

Flexible RF cable

RADOX_RF_316_D **Item: 85023719**

Description

RADOX RF: Highly flame retardant LSFH alternatives to RG cables

RG316D/RD316 LSFH, 50 Ohm, 8 GHz, 105°C, ø3.2 mm,

RADOX® jacket, Flame retardant, Railway qualified



Technical Data

Construction

	Material	Detail	Diameter
Centre conductor	Steel, Copper+Silver plated	Strand-07	0.54 mm
Dielectric	SPEX (Crosslink Foam PE)		1.53 mm
Outer conductor	Copper, Silver plated	Braid, 96%	1.99 mm
Outer conductor	Copper, Silver plated	Braid, 90 %	2.44 mm
Jacket	RADOX EM104	RAL 9005 - bk	3.2 mm +/- 0.1

Print: HUBER+SUHNER RADOX_RF_316_D 50 Ohm (production order number)

Electrical Data

Impedance	50 Ω +/- 2
Operating Frequency	8 GHz
Capacitance	94.5 pF/m
Velocity of signal propagation	70.1 %
Signal delay	4.72 ns/m
Screening effectiveness	≥ 70 dB (up to 6 GHz)
Operating voltage	≤ 1.5 kV _{rms} (at sea level)
Test voltage	3 kV _{rms} (50 Hz/1 min)
Voltage Rating UL	300 V

Mechanical Data

Weight		2 kg/100 m
Min. bending radius	static	5 mm
	repeated (for ≤ 50 bendings)	30 mm

Environmental Data

Temperature range	-40 °C ... +105 °C
Installation temperature	-20 °C... +60 °C
Flame propagation test	EN 60332-1-2, EN 50305, 9.1.2, IEC 60332-3-24, UL 1581 § 1100, CFR/JAR/CS Part 25 Appendix F
Smoke density test	EN 61034-2
Halogen test	IEC 60754
Halogen free	Yes
2011/65/EU (RoHS - including 2015/863 and 2017/2102)	compliant
1907/2006/EC (REACH)	compliant
2000/53/EC (ELV)	compliant
2012/19/EU (WEEE)	no special marking needed

Additional Information

EN 45545 compliant hazard level for indoor cables: HL3 NFPA-130 compliant An operating temperature of -55°C is feasible for static applications.

Remarks

(For details refer to the HUBER+SUHNER RF CABLES GENERAL CATALOGUE or contact your nearest HUBER+SUHNER partner)

Suitable Connectors

Cable group	U4 2 mm / 50 Ohm
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Matrix typical Attenuation [formula: $(a \cdot f^{0.5} + b \cdot f)$] and maximum Power CW [formula: $(p/f^{0.5})$]

Coefficients:

a = 0.7648

b = 0.1301

f_{max} = 8

P at 1GHz = 110

Frequency	Nom. attenuation	Nom. attenuation	Max. 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
0.4	0.54	0.163	174
0.8	0.79	0.240	123
1.2	0.99	0.303	100
1.6	1.18	0.358	87
2.0	1.34	0.409	78
2.4	1.5	0.456	71
2.8	1.64	0.501	66
3.2	1.78	0.544	61
3.6	1.92	0.585	58
4.0	2.05	0.625	55
4.4	2.18	0.663	52
4.8	2.3	0.701	50
5.2	2.42	0.738	48
5.6	2.54	0.774	46
6.0	2.65	0.809	45
6.4	2.77	0.843	43
6.8	2.88	0.877	42
7.2	2.99	0.911	41
7.6	3.1	0.944	40
8.0	3.2	0.977	39