 QFCI-I/O/RM-JM/-	OM1 62.5/125 multi mode	C02

*)-Part numbers will be given on request. When ordering, pls. refer to data sheet: D95QFCI

Colour code

Fibre no.	Colour	Fibre no.	Colour	Tube no.	Colour
1	White	7	Brown	1	Red
2	Red	8	Black	2	Green
3	Yellow	9	Violet	3	White
4	Green	10	Turquise	4	White
5	Blue	11	Orange	5	White
6	Grey	12	Pink	6	White

Standard colour of outer sheath is black.
Other fibre types and qualities are available on request.