

Flexible RF cable RADOX OFL RF 214

Item: 85182102

Description

RADOX OFL RF: Oil&Gas flexible and lightweight RF cable, highly flame retardant

RG214 LSFH, 50 Ohm, 6 GHz, 105°C, ø11.1 mm, RADOX® jacket, Flame retardant, Oil&Gas qualified



Technical Data

Construction

	Material	Detail	Diameter
Centre conductor	Copper, Silver plated	Strand-07	2.25 mm
Dielectric	PE foam, eBeam Crosslink		7.28 mm
Outer conductor	Copper, Silver plated	Braid, 93%	8 mm
Outer conductor	Copper, Silver plated	Braid, 95 %	8.6 mm
Jacket	RADOX EM104	RAL 9005 - bk	11.1 mm +/- 0.1

Print: HUBER+SUHNER RADOX OFL RF 214 50 Ohm (production order number)

Electrical Data

Impedance	50 Ω +/- 2
Operating Frequency	6 GHz
Capacitance	101.4 pF/m
Velocity of signal propagation	66 %
Signal delay	5.03 ns/m
Screening effectiveness	≥ 81 dB (up to 6 GHz)
Operating voltage	≤ 5 kV _{rms} (at sea level)
Test voltage	10 kV _{rms} (50 Hz/1 min)

Mechanical Data

Weight		20.3 kg/100 m
Min. bending radius	static	50 mm
	repeated (for ≤ 50 bendings)	110 mm
	dynamic	170 mm

Environmental Data

Temperature range	-40 °C ... +105 °C
Installation temperature	-20 °C... +60 °C
Oil and mud resistance test	IEC 60092-360, NEK TS 606: 2016 (cat. a/b/c, cat. d on request) ¹
Halogen test	IEC 60754
Halogen free	Yes
Flame propagation (acc. construction)	EN 60332-1-2, EN 60332-3-25
Smoke density (acc. construction)	EN 61034-2
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

An operating temperature of -55°C is feasible for applications without mechanical loads.

Remarks

¹ Tested with BASEC (UK)

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

Suitable Connectors

Cable group	U43 7 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 = 0.2203

b = 0.0874

f_{max} = 6

P at 1GHz = 560

Frequency (GHz)	Nom. attenuation (dB / m) sea level 25° C ambient temperature	Nom. attenuation (dB / ft) sea level 25° C ambient temperature	Max. CW power (W) sea level 40° C ambient temperature
0,3	0,15	0,045	1022
0,6	0,22	0,068	723
0,9	0,29	0,088	590
1,2	0,35	0,106	511
1,5	0,4	0,122	457
1,8	0,45	0,138	417
2,1	0,5	0,153	386
2,4	0,55	0,168	361
2,7	0,6	0,182	341
3,0	0,64	0,196	323
3,3	0,69	0,210	308
3,6	0,73	0,223	295
3,9	0,78	0,236	284
4,2	0,82	0,249	273
4,5	0,86	0,262	264
4,8	0,9	0,275	256
5,1	0,94	0,287	248
5,4	0,98	0,300	241
5,7	1,02	0,312	235
6,0	1,06	0,324	229