

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

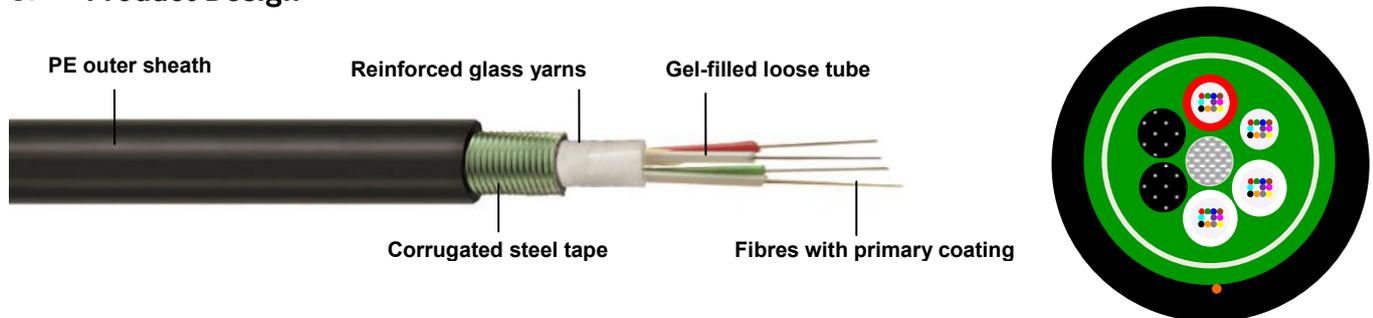
Outdoor glass fibre optic cable with corrugated steel tape armour, multiple stranded loose tube, non-metallic strength elements, longitudinally and laterally watertight, excellent rodent protection, robust and halogen-free cable sheath

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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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 |
|-----------|--|

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) |
|--------------------|--------------------------------------|--------------|---------------|--------------|----------------|
| Multimode | | | | | |
| 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 |
| Single-mode | | | | | |
| 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 |