



SMA Male Connector Crimp/Solder Attachment for LMR-400, PE-C400

RF Connectors
Technical Data Sheet

TC-400-SM-X

Times Microwave Systems Connector Specification

Configuration

- SMA Male Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: LMR-400, PE-C400

Features

- Max. Operating Frequency 6 GHz
- Excellent VSWR of 1.22:1
- Gold Plated Brass Contact
- 50µ" Minimum contact plating

Applications

- General Purpose Test
- Custom Cable Assemblies

Description

Pasternack's TC-400-SM-X SMA male connector with crimp/solder attachment for LMR-400 and PE-C400 is part of our full line of RF components available for same-day shipping. Our SMA male connector operates up to a maximum frequency of 6 GHz and offers excellent VSWR of 1.22:1.

Our SMA male connector TC-400-SM-X datasheet specifications and drawing with dimensions 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			1.22:1	
Operating Voltage (AC)			335	Vrms
Dielectric Withstanding Voltage (DC)			500	Vdc
Inner Conductor DC Resistance			3	mOhms
Outer Conductor DC Resistance			2	mOhms
Insulation Resistance	5,000			MOhms

Mechanical Specifications

Size

- Length 1.23 in [31.24 mm]
- Width/Dia. 0.5 in [12.70 mm]
- Height 0.5 in [12.7 mm]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male Connector Crimp/Solder Attachment for LMR-400, PE-C400 TC-400-SM-X](#)



SMA Male Connector Crimp/Solder Attachment for LMR-400, PE-C400

RF Connectors Technical Data Sheet

TC-400-SM-X

Weight	0.051 lbs [23.13 g]
Mating Cycles	500 Cycles
Mating Torque	7 to 10 in-lbs [0.79 to 1.13 Nm]

Material Specifications

Description	Material	Plating
Contact	Brass	Gold 50µ" Minimum
Insulation	Teflon	
Body	Brass	Tri-Metal
Coupling Nut	Brass	Tri-Metal

Environmental Specifications

Temperature

Operating Range	-55 to +125 deg C
Humidity	MIL-STD-202, Method 106
Shock	MIL-STD-202, Method 213, Cond. I
Vibration	MIL-STD-202, Method 204, Cond. D

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

Plotted and Other Data

Notes:

SMA Male Connector Crimp/Solder Attachment for LMR-400, PE-C400 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: [SMA Male Connector Crimp/Solder Attachment for LMR-400, PE-C400 TC-400-SM-X](#)

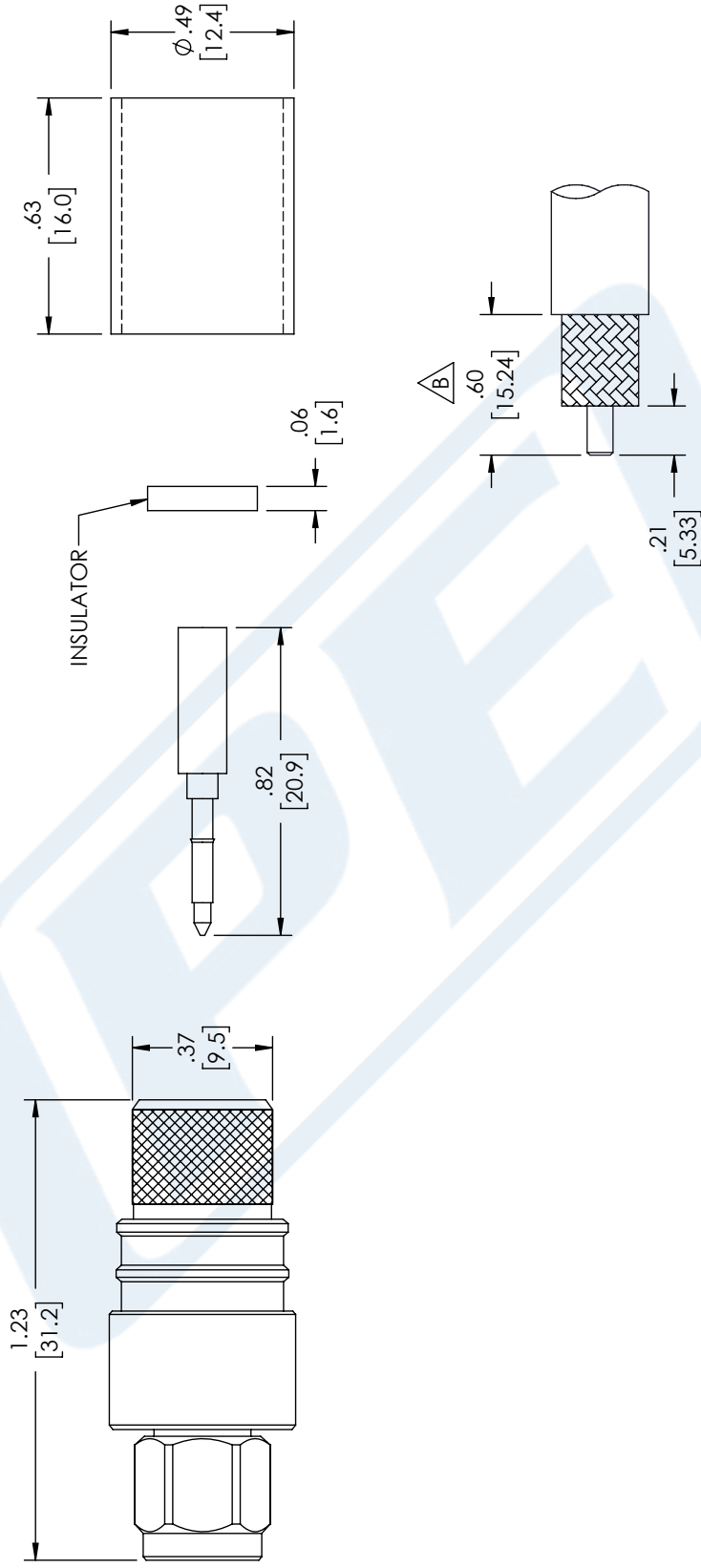
URL: <https://www.pasternack.com/sma-male-lmr-400-pe-c400-connector-tc-400-sm-x-p.aspx>

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.

TC-400-SM-X CAD Drawing

SMA Male Connector Crimp/Solder Attachment for LMR-400, PE-C400

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	PCR TC-400-SM-X 20220513; UPDATE STRIPPING DIM	6/2/22	SRAUTUS



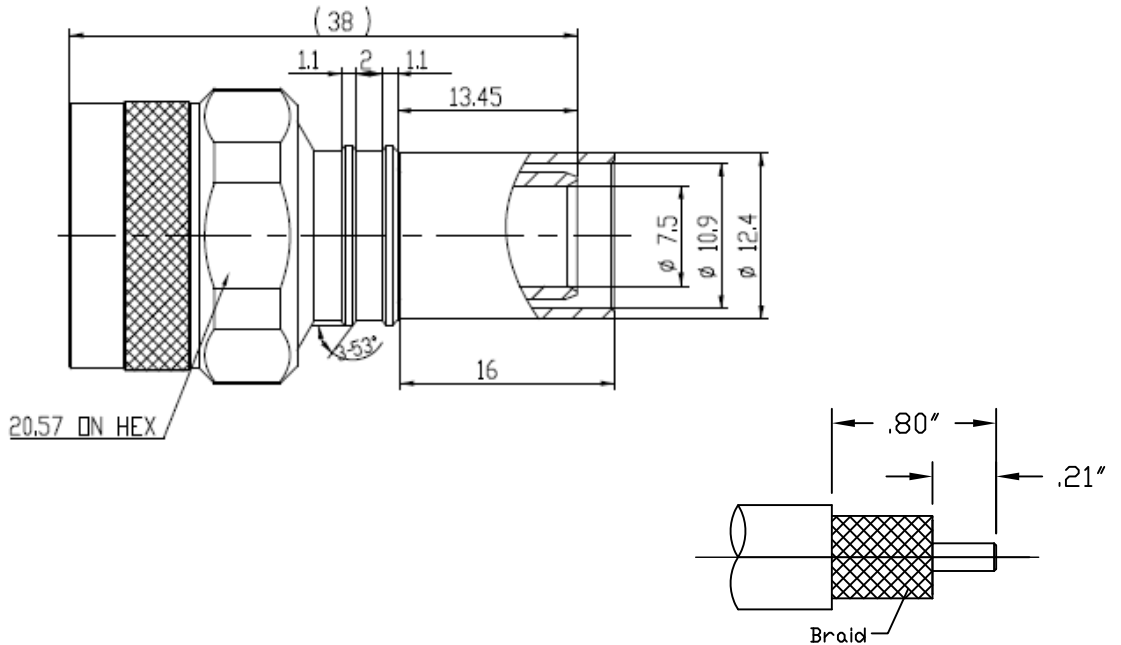
RECOMMENDED CABLE STRIPPING DIMENSION

<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <p>.X = ±.2 [5.08] FRACTIONS ± 1/32 .XX = ±.02 [.51] ANGLES ± 1° .XXX = ±.005 [.13]</p> <p>CABLE LENGTH (L), TOLERANCES: L ≤ 12 [305] = +1 [25] / -0 12 [305] < L ≤ 60 [1524] = +2 [51] / -0 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0 300 [7620] < L = +5% / -0</p> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p>	<p>THIRD-ANGLE PROJECTION</p> <p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION ALL RIGHTS RESERVED.</p> <p>SHEET 1 OF 1</p> <p>SCALE N/A</p>
	<p>SIZE A CAGE CODE 53919 DRAWN BY HBAKKE ITEM NO. TC-400-SM-X-PE REV B</p>
<p>PE PASTERNAK an INFINITI brand</p> <p>Pasternack Enterprises, Inc. P. O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920 1.866.727.8376 Fax: 1.949.261.7451 Website: www.pasternack.com E-mail: sales@pasternack.com</p>	

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

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	N. N. N	11/18/13	J. D. B.	12/3/13



Reference standard IEC60169-16
 I. Electric Performance
 Impedance(Ω): 50
 Frequency Range: DC-6GHz
 VSWR: ≤ 1.3
 Insert Loss: (dB) ≤ 0.05
 Insulation resistance (M Ω) > 5000
 Proof voltage (V) 1500
 Conductor resistance (m Ω)
 outer conductor < 0.4
 inner conductor < 0.8

IV. Environment
 Temperature range -40 $^{\circ}$ C~+85 $^{\circ}$ C
 Weather standard IEC 60068 40 / 085/ 21
 Thermal shock US MIL-STD 202, Meth.107, Cond.B
 Vibration US MIL-STD 202, Meth.204, Cond.B
 Shock US MIL-STD 202, Meth.213, Cond.I
 Waterproofing standard IP67
 V. Assemble: inner conductor installed and outer conductor crimped

II. Mechanical Performance
 Nut torque 5N.m
 (Nut)Whorl pull 500N
 Tensile force(cable-connector) 400N
 Torsion(cable-connector) 2N.m

III. Material and plating:

Component	Material	Plating
Inner conductor	Beryllium Bronze	Au50 micro inches over nickel 100 over copper
Outer conductor	Brass	Copper-tin-zinc 100-150 micro inches
Tube:	copper	Copper-tin-zinc 100-150 micro inches
Nut:	Brass	Copper-tin-zinc 100-150 micro inches
Gasket:	Silicone rubber	
Insulator:	PTFE	

MATERIAL:	UNLESS OTHERWISE SPECIFIED		DFTM. N. N. N	TIMES MICROWAVE SYSTEMS
	ALL DIMENSIONS ARE IN mm		DATE 11/18/13	
USED ON: O-0	DO NOT SCALE DRAWING		CHKD. J. D. B.	EZ-400-NMH-PL-X CONNECTOR, NM FOR LMR400-LLPL
			DATE 12/3/13	
			APPD. J. D. B.	
SCALE: ~	DWG. SIZE A	CODE IDENT 68999	DATE 12/3/13	SHEET 1 of 1 SD3190-2961 REV A

LMR[®]-400 Flexible Low Loss Communications Coax

Ideal for...

- Drop-in replacement for RG-8/9913 Air-Dielectric type Cable
- 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-400 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-400.

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-400 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-400 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-400 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	Code
LMR-400	Outdoor	PE	Black	54001	
LMR-400-DB	Outdoor/Watertight	PE	Black	54091	
LMR-400-FR	Indoor/Outdoor Riser	CMR FRPE	Black	54030	
LMR-400-FR-PVC	Indoor/Outdoor Riser	CMR FRPVC	Black	54073	
LMR-400-PVC	General Purpose	PVC	Black	54218	
LMR-400-PVC-W	General Purpose	PVC	White	54204	

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCAI	0.108	(2.74)
Dielectric	Foam PE	0.285	(7.24)
Outer Conductor	Aluminum Tape	0.291	(7.39)
Overall Braid	Tinned Copper	0.320	(8.13)
Jacket	(see table above)	0.405	(10.29)

LMR[®]-400 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)
7-16 DIN Female	Straight Jack	TC-400-716-FC	3190-376	<1.25:1 (2.5)	NA	Solder	Clamp	S/S	1.6 (41)	1.13 (28.7)	0.281 (127.5)
7-16 DIN Male	Straight Plug	EZ-400-716M-X	3190-2524	<1.25:1 (6)	Hex	Spring Finger Crimp		A/G	1.6 (39.5)	1.38 (35)	0.277 (126.0)
7-16 DIN Male	Straight Plug	TC-400-716-MC	3190-279	<1.25:1 (2.5)	Hex	Solder	Clamp	S/S	1.4 (36)	1.40 (35.6)	0.268 (121.6)
7-16 DIN Male	Right Angle	TC-400-716MC-RA	3190-1671	<1.25:1 (<3)	Hex	Solder	Clamp	A/S	2.4 (61.5)	1.88 (47.8)	0.35 (159)
7-16DIN Male	Right Angle	EZ-400-716M-RA-X	3190-2545	<1.35:1 (6)	Hex	Spring Finger Crimp		A/G	1.6 (41.7)	1.75 (44.3)	0.374 (0.17)
BNC Male	Straight Plug	TC-400-BM	3190-318	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/S	1.7 (43)	0.56 (14.2)	0.063 (28.6)
HN Male	Straight Plug	TC-400-HNM	3190-923	<1.25:1 (<1)	Knurl	Solder	Clamp	S/G	2.3 (59.2)	0.88 (22.4)	0.25 (113.4)
HN Male	Right Angle	TC-400-HNM-RA	3190-2541	<1.25:1 (2.5)	Hex	Solder	Crimp	A/G	1.6 (41.4)	1.56 (39.6)	0.198 (90.0)
QDS Male	Straight Plug	TC-400-QDSM	3190-620	<1.25:1 (<3)	Knurl	Solder	Clamp	A/G	1.8 (46.6)	1.00 (25.4)	0.25 (113.4)
Mini-UHF	Straight Plug	TC-400-MUHF	3190-520	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/G	1.1 (28)	0.50 (12.7)	0.020 (9.1)
N Female	Straight Jack	TC-400-NFC	3190-299	<1.25:1 (2.5)	NA	Solder	Clamp	N/S	1.6 (41)	0.75 (19.1)	0.119 (54.0)
	Straight Jack	EZ-400-NF	3190-956	<1.25:1 (2.5)	NA	Spring Finger Crimp		N/G	1.8 (45)	0.66 (16.8)	0.105 (47.6)
	Straight Jack	TC-400-NF	3190-2255	<1.25:1 (2.5)	NA	Solder	Crimp	N/G	1.8 (45)	0.66 (16.8)	0.105 (47.6)
	Bulkhead Jack	EZ-400-NF-BH	3190-518*	<1.25:1 (2.5)	NA	Spring Finger Crimp		N/G	1.8 (46)	0.88 (22.4)	0.102 (46.3)
	Bulkhead Jack	TC-400-NFC-BH (A)	3190-872	<1.25:1 (2.5)	NA	Solder	Clamp	A/G	1.8 (46)	0.88 (22.4)	0.145 (65.8)
N Male	Straight Plug	SC-400-NM	3190-1454	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/G	1.5 (38)	0.75 (19.1)	0.090 (40.8)
	Straight Plug	TC-400-NMC	3190-277	<1.25:1 (2.5)	Knurl	Solder	Clamp	N/G	1.5 (38)	0.70 (17.8)	0.121 (54.9)
	Straight Plug	EZ-400-NMC-2	3190-2640	<1.25:1 (2.5)	Hex/Knurl	Spring Finger Crimp		N/G	1.5 (38)	0.75 (19.1)	0.121 (54.9)
	Straight Plug	EZ-400-NMH-X	3190-2590	<1.25:1 (10)	Hex/Knurl	Spring Finger Crimp		A/G	1.5 (38)	0.89 (22.6)	0.103 (46.8)
	Straight Plug	TC-400-NMH-X	3190-2626	<1.25:1 (10)	Hex/Knurl	Solder	Crimp	A/G	1.5 (38)	0.89 (22.6)	0.113 (51.3)
	Straight Plug	EZ-400-NMK	3190-661	<1.25:1 (10)	Knurl	Spring Finger Crimp		S/G	1.5 (38)	0.75 (22.6)	0.113 (51.3)
	Right Angle	EZ-400-NMH-RA-X	3190-2638	<1.35:1 (6)	Hex/Knurl	Spring Finger Crimp		A/G	1.87 (47)	1.42 (36.0)	0.177 (80.2)
	Right Angle	TC-400-NMH-RA-D	3190-2293*	<1.35:1 (6)	Hex/Knurl	Solder	Crimp	A/G	1.8 (46)	1.25 (31.8)	0.130 (59.0)
	Right Angle	TC-400-NMC-RA (A)	3190-870	<1.35:1 (2.5)	Hex	Solder	Clamp	A/G	1.8 (46)	1.25 (31.8)	0.150 (68.0)
	Reverse Polarity	TC-400-NM-RP	3190-960	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/G	1.5 (38)	0.75 (19.1)	0.090 (40.8)
SMA Male	Straight Plug	TC-400-SM	3190-439	<1.25:1 (8)	Hex	Solder	Crimp	N/G	1.2 (29)	0.50 (12.7)	0.032 (14.5)
TNC Female	Reverse Polarity	TC-400-TF-RP	3190-1063	<1.25:1 (2.5)	NA	Solder	Crimp	N/G	1.8 (46)	0.55 (14.0)	0.074 (33.6)
	Reverse Polarity	EZ-400-TF-RP	3190-795	<1.25:1 (2.5)	NA	Spring Finger Crimp		A/G	1.8 (46)	0.55 (14.0)	0.074 (33.6)
TNC Male	Straight Plug	TC-400-TM-X	3190-2532	<1.25:1 (6)	Hex/Knurl	Solder	Crimp	A/G	1.9 (48)	0.67 (17.5)	0.075 (34.3)
	Straight Plug	EZ-400-TM-X	3190-2533	<1.25:1 (6)	Hex/Knurl	Spring Finger Crimp		A/G	1.9 (48)	0.67 (17.5)	0.075 (34.3)
	Right Angle	TC-400-TM-RA	3190-442*	<1.35:1 (2.5)	Knurl	Solder	Crimp	N/G	1.7 (43)	0.59 (15.0)	0.085 (38.6)
	Reverse Polarity	TC-400-TM-RP	3190-1062	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/G	1.7 (43)	0.59 (15.0)	0.074 (33.6)
	Reverse Polarity	EZ-400-TM-RP	3190-794	<1.25:1 (2.5)	Knurl	Spring Finger Crimp		A/G	1.7 (43)	0.59 (15.0)	0.074 (33.6)