

L4-PNRDM-30-X

LDF4-50A Jumper with interface types N Male Right Angle and 7-16 DIN Male, 9.14 m



Product Classification

Product Type SureFlex® standard

Product Series LDF4-50A

General Specifications

Attachment, Connector B Field attachment

Body Style, Connector A Right angle

Body Style, Connector B Straight

Interface, Connector A N Male

Interface, Connector B 7-16 DIN Male

Specification Sheet Revision Level A

Dimensions

Length 9.14 m | 29.987 ft

Nominal Size 1/2 in

Electrical Specifications

DTF, Connector A -32 dB

Jumper Assembly Sample Label

L4-PNRDM-30-X



Environmental Specifications

Immersion Test Method

Meets IEC 60529:2001, IP68 in mated condition

Regulatory Compliance/Certifications

Agency

ISO 9001:2015

Classification

Designed, manufactured and/or distributed under this quality management system



Included Products

- | | | |
|-----------|---|--|
| L4TDM-PS | - | 7-16 DIN Male Positive Stop™ for 1/2 in LDF4-50A cable |
| L4TDM-PSA | - | 7-16 DIN Male Positive Stop™ for 1/2 in AL4RPV-50, LDF4-50A, HL4RPV-50 cable |
| L4TNR-HC | - | Type N Male Right Angle for 1/2 in LDF4-50A cable |
| LDF4-50A | - | LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket (Halogen free jacketing non-fire-retardant) |

L4TDM-PS



7-16 DIN Male Positive Stop™ for 1/2 in LDF4-50A cable

Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX® Positive Stop™

General Specifications

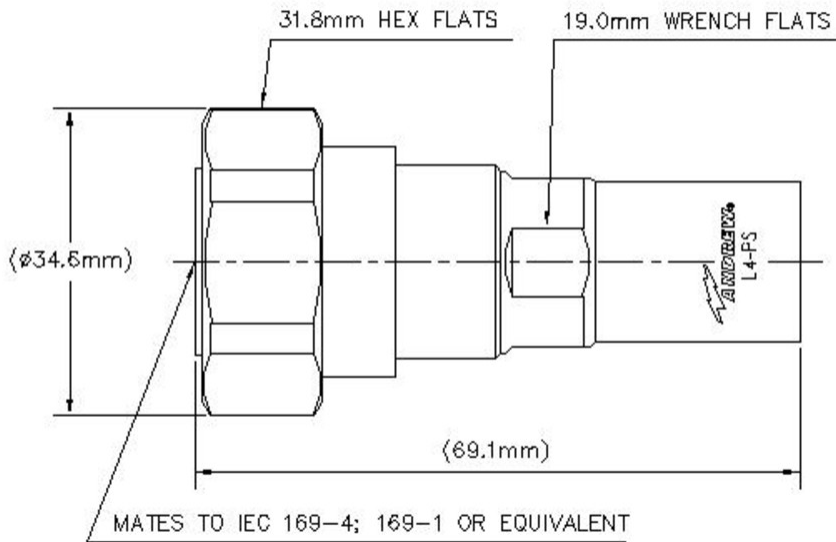
Body Style	Straight
Cable Family	LDF4-50A
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Silver
Interface	7-16 DIN Male
Mounting Angle	Straight
Outer Contact Attachment Method	Ring-flare
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Length	68.07 mm 2.68 in
Diameter	36.07 mm 1.42 in
Nominal Size	1/2 in

Outline Drawing

L4TDM-PS



Electrical Specifications

3rd Order IMD at Frequency	-120 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
Insertion Loss, typical	0.05 dB
Average Power at Frequency	1.1 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	4000 V
Inner Contact Resistance, maximum	0.8 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 8800 MHz
Outer Contact Resistance, maximum	1.5 mOhm
Peak Power, maximum	40 kW
RF Operating Voltage, maximum (vrms)	1415 V
Shielding Effectiveness	-110 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
45–1000 MHz	1.03	39

L4TDM-PS

1010–2200 MHz	1.03	37
2200–3000 MHz	1.05	33
3010–4000 MHz	1.08	29
4010–6000 MHz	1.11	26
6010–8000 MHz	1.16	23

Mechanical Specifications

Attachment Durability	25 cycles
Connector Retention Tensile Force	889.64 N 200 lbf
Connector Retention Torque	5.42 N-m 47.998 in lb
Coupling Nut Proof Torque	25 N-m 221.269 in lb
Coupling Nut Retention Force	1000 N 224.81 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.25, 4.6.22
Insertion Force	200.17 N 45 lbf
Insertion Force Method	IEC 61169-1:15.2.4
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-4:9.5
Mechanical Shock Test Method	MIL-STD-202, Method 213, Test Condition I

Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Attenuation, Ambient Temperature	20 °C 68 °F
Average Power, Ambient Temperature	40 °C 104 °F
Corrosion Test Method	MIL-STD-1344A, Method 1001.1, Test Condition A
Immersion Depth	1 m
Immersion Test Mating	Unmated
Immersion Test Method	IEC 60529:2001, IP68
Moisture Resistance Test Method	MIL-STD-202F, Method 106F
Thermal Shock Test Method	MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C
Vibration Test Method	IEC 60068-2-6
Water Jetting Test Mating	Unmated
Water Jetting Test Method	IEC 60529:2001, IP66

L4TDM-PS

Packaging and Weights

Weight, net 123 g | 0.271 lb

* Footnotes

Insertion Loss, typical 0.05v⁻freq (GHz) (not applicable for elliptical waveguide)

Immersion Depth Immersion at specified depth for 24 hours

L4TDM-PSA



7-16 DIN Male Positive Stop™ for 1/2 in AL4RPV-50, LDF4-50A, HL4RPV-50 cable

Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX® Positive Stop™
Ordering Note	CommScope® standard product (Global)

General Specifications

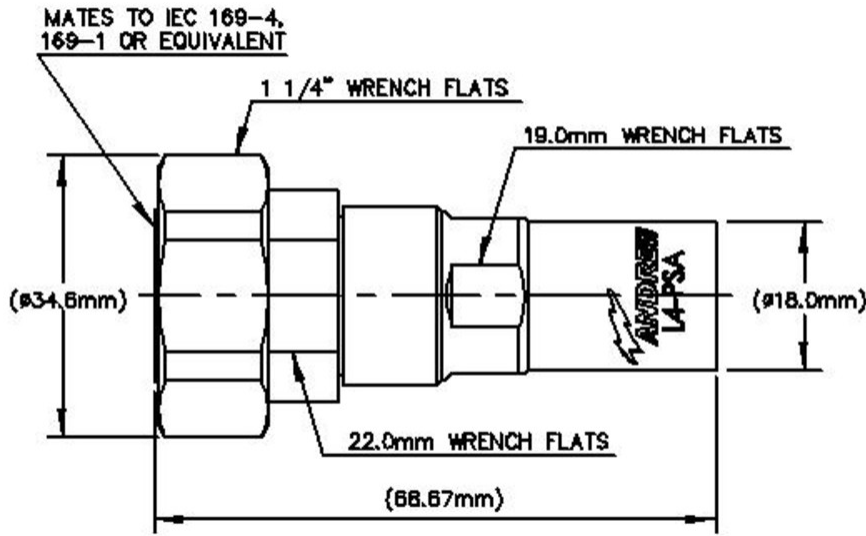
Body Style	Straight
Cable Family	AL4-50
Harmonized System (HS) Code	854420 (Coaxial cable and other coaxial electric conductors)
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Silver
Interface	7-16 DIN Male
Mounting Angle	Straight
Outer Contact Attachment Method	Ring-flare
Outer Contact Plating	Trimetal

Dimensions

Length	68.58 mm 2.7 in
Diameter	34.54 mm 1.36 in
Nominal Size	1/2 in

Outline Drawing

L4TDM-PSA



Electrical Specifications

3rd Order IMD at Frequency	-120 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
Insertion Loss, typical	0.05 dB
Average Power at Frequency	1.1 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	4000 V
Inner Contact Resistance, maximum	0.8 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 8800 MHz
Outer Contact Resistance, maximum	1.5 mOhm
Peak Power, maximum	40 kW
RF Operating Voltage, maximum (vrms)	1415 V
Shielding Effectiveness	-110 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
45–1000 MHz	1.03	39

L4TDM-PSA

1010–2200 MHz	1.03	37
2200–3000 MHz	1.05	33
3010–4000 MHz	1.08	29
4010–6000 MHz	1.11	26
6010–8000 MHz	1.16	23

Mechanical Specifications

Attachment Durability	25 cycles
Connector Retention Tensile Force	889.64 N 200 lbf
Connector Retention Torque	5.42 N-m 47.998 in lb
Coupling Nut Proof Torque	25 N-m 221.269 in lb
Coupling Nut Retention Force	1000 N 224.81 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.25, 4.6.22
Insertion Force	200.17 N 45 lbf
Insertion Force Method	IEC 61169-1:15.2.4
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-4:9.5
Mechanical Shock Test Method	MIL-STD-202, Method 213, Test Condition I

Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Corrosion Test Method	MIL-STD-1344A, Method 1001.1, Test Condition A
Immersion Depth	1 m
Immersion Test Mating	Unmated
Immersion Test Method	IEC 60529:2001, IP68
Moisture Resistance Test Method	MIL-STD-202F, Method 106F
Thermal Shock Test Method	MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C
Vibration Test Method	IEC 60068-2-6
Water Jetting Test Mating	Unmated
Water Jetting Test Method	IEC 60529:2001, IP66

Packaging and Weights

L4TDM-PSA

Weight, net

120.09 g | 0.265 lb

Regulatory Compliance/Certifications

Agency

Classification

CHINA-ROHS

Above maximum concentration value

ISO 9001:2015

Designed, manufactured and/or distributed under this quality management system

REACH-SVHC

Compliant as per SVHC revision on www.commscope.com/ProductCompliance

ROHS

Compliant/Exempted



* Footnotes

Insertion Loss, typical 0.05v~freq (GHz) (not applicable for elliptical waveguide)

Immersion Depth Immersion at specified depth for 24 hours

L4TNR-HC



Type N Male Right Angle for 1/2 in LDF4-50A cable

Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®

General Specifications

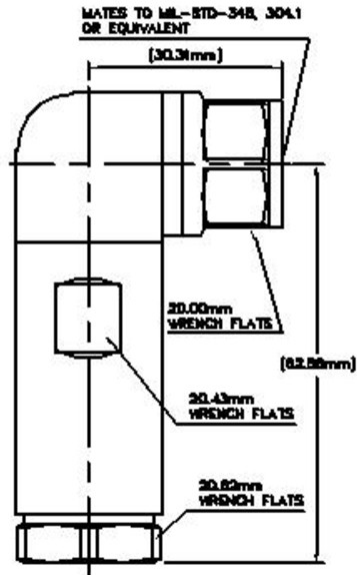
Body Style	Right angle
Cable Family	LDF4-50A
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Gold
Interface	N Male
Mounting Angle	Right angle
Outer Contact Attachment Method	Ring-flare
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Width	22.86 mm 0.9 in
Length	73.66 mm 2.9 in
Right Angle Length	41.66 mm 1.64 in
Diameter	22.86 mm 0.9 in
Nominal Size	1/2 in

Outline Drawing

L4TNR-HC



Electrical Specifications

Insertion Loss, typical	0.05 dB
Average Power at Frequency	0.6 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	2000 V
Inner Contact Resistance, maximum	2 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 8800 MHz
Outer Contact Resistance, maximum	0.3 mOhm
Peak Power, maximum	10 kW
RF Operating Voltage, maximum (vrms)	707 V
Shielding Effectiveness	-130 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0–1000 MHz	1.07	30
1000–2170 MHz	1.12	25

Mechanical Specifications

L4TNR-HC

Attachment Durability	25 cycles
Connector Retention Tensile Force	889.64 N 200 lbf
Connector Retention Torque	5.42 N-m 47.998 in lb
Coupling Nut Proof Torque	4.52 N-m 39.997 in lb
Coupling Nut Retention Force	444.82 N 100 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.25, 4.6.22
Insertion Force	66.72 N 15 lbf
Insertion Force Method	MIL-C-39012C-3.12, 4.6.9
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-16:9.5
Mechanical Shock Test Method	MIL-STD-202, Method 213, Test Condition I

Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Attenuation, Ambient Temperature	20 °C 68 °F
Average Power, Ambient Temperature	40 °C 104 °F
Corrosion Test Method	MIL-STD-1344A, Method 1001.1, Test Condition A
Immersion Depth	1 m
Immersion Test Mating	Mated
Immersion Test Method	IEC 60529:2001, IP68
Moisture Resistance Test Method	MIL-STD-202F, Method 106F
Thermal Shock Test Method	MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C
Vibration Test Method	IEC 60068-2-6
Water Jetting Test Mating	Mated
Water Jetting Test Method	IEC 60529:2001, IP66

Packaging and Weights

Weight, net	204.49 g 0.451 lb
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* Footnotes

Insertion Loss, typical	0.05v̄freq (GHz) (not applicable for elliptical waveguide)
Immersion Depth	Immersion at specified depth for 24 hours

LDF4-50A



LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket (Halogen free jacketing non-fire-retardant)

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	LDF4-50A
Ordering Note	CommScope® standard product (Global)

General Specifications

Flexibility	Standard
Jacket Color	Black

Dimensions

Diameter Over Dielectric	12.954 mm 0.51 in
Diameter Over Jacket	15.875 mm 0.625 in
Inner Conductor OD	4.826 mm 0.19 in
Outer Conductor OD	13.97 mm 0.55 in
Nominal Size	1/2 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	75.8 pF/m 23.104 pF/ft
dc Resistance, Inner Conductor	1.48 ohms/km 0.451 ohms/kft
dc Resistance, Outer Conductor	2.69 ohms/km 0.82 ohms/kft
dc Test Voltage	4000 V
Inductance	0.19 µH/m 0.058 µH/ft
Insulation Resistance	100000 MOhms-km
Jacket Spark Test Voltage (rms)	8000 V

LDF4-50A

Operating Frequency Band	1 – 8800 MHz
Peak Power	40 kW
Velocity	88 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.13	24.3
800–960 MHz	1.13	24.3
1700–2200 MHz	1.13	24.3
2300–2700 MHz	1.13	24.3
3400–3800 MHz	1.26	19

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.211	0.064	36.11
1.5	0.259	0.079	29.46
2.0	0.299	0.091	25.5
10.0	0.672	0.205	11.35
20.0	0.954	0.291	7.99
30.0	1.172	0.357	6.51
50.0	1.521	0.463	5.02
85.0	1.995	0.608	3.82
88.0	2.031	0.619	3.76
100.0	2.169	0.661	3.52
108.0	2.256	0.688	3.38
150.0	2.673	0.815	2.85
174.0	2.887	0.88	2.64
200.0	3.103	0.946	2.46
204.0	3.135	0.956	2.43
300.0	3.835	1.169	1.99
400.0	4.462	1.36	1.71
450.0	4.749	1.447	1.61
460.0	4.804	1.464	1.59
500.0	5.021	1.53	1.52
512.0	5.085	1.55	1.5

LDF4-50A

600.0	5.533	1.686	1.38
700.0	6.009	1.831	1.27
800.0	6.456	1.968	1.18
824.0	6.56	1.999	1.16
894.0	6.855	2.089	1.11
960.0	7.124	2.171	1.07
1000.0	7.284	2.22	1.05
1218.0	8.11	2.472	0.94
1250.0	8.226	2.507	0.93
1500.0	9.093	2.771	0.84
1700.0	9.744	2.97	0.78
1794.0	10.039	3.06	0.76
1800.0	10.058	3.066	0.76
2000.0	10.666	3.251	0.72
2100.0	10.961	3.341	0.7
2200.0	11.251	3.429	0.68
2300.0	11.535	3.516	0.66
2500.0	12.09	3.685	0.63
2700.0	12.627	3.849	0.6
3000.0	13.407	4.086	0.57
3400.0	14.401	4.389	0.53
3600.0	14.882	4.536	0.51
3700.0	15.118	4.608	0.5
3800.0	15.353	4.679	0.5
3900.0	15.585	4.75	0.49
4000.0	15.815	4.82	0.48
4100.0	16.042	4.889	0.48
4200.0	16.268	4.958	0.47
4300.0	16.492	5.027	0.46
4400.0	16.714	5.094	0.46
4500.0	16.934	5.161	0.45
4600.0	17.153	5.228	0.44
4700.0	17.37	5.294	0.44
4800.0	17.585	5.36	0.43
4900.0	17.798	5.425	0.43

LDF4-50A

5000.0	18.01	5.489	0.42
6000.0	20.055	6.113	0.38
8000.0	23.826	7.262	0.32
8800.0	25.244	7.694	0.3

Material Specifications

Dielectric Material	Foam PE
Jacket Material	PE
Inner Conductor Material	Copper-clad aluminum wire
Outer Conductor Material	Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends	127 mm 5 in
Minimum Bend Radius, single Bend	50.8 mm 2 in
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	113 kg 249.122 lb
Bending Moment	3.8 N-m 33.633 in lb
Flat Plate Crush Strength	2 kg/mm 111.995 lb/in

Environmental Specifications

Installation temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)
Attenuation, Ambient Temperature	68 °F 20 °C
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C

Packaging and Weights

Cable weight	0.22 kg/m 0.148 lb/ft
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Regulatory Compliance/Certifications

Agency	Classification
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available
CHINA-ROHS	Below maximum concentration value

LDF4-50A

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system
REACH-SVHC Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS Compliant

