



FXL-540-NHR

FXL-540, HELIAX® Flexible Coaxial Cable, smoothwall aluminum, 1/2 in, black non-halogenated, fire retardant, low smoke, riser rated polyolefin jacket

- This product is part of the CommScope Wired for Wireless® Solution

Construction Materials

Jacket Material	Non-halogenated, fire retardant polyolefin
Outer Conductor Material	Smoothwall aluminum
Dielectric Material	Foam PE
Flexibility	Flexible
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Black

Dimensions

Nominal Size	1/2 in
Cable Weight	0.12 lb/ft 0.17 kg/m
Diameter Over Jacket	15.494 mm 0.610 in
Inner Conductor OD	0.2010 in 5.1100 mm
Outer Conductor OD	0.540 in 13.700 mm

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	23.1 pF/ft 75.8 pF/m
dc Resistance, Inner Conductor	0.420 ohms/kft 1.380 ohms/km
dc Resistance, Outer Conductor	0.630 ohms/kft 2.070 ohms/km
dc Test Voltage	2500 V
Inductance	0.190 µH/m 0.058 µH/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	100 – 8800 MHz
Peak Power	41.8 kW
Velocity	88%

Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-50 °C to +70 °C (-58 °F to +158 °F)
Storage Temperature	-55 °C to +80 °C (-67 °F to +167 °F)

General Specifications

Brand	HELIAX®
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Mechanical Specifications

Bending Moment	8.8 N-m 6.5 ft lb
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Fire Retardancy Test Method	UL 1666/CATVR/CMR
Flat Plate Crush Strength	1.7 kg/mm 90.0 lb/in
Minimum Bend Radius, Multiple Bends	203.20 mm 8.00 in
Minimum Bend Radius, Single Bend	50.80 mm 2.00 in
Number of Bends, minimum	15
Smoke Index Test Method	IEC 61034
Tensile Strength	181 kg 400 lb
Toxicity Index Test Method	IEC 60754-1 IEC 60754-2

Standard Conditions

Attenuation, Ambient Temperature	20 °C 68 °F
Average Power, Ambient Temperature	40 °C 104 °F
Average Power, Inner Conductor Temperature	100 °C 212 °F

Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
800–960 MHz	1.10	26.40
1700–2000 MHz	1.10	26.40
2300–2500 MHz	1.10	26.40

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.149	0.045	41.80
1	0.211	0.064	35.65
1.5	0.259	0.079	29.09
2	0.299	0.091	25.18
10	0.671	0.205	11.22
20	0.952	0.29	7.91
30	1.168	0.356	6.44
50	1.514	0.461	4.97
88	2.019	0.615	3.73
100	2.155	0.657	3.49
108	2.242	0.683	3.36
150	2.653	0.809	2.84
174	2.864	0.873	2.63
200	3.077	0.938	2.45
300	3.795	1.157	1.98
400	4.408	1.344	1.71
450	4.688	1.429	1.61
500	4.955	1.51	1.52
512	5.017	1.529	1.50
600	5.453	1.662	1.38
700	5.915	1.803	1.27
800	6.349	1.935	1.19
824	6.449	1.966	1.17
894	6.735	2.053	1.12
960	6.996	2.132	1.08
1000	7.15	2.179	1.05
1250	8.058	2.456	0.93
1500	8.891	2.71	0.85
1700	9.516	2.9	0.79
1800	9.817	2.992	0.77
2000	10.398	3.169	0.72
2100	10.68	3.255	0.70
2200	10.956	3.339	0.69
2300	11.227	3.422	0.67
2500	11.754	3.583	0.64
2700	12.265	3.738	0.61
3000	13.004	3.963	0.58
3400	13.945	4.25	0.54
3700	14.622	4.456	0.51
4000	15.278	4.656	0.49
5000	17.339	5.285	0.43
6000	19.25	5.867	0.39
8000	22.751	6.934	0.33
8800	24.062	7.334	0.31

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency	Classification
UL/ETL Certification	CATVR/CMR
RoHS 2002/95/EC	Compliant
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Product Specifications

COMMSCOPE®

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 on the go®

