

HITRONIC® TORSION

DB_HITRONIC_TORSION_EN
(version 4.0)
valid from: 01.09.2014

1. Product Description

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

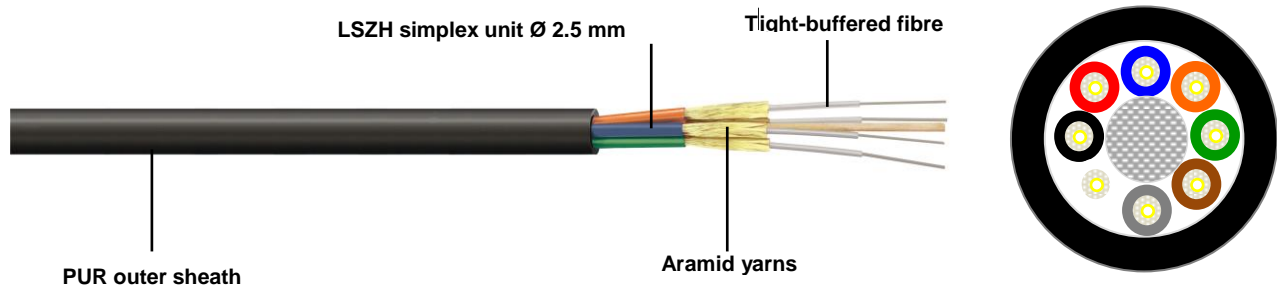
Universal mobile breakout cable for direct connector assembly (based on military norm MIL-C-85045), with up to 12 tight-buffered simplex units, flame-retardant and halogen-free sheaths, high flexibility, UV-resistant and excellent mechanical resistance

2. Application

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 plenums for short distances

3. Product Design



Cable core	Up to 12 tight-buffered simplex units enclosed by individual aramid fibres and LSZH sheaths (Ø 2.5 mm), and an overall PUR outer sheath
Cable inner sheath	LSZH, halogen-free, flame-retardant, low smoke
Cable outer sheath	Polyurethane (PUR), 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	-

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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	0°C to +50°C
Storage temperature	-40°C to +70°C

6. Mechanical Properties

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 overview
	short-term	
Max. crush resistance (N)	2000	

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7. Chemical Properties

LSZH inner sheath	Flame-retardant (IEC 60332-3), halogen-free, low smoke
PUR outer sheath	Flame-retardant (IEC 60332-3), halogen-free, UV-resistant

8. EC Directives

Not applicable for fibre optics

9. Approvals

- RoHS
- Environmental and mechanical tests comply to EN 187000 and IEC 60794
- Fire resistance tested according to IEC 60332-1, IEC 60332-3
- Halogen free according to IEC 60754-1

10. Product Range Overview

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