

HITRONIC® HVN5000 Outdoor Stranded Cable

DB_HVN5000_EN (version 3.0)
valid from: 20.02.2014

1. Product Description

Cable designation: A-DQ(ZN)B2Y

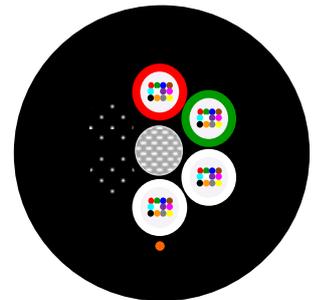
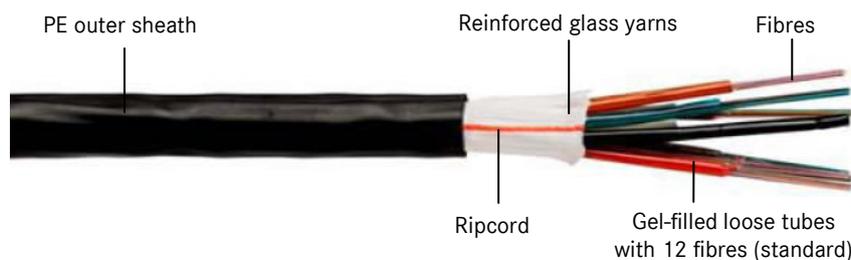
Outdoor glass fibre optic cable with multiple stranded loose tubes, non-metallic strength elements, longitudinally and laterally watertight, rodent protection, robust and halogen-free cable sheath

2. Application

For use in outdoor, campus backbone, WAN applications, and industrial environment, and suitable for installation by air-blowing systems

Methods of deployment: empty plastic pipes, ducts and trays

3. Product Design



Cable core	Up to 12 stranded loose tubes with a total of up to 144 glass fibres, a central element, water-blocking reinforced glass yarns
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 tubes	Active tubes: red, green, subsequent tubes are natural Filler: black
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	Up to 144	
Cable outer diameter (mm)	Refer to overview	
Cable weight (kg/km)	Refer to overview	
Min. bending radius (mm)	static	15 x D
	dynamic	20 x D
Max. tensile strength (N)	long-term	5000
	short-term	6000
Max. crush resistance (N)	2000	

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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

- 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	Weight (kg/km)	Outer Ø (mm)
Multimode					
26600424	HITRONIC® HVN5000 2x12G 50/125 OM4	50/125 OM4	24	64	11.0
26600448	HITRONIC® HVN5000 4x12G 50/125 OM4	50/125 OM4	48	84	11.0
26600324	HITRONIC® HVN5000 2x12G 50/125 OM3	50/125 OM3	24	64	11.0
26600348	HITRONIC® HVN5000 4x12G 50/125 OM3	50/125 OM3	48	84	11.0
26600224	HITRONIC® HVN5000 2x12G 50/125 OM2	50/125 OM2	24	64	11.0
26600248	HITRONIC® HVN5000 4x12G 50/125 OM2	50/125 OM2	48	84	11.0
26600124	HITRONIC® HVN5000 2x12G 62.5/125 OM1	62.5/125 OM1	24	64	11.0
26600148	HITRONIC® HVN5000 4x12G 62.5/125 OM1	62.5/125 OM1	48	84	11.0
Single-mode					
26600924	HITRONIC® HVN5000 2x12E 9/125 OS2	9/125 OS2	24	64	11.0
26600948	HITRONIC® HVN5000 4x12E 9/125 OS2	9/125 OS2	48	84	11.0