

RF LLF 1/2" SHF1

Feeder cable

50Ω

SHF1

DNV

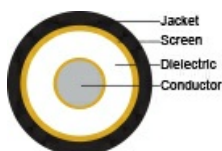
Application

Low loss flexible feeder cable designed for broadband transmission from sources like radio antennas, radars, GPS devices, mobile phone antennas to distribution systems inside ships, tunnels, buildings and underground areas where RF signals normally cannot be received.



Construction

Conductor	Copper coated Al wire 4.80 ± 0.05 [mm]
Dielectricum	Cellular PE 12.10 ± 0.30 [mm]
Screen	Corrugated Cu tube 13.90 ± 0.25 [mm]
Jacket	Black or grey SHF1
O.D.	16,40 ± 0,40 [mm]
Weight	250 [kg/km]
Jacket marking	NEK Kabel – RF LLF 1/2" 50 – SHF1 – DNV – DD/MM/YYYY – <batch no.> – ****m



Specifications

Operating temperature normal	-40 – +70 [°C]
Inductance	0.19 [μH/m]
Screen resistance	< 2.85 [Ω/km]
Peak RF voltage	1.8 [kV]
Characteristic impedance	50 ± 2 Ω
Peak power rating	32 [kW]
Conductor resistance	< 1.60 [Ω/km]
Insulation resistance	10 [GΩ x km]
Tensile strength	1100 [N]
Capacitance	76 [pF/m]
Velocity factor	88 [%]
Min. bending radius	85 [mm]
Min. bending radius flexible	135 [mm]



Norms

Halogenfree, max content corrosive and toxic gases	IEC 60754-1 & IEC 60754-2
Material properties, insulation and sheath	IEC 60092-360 (359) , NEK 606
Design and testing standards	IEC 60096-0-1 Ed 3 IEC 61196-1-100
Flame resistance	IEC 60332-3-22 Cat.A , IEC 60332-3-24 Cat.C
Flame retardant	IEC 60332-1-2
Weather resistant	ASTM G 154
Smoke emission	IEC 61034-1 & IEC 61034-2
Oil and fuel resistant	IEC 60811-2-1 Mineral Oils, IRM 902: 23°C / 7 days, 70°C / 4h Diesel, IRM 903: 23°C / 7 days, 70°C / 4h
UV-resistant	ASTM G 154
CPR classification	Dca-s1,d2,a1
Certification	DNV

Part No.	1028850-black, 1028857-grey
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NEK offers connectors for RF LLF 1/2":
Male, Part No. 65402 and Female, Part No. 65464

VSWR

Frequency [MHz]	-
260 – 300	1.15
320 – 480	1.15
820 – 960	1.15
1400 – 1650	1.18
1700 – 1900	1.18
1860 – 2100	1.18
2100 – 2250	1.18
2300 – 2500	1.18



Screening Effectiveness dB (EN 50117)

MHz	dB Ω /m
150	2.7
280	3.99
450	5.06
800	6.73
900	7.15
1500	9.33
1800	10.52
2000	11.62
2400	12.52
3000	13.46

Updated

Date	Rev.	Description
13.09.2017	1	Update outer diam.
10.10.2017	2	Update screen resistance
27.11.2017	3	Update design Norm
27.9.2019	4	Corr. approval
16.06.2020	5	Corr. approvals
11.01.2022	6	Attenuation/VSWR
22.12.2023	7	Norms