

HITRONIC® HQN1500 Outdoor Cable**DB_HQN1500_EN (version 3.0)**
valid from: 20.02.2014**1. Product Description**

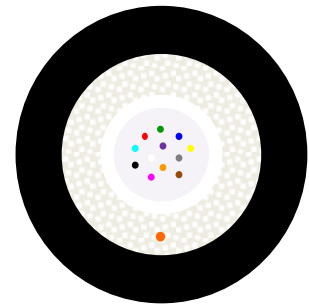
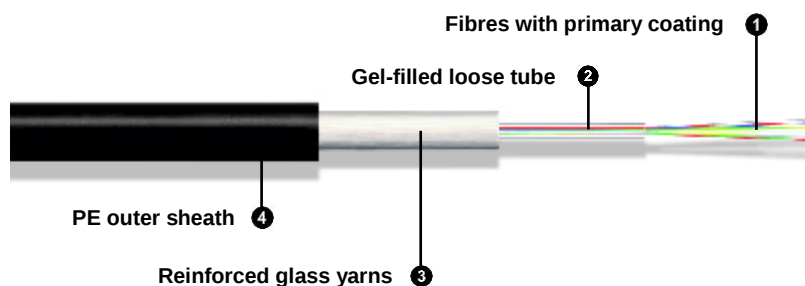
Cable designation: A-DQ(ZN)B2Y

Outdoor glass fibre optic cable with central loose tube, non-metallic strength elements, longitudinally and laterally watertight, rodent protection, robust and halogen-free cable sheath

2. Application

For use in outdoor, direct burial, campus backbone, WAN applications, and industrial environment

Methods of deployment: empty plastic pipes, ducts and trays

3. Product Design

Cable core	Central gel-filled loose tube with up to 24 glass fibres, water-blocking reinforced glass yarns, ripcord
Cable inner sheath	-
Cable outer sheath	Polyethylene (PE) outer sheath, halogen-free, UV and water-resistant
Colour of inner sheath	-
Colour of outer sheath	Black (RAL 9005)
Colour of loose tube	Natural
Identification of fibres	Red, green, blue, yellow, grey, violet, brown, orange, white, pink, black, turquoise
Type of armouring	-

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4. Optical and Physical Properties of Cabled Fibre (and Bare Fibre)

Multimode fibre			50/125 µm	50/125 µm	50/125 µm	62.5/125 µm
			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
Single-mode 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	-40°C to +70°C
Installation temperature	-5°C to +50°C
Storage temperature	-40°C to +70°C

6. Mechanical Properties

Max. number of fibres		12	24
Cable outer diameter (mm)		7.3 ± 0.3	8.3 ± 0.3
Cable weight (kg/km)		40	65
Min. bending radius (mm)	without tensile load	15 x D	15 x D
	with tensile load	20 x D	20 x D
Max. tensile strength (N)	long-term	1500	1500
	short-term	2000	2000
Max. crush resistance (N)		3000	3000

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7. Chemical Properties

PE sheath	Non-aging, halogen-free, good stability to acids and alkalis
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8. EC Directives

Not applicable for fibre optic cables

9. Approvals and Standards

- RoHS
- Environmental and mechanical tests comply to EN 187000 and IEC 60794
- Halogen free according to IEC 60754-1

10. Product Range Overview

Article number	Article designation	Fibre type	No. of Fibres	Outer Ø (mm)
Multimode				
27600404	HITRONIC® HQN1500 4G 50/125 OM4	50/125 OM4	4	7.3
27600408	HITRONIC® HQN1500 8G 50/125 OM4	50/125 OM4	8	7.3
27600412	HITRONIC® HQN1500 12G 50/125 OM4	50/125 OM4	12	7.3
27600424	HITRONIC® HQN1500 24G 50/125 OM4	50/125 OM4	24	8.3
27600304	HITRONIC® HQN1500 4G 50/125 OM3	50/125 OM3	4	7.3
27600308	HITRONIC® HQN1500 8G 50/125 OM3	50/125 OM3	8	7.3
27600312	HITRONIC® HQN1500 12G 50/125 OM3	50/125 OM3	12	7.3
27600324	HITRONIC® HQN1500 24G 50/125 OM3	50/125 OM3	24	8.3
27600204	HITRONIC® HQN1500 4G 50/125 OM2	50/125 OM2	4	7.3
27600208	HITRONIC® HQN1500 8G 50/125 OM2	50/125 OM2	8	7.3
27600212	HITRONIC® HQN1500 12G 50/125 OM2	50/125 OM2	12	7.3
27600224	HITRONIC® HQN1500 24G 50/125 OM2	50/125 OM2	24	8.3
27600104	HITRONIC® HQN1500 4G 62.5/125 OM1	62.5/125 OM1	4	7.3
27600108	HITRONIC® HQN1500 8G 62.5/125 OM1	62.5/125 OM1	8	7.3
27600112	HITRONIC® HQN1500 12G 62.5/125 OM1	62.5/125 OM1	12	7.3
27600124	HITRONIC® HQN1500 24G 62.5/125 OM1	62.5/125 OM1	24	8.3
Single-mode				
27600904	HITRONIC® HQN1500 4 E 9/125 OS2	9/125 OS2	4	7.3
27600908	HITRONIC® HQN1500 8 E 9/125 OS2	9/125 OS2	8	7.3
27600912	HITRONIC® HQN1500 12 E 9/125 OS2	9/125 OS2	12	7.3
27600924	HITRONIC® HQN1500 24 E 9/125 OS2	9/125 OS2	24	8.3