

TS2 L 7 M 26 B - K

TS2 Series
 Connector Type:
 L - Cable-to-Cable

Options:
K - Kit Packaging (one unit/bag)
[blank] - Bulk Packaging
 Consult factory for other options

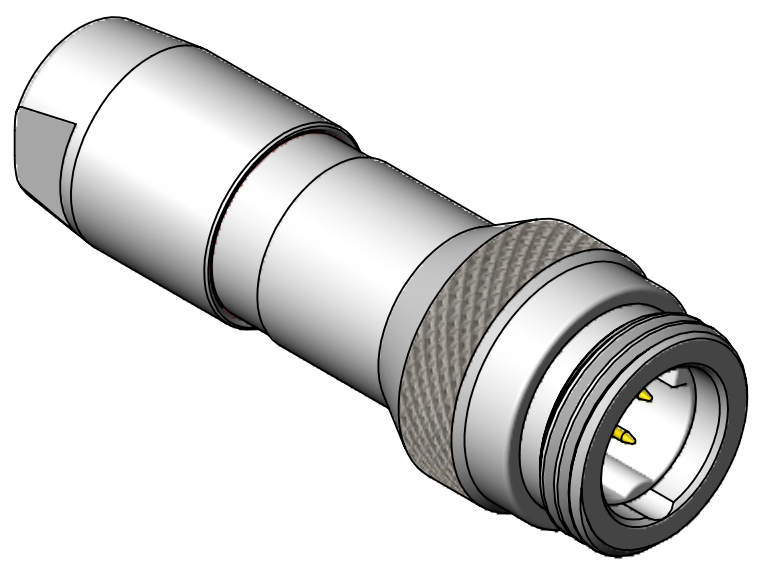
of contacts:
2-5 for #20
6-9 for #26

Gender:
M - Male (Pin)
F - Female (Socket)

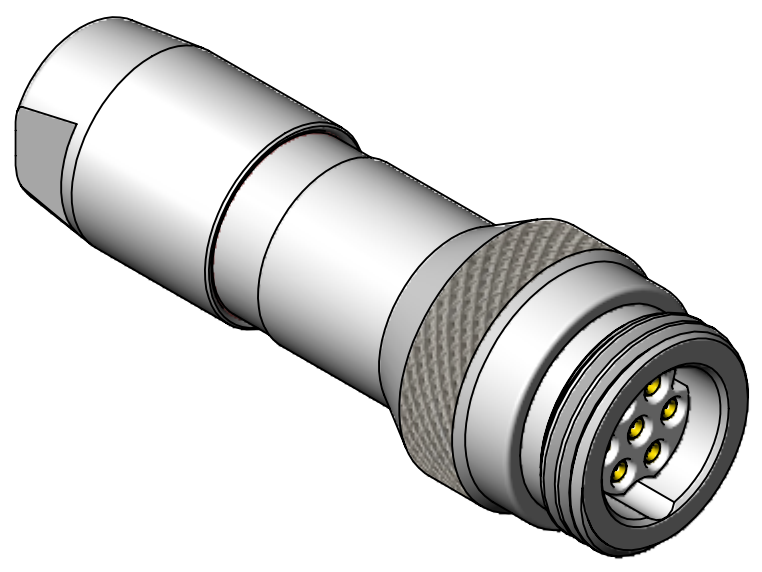
Refer to TS2P SERIES drawing for Panel-mount connectors.
 Refer to TS2C SERIES drawing for mating Cable-End connectors.

Clamp Set per Cable O.D. Range
 for Cable-End and Cable-to-Cable only:
A - 0.110 - 0.140 [2.8 - 3.6]
B - 0.140 - 0.180 [3.6 - 4.6]
C - 0.180 - 0.216 [4.6 - 5.5]

Contact Size:
20 - 20, 22, 24, 26 AWG wires
26 - 26, 28, 30 AWG wires

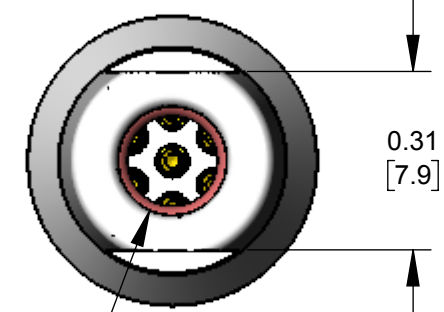
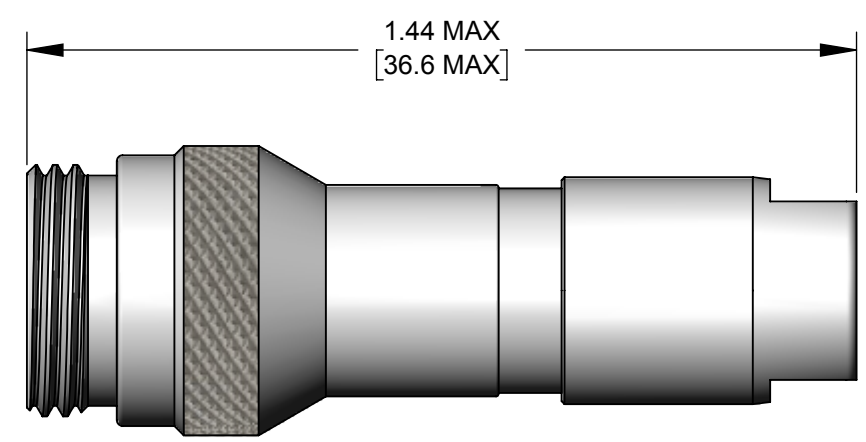
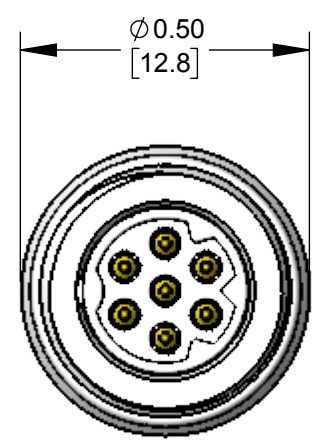


TYPICAL CABLE-TO-CABLE PIN (MALE)
 (TS2L7M26B SHOWN HERE)



TYPICAL CABLE-TO-CABLE SOCKET (FEMALE)
 (TS2L7F26B SHOWN HERE)

| SPECIFICATIONS: | |
|----------------------------------|---|
| MECHANICAL | |
| Mating / Locking Type: | Threaded Coupling |
| Life | 5,000 cycles minimum |
| Operating Forces | 10 lb. [44.5 N] maximum Insertion or Withdrawal |
| Vibration | Mil-Std 202G Method 201A |
| Panel-Mount Hex Nut Tongue | 40 in-lb [4.5 Nm] maximum |
| Cable Securing System: | Threaded on metal Clamp |
| ELECTRICAL | |
| Voltage Rating | 125 V AC/DC for 2-5 contact arrangements 30 V AC/DC for 6-9 contact arrangements |
| Current Rating | Refer to Current Carry Capacity Table |
| Insulation Resistance | 1000 MΩ minimum |
| Contact Resistance | 10 mΩ typical |
| EMI Shielding | 360° |
| ENVIRONMENTAL | |
| Temperature Limits | -40°C to +135°C (-40°F to +275°F) |
| Operating Temperature Range | Refer to Current Carry Capacity Table |
| Moisture Resistance | Mil-Std 202G Method 106G |
| Insulation Resistance | Mil-Std 202G Method 302 |
| Thermal Shock | Mil-Std 202G Method 107G |
| Salt Atmosphere (Corrosion) | Mil-Std 202G Method 101E |
| Ingress Protection Ratings | IP66, IP67, IP68 (6 ft. for 24 hours) per IEC60529, NEMA 250 6P |
| MATERIAL | |
| Outer Shell Metal components | Copper Alloy, electroless nickel plated |
| Hex Nut & Inner Metal components | Copper Alloy, nickel plated |
| Electrical Insulator | Medical Technology LCP, natural |
| Seal O-rings | Thermoplastic Elastomer |
| Contacts Assembly | Copper Alloy, gold plated with Stainless Steel locking clip |



BACK NUT DIA.
 SIZE A: 0.150 [3.81] DIA.
 SIZE B: 0.190 [4.83] DIA.
 SIZE C: 0.230 [5.84] DIA.

ALL DIMENSIONS FOR REFERENCE ONLY

| Contacts | Wire (awg) | Current Rating (A) at Operating Temperature (°C) | | | | | Minimum Test Voltage (V rms) | Voltage (V rms) tested per UL2238 |
|----------|------------|--|-----------|-----------|------------|------------|------------------------------|-----------------------------------|
| | | 45°C max. | 65°C max. | 85°C max. | 100°C max. | 110°C max. | | |
| 2 #20 | 20 | 10 | 9 | 8 | 7* | 6 | 1300 | 125 |
| | 22 | 8.5 | 7.5 | 7.5 | 5.5* | 4.5 | | |
| | 24 | 7 | 6 | 5 | 4.5* | 3.5 | | |
| | 26 | 4 | 4 | 3.5 | 3.5* | 2.5 | | |
| 3 #20 | 20 | 9.5 | 8.5 | 7.5 | 6.5* | 5 | | |
| | 22 | 8 | 7 | 6 | 5* | 4 | | |
| | 24 | 6 | 5.5 | 4.5 | 4* | 3 | | |
| | 26 | 3.5 | 3.5 | 3 | 3* | 2.5 | | |
| 4 #20 | 20 | 9 | 8 | 7 | 6* | 5 | | |
| | 22 | 7.5 | 6.5 | 5.5 | 4.5* | 3.5 | | |
| | 24 | 5 | 4.5 | 4 | 3.5* | 2.5 | | |
| | 26 | 3 | 3 | 2.5 | 2.5* | 2 | | |
| 5 #20 | 20 | 8 | 7.5 | 6.5 | 5.5* | 4.5 | | |
| | 22 | 6.5 | 5.5 | 5 | 4* | 3 | | |
| | 24 | 4.5 | 4 | 3.5 | 3* | 2.5 | | |
| | 26 | 2.5 | 2.5 | 2 | 2* | 1.5 | | |
| 6-7 #26 | 26 | 2.5 | 2.5 | 2 | 2* | 1.5 | | |
| | 28 | 2 | 2 | 1.5 | 1.5* | 1 | | |
| | 30 | 1.5 | 1.5 | 1 | 1* | .5 | | |
| | 26 | 2 | 2 | 1.5 | 1.5* | 1 | | |
| 8-9 #26 | 28 | 1.5 | 1.5 | 1 | 1* | .5 | | |
| | 30 | 1 | 1 | .5 | .5* | .5 | | |

*Temperature Rise does not exceed 30°C when tested according to UL2238. All other recommended current ratings are based on the Relative Thermal Index of the insulating material.

| TOOL | TOOL TYPE | POSITIONER | CONTACT SIZE | WIRE SIZES |
|------------|----------------------------------|------------|--------------|------------------------|
| EN3CR | HAND CRIMP TOOL | EN2POS20 | 20 and 22 | 20 and 22 AWG |
| | | EN3POS26 | 26 | 26, 28, and 30 AWG |
| EN3CRAUTO | PNEUMATIC CRIMP TOOL | EN2POS20 | 20 and 22 | 20 and 22 AWG |
| | | EN3POS26 | 26 | 26, 28, and 30 AWG |
| EN2CRL | HAND CRIMP TOOL LARGE FRAME | EN2POS20L | 20 and 22 | 20, 22, 24, and 26 AWG |
| EN2CRAUTOL | PNEUMATIC CRIMP TOOL LARGE FRAME | | | |
| INSTOOL20 | CONTACT INSERTION | -- | 20 | 20, 22, 24, and 26 AWG |
| INSTOOL26 | | -- | 26 | 26, 28, and 30 AWG |
| REMTOOL20 | CONTACT EXTRACTION | -- | 20 | 20, 22, 24, and 26 AWG |
| REMTOOL26 | | -- | 26 | 26, 28, and 30 AWG |

CUSTOMER DRAWING

UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS IN INCHES [mm]
 - TWO PLACE DECIMALS ±0.02 [0.5]
 - THREE PLACE DECIMALS ±0.005 [0.13]

| OB | 10 lb WAS 5 lb | 09/22/16 | PNK | SRC |
|-----|----------------|----------|-----|------|
| OA | PRELIMINARY | 04/20/16 | PNK | SRC |
| REV | ECO NUMBER | DATE | BY | APVD |

DO NOT SCALE DRAWING

THIS DRAWING DESCRIBES A DESIGN CONSIDERED PROPRIETARY IN NATURE, DEVELOPED AND MANUFACTURED BY SWITCHCRAFT INC. AND IS RELEASED ON A CONFIDENTIAL BASIS FOR IDENTIFICATION PURPOSES ONLY.

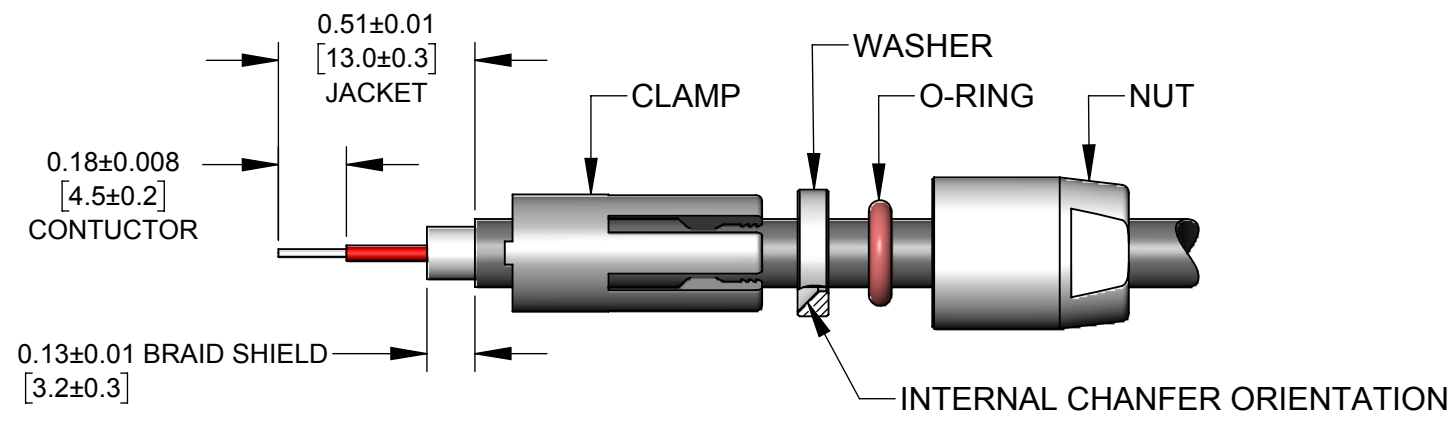
| SIZE | WIDTH | MULT | LBS/M | TEMPER |
|--|-------|-------------------|----------|--------|
| FINISH | | | | |
| SPEC No. | | MATERIAL SPEC No. | | |
| FIRST USED ON | | SCALE 3:1 | | |
| DATE DRAWN | BY | CHKD | APVD | |
| 04/20/16 | PNK | 04/20/16 | 04/20/16 | |
| NAME CABLE-TO-CABLE TS2 SERIES CONNECTOR | | | | REV 0B |
| PART No. TS2L SERIES | | | | |

Switchcraft®

SHEET 1 OF 2

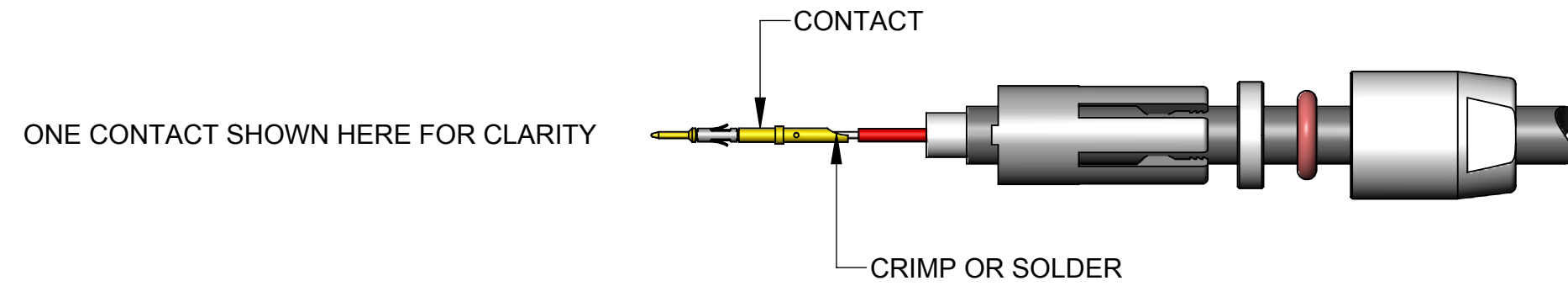
SolidWorks CAD File

STEP 1



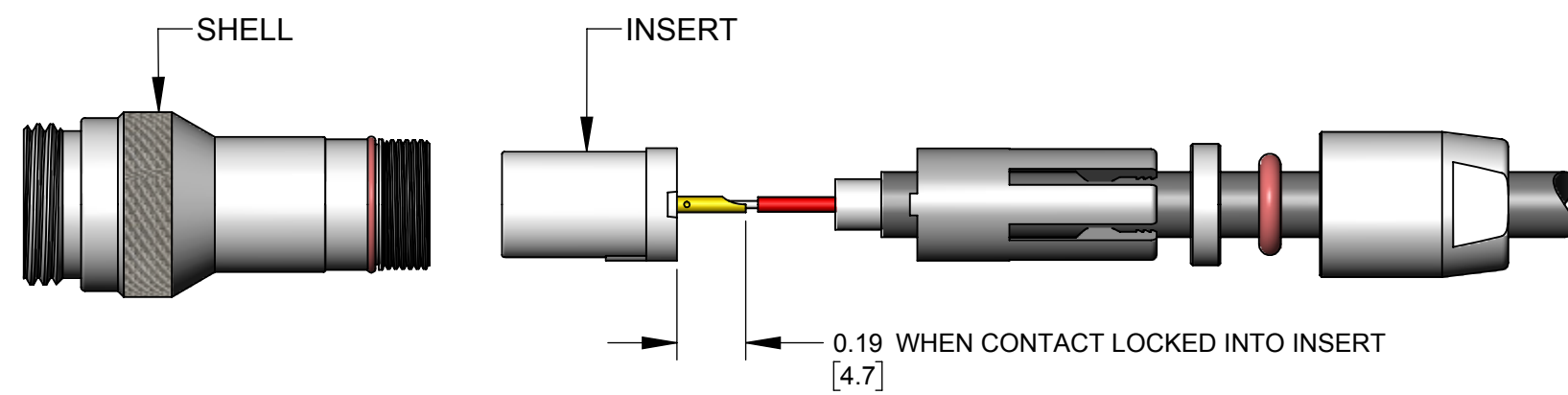
FEED THE FREE END OF CABLE THROUGH THE NUT, O-RING, WASHER, AND CLAMP IN THE ORDER SHOWN.
STRIP THE CABLE JACKET, THE CONDUCTORS, AND THE CABLE SHIELDING AS SHOWN.

STEP 2



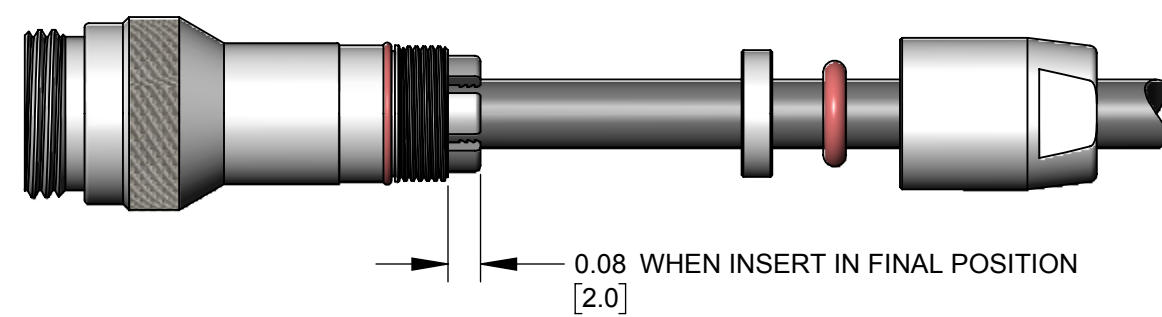
CRIMP CONDUCTORS TO CONTACTS USING HAND OR PNEUMATIC CRIMP TOOL* WITH CRIMP POSITIONER* SET PER CONTACT SIZE AND WIRE GAGE.
IF SOLDERING, IT IS RECOMMENDED TO SOLDER CONDUCTORS TO CONTACTS BEFORE INTALLATION.

STEP 3



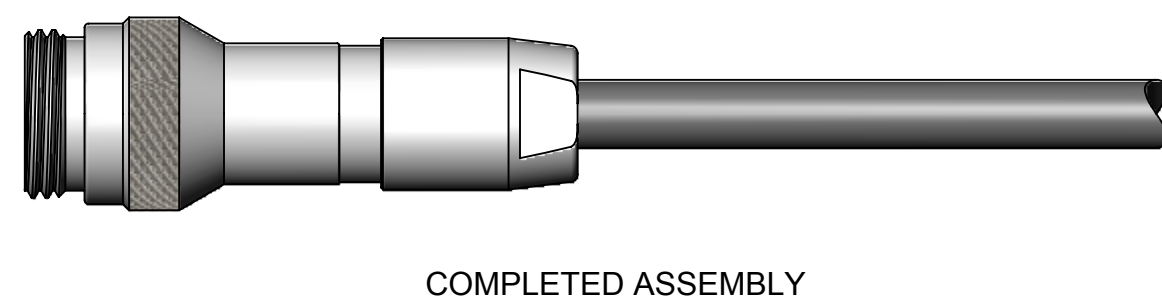
GUIDE EACH WIRED CONTACT INTO INSERT HOLE AND PUSH UNTIL CONTACT SNAPS IN PLACE. USE INSERTION TOOL* IF NECESSARY.
COLORED CONDUCTORS CAN BE ASSIGNED TO CONTACT POSITION NUMBERS AS DESIRED.
TO REMOVE A CONTACT, INSERT THE EXTRACTION TOOL* FROM THE FRONT OF INSERT AND LIGHTLY PRESS THE SPRING LOADED PLUNGER INWARD TO PUSH THE CONTACT OUT.

STEP 4



ALIGN INSERT ASSEMBLY INTO SHELL FOLLOWED BY THE CLAMP. PUSH CLAMP LIGHTLY FORWARD AND ROTATE UNTIL THE ASSEMBLY SNAPS IN THE FINAL POSITION SHOWN.

STEP 5



SLIDE WASHER, O-RING, AND NUT AGAINST CLAMP AND THREAD NUT ON UNTIL TIGHT - NOT TO EXCEED 9 IN-LB [1 Nm] TORQUE. A 5/16" [8mm] WRENCH CAN BE USED, IF NECESSARY.

*REFER TO TOOLS TABLE ON THIS DRAWING FOR SELECTION OF TOOLS PER CONTACT AND WIRE SIZE.

**TS2 SERIES CABLE-TO-CABLE
FIELD ASSEMBLY INSTRUCTIONS**

| | | |
|------------------------|----------------------------|-----------|
| SCALE 2:1 | Switchcraft® | |
| DATE DRAWN 04/20/16 | | |
| DRAWN BY PNK | PART No. TS2L SERIES_CD | REV 0A |

Mouser Electronics

Authorized Distributor

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