

HELIAX® Coaxial Cables

416951 LDF7-50A HELIAX

LDF7-50A

Cable Ordering Information

Description	Type No.
Standard Cable	
1-5/8" Standard Cable, Standard Jacket	LDF7-50A
Fire Retardant Cable	
1-5/8" Fire Retardant Jacket (CATVR)	LDF7RN-50A
Low VSWR Cables	
1-5/8" Low VSWR, specify operating band	LDF7P-50A-(**)
Cable for Cellular, standard jacket	
824-894 MHz, 1.20 VSWR, max.	LDF7P-50A-1A
880-960 MHz, 1.20 VSWR, max.	LDF7P-50A-3A
870-960 MHz, 1.10 VSWR, max. (up to 300 ft)	LDF7P-50A-2A
Cable for Cellular, fire retardant jacket (CATVR)	
824-894 MHz, 1.20 VSWR, max.	41690-73
Qualified to MIL-C-28830/5	202071-3

** Insert suffix number from "Low VSWR Specifications" table.

Characteristics

Electrical	
Impedance, ohms	50 ± 1
Maximum Frequency, GHz	2.5
Velocity, percent	88
Peak Power Rating, kW	315
dc Resistance, ohms/1000 ft (1000 m)	
Inner	0.21 (0.69)
Outer	0.10 (0.33)
dc Breakdown, volts	11000
Jacket Spark, volts RMS	10000
Capacitance, pF/ft (m)	23.1 (75.8)
Inductance, µH/ft (m)	0.058 (0.190)
Mechanical	
Outer Conductor	Copper
Inner Conductor	Copper
Diameter over Jacket, in (mm)	1.98 (50)
Diameter over Copper Outer Conductor, in (mm)	1.83 (46.5)
Diameter Inner Conductor, in (mm)	0.681 (17.3)
Nominal Inside Transverse Dimensions (cm)	(4.05)
Minimum Bending Radius, in (mm)	20 (510)
Number of Bends, minimum (typical)	15 (50)
Bending Moment, lb-ft (N·m)	50 (68)
Cable Weight, lb/ft (kg/m)	0.92 (1.36)
Tensile Strength, lb (kg)	1000 (455)
Flat Plate Crush Strength, lb/in (kg/mm)	150 (2.7)

Attenuation and Average Power

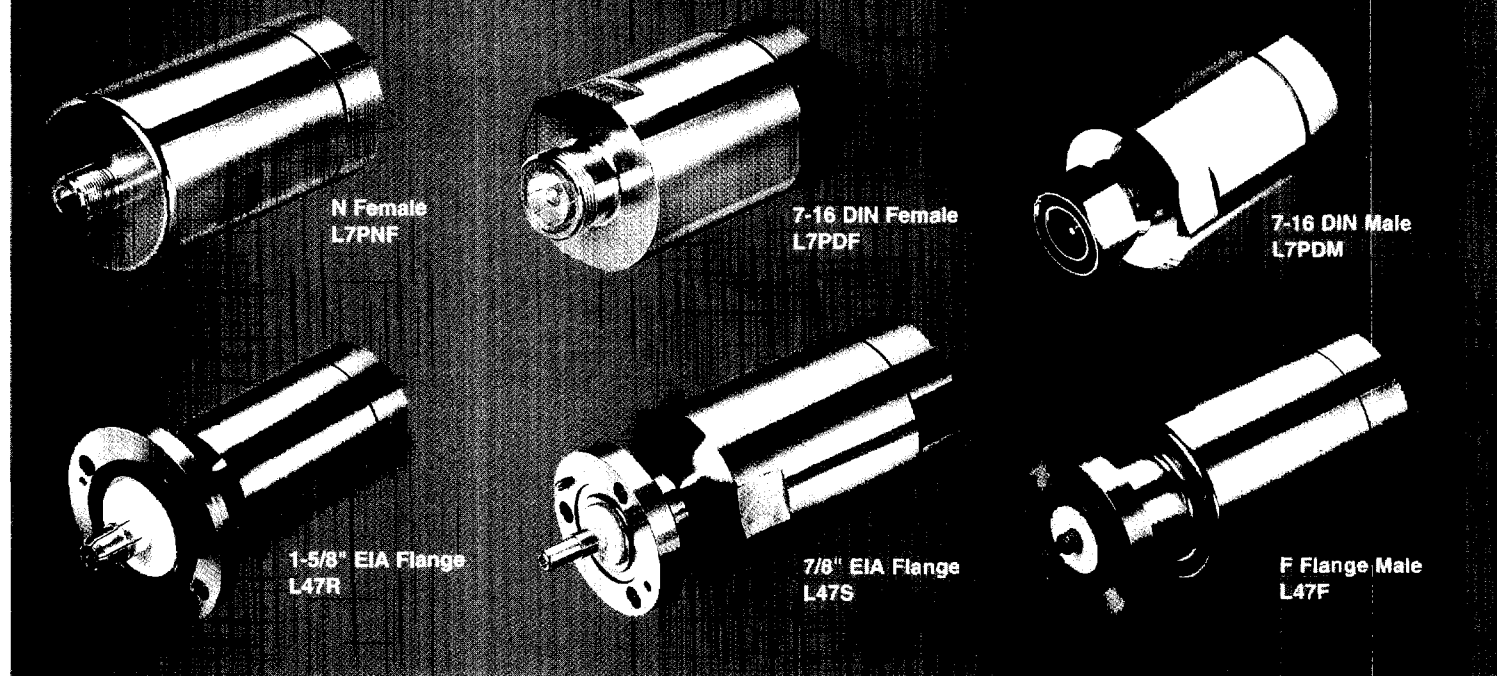
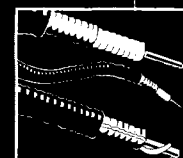
Frequency MHz	Attenuation dB/100 ft	Attenuation dB/100m	Average Power kW
0.5	0.015	0.048	231
1	0.021	0.069	163
1.5	0.026	0.085	133
2	0.030	0.098	115
10	0.068	0.223	50.8
20	0.097	0.319	35.6
30	0.120	0.394	28.9
50	0.156	0.512	22.1
88	0.210	0.690	16.4
100	0.225	0.738	15.3
108	0.235	0.769	14.7
150	0.280	0.919	12.3
174	0.304	0.997	11.3
200	0.328	1.08	10.5
300	0.411	1.35	8.42
400	0.482	1.58	7.17
450	0.515	1.69	6.71
500	0.547	1.79	6.31
512	0.556	1.82	6.23
600	0.607	1.99	5.69
700	0.664	2.18	5.20
800	0.718	2.36	4.81
824	0.731	2.40	4.73
894	0.767	2.52	4.51
960	0.800	2.62	4.32
1000	0.819	2.69	4.22
1250	0.936	3.07	3.69
1500	1.05	3.44	3.30
1700	1.13	3.72	3.06
2000	1.25	4.10	2.76
2300	1.37	4.48	2.53
2500	1.44	4.72	2.40

Standard Conditions:

For Attenuation. VSWR 1.0 ambient temperature 24°C (75°F), atmospheric pressure, dry air.

For Average Power, VSWR 1.0, inner temperature 100°C (212°F), ambient temperature 40°C (104°F), atmospheric pressure, dry air, no solar loading.

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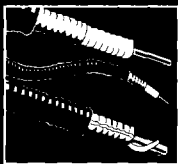
Connectors

Interface	Description	Type Number	Previous Type Number	Inner Contact Attachment	Outer Contact Attachment	Plating Code	Max. Length in (mm)	Max. Dia in (mm)
N Male		L7PNM		Self-Tapping	Self-Flare	SG	4.8 (122)	2.4 (61)
N Male	Hex Head	L7PNM-H		Self-Tapping	Self-Flare	SG	5.0 (127)	2.38 (60.5)
N Female	Bulkhead	L7NF-BH	200220	Tab Flare	Self-Flare	BB	4.8 (122)	2.4 (61)
N Female		L7PNF	L47APN	Self-Tapping	Self-Flare	SG	4.8 (122)	2.4 (61)
7-16 DIN Male		L7PDM	L47ADM	Self-Tapping	Self-Flare	SS	5.3 (135)	2.4 (61)
7-16 DIN Female		L7PDF	L47ADF	Self-Tapping	Self-Flare	SS	5.3 (135)	2.4 (61)
7-16 DIN Female	Bulkhead	L7PDF-BH		Self-Tapping	Self-Flare	SS	4.7 (118)	2.37 (60.1)
1-5/8" EIA Flange		L47R		Tab Flare	Self-Flare	BB	5.1 (130)	3.5 (89)
7/8" EIA Flange		L47S		Tab Flare	Self-Flare	BB	5.1 (130)	2.25 (57)
F Flange Male		L47F		Tab Flare	Self-Flare	BB	5.9 (150)	2.25 (57)
F Flange Female		201942		Tab Flare	Self-Flare	BB	5.5 (140)	2.25 (57)
LC Male		L47M		Tab Flare	Self-Flare	BB	5.3 (135)	2.4 (61)
LC Female		L47L		Tab Flare	Self-Flare	BB	4.8 (122)	2.4 (61)
Splice		L47Z		Tab Flare	Self-Flare	BB	5.1 (130)	2.9 (74)

Plating Codes: BB - Brass Body and Pin, SG - Silver Plated Body and Gold Plated Pin, SS - Silver Plated Body and Pin

Connector Accessories

	Type Number
Connector Pin-Paks, two replacement pins	
For L7PNF	241056
For L7PNM	243371
Connector Reattachment Kit for L47 Series	34767A-35
7/8" EIA Gas Barrier	1260A
1-5/8" EIA Gas Barrier	1261B
1-5/8" EIA End Terminal, for strap connection to center conductor, includes inner connector. Use with L47R.	2061
Elbow, F Flange male and F Flange female	203361
Test Adapter, F Flange female and Type N female. For testing of feeder terminated with F Flange female	104300-2



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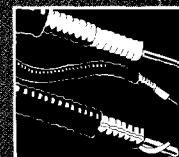
Low VSWR Specifications, Type LDF7P-50A-()

Frequency Band, GHz	Type No.	Using Connector Type**	Assembly VSWR, Maximum (R.L., dB)				
			1-25 ft (0.3-8 m)	25-100 ft (8-30 m)	100-200 ft (30-60 m)	200-500 ft (60-150 m)	Above 500 ft (150 m)
0.824-0.894	LDF7P-50A-1A	N: L7PNF, L7PNM	1.06 (30.7)	1.08 (28.3)	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)
		7-16 DIN Male: L7PDM	1.06 (30.7)	1.08 (28.3)	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)
		N Female: L7NFBH	1.08 (28.3)	1.10 (26.4)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		7/8" EIA: L47S	1.08 (28.3)	1.10 (26.4)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		"F" Flange Female: 201942	1.09 (27.3)	1.12 (24.9)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)
		7-16 DIN Female: L7PDF	1.10 (26.4)	1.13 (24.3)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)
		LC Female: L47L	1.12 (24.9)	1.14 (23.7)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)
		1-5/8" EIA: L47R	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)
		"F" Flange Male: L47F	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.28 (18.2)
		LC Male: L47M	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.30 (17.7)	1.30 (17.7)
0.824-0.960 and 1.85-1.99	LDF7P-50A-17A	N Male	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		N Females	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		7-16 DIN Males	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		7-16 DIN Females	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
0.870-0.960	LDF7P-50A-2A	N: L7PNF, L7PNM	1.08 (28.3)	1.09 (27.3)	1.10 (26.4)	1.10 (26.4)	1.20 (20.8)
		7-16 DIN Male: L7PDM	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)
		N Female: L7NFBH	1.08 (28.3)	1.10 (26.4)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		7/8" EIA: L47S	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		"F" Flange Female: 201942	1.10 (26.4)	1.12 (24.9)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)
		7-16 DIN Female: L7PDF	1.10 (26.4)	1.13 (24.3)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)
		LC Female: L47L	1.12 (24.9)	1.14 (23.7)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)
		1-5/8" EIA: L47R	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)
		"F" Flange Male: L47F	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.28 (18.2)
		LC Male: L47M	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.30 (17.7)	1.30 (17.7)
0.880-0.960	LDF7P-50A-3A	N: L7PNF, L7PNM	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		7-16 DIN Male: L7PDM	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		N Female: L7NFBH	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		7/8" EIA: L47S	1.12 (24.9)	1.14 (23.7)	1.15 (23.1)	1.20 (20.8)	1.20 (20.8)
		"F" Flange Female: 201942	1.12 (24.9)	1.14 (23.7)	1.15 (23.1)	1.20 (20.8)	1.20 (20.8)
		7-16 DIN Female: L7PDF	1.13 (24.3)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.20 (20.8)
		LC Female: L47L	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)
		1-5/8" EIA: L47R	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)
		"F" Flange Male: L47F	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.28 (18.2)
		LC Male: L47M	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.30 (17.7)	1.30 (17.7)
1.427-1.535	LDF7P-50A-4A	N: L7PNF, L7PNM	1.06 (30.7)	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)
		7-16 DIN Male: L7PDM	1.06 (30.7)	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)
		N Female: L7NFBH	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		7/8" EIA: L47S	1.06 (30.7)	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)
		"F" Flange Female: 201942	1.10 (26.4)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)
		7-16 DIN Female: L7PDF	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		LC Female: L47L	1.10 (26.4)	1.12 (24.9)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)
		1-5/8" EIA: L47R	1.10 (26.4)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.22 (20.1)
		"F" Flange Male: L47F	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)
		LC Male: L47M	1.30 (17.7)	1.32 (17.2)	1.35 (16.5)	1.38 (15.9)	1.40 (15.6)
1.7-1.9	LDF7P-50A-5A	N: L7PNF, L7PNM	1.06 (30.7)	1.08 (28.3)	1.08 (28.3)	1.10 (26.4)	1.10 (26.4)
		7-16 DIN Male: L7PDM	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		N Female: L7NFBH	1.10 (26.4)	1.12 (24.9)	1.14 (23.7)	1.15 (23.1)	1.15 (23.1)
		7/8" EIA: L47S	1.06 (30.7)	1.08 (28.3)	1.08 (28.3)	1.10 (26.4)	1.10 (26.4)
		"F" Flange Female: 201942	1.20 (20.8)	1.22 (20.1)	1.24 (19.4)	1.25 (19.1)	1.25 (19.1)
		7-16 DIN Female: L7PDF	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		LC Female: L47L	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)
		1-5/8" EIA: L47R	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)
		"F" Flange Male: L47F	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.25 (19.1)	1.25 (19.1)
1.7-2.11	LDF7P-50A-6A	N: L7PNF, L7PNM	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		7-16 DIN Male: L7PDM	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)
		N Female: L7NFBH	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)
		7/8" EIA: L47S	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		"F" Flange Female: 201942	1.30 (17.7)	1.32 (17.2)	1.35 (16.5)	1.38 (15.9)	1.40 (15.6)
		7-16 DIN Female: L7PDF	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)
		LC Female: L47L	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)
		1-5/8" EIA: L47R	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)
		"F" Flange Male: L47F	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.25 (19.1)

* Specify operating band ** Connectors ordered separately

Continued on next page

VSWR values are guaranteed for factory fit assemblies and are typical for field cut lengths. If two different connector interfaces are selected, the higher VSWR value is guaranteed.



Low VSWR Specifications, Type LDF7P-50A-()

Frequency Band, GHz	Type No.	Using Connector Type**	1-25 ft (0.3-8 m)	25-100 ft (8-30 m)	100-200 ft (30-60 m)	200-500 ft (60-150 m)	Above 500 ft (150 m)
1.85-2.11	LDF7P-50A-7A	N: L7PNF, L7PNM	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		7-16 DIN Male: L7PDM	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)
		N Female: L7NFBH	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)
		7/8" EIA: L47S	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		"F" Flange Female: 201942	1.20 (20.8)	1.22 (20.1)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)
		7-16 DIN Female: L7PDF	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)
		LC Female: L47L	1.30 (17.7)	1.32 (17.2)	1.35 (16.5)	1.38 (15.9)	1.40 (15.6)
		1-5/8" EIA: L47R	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)
1.9-2.3	LDF7P-50A-8A	"F" Flange Male: L47F	1.12 (24.9)	1.15 (23.1)	1.18 (21.6)	1.20 (20.8)	1.25 (19.1)
		N: L7PNF, L7PNM	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		7-16 DIN Male: L7PDM	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)	1.25 (19.1)
		N Female: L7NFBH	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)	1.32 (17.2)	1.35 (16.5)
		7/8" EIA: L47S	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		"F" Flange Female: 201942	1.30 (17.7)	1.35 (16.5)	1.40 (15.6)	1.45 (14.8)	1.50 (14.0)
		7-16 DIN Female: L7PDF	1.20 (20.8)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)	1.35 (16.5)
		LC Female: L47L	1.25 (19.1)	1.30 (17.7)	1.35 (16.5)	1.40 (15.6)	1.40 (15.6)
2.1-2.2	LDF7P-50A-9A	1-5/8" EIA: L47R	1.20 (20.8)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)	1.35 (16.5)
		"F" Flange Male: L47F	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)
		N: L7PNF, L7PNM	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		7-16 DIN Male: L7PDM	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)	1.25 (19.1)
		N Female: L7NFBH	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)	1.32 (17.2)	1.35 (16.5)
		7/8" EIA: L47S	1.08 (28.3)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		"F" Flange Female: 201942	1.30 (17.7)	1.35 (16.5)	1.40 (15.6)	1.45 (14.8)	1.50 (14.0)
		7-16 DIN Female: L7PDF	1.20 (20.8)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)	1.35 (16.5)
0.01-2.5	LDF7P-50A-10A	LC Female: L47L	1.25 (19.1)	1.30 (17.7)	1.35 (16.5)	1.40 (15.6)	1.40 (15.6)
		1-5/8" EIA: L47R	1.15 (23.1)	1.20 (20.8)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)
		"F" Flange Male: L47F	1.20 (20.8)	1.25 (19.1)	1.28 (18.2)	1.30 (17.7)	1.35 (16.5)
		N: L7PNF, L7PNM	1.10 (26.4)	1.20 (20.8)	1.30 (17.7)	1.55 (13.3)	1.65 (12.2)
		7-16 DIN Male: L7PDM	1.10 (26.4)	1.20 (20.8)	1.30 (17.7)	1.60 (12.7)	1.65 (12.2)
		7/8" EIA: L47S	1.10 (26.4)	1.20 (20.8)	1.30 (17.7)	1.55 (13.3)	1.65 (12.2)
		7-16 DIN Female: L7PDF	1.15 (23.1)	1.25 (19.1)	1.35 (16.5)	1.65 (12.2)	1.75 (11.3)
		1-5/8" EIA: L47R	1.15 (23.1)	1.25 (19.1)	1.35 (16.5)	1.65 (12.2)	1.75 (11.3)
		"F" Flange Male: L47F	1.10 (26.4)	1.20 (20.8)	1.30 (17.7)	1.55 (13.3)	1.65 (12.2)

* Specify operating band ** Connectors ordered separately

VSWR values are guaranteed for factory fit assemblies and are typical for field cut lengths. If two different connector interfaces are selected, the higher VSWR value is guaranteed.

Accessories – Photos and descriptions on pages 544-572

Description	Type No.	Description	Type No.
Hangers and Adapters - for more hangers and adapters see pages 547-557.		SureGround™ Grounding Kit, with tape weatherproofing kit.	
Standard Hangers and Adapters Standard Hanger Kit of 10. <i>Standard tower configuration spacing is 3-4 feet (1-1.2 m).</i> Recommended maximum spacing for outdoor installation is 6 ft (1.83 m) at 125 mph (200 km/h) wind, 1/2" (13 mm) radial ice. For different wind and ice loading spacing recommendations, refer to Cable Hanger Spacing, page 547.	42396A-2	factory attached, one-hole lug, 600 mm lead	SGL7-06B1
Hardware Kit of 10, 3/8" bolts, lock washers, nuts 3/4" (19 mm) long 1" (25) mm long	31769-5 31769-1	factory attached, two-hole lug, 600 mm lead	SGL7-06B2
Angle Adapter, kit of 10. Stainless Steel Galvanized Galvanized, metric hardware	31768A 242774 242774-M	field attachable crimp-on, one-hole lug, 1000 mm lead	SGL7-10B3
Round Member Adapter Kit of 10. Stainless steel Member Diameter, in (mm) 1-2 (25-50) 2-3 (50-75) 3-4 (75-100) 4-5 (100-125) 5-6 (125-150) 6-8 (150-200)	31670-1 31670-2 31670-3 31670-4 31670-5 31670-6	field attachable crimp-on, two-hole lug, 1500 mm lead	SGL7-10B4 SGL7-15B4
Snap-In Hangers and Adapters Snap-In Hanger Kit of 10. For prepunched 3/4 in (19 mm) holes on tower members or adapters below. <i>Standard tower configuration spacing is 3-4 feet (1-1.2 m).</i> Recommended maximum spacing for outdoor installation is 4 ft (1.22 m) at 125 mph (200 km/h) wind, 1/2" (13 mm) radial ice. For different wind and ice loading spacing recommendations, refer to Cable Hanger Spacing, page 547.	206706-4	Grounding Kit factory attached, one-hole lug, 24 in (610 mm) lead factory attached, two-hole lug, 24 in (610 mm) lead field attachable crimp-on, one-hole lug, 36 in (915 mm) lead field attachable crimp-on, two-hole lug, 36 in (915 mm) lead	204989-4 241088-4 204989-24 241088-9 207270
Tower Hanger/Adapter, attaches to existing angle tower members 1 cable run, 1 connection required 4 cable runs, 2 connections required 8 cable runs, 3 connections required	206929-1 206929-4 206929-8	Crimping Tool to field attach lug to Grounding Kit	
J-Bolt Hardware Kit of 10 for use with Tower/Hanger Adapter	206930	Arrestor Plus® Lightning Surge Protector Connector/surge protector. #,* <i>Interface and frequency band information.</i> <i>See page 562 for details and more interface types.</i>	APPL7-#-*
Hanger Blox™ Kit of 3. Injection molded plastic, stackable. 2 runs per unit; 6 runs per bundle. <i>Standard tower configuration spacing is 3-4 feet (1-1.2 m).</i> Recommended maximum spacing for outdoor installation is 6 ft (1.83 m) at 125 mph (200 km/h) wind, 1/2" (13 mm) radial ice, bolted to tower. For different mounting, wind and ice loading spacing recommendations, refer to Cable Hanger Spacing, page 547. See page 557 for supporting accessories.	HB-7	Arrestor Plus T-Series Lightning Surge Protector Connectors on each end (universal version). Non-directional #,* <i>Interface and frequency band information.</i> <i>See page 563 for details.</i>	APT-#-*
Hanger Blox Hardware Kit. Starter Kit Extender Kit	HBSH-7 HBEH-7	Gas Tube Surge Arrestor Connectors on each end (universal version). Directional, dc pass capability #,* <i>Interface and frequency band information.</i> <i>See page 564 for details.</i>	SA-#-*
Insulated Hangers and Adapters - please refer to pages 554-555.		Weatherproofing - for more information, see page 565.	
Support/Hoisting Grip. Use at 200 ft (60 m) intervals. Grip with one clamp Support clamp kit of 10 Installation tool with 10 support clamps	L7SGRIP L7SGRIP-71K L7SGRIP-71KT 24312A	Cold Shrink Weatherproofing Kit 1-5/8" Coax-Type N to 1/2" Coax-Type N 1-5/8" Coax-Type N to 7/8" Coax-Type N 1-5/8" Coax-Type N to 1-5/8" Coax-Type N 1-5/8" Coax-7-16 DIN to 1/2" LDF4 - 7-16 DIN 1-5/8" Coax-7-16 DIN to 1/2" FSJ4 - 7-16 DIN AAPL7 to 1-5/8" LDF7-50A	241475-2 241475-3 241474-6 241475-5 241475-7 241474-6
Hoisting Grip		Connector/Splice Weatherproofing Kit	221213
Grounding and Surge Protection - for more information, see pages 559-564.		Entry Systems - for more information, see pages 566-567.	
		Wall/Roof Feed-Thru	40656A-2
		Feed-Thru Plates and Boots. Order separately.	
		Openings	Plates For 4 in Boots Plates For 5 in Boots
		1	204673-1 48940-1
		1	204673-2
		2	
		3	48940-2
		4	48940-3
		6	48940-4
		8	48940-6
		12	
		4 in Boots	5 in Boots
		One Hole: 204679-4	48939-1
		ArrestorPort Plus™. Wall entry plate and integrated ground bar assembly. Use with Arrestor Plus surge protector series. Available in many configurations see page 562 for available options and ordering information. * <i>Number of surge arrestor openings in the plate.</i> ** <i>Number of cable feed thru ports at the top.</i>	APPORT-(*)-(**)
		Tools - for more tools see page 569.	
		Installer Pax™. Bulk packs are available for some hangers, adapters, grounding kits and cold shrink weatherproofing kits. See page 570.	