Data Sheet

HUBER+SUHNER

Flexible RF cable
RADOX_RF_58 Item: 85023726

Description

RADOX RF: Highly flame retardant LSFH alternatives to RG cables

RG58 LSFH, 50 Ohm, 3 GHz, 105°C, ø5.1 mm, RADOX® jacket, Flame retardant, Railway qualified

Technical Data

Construction

	Material	Detail	Diameter
Centre conductor	Copper, Tin plated	Strand-19	0.9 mm
Dielectric	PEX (Polyethylene cross-linked)		2.95 mm
Outer conductor	Copper, Tin plated	Braid, 96%	3.6 mm
Jacket	RADOX EM104	RAL 9005 - bk	5.1 mm +/- 0.1

Print: HUBER+SUHNER RADOX_RF_58 50 Ohm (production order number)

Electrical Data

Impedance		50 Ω +/- 2
Operating Frequency		3 GHz
Capacitance		101 pF/m
Velocity of signal propagation		66 %
Signal delay		5.05 ns/m
Screening effectiveness		≥ 40 dB (up to 2 GHz)
Operating voltage		≤ 2.5 kV_{rms} (at sea level)
Test voltage		5 kV_{rms} (50 Hz/1 min)

Mechanical Data

Weight		4.13 kg/100 m
Min. bending radius	static	25 mm
	repeated (for ≤ 50 bendings)	50 mm
	dynamic	100 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
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	U7 3 mm / 50 Ohm

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Matrix typical Attenuation [formula: (a*f^0.5 + b*f)] and maximum Power CW [formula: (p/f^0.5)]
Coefficients:

a =	0.387	b =	0.201	f_{max} =	3	P at 1GHz =	130

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
0.15	0.18	0.055	336
0.3	0.27	0.083	237
0.45	0.35	0.107	194
0.6	0.42	0.128	168
0.75	0.49	0.148	150
0.9	0.55	0.167	137
1.05	0.61	0.185	127
1.2	0.67	0.203	119
1.35	0.72	0.220	112
1.5	0.78	0.236	106
1.65	0.83	0.253	101
1.8	0.88	0.269	97
1.95	0.93	0.284	93
2.1	0.98	0.300	90
2.25	1.03	0.315	87
2.4	1.08	0.330	84
2.55	1.13	0.345	81
2.7	1.18	0.359	79
2.85	1.23	0.374	77
3.0	1.27	0.388	75