

Low-loss, 50 Ohm, 8 GHz, 85°C, ø12.9 mm, LSFH jacket

S_10162_B-11

Properties

- Alternative to standard SPUMA cables
- Low loss
- Low smoke
- Flame retardant
- Railway qualified



Construction			
Component	Material	Detail	Diameter
Centre conductor	Copper clad Aluminum	Wire	3.8 mm - 0.2 mm
Dielectric	SPE (Foamed Polyethylene)		9.9 mm
Outer conductor	Copper	longitudinal Foil, 100%	10 mm
Outer conductor	Copper	Braid, 80%	10.8 mm
Jacket	LSFH (modified polyethylene)	RAL 9005 - bk	12.9 mm +/- 0.2 mm

Electrical data	
Impedance	50 Ω +/- 2Ω
Operating frequency	≤ 8 GHz
Capacitance	77 pF/m
Velocity of signal propagation	87 %
Signal delay	3.85 ns/m
Screening effectiveness	90 dB at frequency 0.001 GHz ... 7.5GHz
Insulation resistance	100000000 MΩ*m
Inner conductor resistance	2.3 Ω/km
Outer conductor resistance	3.9 Ω/km
Operating Voltage (at sea level)	≤ 1.7 kVrms
Phase vs temperature	3000 ppm within the temperature range -40 ... 70 °C
Phase vs bending	2 °/GHz
Test voltage (50 Hz/1 min)	≤ 3.4 kVrms

Mechanical data	
Weight	approx. 150 g/m
Static bending radius	≥ 100 mm
Repeated bending radius	200 mm

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Environmental data	
Operation temperature	-40 °C ... 85 °C
Installation temperature	-20 °C ... 60 °C
Flame propagation standard	EN 60332-1-2 IEC 60332-3-24
Fire characteristics	free of halogenes, acc. standard IEC 60754
Smoke test	EN 61034-2
UV resistance	ISO 4892-2A

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
23002145	RoHS 2011/65/EU and (EU) 2015/863	Compliant without exemption	
	REACH 1907/2006 Article 33 SVHC	Free of SVHC >0,1%	

Additional Information
EN 45545 compliant Hazard level for indoor cables: HL3

Suitable connectors
Cable group S39

Ordering information		
Item number	Item description	Available as assembly only
23002145	S_10162_B-11	No

Power Matrix			
Calculation: typical Attenuation [formula: (a*f^0.5 + b*f)] and maximum Power CW [formula: (p/f^0.5)]			
a coefficient typical =	0.0826	b coefficient typical =	0.0129
fmax =	8	P at 1 GHz =	700
Frequency	Nom. attenuation	Nom. attenuation	CW power
GHz	(dB/m)	(dB/ft)	(W)
	sea level 25°C ambient temperature	sea level 25°C ambient temperature	sea level 40°C ambient temperature
0.10	0.027	0.008	2214
0.20	0.040	0.012	1565
0.40	0.057	0.017	1107
0.60	0.072	0.022	904
1.00	0.096	0.029	700
1.50	0.121	0.037	572
2.00	0.143	0.043	495
6.00	0.280	0.085	286
6.50	0.294	0.090	275
7.00	0.309	0.094	265
7.50	0.323	0.098	256
8.00	0.337	0.103	247

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