



N Male Right Angle Connector Crimp/Non-Solder Contact Attachment for LMR-400, PE-C400, PE-B400, PE-B405

RF Connectors Technical Data Sheet



EZ-400-NMH-RA-X

Times Microwave Systems Connector Specification

Configuration

- N Male Connector
- 50 Ohms
- Right Angle Body Geometry
- Connector Interface Types: LMR-400, PE-C400, PE-B400, PE-B405

Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.35:1
- Gold Plated Beryllium Copper Contact
- 1.27 μ m minimum contact plating

Applications

- General Purpose Test
- Custom Cable Assemblies

Description

Pasternack's EZ-400-NMH-RA-X type N male right angle connector with crimp/non-solder contact attachment for LMR-400, PE-C400, PE-B400 and PE-B405 is part of our full line of RF components available for same-day shipping. Our type N male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.35:1. Its right angle body geometry allows for easier connections in tight spaces.

Our type N male right angle connector EZ-400-NMH-RA-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			1.35:1	
Dielectric Withstanding Voltage (AC)			2,500	Vrms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3					GHz
Insertion Loss, Max	0.1					dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Right Angle Connector Crimp/Non-Solder Contact Attachment for LMR-400, PE-C400, PE-B400, PE-B405 EZ-400-NMH-RA-X](#)



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Mechanical Specifications

Size

Length	1.87 in [47.5 mm]
Width/Dia.	0.81 in [20.57 mm]
Height	1.42 in [36.07 mm]
Weight	0.2 lbs [90.72 g]
Mating Torque	44 in-lbs [4.97 Nm]

Material Specifications

Description	Material	Plating
Contact	Beryllium Copper	Gold 1.27 µm minimum
Insulation	PTFE	
Body	Brass	Tri-Metal 2 µm minimum
Coupling Nut	Brass	Tri-Metal 2 µm minimum

Environmental Specifications

Temperature

Operating Range	-55 to +155 deg C
Shock	MIL-STD 202, Method 213, Condition I
Vibration	MIL-STD 202, Method 204, Condition 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: [N Male Right Angle Connector Crimp/Non-Solder Contact Attachment for LMR-400, PE-C400, PE-B400, PE-B405 EZ-400-NMH-RA-X](#)



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EZ-400-NMH-RA-X

N Male Right Angle Connector Crimp/Non-Solder Contact Attachment for LMR-400, PE-C400, PE-B400, PE-B405 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.

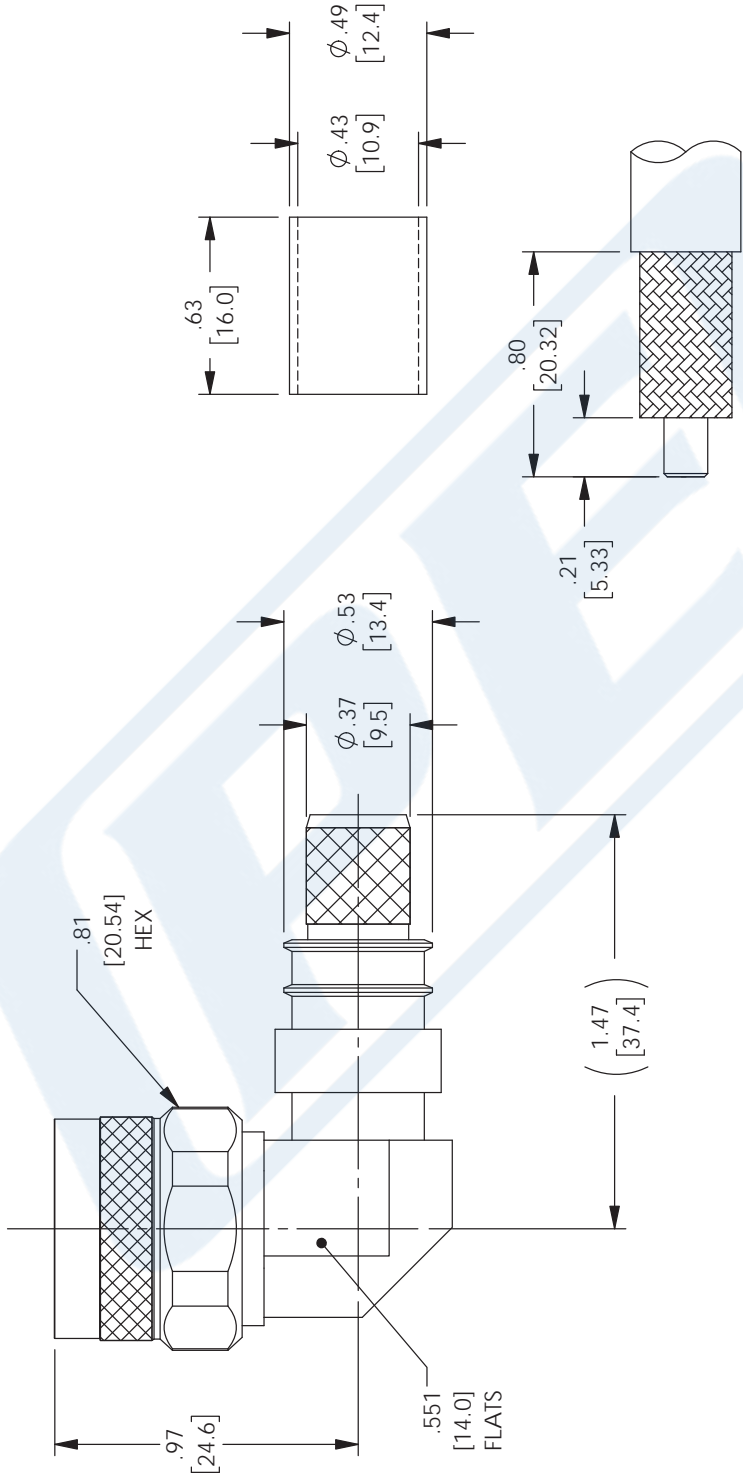
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Right Angle Connector Crimp/Non-Solder Contact Attachment for LMR-400, PE-C400, PE-B400, PE-B405 EZ-400-NMH-RA-X](https://www.pasternack.com/n-male-lmr-400-pe-c400-pe-b400-pe-b405-connector-ez-400-nmh-ra-x-p.aspx)

URL: <https://www.pasternack.com/n-male-lmr-400-pe-c400-pe-b400-pe-b405-connector-ez-400-nmh-ra-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.

TIMES MICROWAVE SYSTEMS **EZ-400-NMH-RA-X CAD Drawing**
 N Male Right Angle Connector Crimp/Non-Solder Contact
 Attachment for LMR-400, PE-C400, PE-B400, PE-B405

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	01/19/20201	SELLIS



RECOMMENDED CABLE
STRIPPING DIMENSIONS

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE IN INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:
 X = +.2 [5.08] FRACTIONS
 XX = +.02 [.51] +.132
 .XXX = ±.005 [.13] ANGLES ± 1°

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

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

PE PASTERNAK an INFINITI brand

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 Fax: 1.949.261.7451
 Website: www.pasternack.com
 E-mail: sales@pasternack.com

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	BPUCHASKI	EZ-400-NMH-RA-X

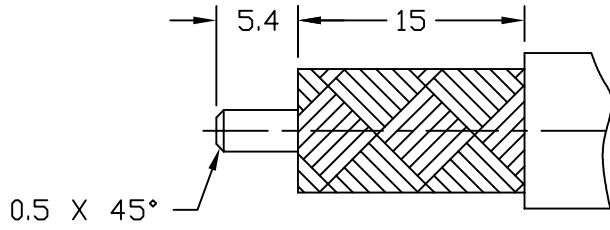
REV A

FERRULE HEX CRIMP SIZE: 0.429 [10.89]

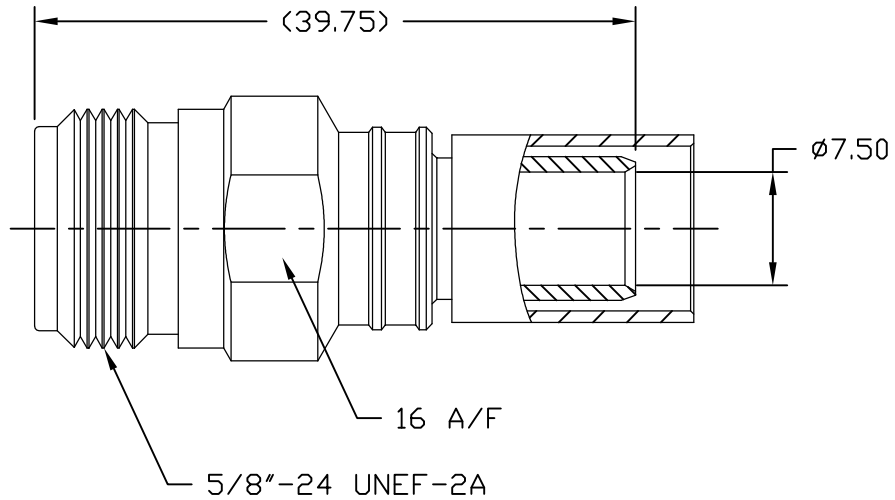
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SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	D. J. H.	12/11/12	J. D. B.	12/12/12



CABLE PREP.
USE CST-400
(3192-004)
.429" HEX.



Reference Standard IEC60169-16

I. Electric Performance

Nominal Impedance(Ω): 50
 Frequency Range: DC-6GHz
 VSWR: $\leq 1.3(0-6\text{GHz})$
 Insert Loss(dB): ≤ 0.10
 Insulation resistance(M Ω): >5000
 Proof Voltage(V): 1500
 Conductor resistance(m Ω):
 outer conductor <0.4
 inner conductor <0.8

II. Mechanical Performance

Tensile force(cable-connect) 400N
 Torsion(cable-connect) 2N.m

III. Material and plating

Component	Material	Plating
Inner conductor	Spring Copper	Au >1.27 μm
Outer conductor	Brass	Copper-tin-zinc > 2 μm
Insulator	PTFE	

IV. Environment

Temp. range -55°C~+155°C
 Weather standard IEC 60068 55 / 155/ 56
 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
 ROHS Compliant

V. Assembly: inner conductor soldered and outer conductor crimped

MATERIAL:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN mm MACHINED SURFACES FINISH N/A RMS MAX. REMOVE ALL BURRS N/A MAX. BREAK MACHINE CORNERS N/A MAX. FILLET R. TOLERANCES ON DECIMALS .XX \pm N/A .XXX \pm N/A ANGLES $\pm 1^\circ$ FRACTIONS \pm N/A	DFTM. D. J. H.	TIMES MICROWAVE SYSTEMS
		DATE 12/11/12	
USED ON: O-1		CHKD. J. D. B.	TC-400-NF-X N FEMALE FOR LMR-400 CABLE SOLDER/CRIMP/NO BRAID TRIM
		DATE 12/12/12	
SCALE: N/A	DWG. SIZE A	APPD. J. D. B.	SHEET 1 of 1 SD3190-2815 REV A
		DATE 12/12/12	
DO NOT SCALE DRAWING	CODE IDENT 68999		

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)