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| 26310102                  | <b>DATA SHEET</b>        |  |
| valid from:<br>2025-12-01 | <b>HITRONIC® TORSION</b> |                                                                                     |

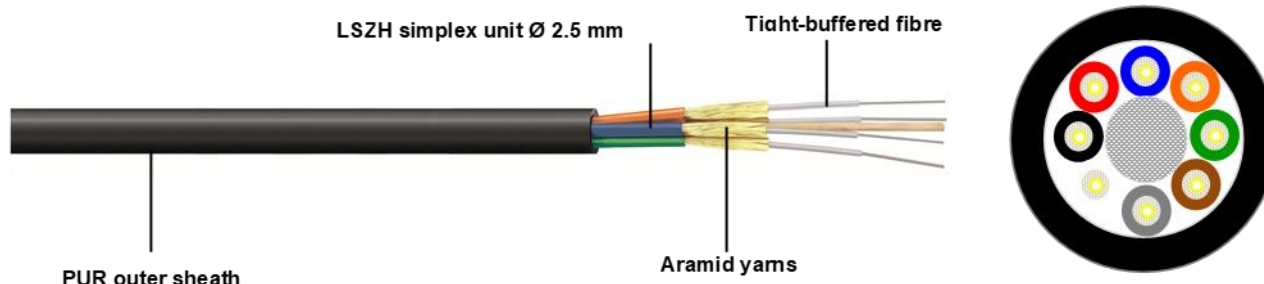
## Product Description

Cable designation: A/J-V(ZN)H11Y or U-V(ZN)H11Y

Universal mobile breakout cable for direct connector assembly (based on military norm MIL-C-85045), with up to 12 tight-buffered simplex units, flame-retardant and halogen-free sheaths, high flexibility, UV-resistant and excellent mechanical resistance

## Application

Field of use: For use in outdoors or indoors, as links between moving parts, inside wind towers  
Methods of deployment: trunking, ducts, trays, building riser, empty plastic pipes, raised floors and ple-nums for short distances



## Design

|                                 |                                                                                                                                                |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Cable core                      | Up to 12 tight-buffered simplex units enclosed by individual aramid fibres and LSZH sheaths (diameter 2.5 mm), and an overall TPU outer sheath |
| Cable inner sheath              | LSZH, halogen-free, flame-retardant, low smoke                                                                                                 |
| Cable outer sheath              | Polyurethane (TPU), halogen-free, flame-retardant, UV-resistant                                                                                |
| Colour of inner sheath          | Blue, orange, green, brown, grey, white, red, black, yellow, violet, pink, turquoise                                                           |
| Colour of outer sheath          | Black (RAL 9005)                                                                                                                               |
| Identification of simplex units | Colour-coded (refer to colour of inner sheath)                                                                                                 |
| Strain relief                   | Aramid yarns                                                                                                                                   |
| Type of armouring               | none                                                                                                                                           |

## Optical Fibre Characteristics

| 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            |             |             |               |

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

### Mechanical and Thermal Properties

|                   |               |                  |
|-------------------|---------------|------------------|
| Temperature range | Operating:    | -40 °C to +70 °C |
|                   | Installation: | 0 °C to +50 °C   |
|                   | Storage:      | -40 °C to +70 °C |

Flammability acc. to IEC 60332-1-2 resp. EN 60332-1-2

Halogen free acc. to IEC 60754-1 resp. EN 60754-1

Max. number of fibres / simplex units 12

Simplex cable diameter (mm) 2.5

Outer cable diameter (mm) refer to range overview

Cable weight refer to range overview

|                          |                      |        |
|--------------------------|----------------------|--------|
| Min. bending radius (mm) | without tensile load | 15 x D |
|                          | with tensile load    | 20 x D |

|                           |            |                            |
|---------------------------|------------|----------------------------|
| Max. tensile strength (N) | Long-term  | refer to range<br>overview |
|                           | Short-term |                            |

Max. crush resistance (N) 2000

|                  |                |          |
|------------------|----------------|----------|
| Torsional stress | torsion angle: | ± 180°/m |
|                  | torsion speed: | 360°/min |
|                  | cycles:        | 5.000    |

**General requirements** This cable is conform to EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

|                                             |                                       |             |
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## Product Range Overview

| Article number                                  | Article designation              | No. of Fibres | Outer $\varnothing$<br>(mm) | Weight<br>(kg/km) | Tensile Strength<br>long/short (N) |
|-------------------------------------------------|----------------------------------|---------------|-----------------------------|-------------------|------------------------------------|
| <b>Multimode 50/125 <math>\mu</math>m OM4</b>   |                                  |               |                             |                   |                                    |
| 26310402                                        | HITRONIC® TORSION 2G 50/125 OM4  | 2             | 8.4 $\pm$ 0.3               | 54                | 600/1000                           |
| 26310404                                        | HITRONIC® TORSION 4G 50/125 OM4  | 4             | 8.4 $\pm$ 0.3               | 54                | 800/1350                           |
| 26310408                                        | HITRONIC® TORSION 8G 50/125 OM4  | 8             | 11.6 $\pm$ 0.5              | 95                | 1600/2700                          |
| 26310412                                        | HITRONIC® TORSION 12G 50/125 OM4 | 12            | 14.7 $\pm$ 0.5              | 122               | 2400/3500                          |
| <b>Multimode 50/125 <math>\mu</math>m OM3</b>   |                                  |               |                             |                   |                                    |
| 26310302                                        | HITRONIC® TORSION 2G 50/125 OM3  | 2             | 8.4 $\pm$ 0.3               | 54                | 600/1000                           |
| 26310304                                        | HITRONIC® TORSION 4G 50/125 OM3  | 4             | 8.4 $\pm$ 0.3               | 54                | 800/1350                           |
| 26310308                                        | HITRONIC® TORSION 8G 50/125 OM3  | 8             | 11.6 $\pm$ 0.5              | 95                | 1600/2700                          |
| 26310312                                        | HITRONIC® TORSION 12G 50/125 OM3 | 12            | 14.7 $\pm$ 0.5              | 122               | 2400/3500                          |
| <b>Multimode 50/125 <math>\mu</math>m OM2</b>   |                                  |               |                             |                   |                                    |
| 26310202                                        | HITRONIC® TORSION 2G 50/125 OM2  | 2             | 8.4 $\pm$ 0.3               | 54                | 600/1000                           |
| 26310204                                        | HITRONIC® TORSION 4G 50/125 OM2  | 4             | 8.4 $\pm$ 0.3               | 54                | 800/1350                           |
| 26310208                                        | HITRONIC® TORSION 8G 50/125 OM2  | 8             | 11.6 $\pm$ 0.5              | 95                | 1600/2700                          |
| 26310212                                        | HITRONIC® TORSION 12G 50/125 OM2 | 12            | 14.7 $\pm$ 0.5              | 122               | 2400/3500                          |
| <b>Multimode 62.5/125 <math>\mu</math>m OM1</b> |                                  |               |                             |                   |                                    |
| 26310102                                        | HITRONIC® TORSION 2G 62.5/125    | 2             | 8.4 $\pm$ 0.3               | 54                | 600/1000                           |
| 26310104                                        | HITRONIC® TORSION 4G 62.5/125    | 4             | 8.4 $\pm$ 0.3               | 54                | 800/1350                           |
| 26310108                                        | HITRONIC® TORSION 8G 62.5/125    | 8             | 11.6 $\pm$ 0.5              | 95                | 1600/2700                          |
| 26310112                                        | HITRONIC® TORSION 12G 62.5/125   | 12            | 14.7 $\pm$ 0.5              | 122               | 2400/3500                          |
| <b>Single-mode 9/125 <math>\mu</math>m OS2</b>  |                                  |               |                             |                   |                                    |
| 26310902                                        | HITRONIC® TORSION 2E 9/125 OS2   | 2             | 8.4 $\pm$ 0.3               | 54                | 600/1000                           |
| 26310904                                        | HITRONIC® TORSION 4E 9/125 OS2   | 4             | 8.4 $\pm$ 0.3               | 54                | 800/1350                           |
| 26310908                                        | HITRONIC® TORSION 8E 9/125 OS2   | 8             | 11.6 $\pm$ 0.5              | 95                | 1600/2700                          |
| 26310912                                        | HITRONIC® TORSION 12E 9/125 OS2  | 12            | 14.7 $\pm$ 0.5              | 122               | 2400/3500                          |

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