Data Sheet

HUBER+SUHNER

Flexible RF cable
SPUMA_400-FR-01

Description

Spuma: Flexible, low-loss RF cables (LMR* alternatives)

50 Ohm, 6 GHz, 85°C, ø10.25 mm, LSFH jacket, Flame retardant, Railway and CPR qualified

Technical Data

Construction

	Material	Detail	Diameter
Centre conductor	Aluminium / Copper	Wire	2.74 mm
Dielectric	SPE (Foamed Polyethylene)		7.24 mm
Outer conductor	Aluminum / PES	longitudinal Foil, 100%	7.4 mm
Outer conductor	Copper, Tin plated	Braid, 78 %	8.15 mm
Jacket	LSFH (modified polyethylene)	RAL 9005 - bk	10.25 mm +/- 0.1

Print: HUBER+SUHNER SPUMA 400-FR-01 50 Ohm Cca-s1a,d0,a1 (production order number)

Electrical Data

Impedance		50 Ω +/- 2
Operating Frequency		6 GHz
Capacitance		78 pF/m
Velocity of signal propagation		85 %
Signal delay		3.9 ns/m
Screening effectiveness		≥ 90 dB (up to 6 GHz)
Operating voltage		≤ 1.6 kV_{rms} (at sea level)
Test voltage		3 kV_{rms} (50 Hz/1 min)

Mechanical Data

Weight		11.5 kg/100 m
Min. bending radius	static	25 mm
		100 mm

Environmental Data

Temperature range	-40 °C ... +85 °C
Installation temperature	-20 °C... +60 °C
Cold bend test	MIL-C-17 § 4.8.19
Uv resistance test	ISO 4892-2A
Flame propagation test	UL 1581 § 1100, UL 1581 § 1080 (VW-1), EN 60332-1-2, EN 50266-2-5, IEC 60332-3-25
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
2011/305/EU (CPR)	compliant, Cca-s1a,d0,a1

Additional Information

EN 45545-2 compliant hazard level for indoor cables: HL3 NFPA-130 compliant An operating temperature of -55°C is feasible for static applications. *) LMR is a registered trademark of Times Microwave Inc.

Ordering Information

Order as	SPUMA_400-FR-01

Remarks

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

Suitable Connectors

Cable group	U30 7 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 =	0.1241	b =	0.008	f_{max} =	6	P at 1GHz =	600

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
0,3	0,07	0,021	1095
0,6	0,1	0,031	775
0,9	0,12	0,038	632
1,2	0,15	0,044	548
1,5	0,16	0,050	490
1,8	0,18	0,055	447
2,1	0,2	0,060	414
2,4	0,21	0,064	387
2,7	0,23	0,069	365
3,0	0,24	0,073	346
3,3	0,25	0,077	330
3,6	0,26	0,081	316
3,9	0,28	0,084	304
4,2	0,29	0,088	293
4,5	0,3	0,091	283
4,8	0,31	0,095	274
5,1	0,32	0,098	266
5,4	0,33	0,101	258
5,7	0,34	0,104	251
6,0	0,35	0,107	245