

**HITRONIC® HVW Armoured  
Outdoor Stranded Cable**

**DB HVW3000\_EN (version 3.0)**  
valid from: 20.02.2014

**1. Product Description**

Cable designation: A-DQ(ZN)(SR)2Y

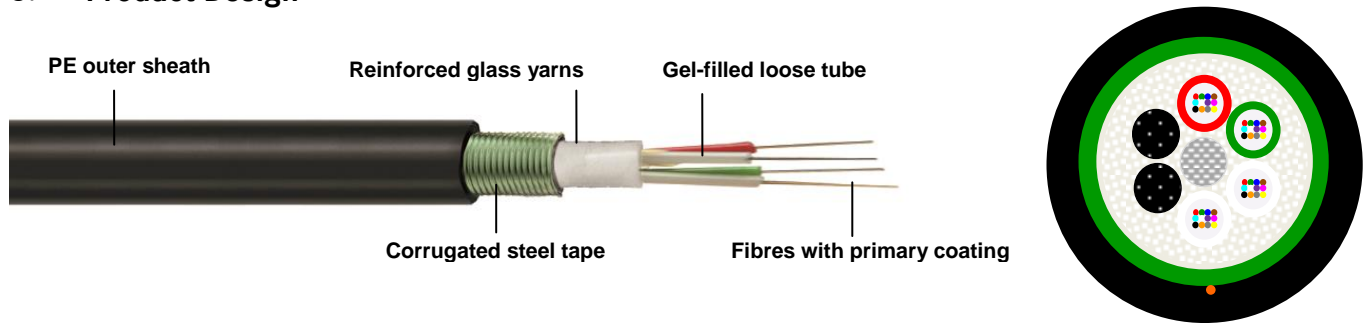
Outdoor glass fibre optic cable with corrugated steel tape armour, multiple stranded loose tube, non-metallic strength elements, longitudinally and laterally watertight, excellent rodent protection, robust and halogen-free cable sheath

**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	Stranded loose tubes with up to 144 glass fibres, 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 tube	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	Corrugated steel tape

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valid from: 20.02.2014**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	144	
Cable outer diameter (mm)	refer to Product Range Overview	
Cable weight (kg/km)	refer to Product Range Overview	
Min. bending radius (mm)	without tensile load	15 x D
	with tensile load	20 x D
Max. tensile strength (N)	long-term	3000
	short-term	5000
Max. crush resistance (N)	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**

- 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)	Weight (kg/km)
<b>Multimode</b>					
26900424	HITRONIC® HVW3000 2x12G 50/125 OM4	50/125 OM4	24	12.5	98
26900448	HITRONIC® HVW3000 4x12G 50/125 OM4	50/125 OM4	48	12.5	148
26900324	HITRONIC® HVW3000 2x12G 50/125 OM3	50/125 OM3	24	12.5	98
26900348	HITRONIC® HVW3000 4x12G 50/125 OM3	50/125 OM3	48	12.5	148
26900224	HITRONIC® HVW3000 2x12G 50/125 OM2	50/125 OM2	24	12.5	98
26900248	HITRONIC® HVW3000 4x12G 50/125 OM2	50/125 OM2	48	12.5	148
26900124	HITRONIC® HVW3000 2x12G 62.5/125 OM1	62.5/125 OM1	24	12.5	98
26900148	HITRONIC® HVW3000 4x12G 62.5/125 OM1	62.5/125 OM1	48	12.5	148
<b>Single-mode</b>					
26900924	HITRONIC® HVW3000 2x12E 9/125 OS2	9/125 OS2	24	12.5	98
26900936	HITRONIC® HVW3000 3x12E 9/125 OS2	9/125 OS2	36	12.5	148
26900948	HITRONIC® HVW3000 4x12E 9/125 OS2	9/125 OS2	48	12.5	148
26900972	HITRONIC® HVW3000 6x12E 9/125 OS2	9/125 OS2	72	16.0	215
26900996	HITRONIC® HVW3000 8x12E 9/125 OS2	9/125 OS2	96	16.0	222
26900944	HITRONIC® HVW3000 12x12E 9/125 OS2	9/125 OS2	144	18.5	261