

RADOX OFL - RG316D/RD316 LSFH, 50 Ohm, 8 GHz, 105°C, ø3.2 mm, RADOX® jacket

RADOX OFL RF 316 D

Properties

- Flexible and lightweight
- Suitable for use in applications up to 8 GHz
- Flame retardant
- Oil and mud resistance
- Oil and gas qualified
- HUBER+SUHNER RADOX® jacket material



Construction			
Component	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 mm

Electrical data	
Impedance	50 Ω +/- 2Ω
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 at frequency 0.01 GHz ... 6GHz
Insulation resistance	10000000 MΩ*m
Operating Voltage (at sea level)	≤ 1.5 kVrms
Voltage Rating UL	300 V
Test voltage (50 Hz/1 min)	≤ 3 kVrms

Mechanical data	
Weight	approx. 20 g/m
Static bending radius	≥ 5 mm
Repeated bending radius	30 mm (bendings, up to 50)

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Environmental data	
Operation temperature	-40 °C ... 105 °C
Installation temperature	-20 °C ... 60 °C
Oil and mud resistance	IEC 60092-360 NEK TS 606: 2016 (cat. a/b/c, cat. d on request)*
Flame propagation standard	(acc. construction) EN 60332-1-2 (acc. construction) EN 50305, 9.1.2
Fire characteristics	free of halogenes, acc. standard IEC 60754
Smoke test	(acc. construction) EN 61034-2
UV resistance	ISO 4892-2A

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
85182099	RoHS 2011/65/EU and (EU) 2015/863	Compliant without exemption	
	REACH 1907/2006 Article 33 SVHC	Free of SVHC >0,1%	

Additional Information

* Tested with BASEC (UK).

Flame propagation tested according to IEC 60079-1:2014 (Equipment protection by flameproof enclosures "d") with CCG A2F, gland size 0, part no. 054100, passed IIB/IIC gas test.

Suitable connectors	
Cable group	U4

Ordering information

Item number	Item description	Available as assembly only
85182099	RADOX OFL RF 316 D	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 =	0.7648	b coefficient typical =	0.1301
fmax =	8	P at 1 GHz =	110
Frequency GHz	Nom. attenuation (dB/m)	Nom. attenuation (dB/ft)	CW power (W)
	sea level 25°C ambient temperature	sea level 25°C ambient temperature	sea level 40°C ambient temperature
0.10	0.255	0.078	348
0.20	0.368	0.112	246
0.30	0.458	0.140	201
0.40	0.536	0.163	174
0.60	0.670	0.204	142
0.80	0.788	0.240	123
1.00	0.895	0.273	110
1.20	0.994	0.303	100
1.40	1.087	0.331	93
1.60	1.176	0.358	87
1.80	1.260	0.384	82
2.00	1.342	0.409	78
2.50	1.535	0.468	70
3.00	1.715	0.523	64

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Power Matrix			
3.50	1.886	0.575	59
4.00	2.050	0.625	55
5.00	2.361	0.720	49
6.00	2.654	0.809	45
7.00	2.934	0.894	42
8.00	3.204	0.977	39

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DOCUMENT PIM-P53612 / Date of publication: 21.10.2025 / uncontrolled copy