

HITRONIC® FIRE

DB27560104

valid from: 17.11.2016

1. Product Description

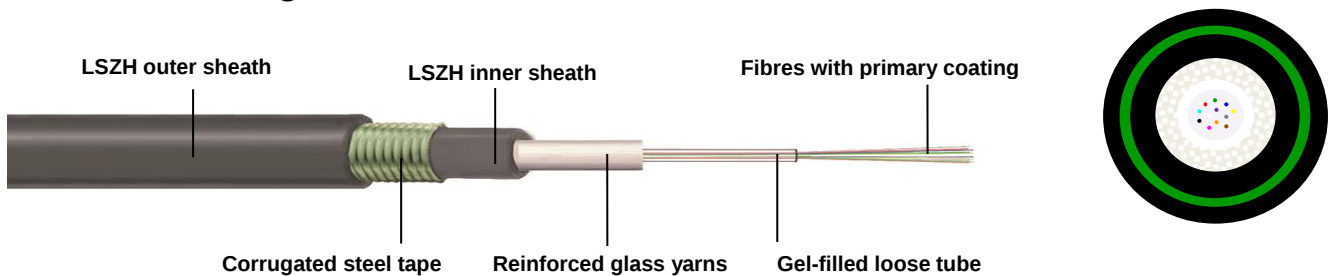
Cable designation: A/J-DQ(ZN)BH(SR)H or U-DQ(ZN)BH(SR)H

2. Application

HITRONIC® FIRE cables are reinforced glass optical fibres with improved properties in case of fire, for use in indoor and outdoor applications of industrial environment. The cable is applicable in highly combustible or fire-prone areas and harsh environments. They are equipped with insulation integrity in case of fire exposure.

Methods of deployment: empty plastic pipes, ducts and trays

3. Cable Design



Fibre type	Glass Optical Fibre (GOF)
Construction of loose tube	Central gel-filled loose tube with up to 24 fibres
Cable inner sheath	LSZH compound
Cable outer sheath	LSZH compound
Colour of inner sheath	Black matt
Colour of outer sheath	Black matt
Colour of loose tube	Neutral
Colour coding	Red, green, blue, yellow, grey, violet, brown, orange, white, pink, black, turquoise
Type of armouring	Corrugated steel tape

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4. Optical and Physical Properties of Cable (bare fibre data)

Multimode fibre			50/125 µm	50/125 µm	50/125 µm	62.5/125 µm
(ITU-T G651)			OM4	OM3	OM2	OM1
Attenuation	@ 850 nm	dB/km	≤ 3.5 (2.5)	≤ 3.5 (2.5)	≤ 3.5 (2.5)	≤ 3.5 (3.0)
	@ 1300 nm	dB/km	≤ 1.5 (0.7)	≤ 1.5 (0.7)	≤ 1.5 (0.7)	≤ 1.5 (0.7)
Bandwidth	@ 850 nm	MHz-km	≥ 3500	≥ 1500	≥ 500	≥ 200
	@ 1300 nm	MHz-km	≥ 500	≥ 500	≥ 500	≥ 500
Numerical aperture			0.2 ± 0.015	0.2 ± 0.015	0.2 ± 0.015	0.275 ± 0.015
Core diameter	µm		50 ±2.0	50 ±2.0	50 ± 2.0	62.5 ± 2.5
Cladding diameter	µm		125 ± 1.0	125 ± 1.0	125 ± 1.0	125 ± 2
Primary coating diameter	µm		242 ± 5	242 ± 5	242 ± 5	245 ± 10
Singlemode fibre			9/125 µm			
(ITU-T G.652.D)						
Attenuation	@ 1310 nm	dB/km	≤ 0.4 (0.35)			
	@ 1550 nm	dB/km	≤ 0.4 (0.21)			
Chromatic dispersion	@ 1310 nm	ps/(nm·km)	≤ 3.0			
	@ 1550 nm	ps/(nm·km)	≤ 18			
Zero dispersion wavelength		nm	1300 – 1322			
Cut-off wavelength		nm	≤ 1260			
PMD		ps/√km	≤ 0.1			
Mode field diameter		µm	9.0 ± 0.4			
Cladding diameter		µm	125 ± 1			
Primary coating diameter		µm	242 ± 7			

5. Thermal Properties

Operating temperature	-30°C to +70°C
Installation temperature	-5°C to +50°C
Storage temperature	-30°C to +70°C

6. Mechanical Properties

Max. number of fibres		24
Min. bending radius (mm)	static	15 x D
	dynamic	20 x D
Max. tensile strength (N)	long-term	1500
	short-term	2200
Max. crush resistance (N)	long-term	2000



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7. Chemical Properties

Halogen free	acc. to IEC 60754-1 resp. 60754-2
Low smoke emission	acc. to IEC 61034-2
Insulation integrity (180 min.)	acc. to IEC 60331-25
Flammability	acc. to IEC 60332-1-2, IEC 60332-3

8. Approvals

Environmental and mechanical tests acc. to EN 187000 and IEC 60794-1-2

9. Product Range Overview

Article number	Article designation	Fibre type	No. of Fibres	Weight (kg/km)	Outer Ø (mm)
Multimode					
27560404	HITRONIC® FIRE 4G 50/125 OM4	50/125 OM4	4	123	9.6
27560408	HITRONIC® FIRE 8G 50/125 OM4	50/125 OM4	8	123	9.6
27560412	HITRONIC® FIRE 12G 50/125 OM4	50/125 OM4	12	123	9.6
27560424	HITRONIC® FIRE 24G 50/125 OM4	50/125 OM4	24	188	12.6
27560304	HITRONIC® FIRE 4G 50/125 OM3	50/125 OM3	4	123	9.6
27560308	HITRONIC® FIRE 8G 50/125 OM3	50/125 OM3	8	123	9.6
27560312	HITRONIC® FIRE 12G 50/125 OM3	50/125 OM3	12	123	9.6
27560324	HITRONIC® FIRE 24G 50/125 OM3	50/125 OM3	24	188	12.6
27560204	HITRONIC® FIRE 4G 50/125 OM2	50/125 OM2	4	123	9.6
27560208	HITRONIC® FIRE 8G 50/125 OM2	50/125 OM2	8	123	9.6
27560212	HITRONIC® FIRE 12G 50/125 OM2	50/125 OM2	12	123	9.6
27560224	HITRONIC® FIRE 24G 50/125 OM2	50/125 OM2	24	188	12.6
27560104	HITRONIC® FIRE 4G 62.5/125	62.5/125 OM1	4	123	9.6
27560108	HITRONIC® FIRE 8G 62.5/125	62.5/125 OM1	8	123	9.6
27560112	HITRONIC® FIRE 12G 62.5/125	62.5/125 OM1	12	123	9.6
27560124	HITRONIC® FIRE 24G 62.5/125	62.5/125 OM1	24	188	12.6
Singlemode					
27560904	HITRONIC® FIRE 4E 9/125 OS2	9/125 OS2	4	123	9.6
27560908	HITRONIC® FIRE 8E 9/125 OS2	9/125 OS2	8	123	9.6
27560912	HITRONIC® FIRE 12E 9/125 OS2	9/125 OS2	12	123	9.6
27560924	HITRONIC® FIRE 24E 9/125 OS2	9/125 OS2	24	188	12.6