

Accessories

Connector

7/16 DIN Series

N Series

Adaptors

Cable Cutting Tool

Surge Arrestor

Jumper Cable

Dummy Load

Grounding Kit

Single Hanger Clamp Set

Double Hanger Clamp Set

Hoisting Grip

Weatherproofing Kit

Entry Port System

Cushion and Boot



Connector

7/16 DIN Series / N Series Connectors / Tool



Description

RF connector with 7/16 DIN & N interface is very typical type for communication systems. LS connectors are designed and produced to have features as below.

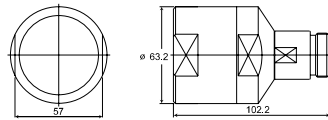
- Excellent V.S.W.R Performance
- Very Low Intermodulation
- Fast and Easy Installation
- Waterproof
- Environment Resistance Ensures Long Life and Consistent Performance

Products Overview

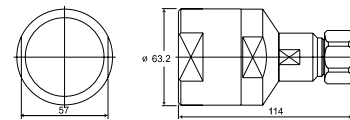
φ	Cable	Cable Description	N Connector		7/16 DIN Connector	
			Male	Female	Male	Female
1/4"	HFSC-FR 6D	Super Flex. 1/4"	CHFS 6NM	CHFS 6NF	CHFS 6DM	CHFS 6DF
			CHFS 6NMR	CHFS 6NFR	CHFS 6DMR	CHFS 6DFR
3/8"	HFSC-FR 10D	Super Flex. 3/8"	CHFS 10NM	CHFS 10NF	CHFS 10DM	CHFS 10DF
			CHFS 10NMR	CHFS 10NFR	CHFS 10DMR	CHFS 10DFR
1/2"	HFSC-FR 12D	Super Flex. 1/2"	CHFS 12NM	CHFS 12NF	CHFS 12DM	CHFS 12DF
			CHFS 12NMR	CHFS 12NFR	CHFS 12DMR	CHFS 12DFR
	HFC-FR 12D	Flex. 1/2"	CHF 12NM	CHF 12NF	CHF 12DM	CHF 12DF
	LHF-FR 12D		CLH 12NM	CLH 12NR	CLH 12DM	CLH 12DF
7/8"	HFSC-FR 22D	Super Flex. 7/8"	CHFS 22NM	CHFS 22NF	CHFS 22DM	CHF 22DF
	HFC-FR 22D	Flex. 7/8"	CHF 22NM	CHF 22NF	CHF 22DM	CHF 22DF
	LHF-FR 22D	Low Loss 7/8"	CLH 22NM	CLH 22NF	CLH 22DM	CLH 22DF
1-1/4"	HFC-FR 33D	Flex. 1-1/4"	CHF 33NM	CHF 33NF	CHF 33DM	CHF 33DF
	LHF-FR 33D		CLH 33NM	CLH 33NF	CLH 33DM	CLH 33DF
1-5/8"	HFC-FR 42D	Flex. 1-5/8"	CHF 42NM	CHF 42NF	CHF 42DM	CHF 42DF
	LHF-FR 42D	Low Loss 1-5/8"	CLH 42NM	CLH 42NF	CLH 42DM	CLH 42DF

* Other Designs are Available on Request

7/16 DIN Series



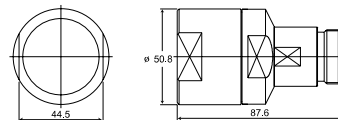
Din-Female for 1-5/8"



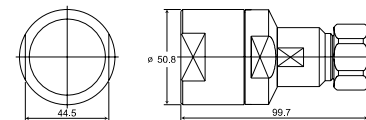
Din-Male for 1-5/8"

Connector Din Type for 1-5/8" LHF & HFC

Description	Length (mm)	Max. Dia (mm)	Weight (g)	Code	
				LHF	HFC
Din-Female for 1-5/8"	102.5	63	1,000	CLH 42DF	CHF 42DF
Din-Male for 1-5/8"	113.8	63	1,070	CLH 42DM	CHF 42DM



Din-Female for 1-1/4"



Din-Male for 1-1/4"

Connector Din Type for 1-1/4" LHF & HFC

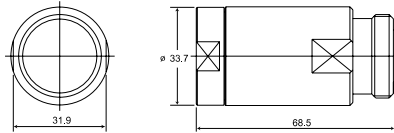
Description	Length (mm)	Max. Dia (mm)	Weight (g)	Code	
				LHF	HFC
Din-Female for 1-1/4"	89.1	50.8	560	CLH 33DF	CHF 33DF
Din-Male for 1-1/4"	101.4	50.8	560	CLH 33DM	CHF 33DM

Electrical Characteristics

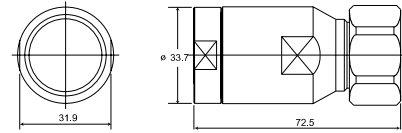
Impedance	50 Ω
Frequency Range	(Max.) 7.5 GHz
V.S.W.R	1 GHz (Straight / Right Angle) 1.08 / 1.12
(Mating)	2 GHz (Straight / Right Angle) 1.10 / 1.15
Insertion Loss	(Max.) 0.2 dB @ 3 GHz
IMD	-155dBc
Dielectric Withstanding Voltage	4.0 kV rms, 50 Hz
Working Voltage	2.7 kV rms, 50 Hz
Insulation Resistance	10 GΩ
Contact Resistance	Inner Contact 0.4 mΩ
	Outer Contact 1.5 mΩ

Mechanical Characteristics

Coupling Nut Torque (Recommended)	25 Nm ~ 30 Nm
Coupling Nut Retention Force	1,000 Nm
Contact Captivation	200 N
Durability (Mating)	500 Times



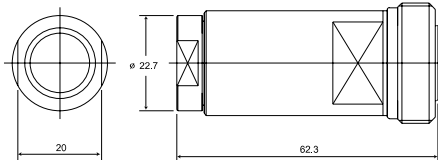
Din-Female for 7/8"



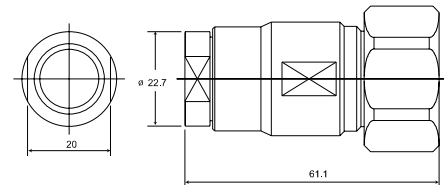
Din-Male for 7/8"

Connector Din Type for 7/8" LHF & HFC & HFSC

Description	Length (mm)	Max. Dia (mm)	Weight (g)	Code		
				LHF	HFC	HFSC
Din-Female for 7/8"	68.3	34	210	CLH 22DF	CHF 22DF	CHFS 22DF
Din-Male for 7/8"	72.5	34	230	CLH 22DM	CHF 22DM	CHFS 22DM



Din-Female for 1/2"



Din-Male for 1/2"

Connector Din Type for 1/2" LHF & HFC & HFSC

Description	Length (mm)	Max. Dia (mm)	Weight (g)	Code		
				LHF	HFC	HFSC
Din-Female for 1/2"	62.4	22.7	150	CLH 12DF	CHF 12DF	CHFS 12DF
Din-Male for 1/2"	60.2	22.7	183	CLH 12DM	CHF 12DM	CHFS 12DM

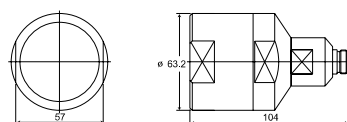
Environmental Characteristics

Temperature Range	-65°C ~ +165°C / -85°F ~ +329°F
Corrosion (Salt Spray Test)	IEC-68-2-11-Ka
Vibration	CECC 22000 Part. 4.6.3
Waterproof	IP68

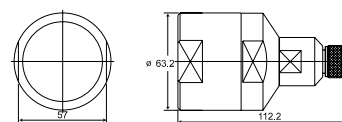
Material Characteristics

Bodies, Cap (Coupling Nut)	Brass / Silver Plated or Su Co (Alloy of Cu/ Sn/ Zn) Plated
Back Nut	Brass / Nickel Plated
Pin	Male Brass / Silver Plated or Su Co (Alloy of Cu/ Sn/ Zn) Plated
	Female Beryllium - Copper / Silver Plated or Su Co (Alloy of Cu/ Sn/ Zn) Plated
Insulators	Plated PTEE (TEFLON)
Gasket	Silicon Rubber

N Series



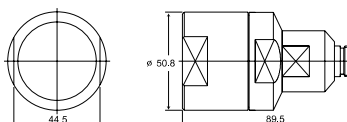
N-Female for 1-5/8"



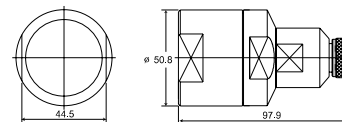
N-Male for 1-5/8"

Connector N Type for 1-5/8" LHF & HFC

Description	Length (mm)	Max. Dia (mm)	Weight (g)	Code	
				LHF	HFC
N-Female for 1-5/8"	107.3	63	1,000	CLH 42NF	CHF 42NF
N-Male for 1-5/8"	112.5	63	1,070	CLH 42NM	CHF 42NM



N-Female for 1-1/4"



N-Male for 1-1/4"

Connector N Type for 1-1/4" LHF & HFC

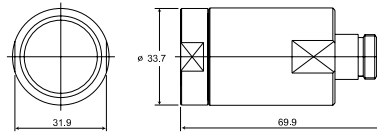
Description	Length (mm)	Max. Dia (mm)	Weight (g)	Code	
				LHF	HFC
N-Female for 1-1/4"	90.9	50.8	560	CLH 33NF	CHF 33NF
N-Male for 1-1/4"	99.1	50.8	560	CLH 33NM	CHF 33NM

Electrical Characteristics

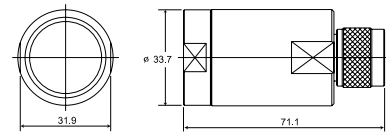
Impedance	50 Ω
Frequency Range	(Max.) 11 GHz
V.S.W.R	1 GHz (Straight / Right Angle) 1.08 / 1.12
(Mating)	2 GHz (Straight / Right Angle) 1.10 / 1.15
Insertion Loss	(Max.) 0.2 dB @ 3 GHz
IMD	-155dBc
Dielectric Withstanding Voltage	2.5 kV rms, 50 Hz
Working Voltage	1.0 kV rms, 50 Hz
Insulation Resistance	5,000 mΩ
Contact Resistance	Inner Contact 1.0 mΩ
	Outer Contact 1.0 mΩ

Mechanical Characteristics

Coupling Nut Torque (Recommended)	0.68 Nm ~ 1.13 Nm
Coupling Nut Retension Force	450 Nm
Contact Captivation	28 N
Durability (Mating)	500 Times



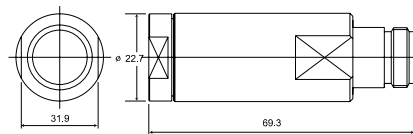
N-Female for 7/8"



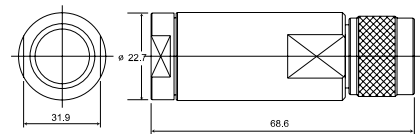
N-Male for 7/8"

Connector N Type for 7/8" LHF & HFC & HFSC

Description	Length (mm)	Max. Dia (mm)	Weight (g)	Code		
				LHF	HFC	HFSC
N-Female for 7/8"	70.4	34	215	CLH 22NF	CHF 22NF	CHFS 22NF
N-Male for 7/8"	71.9	34	215	CLH 22NF	CHF 22NM	CHFS 22NM



N-Female for 1/2"



N-Male for 1/2"

Connector N Type for 1/2" LHF & HFC & HFSC

Description	Length (mm)	Max. Dia (mm)	Weight (g)	Code		
				LHF	HFC	HFSC
N-Female for 1/2"	62.3	22.7	115	CLH 12NF	CHF 12NF	CHFS 12NF
N-Male for 1/2"	61.8	22.7	120	CLH 12NM	CHF 12NM	CHFS 12NM

Environmental Characteristics

Temperature Range	-65°C ~ +165°C / -85°F ~ +329°F
Corrosion (Salt Spray Test)	IEC-68-2-11-Ka
Vibration	CECC 22000 Part. 4.6.3
Waterproof	IP68

Material Characteristics

Bodies, Cap (Coupling Nut)	Brass / Silver Plated or Su Co (Alloy of Cu/ Sn/ Zn) Plated
Back Nut	Brass / Nickel Plated
Pin	Male Brass / Silver Plated or Su Co (Alloy of Cu/ Sn/ Zn) Plated
	Female Beryllium - Copper / Silver Plated or Su Co (Alloy of Cu/ Sn/ Zn) Plated
Insulators	PTEE (TEFLON)
Gasket	Silicon Rubber

Adaptors



Description

RF Adaptor with Between Series & IN - Series is very typical type for communication systems. LS Adaptors are designed and produced to have features as below.

- Excellent V.S.W.R Performance
- Very Low Intermodulation
- Fast and Easy Installation
- Waterproof
- Environment Resistance Ensures Long Life and Consistent Performance

Adaptor type & product code

<Between series>

Product code	Adaptor Type	Gender A	Gender B
AHF NM(F)DM(F)	N / 7/16DIN	Male (Female)	Male (Female)
AHF SM(F)NM(F)	SMA / N	Male (Female)	Male (Female)

<In- series>

Product code	Adaptor Type	Gender A	Gender B
AHF NM(F)NF(M)	N	Male (Female)	Male (Female)
AHF DM(F)DF(M)	7/16DIN	Male (Female)	Male (Female)
AHF SM(F)SF(M)	SMA	Male (Female)	Male (Female)

Electrical Characteristics

Impedence	50 Ω	
Frequency Range	DC to 3 GHz	
V.S.W.R (Max)	1.07:1(DC to 3 GHz)	
Insertion (Max)	-0.1 dB	
Intermodulation Distortion	≤ -150 dBc (2 \times 43dBm carrier)	
Insulation Resistance	$\geq 5 \times 10^3$ m Ω	
Dielectric Withstanding	Voltage (at sea level)	2500V rms, 50 Hz
	Working Voltage (at sea level)	≤ 1000 V rms, 50 Hz
Contact Resistance	Center Contact	≤ 1.0 m Ω
	Outer Contact	≤ 1.0 m Ω

Environmental Characteristics

Temperature Range	-65 $^{\circ}$ C ~ +165 $^{\circ}$ C
Temperature Shock	MIL-STD202, Method107, Condition B
Moisture Resistance	MIL-STD202, Method106
Corrosion	Saltspray test acc. To MIL-STD-202 Method101D Condition B
Shock	MIL-STD-202, Method213. Condition I

Cable Cutting Tool



Description

Connector termination is one of the most important factors affecting RF transmission line operation. LS Cable offers cable cutting tools in sizes ranging from 1/2" to 1 - 5/8" which are designed to cut the jacket and outer conductor in seconds. These cutting tools make the accurate cuts of cables at top of corrugation at exact distance required for easy connector attachment. It allows to give one more way to ensure consistent electrical performance for your application.

Features / Benefits

- Accurate Termination
- Easy Handling

Product Code

Code	Description	Cable Type
L-CT-12D	Cut Jacket & Outer Conductor	1/2" Flex.
L-CT-12DS	Cut Jacket & Outer Conductor	1/2" SuperFlex.
L-CT-22D	Cut Jacket, Outer Conductor, Dielectric & Inner Conductor	7/8" Flex.
L-CT-33D	Cut Jacket, Outer Conductor, Dielectric & Inner Conductor	1-1/4" Flex.
L-CT-42D	Cut Jacket, Outer Conductor, Dielectric & Inner Conductor	1-5/8" Flex.

Surge Arrestor ($\lambda / 4$ wave)



Description

LS Cable's surge arrestors provide excellent lightning protection and outstanding RF performance. All designs have low return loss, low insertion loss and low intermodulation. LS Cable offers $\lambda / 4$ wave shorting stubs with a full line of mounting adaptors and accessories.

Features / Benefits

- Outstanding RF Performance
- Complete Weatherproof
- Available with Type N or DIN Interface
- Maintenance Free Operation ($\lambda / 4$ Wave Shorting Stubs)

Product Code

Model	Code	Frequency Band(MHz)	Interface Type
$\lambda/4$ Wave	AT-NMNF-W	800 ~ 2,500	N-Male / N-Female
	AT-NMNF-01	800 ~ 900	N-Male / N-Female
	AT-NMNF-02	890 ~ 960	N-Male / N-Female
	AT-NMNF-03	1,700 ~ 1,900	N-Male / N-Female

Model	Code	Frequency Band(MHz)	Interface Type
$\lambda/4$ Wave	AT-DMDF-W	800 ~ 2,500	DIN-Male / Din-Female
	AT-DMDF-01	800 ~ 900	DIN-Male / Din-Female
	AT-DMDF-02	890 ~ 960	DIN-Male / Din-Female
	AT-DMDF-03	1,700 ~ 1,900	DIN-Male / Din-Male

Electrical Characteristics

Model	$\lambda/4$ Wave Shorting Stub
Impedance (Nominal)	50 Ω
V.S.W.R	< 1.1
Insertion Loss	<0.1 dB
IMD	-155dBc
Max.Impulse Spark-Over Voltage	>600V

Mechanical Characteristics

Model	$\lambda/4$ Wave Shorting Stub
Outer Conductor	Brass / Silver or SuCo Plated
Inner Conductor	BeCu (Female) / Silver or SuCo Plated
Other Metal Parts	Brass / Nickel Plated
Temperature Range	-40°C ~ +100°C
Moisture Resistance	Waterproof

Surge Arrestor (Gas Tube)



Description

LS Cable's gas discharge tube type lightning arrestor is one of lightning strike protector that is used most widely with $\lambda/4$ shorting stub type lightning arrestor.

The biggest difference from others is that it adapts replaceable gas discharge tube between internal and outer conductor and it discharges electron pulse that occurred instantaneously at lightning strike to earth.

Features/Benefits

- Outstanding Broadband RF Performance (DC~2400MHz)
- DC Pass Capability
- High Tensional Internal Conductor Structure
- Complete Waterproof
- Available with Type N or 7/16 DIN Type

Product Code

Model	Code	Frequency Band(MHz)	Interface Type
Gas Tube	AG-NMNF-01	DC ~ 2,500	N Male / N Female
	AG-DMDF-02	DC ~ 2,500	DIN Male / Din Female

Electrical Characteristics

Model	Gas Tube
Impedance (Nominal)	50 Ω
V.S.W.R	< 1.1
Insertion Loss	< 0.1 dB
Max.Impulse Spark-Over Voltage	> 600V

Mechanical Characteristics

Model	Gas Tube
Outer Conductor	Brass / Silver or SuCo Plated
Inner Conductor	BeCu (Female) / Silver or SuCo Plated
Other Metal Parts	Brass / Nickel Plated
Temperature Range	-40°C~ +100°C
Moisture Resistance	Waterproof

Jumper Cable



Description

LS Cable provides jumper cables which have outstanding electrical performance along with high durability for tight routing and superior environmental sealing for long life reliability.

LS jumper cables are offered in sizes of 3/8" and 1/2". Jumper cables are used in areas that require extremely small bending radius such as on the connection between main feeders and antennas or between main feeders and RF-equipments. LS jumper cables are designed and produced to have features as belows.

Features / Benefits

- High Pull-Off Strength
- Excellent V.S.W.R Performance
 - Typical V.S.W.R Over Cellular, PCS and 3 G-Band are 1.08
- Low and Stable Intermodulation
 - Typical IM3 Product Value with 40 dBm is -155 dBc Over the Cellular and PCS Band
- Complete Weatherproof

Cable Type (Min. Bending Radius)

- HFSC 10D : 25 mm
- HFSC 12D : 35 mm

Product Code

Description of Attached Connector	HFSC 10D		
	1M	2M	3M
7/16 Male to 7/16 Male	JHFS10-1-DMDM	JHFS10-2-DMDM	JHFS10-3-DMDM
7/16 Male to 7/16 Female	JHFS10-1-DMDF	JHFS10-2-DMDF	JHFS10-3-DMDF
7/16 Female to 7/16 Female	JHFS10-1-DFDF	JHFS10-2-DFDF	JHFS10-3-DFDF
N Male to 7/16 Male	JHFS10-1-NMDM	JHFS10-2-NMDM	JHFS10-3-NMDM
N Female to 7/16 Female	JHFS10-1-NMDF	JHFS10-2-NMDF	JHFS10-3-NMDF
N Male to 7/16 Female	JHFS10-1-NMDF	JHFS10-2-NMDF	JHFS10-3-NMDF
N Female to 7/16 Male	JHFS10-1-NFDM	JHFS10-2-NFDM	JHFS10-3-NFDM
N Male to N Male	JHFS10-1-NMNM	JHFS10-2-NMNM	JHFS10-3-NMNM
N Male to N Female	JHFS10-1-NMNF	JHFS10-2-NMNF	JHFS10-3-NMNF
N Female to N Male	JHFS10-1-NFNM	JHFS10-2-NFNM	JHFS10-3-NFNM

Description of Attached Connector	HFSC 12D		
	1M	2M	3M
7/16 Male to 7/16 Male	JHFS12-1-DMDM	JHFS12-2-DMDM	JHFS12-3-DMDM
7/16 Male to 7/16 Female	JHFS12-1-DMDF	JHFS12-2-DMDF	JHFS12-3-DMDF
7/16 Female to 7/16 Female	JHFS12-1-DFDF	JHFS12-2-DFDF	JHFS12-3-DFDF
N Male to 7/16 Male	JHFS12-1-NMDM	JHFS12-2-NMDM	JHFS12-3-NMDM
N Female to 7/16 Female	JHFS12-1-NMDF	JHFS12-2-NMDF	JHFS12-3-NMDF
N Male to 7/16 Female	JHFS12-1-NMDF	JHFS12-2-NMDF	JHFS12-3-NMDF
N Female to 7/16 Male	JHFS12-1-NFDM	JHFS12-2-NFDM	JHFS12-3-NFDM
N Male to N Male	JHFS12-1-NMNM	JHFS12-2-NMNM	JHFS12-3-NMNM
N Male to N Female	JHFS12-1-NMNF	JHFS12-2-NMNF	JHFS12-3-NMNF
N Female to N Male	JHFS12-1-NFNM	JHFS12-2-NFNM	JHFS12-3-NFNM

Dummy Load



Description

Dummy load is a means of termination microwave transmission line without much reflection.

It is performed by microwave power absorption.

Dummy load is used in "RFCL" or "RFCX" application to provide launch for the signal from the end of the cable.

All connector interfaces conform to MIL-C-39012.

V.S.W.R : 0~3GHz. Max 1.15.

Features / Benefits

- Outstanding RF Performance. Low V.S.W.R
- Available with Type N Interfaces

Product Code

Code	V. S. W. R	Connector Interface	Dummy Load Power Rating
L-DL-10-NM	< 1.15	N-Male	10 Watt
L-DL-10-NF	< 1.15	N-Female	
L-DL-20-NM	< 1.15	N-Male	20 Watt
L-DL-20-NF	< 1.15	N-Female	
L-DL-30-NM	< 1.15	N-Male	30 Watt
L-DL-30-NF	< 1.15	N-Female	
L-DL-50-NM	< 1.15	N-Male	50Watt
L-DL-50-NF	< 1.15	N-Female	

* Note : Other Designs are Available on Request

Grounding Kit

Clip-on Type



Description

The clip-on ground kits are an advanced coax grounding solution, providing the ultimate in ease-of-installation coupled with dependable protection of your coaxial cable system. The unique clip design and pre-formed strap allow the clip-on ground kits to be easily slipped over the outer conductor of the coax and firmly latched into place. The latch mechanism has been optimized to provide a secure fit maximizing performance by ensuring proper contact surface area and pressure. The innovative design of the clip-on ground kits greatly simplifies installation, minimizing installation time over traditional coiled and bolt-on grounding kits. This design also eliminates the danger of overtightening, reducing the chance of costly errors in the field. The clip-on ground kits are designed to comply with MIL-STD-188-124A, protecting coax from the damaging effects of lightning current in excess of 200 kA. Each kit includes a 6-gauge 7-strand copper ground lead with your choice of lead lengths and attached or unattached lugs. All buss bar attachment hardware is included along with required mastic and electric tape for weatherproofing each kit.

Characteristics

App.	Coax Protection	Mounts to	Coax Outer Conductor
Size	1/2" to 1-5/8" Coax	Material	Copper Strap
Feature	Easy-To-Install Clip Design	Incl.	Grounding Kit, Lug, Weatherproofing Kit
Design	One-Piece Style with Three Lead / Lug Options		

Product Code

Code	Description	Kit Qty.	Wt. lbs (Wt. kg)
L-GK-C12	Clip-on Ground Kit for 1/2" Corrugated Coax. Includes 5' (1.5 m) Lead with Unattached 3/8" (10 mm) Two-Hole Lug *	Each	1.4 (0.6)
L-GK-C22	Clip-on Ground Kit for 7/8" Corrugated Coax. Includes 5' (1.5 m) Lead with Unattached 3/8" (10 mm) Two-Hole Lug *	Each	1.4 (0.6)
L-GK-C33	Clip-on Ground Kit for 1-1/4" Corrugated Coax. Includes 5' (1.5 m) Lead with Unattached 3/8" (10 mm) Two-Hole Lug *	Each	1.4 (0.6)
L-GK-C42	Clip-on Ground Kit for 1-5/8" Corrugated Coax. Includes 5' (1.5 m) Lead with Unattached 3/8" (10 mm) Two-Hole Lug *	Each	1.5 (0.7)

* Note : 3/8" (10 mm) two-hole lugs are universal to accommodate 3/4" to 1" (19 mm to 25 mm) spacing requirements. Versions of these kits are available with 1/4" (6 mm) two-hole lugs or with your choice of lug pre-attached.

Grounding Kit

Standard Type



Description

The standard ground kits facilitate easy installation with a pre-formed copper strap that eliminates the need for a coiling tool and prevents overtightening. These kits are designed to comply with MIL-STD-188-124A and have been verified by independent labs to protect coax from the damaging effects of lightning current in excess of 200 kA. Each kit includes a 5' (1.5 m), 6-gauge 7-strand copper ground lead which can be trimmed to the exact length required for a neat and effective installation. Included in each kit is a two-hole 3/8" (10 mm) universal lug, and all hardware necessary for attachment to the buss bar. The innovative two-hole universal lug features a unique slotted design which allows it to accommodate 3/4" to 1" (19 mm to 25 mm) buss bar hole spacings, ensuring a perfect fit in any ground system. The standard ground kits also include required mastic and electric tape for weatherproofing each kit.

Characteristics

App.	Coax Protection	Mounts to	Coax Outer Conductor
Size	1/2" to 1-5/8" Coax	Material	Copper or Aluminum Strap
Feature	Economical Protection	Incl.	Grounding Kit, Lug, Weatherproofing Kit
Design	Bolt - on Style with 5' (1.5 m) Lead / Crimp Lug		

Product Code

Code	Description	Kit Qty.	Wt. lbs (Wt. kg)
L-GK-S12	Standard Ground Kit for 1/2" Corrugated Coax	Each	1.4 (0.6)
L-GK-S22	Standard Ground Kit for 7/8" Corrugated Coax	Each	1.4 (0.6)
L-GK-S33	Standard Ground Kit for 1-1/4" Corrugated Coax	Each	1.4 (0.6)
L-GK-S42	Standard Ground Kit for 1-5/8" Corrugated Coax	Each	1.5 (0.7)

Single Hanger Clamp Set



Description

This single hanger clamp set is a second generation hanger solution designed specially for BTS tower application.

Consist of Set

- Hanger clamp : UV and chemical resistances
- Hardware kits : 10mm 304 stainless steel hardware kit
- Angle adaptor : adaptor bracket, stainless 304

Product Code

Code	Description
L-MT-12SC1	Single Hanger Clamp Set for 1/2" Corrugated Cable 1 Run
L-MT-12SC2	Single Hanger Clamp Set for 1/2" Corrugated Cable 2 Runs
L-MT-12SC3	Single Hanger Clamp Set for 1/2" Corrugated Cable 3 Runs
L-MT-22SC1	Single Hanger Clamp Set for 7/8" Corrugated Cable 1 Run
L-MT-22SC2	Single Hanger Clamp Set for 7/8" Corrugated Cable 2 Runs
L-MT-22SC3	Single Hanger Clamp Set for 7/8" Corrugated Cable 3 Runs
L-MT-33SC1	Single Hanger Clamp Set for 1- 1/4" Corrugated Cable 1 Run
L-MT-33SC2	Single Hanger Clamp Set for 1- 1/4" Corrugated Cable 2 Runs
L-MT-33SC3	Single Hanger Clamp Set for 1-1/4" Corrugated Cable 3 Runs
L-MT-42SC1	Single Hanger Clamp Set for 1- 5/8" Corrugated Cable 1 Run
L-MT-42SC2	Single Hanger Clamp Set for 1- 5/8" Corrugated Cable 2 Runs
L-MT-42SC3	Single Hanger Clamp Set for 1- 5/8" Corrugated Cable 3 Runs

Single Hanger Clamp Set for Small Tower (Max.50m)



Description

This single hanger clamp set for small tower which is shorter than 50m height is a second generation hanger solution designed specially for BTS tower application.

Consist of Set

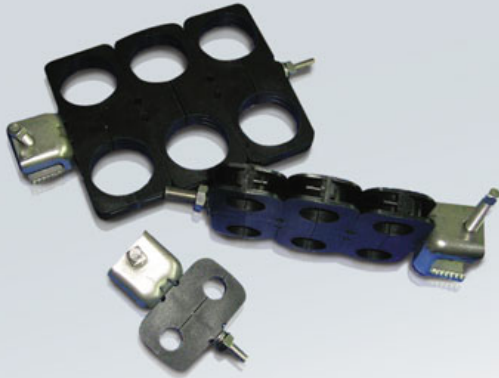
- Hanger clamp : UV and chemical resistances
- Hardware kits : 10mm 304 stainless steel hardware kit
- Angle adaptor : adaptor bracket, stainless 304

Product Code

Code	Description
L-MT-12SC1L	Single Hanger Clamp for 1/2" Corrugated Cable 1 Run Less 50m
L-MT-12SC2L	Single Hanger Clamp for 1/2" Corrugated Cable 2 Runs Less 50m
L-MT-12SC3L	Single Hanger Clamp for 1/2" Corrugated Cable 3 Runs Less 50m
L-MT-22SC1L	Single Hanger Clamp for 7/8" Corrugated Cable 1 Run Less 50m
L-MT-22SC2L	Single Hanger Clamp for 7/8" Corrugated Cable 2 Runs Less 50m
L-MT-22SC3L	Single Hanger Clamp for 7/8" Corrugated Cable 3 Runs Less 50m
L-MT-33SC1L	Single Hanger Clamp for 1-1/4" Corrugated Cable 1 Run Less 50m
L-MT-33SC2L	Single Hanger Clamp for 1-1/4" Corrugated Cable 2 Runs Less 50m
L-MT-33SC3L	Single Hanger Clamp for 1-1/4" Corrugated Cable 3 Runs Less 50m

* Note : Not available for 1-5/8" corrugated cable

Double Hanger Clamp Set



Description

This double hanger clamp set is a second generation hanger solution designed specially for BTS tower application.

Consist of Set

- Hanger clamp : UV and chemical resistances
- Hardware kits : 10mm 304 stainless steel hardware kit
- Angle adaptor : adaptor bracket, stainless 304

Product Code

Code	Description
L-MT-12DC1	Double Hanger Clamp Set for 1/2" Corrugated Cable 2 Runs
L-MT-12DC2	Double Hanger Clamp Set for 1/2" Corrugated Cable 4 Runs
L-MT-12DC3	Double Hanger Clamp Set for 1/2" Corrugated Cable 6 Runs
L-MT-22DC1	Double Hanger Clamp Set for 7/8" Corrugated Cable 2 Runs
L-MT-22DC2	Double Hanger Clamp Set for 7/8" Corrugated Cable 4 Runs
L-MT-22DC3	Double Hanger Clamp Set for 7/8" Corrugated Cable 6 Runs
L-MT-33DC1	Double Hanger Clamp Set for 1-1/4" Corrugated Cable 2 Runs
L-MT-33DC2	Double Hanger Clamp Set for 1-1/4" Corrugated Cable 4 Runs
L-MT-33DC3	Double Hanger Clamp Set for 1-1/4" Corrugated Cable 6 Runs
L-MT-42DC1	Double Hanger Clamp Set for 1-5/8" Corrugated Cable 2 Runs
L-MT-42DC2	Double Hanger Clamp Set for 1-5/8" Corrugated Cable 4 Runs
L-MT-42DC3	Double Hanger Clamp Set for 1-5/8" Corrugated Cable 6 Runs

Double Hanger Clamp Set

for Small Tower (Max.50m)



Description

This double hanger clamp set for small tower which is shorter than 50m height is a second generation hanger solution designed specially for BTS tower application.

Consist of Set

- Hanger clamp : UV and chemical resistances
- Hardware kits : 10mm 304 stainless steel hardware kit
- Angle adaptor : adaptor bracket, stainless 304

Product Code

Code	Description
L-MT-12DC1L	Double Hanger Clamp Set for 1/2" Corrugated Cable 2 Runs Less 50m
L-MT-12DC2L	Double Hanger Clamp Set for 1/2" Corrugated Cable 4 Runs Less 50m
L-MT-12DC3L	Double Hanger Clamp Set for 1/2" Corrugated Cable 6 Runs Less 50m
L-MT-22DC1L	Double Hanger Clamp Set for 7/8" Corrugated Cable 2 Runs Less 50m
L-MT-33DC1L	Double Hanger Clamp Set for 1-1/4" Corrugated Cable 2 Runs Less 50m

* Note : Not available for 7/8" corrugated cable for more then 2 stacks

* Note : Not available for 1-1/4" corrugated cable for more then 2 stacks

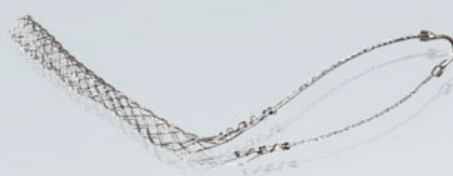
* Note : Not available for 1-5/8" corrugated cable

Hoisting Grip

Lace-Up Hoisting Grip / Pre-Laced Hoisting Grip



Lace-Up Hoisting Grip



Pre-Laced Hoisting Grip

Description

Lace-up hoisting grips provide an effective means for hoisting coax and elliptical waveguide into position and can be utilized to provide additional support once in place. The lace-up design allows the hoisting grip to be attached even when the run has been connectorized and facilitates easy positioning at 200' (61m) increments on long coax runs. Lace-up hoisting grips for coaxial cables include a self-locking clip and sealing tape to provide additional support both during and after installation.

Description

Pre-laced hoisting grips feature a closed-mesh design which simplifies installation over traditional split, lace-up style grips. The unique design allows the pre-laced hoisting grip to slip over an unterminated end of coax. The grip securely tightens when pulled, providing an effective means to hoist coax into position and to provide additional support for the coax once in place. Pre-laced hoisting grips for coaxial cables include a self-locking clip and sealing tape to provide additional support both during and after installation.

Characteristics

	Lace-Up Hoisting Grip	Pre-Laced Hoisting Grip
App.	Coax	Coax Support
Size	1/2" to 1-5/8"	1/2" to 1-5/8"
Feature	Lace-Up Installation at Ant Point On Coax	Pre-Laced to Simplify Installation
Design	Mesh Grip with Single Eye Support	Mesh Grip with Single Eye Support
Material	Tinned Bronze	Tinned Bronze
Incl.	Grip, Self-Locking Clip, Tape	Grip, Self-Locking Clip, Tape

Product Code

	Code	Description	Kit Qty.	Wt. lbs (Wt. kg)
Lace-Up Hoisting Grip	L-HG-12	Open Weave Hoisting Grip for 1/2" Corrugated Coax	Each	0.3 (0.1)
	L-HG-22	Open Weave Hoisting Grip for 7/8" Corrugated Coax	Each	0.6 (0.3)
	L-HG-33	Open Weave Hoisting Grip for 1-1/4" Corrugated Coax	Each	0.6 (0.3)
	L-HG-42	Open Weave Hoisting Grip for 1-5/8" Corrugated Coax	Each	1.3 (0.6)
Pre-Laced Hoisting Grip	L-HG-12L	Open Weave Hoisting Grip for 1/2" Corrugated Coax	Each	0.4 (0.2)
	L-HG-22L	Open Weave Hoisting Grip for 7/8" Corrugated Coax	Each	0.5 (0.2)
	L-HG-33L	Open Weave Hoisting Grip for 1-1/4" Corrugated Coax	Each	0.5 (0.2)
	L-HG-42L	Open Weave Hoisting Grip for 1-5/8" Corrugated Coax	Each	1.3 (0.6)

Weatherproofing Kit

Universal Weatherproofing Kit / 30M™ Cold Shrink™ Weatherproofing Kit

Universal Weatherproofing kit



Description

The universal weatherproofing kits include mastic and electrical tapes that are applied to provide a multi-layer, long-term environmental seal over multiple connections. The standard version (L-WK-U) includes five 3-3/4" x 2' (95mm x 0.6m) rolls of butyl mastic tape, two 3/4" x 44' (19mm x 13m) rolls of electrical tape, and one 2" x 20' (51mm x 6m) roll of electrical tape. The large version (L-WK-UL) includes five 3-3/4" x 2' (95mm x 0.6m) rolls of butyl mastic tape, three 3/4" x 44' (19mm x 13m) rolls of electrical tape, and three 2" x 20' (51mm x 6m) rolls of electrical tape.

Characteristics

App.	Coax Protection	Design	Tape Kit for Multi-Layer Wrap
Size	Two Versions	Material	Butyl and Vinyl
Feature	Multi-Connection Protection	Incl.	See Text

Product Code

Code	Description	Kit Qty.	Wt. lbs (Wt. kg)
L-WK-U	Universal Weatherproofing Kit	Each	3.4 (1.5)

30M™ Cold Shrink™ Weatherproofing Kit



Description

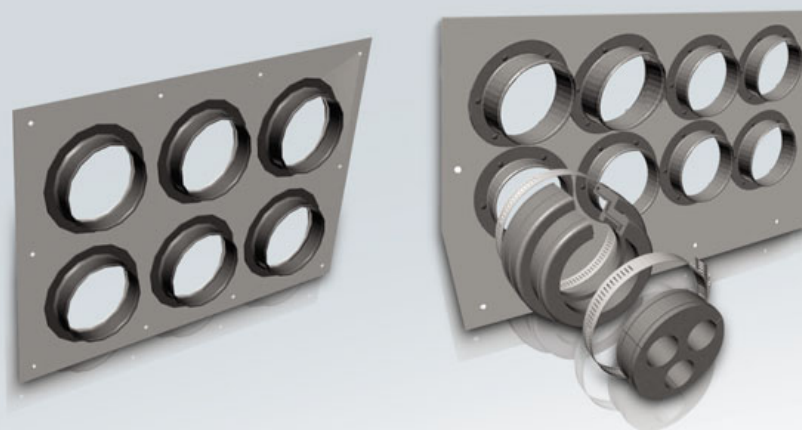
Avoid messy tapes and mastics with cold shrink™. This unique weatherproofing solution installs in less than three minutes, and eliminates difficult and time consuming taping processes. Because no special techniques are required, cold shrink™ can be installed perfectly by both new and experienced installers. To apply, position the kit over a connection, and unwind the spiral support. As the tube loses its support, it collapses over the connection to form a long term environmental seal. An universally designed spacer accommodates similar coax sizes with tolerance variances allowing these kits to be used on a variety of manufacturers coaxial cables regardless of your coax preference. Cold shrink™ kits are available to seal main feeder, jumper and antenna connections.

Product Code

Splices			Main Feeder to Jumper			Antenna Interfaces		
Coax Size Mated to Coax Size	Code	Wt. lbs (Wt. kg)	Coax Size Mated to Coax Size	Code	Wt. lbs (Wt. kg)	Coax Size Mated to Coax Size	Code	Wt. lbs (Wt. kg)
1/2" to 1/2"	L-CS-U1212	0.2 (0.1)	7/8" to 1/2"	L-CS-U1222	0.8 (0.4)	1/2"	L-CS-U1212	0.2 (0.1)
7/8" to 7/8"	L-CS-U1222	0.8 (0.4)	1-1/4" to 1/2"	L-CS-U1242	1.0 (0.5)	5/8"	L-CS-U1222	0.8 (0.4)
1-1/4" to 1-1/4"	L-CS-U1242	1.0 (0.5)	1-1/4" to 5/8"	L-CS-U1242	1.0 (0.5)	7/8"	L-CS-U1222	0.8 (0.4)
1-5/8" to 1-5/8"	L-CS-U1242	1.0 (0.5)	1-5/8" to 1/2"	L-CS-U12142	1.0 (0.5)			

Entry Port System

4" (102mm) Feed-thru Entry Panel



Description

Aluminum feed-thru entry panels enable multiple coax runs to enter buildings and shelters. These rugged panels support the coax at the entry point and prevent moisture from entering the building. Each panel features 4" (102mm) openings to accept boot assemblies. Each boot assembly must be fitted with a cushion to hold the coax in place. Feed-thru entry panels are offered with a broad selection of hole patterns and plate sizes to match your exact application. These entries can be used in both interior and exterior wall applications to create a neat and clean installation. Each feed-thru entry panel includes a set of wall attachment hardware, including #14 x 1-1/2" (6mm x 38mm) stainless steel screws, finishing washers, and plastic anchors and is powder coated to ensure long term integrity and provide appealing aesthetics. Sealing caps for all openings are also included. Boots and cushions, or boot assembly kits must be purchased separately to accommodate specific coax requirements.

Characteristics

App.	Entry Solutions	Mounts to	Walls
Size	19 Sizes	Material	Aluminum
Feature	Easy to Install Solution	Incl.	Port, Caps, Wall Hardware
Design	Entry Plates with Round Ports	Order Sep.	4" (102mm) Boot Assemblies

Product Code

Code	Description	Kit Qty.	Wt. lbs (Wt. kg)	Code	Description	Kit Qty.	Wt. lbs (Wt. kg)
L-EP-220	Entry Panel, 1 Port, 1 x 1, Standard	Each	1.0 (0.5)	L-EP-1338	Entry Panel, 8 Port, 2 x 4, Large	Each	6.0 (2.7)
L-EP-574	Entry Panel, 1 Port, 1 x 1, Compact	Each	0.6 (0.3)	L-EP-1033	Entry Panel, 9 Port, 3 x 3	Each	7.1 (3.2)
L-EP-1448	Entry Panel, 2 Port, 1 x 2	Each	2.3 (1.0)	L-EP-1297	Entry Panel, 10 Port, 2 x 5	Each	7.4 (3.4)
L-EP-1635	Entry Panel, 3 Port, 1 x 3	Each	2.9 (1.3)	L-EP-1118	Entry Panel, 12 Port, 3 x 4, Standard	Each	8.5 (3.9)
L-EP-575	Entry Panel, 4 Port, 1 x 4	Each	3.5 (1.6)	L-EP-1334	Entry Panel, 12 Port, 3 x 4, Compact	Each	7.0 (3.2)
L-EP-1199	Entry Panel, 4 Port, 2 x 2, Standard	Each	4.2 (1.9)	L-EP-1336	Entry Panel, 12 Port, 2 x 6	Each	9.2 (4.2)
L-EP-1650	Entry Panel, 4 Port, 2 x 2, Compact	Each	4.0 (1.8)	L-EP-1447	Entry Panel, 16 Port, 4 x 4	Each	9.0 (4.1)
L-EP-1449	Entry Panel, 6 Port, 2 x 3	Each	6.1 (2.8)	L-EP-1333	Entry Panel, 18 Port, 3 x 6	Each	13.0 (5.9)
L-EP-1477	Entry Panel, 6 Port, 1 x 6	Each	6.0 (2.7)	L-EP-1861	Entry Panel, 20 Port, 4 x 5	Each	11.0 (5.0)
L-EP-576	Entry Panel, 8 Port, 2 x 4, Standard	Each	6.1 (2.8)	L-EP-1340	Entry Panel, 24 Port, 4 x 6	Each	15.8 (7.2)

* Note : 5" (127mm) Feed-thru Entry Panels available with 1, 2, 3, 4, 6, 8, and 9 hole configurations.

Cushion and Boot

4" (102mm) Boot Assembly Kit



Description

These innovative boot assembly kits feature a boot assembly and standard cushion insert in one convenient package. The unique boot assembly features a split, one-piece design which dramatically reduces installation time and difficulty. Boot assembly kits are designed to be fitted onto EP-series entry panels in wall/roof feed-thru applications.

Characteristics

App.	Entry Solutions	Mounts to	4" (102mm) Entry Panels
Size	Versions for Coax and Elliptical Waveguide	Material	EPDM Rubber
Feature	One-Piece Design Simplifies Installation	Incl.	Boot, Cushion, Two Hose Clames
Design	Compression Boot Kit for Aluminum Entry Panels	Order Sep.	4" (102mm) Entry Panel

Product Code

Code	Description	Kit Qty.	Wt. lbs (Wt. kg)
L-BA-12-1A	Boot Assembly Kit, 4" (102mm) w/1 Hole for 1/2" Corrugated Coax	Each	1.6 (0.7)
L-BA-12-2A	Boot Assembly Kit, 4" (102mm) w/2 Hole for 1/2" Corrugated Coax	Each	1.6 (0.7)
L-BA-12-3A	Boot Assembly Kit, 4" (102mm) w/3 Hole for 1/2" Corrugated Coax	Each	1.6 (0.7)
L-BA-12-4A	Boot Assembly Kit, 4" (102mm) w/4 Hole for 1/2" Corrugated Coax	Each	1.6 (0.7)
L-BA-12-5A	Boot Assembly Kit, 4" (102mm) w/5 Hole for 1/2" Corrugated Coax	Each	1.6 (0.7)
L-BA-12F-1A	Boot Assembly Kit, 4" (102mm) w/1 Hole for 1/2" Flex Coax	Each	1.6 (0.7)
L-BA-12F-2A	Boot Assembly Kit, 4" (102mm) w/2Hole for 1/2" Flex Coax	Each	1.6 (0.7)
L-BA-12F-3A	Boot Assembly Kit, 4" (102mm) w/3 Hole for 1/2" Flex Coax	Each	1.6 (0.7)
L-BA-12F-4A	Boot Assembly Kit, 4" (102mm) w/4 Hole for 1/2" Flex Coax	Each	1.6 (0.7)
L-BA-16-1A	Boot Assembly Kit, 4" (102mm) w/1 Hole for 5/8" Corrugated Coax	Each	1.6 (0.7)
L-BA-16-2A	Boot Assembly Kit, 4" (102mm) w/2 Hole for 5/8" Corrugated Coax	Each	1.6 (0.7)
L-BA-16-3A	Boot Assembly Kit, 4" (102mm) w/3 Hole for 5/8" C orrugated Coax	Each	1.6 (0.7)
L-BA-16-4A	Boot Assembly Kit, 4" (102mm) w/4 Hole for 5/8" Corrugated Coax	Each	1.6 (0.7)
L-BA-22-1A	Boot Assembly Kit, 4" (102mm) w/1 Hole for 7/8" Corrugated Coax	Each	1.6 (0.7)
L-BA-22-2A	Boot Assembly Kit, 4" (102mm) w/2 Hole for 7/8" Corrugated Coax	Each	1.6 (0.7)
L-BA-22-3A	Boot Assembly Kit, 4" (102mm) w/3 Hole for 7/8" Corrugated Coax	Each	1.6 (0.7)
L-BA-22-4A	Boot Assembly Kit, 4" (102mm) w/4 Hole for 7/8" Corrugated Coax	Each	1.6 (0.7)
L-BA-33-1A	Boot Assembly Kit, 4" (102mm) w/1 Hole for 1-1/4" Corrugated Coax	Each	1.6 (0.7)
L-BA-42-1A	Boot Assembly Kit, 4" (102mm) w/1 Hole for 1-5/8" Corrugated Coax	Each	1.6 (0.7)
L-BA-57-1A	Boot Assembly Kit, 4" (102mm) w/1 Hole for 2-1/4" Corrugated Coax	Each	1.6 (0.7)