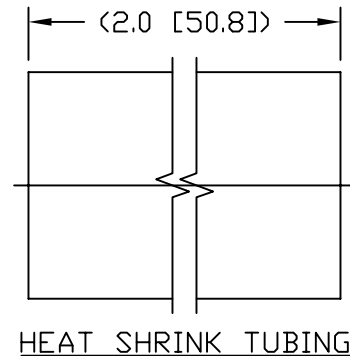
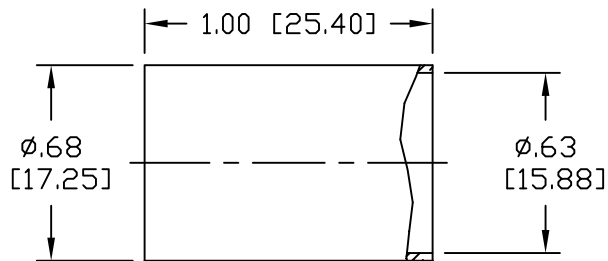
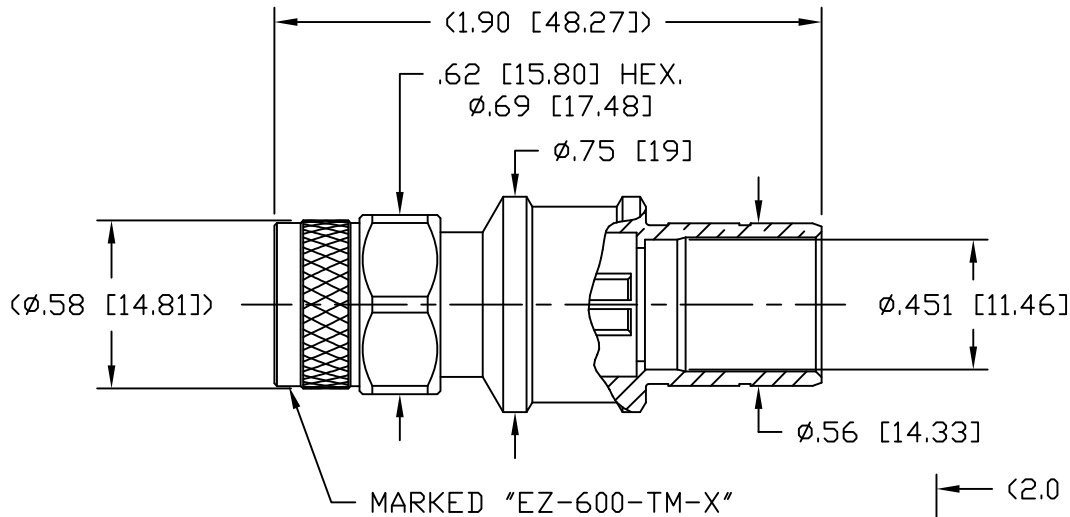


NOTICE OF PROPRIETARY RIGHTS THIS DOCUMENT CONTAINS CONFIDENTIAL TECHNICAL DATA, INCLUDING TRADE SECRETS, PROPRIETARY TO TIMES MICROWAVE SYSTEMS. DISCLOSURE OF THIS DATA IS EXPRESSLY CONDITIONED UPON YOUR ASSENT THAT ITS USE IS LIMITED TO USE WITHIN YOUR COMPANY ONLY. ANY OTHER USE IS STRICTLY PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT OF TIMES MICROWAVE SYSTEMS.

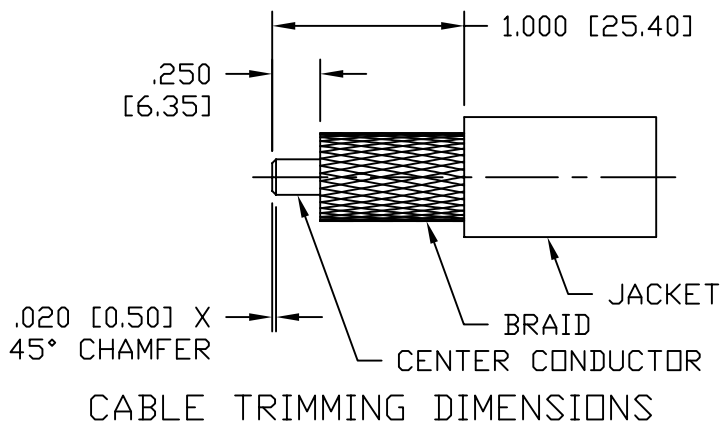
SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	K.A.M.	2/24/10	J.D.B.	3/11/10
B	CHANGED PER CDC #34322	D.J.H.	10/12/11	J.D.B.	10/27/11



HEAT SHRINK TUBING

NOTES:

- MATERIALS AND FINISHES:
BODY: BRASS, ALBALDY PLATING
COUPLING NUT: BRASS, ALBALDY PLATING
CENTER CONTACT: BERYLLIUM COPPER, GOLD PLATE
INSULATOR: PTFE, NATURAL
FERRULE: COPPER, ALBALDY PLATING
- ELECTRICAL:
IMPEDANCE: 50 OHMS NOMINAL
FREQUENCY: DC-6 GHz
VSWR: 1.2 DC-6 GHz
DIELECTRIC WITHSTANDING VOLTAGE: 1,500 VOLTS RMS
- MECHANICAL:
DURABILITY: 500 CYCLES MIN.
TEMPERATURE RANGE: -65°C TO +165°C
- CABLING INSTRUCTIONS:
A. SLIDE FERRULE OVER CABLE JACKET
B. TRIM CABLE TO DIMENSIONS SHOWN. MAKE SURE CUTS ARE SHARP AND SQUARE. DO NOT NICK BRAID OR CENTER CONDUCTOR.
C. FLAIR BRAID SLIGHTLY AND INSERT CABLE INTO BODY UNTIL BOTTOMED. (CONTACT SUPPLIED ASSEMBLED.) SLIDE THE FERRULE UP THE CABLE AND OVER THE BRAID UNTIL BOTTOMED ON BODY. CRIMP FERRULE USING A .612 HEX.



MATL:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES MACHINED SURFACES FINISH 32 RMS MAX. REMOVE ALL BURRS .005 MAX. BREAK MACHINE CORNERS .005 MAX. FILLET R. TOLERANCES ON DECIMALS .XX ± .01 .XXX ± .005 ANGLES ± 1° FRACTIONS ± 1/64	DFTM. K. A. M.	TIMES MICROWAVE SYSTEMS	
		DATE 2/24/10	EZ-600-TM-X	
USED ON: A		CHKD. J. D. B.	PLUG, TNC, EZ	
		DATE 3/11/10	FOR LMR-600	
SCALE: ~	DWG. SIZE A	DO NOT SCALE DRAWING	CODE IDENT 68999	DATE 3/11/10
		SHEET 1 of 1		SD3190-2531
		REV. B		



4.3-10 Male Connector Crimp/Solder Attachment for LMR-600

RF Connectors Technical Data Sheet



TC-600-4310M-X

Times Microwave Systems Connector Specification

Configuration

- 4.3-10 Male Connector
- 50 Ohms
- Straight Body Geometry
- LMR-600 Interface Type
- Crimp/Solder Attachment

Features

- Max. Operating Frequency 6 GHz
- Excellent VSWR of 1.25:1
- Silver Plated Brass Contact

Applications

- General Purpose Test
- Custom Cable Assemblies
- Mobile Communications Systems
- Base Stations
- Distributed Antenna Systems (DAS)
- Small Cells
- Feeder Cables

Description

The Times Microwave TC-600-4310M-X 4.3-10 male connector with crimp/solder attachment for LMR-600 is part of our full line of RF components available for same-day shipping. This 4.3-10 male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.25:1.

Our datasheet specifications and drawing with dimensions for Times Microwave's 4.3-10 male connector TC-600-4310M-X are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. Whether the need is to provide an I/O for a board design, or simply create a custom cable assembly configuration, Pasternack has the right connector for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same-day.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		6	GHz
VSWR			1.25:1	
Insulation Resistance	10,000			MOhms

Electrical Specification Notes:
Insertion Loss = $0.1 \times \text{SQRT}(\text{FGHz})$

Mechanical Specifications

Mating Cycles 500 Cycles

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [4.3-10 Male Connector Crimp/Solder Attachment for LMR-600 TC-600-4310M-X](#)



4.3-10 Male Connector Crimp/Solder Attachment for LMR-600

RF Connectors Technical Data Sheet



TC-600-4310M-X

Material Specifications

Description	Material	Plating
Contact	Brass	Silver
Insulation	PTFE	
Body	Brass	Tri-Metal
Coupling Nut	Brass	Tri-Metal
Gasket	Silicone	
Crimp Sleeve	Brass	Tri-Metal

Environmental Specifications

Temperature

Operating Range

Shock

Vibration

Thermal Shock

-55 to +125 deg C

MIL-STD 202G, Meth. 204, Cond. B

MIL-STD 202G, Meth. 213, Cond. I

MIL-STD 202G, Meth. 107, Cond. B

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [4.3-10 Male Connector Crimp/Solder Attachment for LMR-600 TC-600-4310M-X](#)



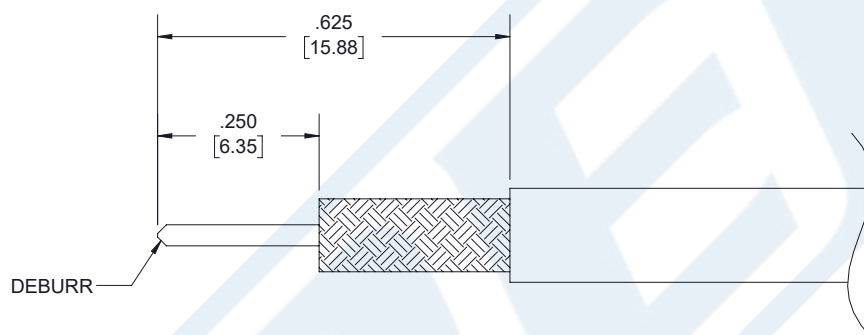
4.3-10 Male Connector Crimp/Solder Attachment for LMR-600

RF Connectors Technical Data Sheet



TC-600-4310M-X

Assembly Instruction



ASSEMBLY PROCEDURES

1. STRIP CABLE TO THE DIMENSIONS SHOWN, CHAMFER CENTER CONDUCTOR AND DEBURR CABLE.
2. SLIDE FERRULE OVER CABLE AND INSULATOR OVER CABLE CENTER CONDUCTOR. INSERT CENTER CONTACT AND SOLDER.
3. PUSH THE CONNECTOR BODY INTO THE CABLE UNTIL IT STOPS. SLIDE FERRULE FORWARD AND AGAINST SHOULDER OF CONNECTOR AND CRIMP.

CRIMP SIZE REQUIRED

- FERRULE: .610" [15.49] HEX CRIMP TOOL

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [4.3-10 Male Connector Crimp/Solder Attachment for LMR-600 TC-600-4310M-X](#)



4.3-10 Male Connector Crimp/Solder Attachment for LMR-600

RF Connectors Technical Data Sheet



TC-600-4310M-X

4.3-10 Male Connector Crimp/Solder Attachment for LMR-600 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [4.3-10 Male Connector Crimp/Solder Attachment for LMR-600 TC-600-4310M-X](https://www.pasternack.com/4.3-10-male-lmr-600-connector-tc-600-4310m-x-p.aspx)

URL: <https://www.pasternack.com/4.3-10-male-lmr-600-connector-tc-600-4310m-x-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.



.XXX ±0.005

*STANDARD TOLERANCES APPLY

P.O. Box 16759 | Irvine | CA | 92623

Phone: (949) 261-1920 | **Fax:** (949) 261-7451

Website: www.pasternack.com | **E-Mail:** sales@pasternack.com

TC-600-4310M-X

CAGE CODE 53919

3. DIMENSIONS ARE IN INCHES [mm].

CAD FILE 04/18/18

SCALE N/A

SIZE A

7361

LMR®-600 Flexible Low Loss Communications Coax

Ideal for...

- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable



• **LMR®** standard is a UV Resistant Polyethylene jacketed cable designed for 20-year service outdoor use. The bending and handling characteristics are significantly better than air-dielectric and corrugated hard-line cables.

• **LMR®-DB** is identical to standard LMR plus has the advantage of being watertight. The addition of waterproofing compound in and around the foil/braid insures continuous reliable service should the jacket be inadvertently damaged during installation or in the future.

• **LMR®-FR** is a non-halogen (non-toxic), low smoke, fire retardant cable designed for in-building runs that can be routed anywhere except air handling plenums. LMR-FR is UL/NEC & CSA rated 'CMR' and 'FT4' respectively, meets FAA FAR25 requirements and is MSHA-P for mining applications.

• **LMR®-FR-PVC** is a general-purpose indoor cable and has a UL/NEC & CSA rating of 'CMR' and 'FT4' respectively. It is less expensive than LMR-FR, however it emits toxic fumes (HCL) and greater smoke density when burned.

• **LMR®-PVC** is designed for low loss general-purpose applications and is somewhat more flexible than the standard polyethylene jacketed LMR.

• **LMR®-PVC-W** is a white-jacketed version of LMR-PVC for marine and other applications where color compatibility is desired.

• **Flexibility** and bendability are hallmarks of the LMR-600 cable design. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-600.

Size for size LMR has the lowest loss of any flexible cable and comparable loss to semirigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

• **Weatherability:** LMR-600 cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors:** A wide variety of connectors are available for LMR-600 cable, including all common interface types, reverse polarity, and a choice of solder or non-solder center pins. Most LMR connectors employ crimp outer attachment using standard hex crimp sizes.

• **Cable Assemblies:** All LMR-600 cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

Part Description				Stock
Part Number	Application	Jacket Color	Code	
LMR-600	Outdoor	PE	Black	54003
LMR-600-DB	Outdoor/Watertight	PE	Black	54093
LMR-600-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54032
LMR-600-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54074
LMR-600-PVC	General Purpose	PVC	Black	54219
LMR-600-PVC-W	General Purpose	PVC	White	54206

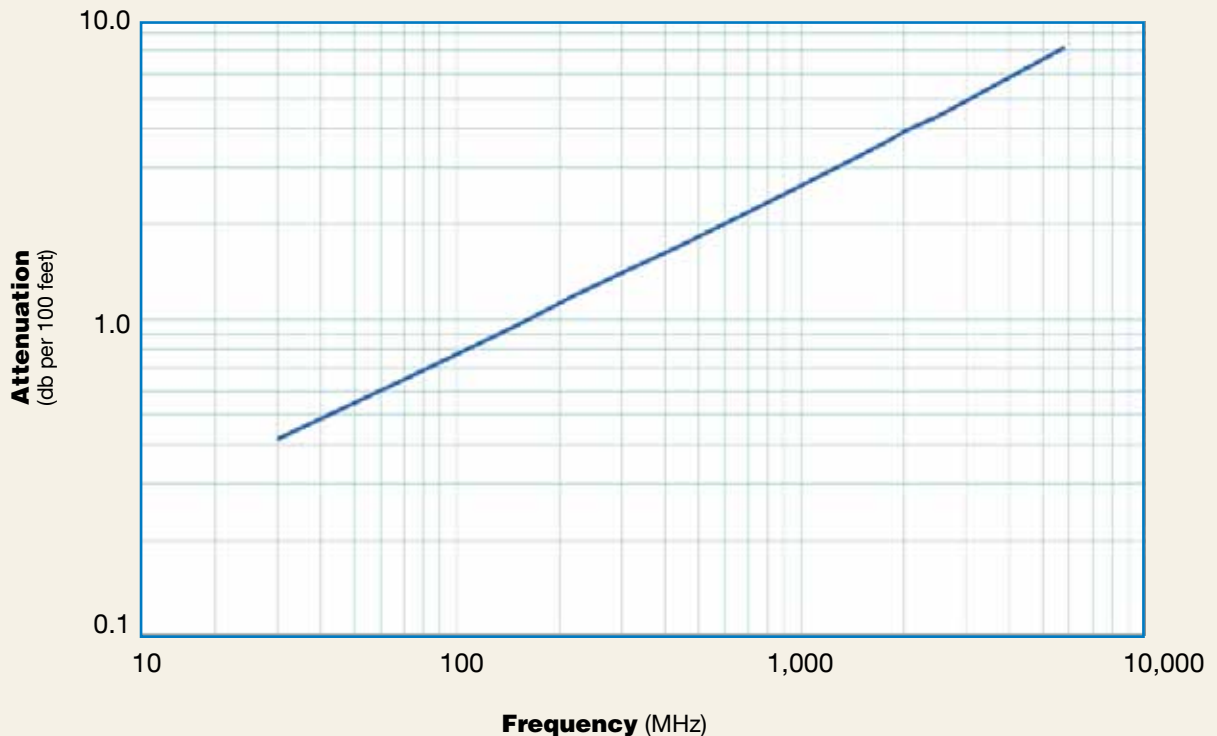
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCAI	0.176	(4.47)
Dielectric	Foam PE	0.455	(11.56)
Outer Conductor	Aluminum Tape	0.461	(11.71)
Overall Braid	Tinned Copper	0.490	(12.45)
Jacket	(see table above)	0.590	(14.99)

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.50	(38.1)
Bend Radius: repeated	in. (mm)	6.0	(152.4)
Bending Moment	ft-lb (N-m)	2.75	(3.73)
Weight	lb/ft (kg/m)	0.131	(0.20)
Tensile Strength	lb (kg)	350	(158.9)
Flat Plate Crush	lb/in. (kg/mm)	60	(1.07)

Environmental Specifications		
Performance Property	°F	°C
Installation Temperature Range	-40/+185	-40/+85
Storage Temperature Range	-94/+185	-70/+85
Operating Temperature Range	-40/+185	-40/+85

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	87	
Dielectric Constant	NA	1.32	
Time Delay	nS/ft (nS/m)	1.17	(3.83)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	23.4	(76.6)
Inductance	uH/ft (uH/m)	0.058	(0.19)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	0.53	(1.7)
Outer Conductor	ohms/1000ft (/km)	1.2	(3.9)
Voltage Withstand	Volts DC	4000	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	40	

Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800
Attenuation dB/100 ft	0.4	0.5	1.0	1.2	1.7	2.5	3.3	3.7	3.9	4.4	7.3
Attenuation dB/100 m	1.4	1.8	3.2	3.9	5.6	8.2	10.9	12.1	12.8	14.5	23.8
Avg. Power kW	5.51	4.24	2.41	1.97	1.35	0.93	0.70	0.63	0.59	0.52	0.32

Calculate Attenuation =

$(0.075550) \cdot \sqrt{\text{FMHz}} + (0.000260) \cdot \text{FMHz}$ (interactive calculator available at http://www.timesmicrowave.com/cable_calculators)

Attenuation:

VSWR=1.0; Ambient = +25°C (77°F)

Power:

VSWR=1.0; Ambient = +40°C; Inner Conductor = 100°C (212°F); Sea Level; dry air; atmospheric pressure; no solar loading

LMR®-600

Flexible Low Loss Communications Coax



Connectors

Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in (mm)	Width in (mm)	Weight lb (g)
7/8 EIA	Flange	EZ-600-78EIA	3190-1373	<1.25:1 (2.5)	NA	Spring Finger	Clamp	S/S	2.3 (58)	2.60 (66.0)	0.873 (396.0)
7-16 DIN Female	Straight Jack	TC-600-716FC	3190-375	<1.25:1 (2.5)	NA	Solder	Clamp	S/S	1.1 (28)	1.00 (25.4)	0.249 (112.9)
7-16 DIN Male	Straight Plug	EZ-600-716MH	3190-503	<1.25:1 (2.5)	Hex	Spring Finger	Crimp	S/S	2.0 (51)	1.30 (33.0)	0.254 (115.2)
	Straight Plug	TC-600-716MC	3190-502	<1.25:1 (2.5)	Hex	Solder	Clamp	S/S	2.0 (51)	1.30 (33.0)	0.347 (157.4)
	Right Angle	TC-600-716M-RA	3190-395	<1.35:1 (2.5)	Hex	Solder	Crimp	S/S	1.4 (36)	1.40 (35.6)	0.354 (160.8)
7/16 Male	Right Angle	EZ-600-716M-RA-X	3190-2546	<1.35:1 (6)	Hex	Spring Finger	Crimp	A/G	1.6 (40)	1.38 (35.0)	0.462 (210.0)
	Straight Jack	EZ-600-716F	3190-2447	<1.25:1 (6)	Hex	Spring Finger	Crimp	A/G	1.8 (45)	1.32 (33.6)	0.158 (71.7)
HN Male	Straight Plug	TC-600-HNM	3190-1429	<1.25:1 (<1)	Knurl	Solder	Clamp	S/G	2.3 (59.2)	0.88 (22.4)	0.25 (113)
LC Male	Straight Plug	TC-600-LCM	3190-1406	<1.25:1 (<1)	Hex	Solder	Clamp	N/S	3.1 (78.0)	1.62 (41.1)	1.20 (544)
N Female	Straight Jack	EZ-600-NF	3190-955	<1.25:1 (2.5)	NA	Spring Finger	Crimp	S/G	2.3 (59)	0.87 (22.1)	0.150 (68.0)
	Bulkhead Jack	EZ-600-NF-BH	3190-616	<1.25:1 (2.5)	NA	Spring Finger	Crimp	S/G	2.4 (61)	0.88 (22.4)	0.195 (88.5)
	Bulkhead Jack	TC-600-NF-BH	3190-589	<1.25:1 (2.5)	NA	Solder	Crimp	S/G	2.4 (61)	0.88 (22.4)	0.195 (88.5)
	Bulkhead Jack	TC-600-NFC-BH	3190-466	<1.25:1 (2.5)	NA	Solder	Clamp	S/G	2.2 (56)	0.94 (23.9)	0.214 (97.1)
N Male	Straight Plug	EZ-600-NMK	3190-669	<1.25:1 (2.5)	Knurl	Spring Finger	Crimp	S/G	2.1 (53)	0.92 (23.4)	0.164 (74.4)
	Straight Plug	EZ-600-NMC-2	3190-2641	<1.25:1 (6)	Hex/Knurl	Spring Finger	Clamp	A/G	2.1 (53)	0.92 (23.4)	0.202 (91.6)
	Straight Plug	TC-600-NMC	3190-357	<1.25:1 (2.5)	Hex	Solder	Clamp	S/G	2.1 (53)	0.92 (23.4)	0.208 (93.4)
	Straight Plug	EZ-600-NMH-X	3190-2627	<1.25:1 (8)	Hex/Knurl	Spring Finger	Crimp	A/G	2.1 (53)	0.92 (23.4)	0.164 (74.4)
	Straight Plug	TC-600-NMH-X	3190-2628	<1.25:1 (8)	Hex/Knurl	Spring Finger	Crimp	A/G	2.1 (53)	0.92 (23.4)	0.166 (75.3)
	Right Angle	EZ-600-NMH-RA-X	3190-2639	<1.35:1 (6)	Hex	Spring Finger	Crimp	A/G	2.0 (50)	1.42 (36.0)	0.224 (101.7)
	Right Angle	TC-600-NMH-RA-D	3190-2427	<1.35:1 (6)	Hex	Solder	Crimp	A/G	1.8 (46.5)	1.62 (41.2)	0.185 (84.3)
QDS Male	Straight Plug	TC-600-QDSM	3190-846	<1.25:1 (<1)	Knurl	Solder	Clamp	A/G	2.2 (55.6)	1.00 (25.4)	0.25 (113)
	Right Angle	TC-600-QDSM-RA	3190-847	<1.25:1 (<1)	Knurl	Solder	Clamp	A/G	2.4 (61.5)	1.88 (47.8)	0.35 (159)
TNC Male	Straight Plug	TC-600-TM-X	3190-2530	<1.25:1 (6)	Hex/Knurl	Solder	Crimp	A/G	2.3 (57.6)	0.75 (19.0)	0.100 (45.6)
	Straight Plug	EZ-600-TM-X	3190-2531	<1.25:1 (6)	Hex/Knurl	Spring Finger	Crimp	A/G	2.3 (57.6)	0.75 (19.0)	0.100 (45.6)
	Reverse Polarity	EZ-600-TM-RP	3190-796	<1.25:1 (2.5)	Knurl	Spring Finger	Crimp	A/G	2.2 (56)	0.87 (22.0)	0.112 (50.8)
TNC Female	Reverse Polarity	EZ-600-TF-RP	3190-797	<1.25:1 (2.5)	NA	Spring Finger	Crimp	A/G	2.3 (58)	0.87 (22.0)	0.100 (45.4)
UHF Male	Straight Plug	EZ-600-UM	3190-615	<1.25:1 (2.5)	Knurl	Spring Finger	Crimp	S/G	1.7 (43)	0.88 (22.4)	0.164 (74.4)
	STRAIGHT PLUG	TC-600-UMC	3190-213	<1.25:1 (2.5)	KNURL	SOLDER	CLAMP	S/G	1.7 (43)	0.88 (22.4)	0.198 (89.8)

Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alloy **VSWR spec based on 3 foot cable with a connector pair *Available in bulk pack



Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	HX-4	3190-200	Crimp Handle
Crimp Dies	Y1720	3190-203	.610" Hex Dies
Crimp Rings	CR-600	3190-831	Crimp Rings for TC/EZ-600 connectors (pkg of 10)
Strip Tool	CST-600	3192-052	Combination prep tool for LMR-600 crimp and clamp style connectors
Replacement Blades	RB-456	3190-421	Replacement Blades for Strip Tools
Deburr Tool	DBT-U	3192-001	Removes center conductor rough edges
Midspan Strip Tool	GST-600A	3190-1051	For ground strap attachment
Wrench	WR600	3190-1435	15/16" Box Wrench (2 required for EZ-600-NMC-2)
Cutting Tool	CCT-01	3190-1544	Cable end flush cut tool
Replacement Blade	RB-01	3190-1609	Replacement blade for cutting tool
Replacement Blade	RB-CST	3192-086	Replacement blade kit for all CST strip tools
Tool Kit	TK-600EZ	3190-1602	Tool kit for LMR crimp/clamp connectors (includes CCT-01, CST-600, HX-4, Y1720, Tool Pouch)



Hardware Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S600TT	GK-S600TT	Standard Grounding Kit (each)
Hoisting Grip	HG-600T	HG-600T	Split/Laced Type (each)
Cold Shrink	CS-A600T	CS-A600T	Cable to Antenna Junction (each)
Cold Shrink	CS-60120T	CS-60120T	LMR-600 to -1200 Junction (each)
Cold Shrink	CS-60170T	CS-60170T	LMR-600 to -1700 Junction (each)
Hanger Blocks	CB-600T	CB-600T	Dual Cable Support Block (kit of 10)
Standard Entry			
Port Cushion	SC-600T-3	SC-600T-3	Three cables (each)
Snap-In Hangers	SH-U600T	SH-U600T	Snap-In Hangers (Kit of 10)
Hanger Block Supporting Hardware			Complete Range of Supporting Hardware & Adapters Available