

## HITRONIC® HVN-Telecom Outdoor Stranded Cable

DB HVN-Telecom\_EN  
(version 3.0)  
valid from: 20.02.2014

### 1. Product Description

Cable designation: A-DQ(ZN)B2Y

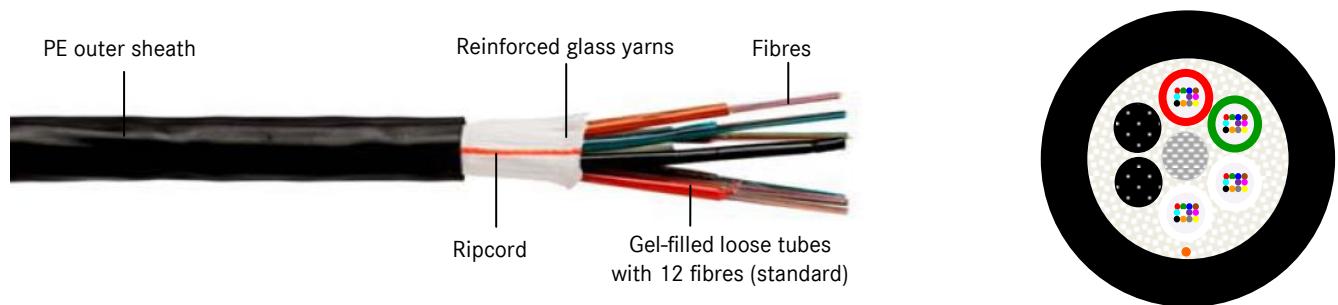
Outdoor glass fibre optic cable with multiple stranded loose tubes, non-metallic strength elements, longitudinally and laterally watertight, rodent protection, robust and halogen-free cable sheath

### 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 ± 2.0
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 48	72-144
Cable outer diameter (mm)		Refer to overview	Refer to overview
Cable weight (kg/km)		Refer to overview	Refer to overview
Min. bending radius (mm)	static	15 x D	15 x D
	dynamic	20 x D	20 x D
Max. tensile strength (N)	long-term	1500	2000
	short-term	2500	3000
Max. crush resistance (N)		2000	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)
<b>Multimode</b>					
26601424	HITRONIC® HVN1500 2x12G 50/125 OM4	50/125 OM4	24	64	11.0
26601448	HITRONIC® HVN1500 4x12G 50/125 OM4	50/125 OM4	48	84	11.0
26601324	HITRONIC® HVN1500 2x12G 50/125 OM3	50/125 OM3	24	64	11.0
26601348	HITRONIC® HVN1500 4x12G 50/125 OM3	50/125 OM3	48	84	11.0
26601224	HITRONIC® HVN1500 2x12G 50/125 OM2	50/125 OM2	24	64	11.0
26601248	HITRONIC® HVN1500 4x12G 50/125 OM2	50/125 OM2	48	84	11.0
26601124	HITRONIC® HVN1500 2x12G 62.5/125 OM1	62.5/125 OM1	24	64	11.0
26601148	HITRONIC® HVN1500 4x12G 62.5/125 OM1	62.5/125 OM1	48	84	11.0
<b>Single-mode</b>					
26601912	HITRONIC® HVN1500 2x6E 9/125 OS2	9/125 OS2	24	64	11.0
26601924	HITRONIC® HVN1500 2x12E 9/125 OS2	9/125 OS2	24	64	11.0
26601948	HITRONIC® HVN1500 4x12E 9/125 OS2	9/125 OS2	48	84	11.0
26601972	HITRONIC® HVN2000 6x12E 9/125 OS2	9/125 OS2	72	119	12.6
26601996	HITRONIC® HVN2000 8x12E 9/125 OS2	9/125 OS2	96	157	14.3
26601944	HITRONIC® HVN2000 12x12E 9/125 OS2	9/125 OS2	144	181	17.0