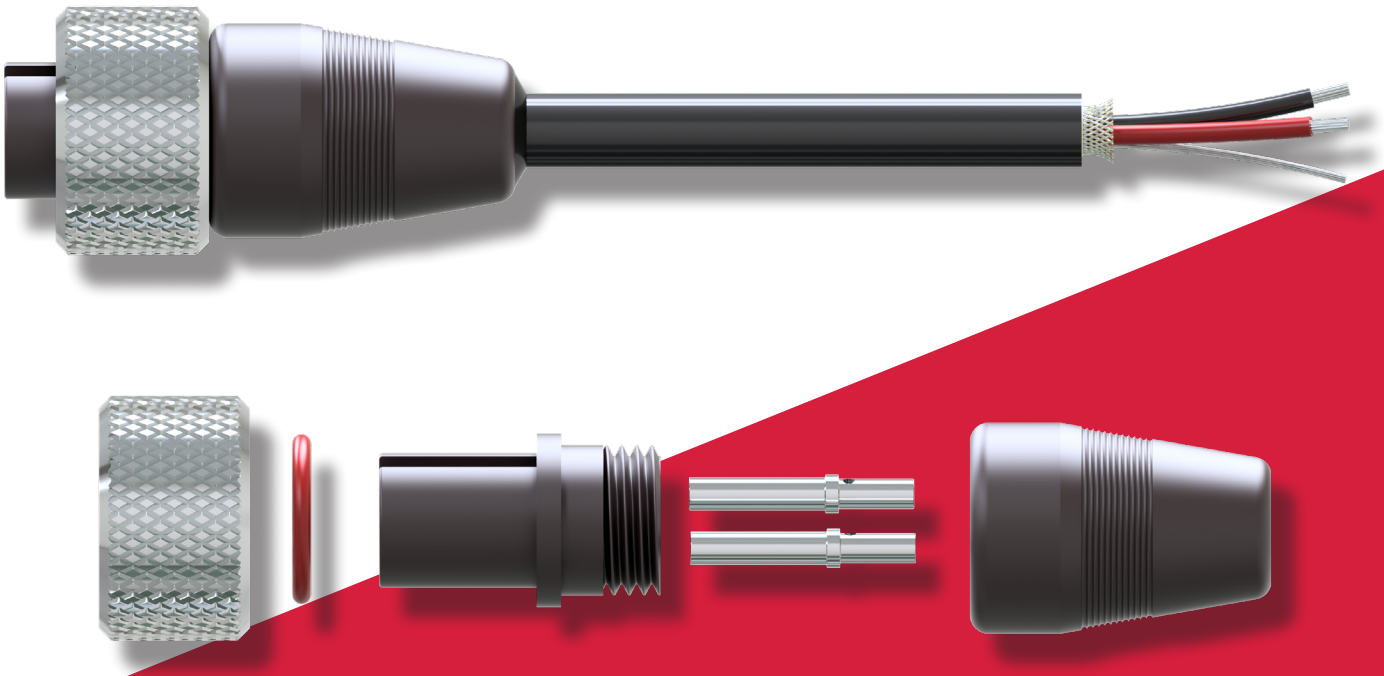
VIBRATION ANALYSIS HARDWARE



# “A” Series MIL-Style Connector Kits
# Product Manual

# Table of Contents

# Introduction

This document contains information on the operation, installation and maintenance of the A-style series of connector kits.

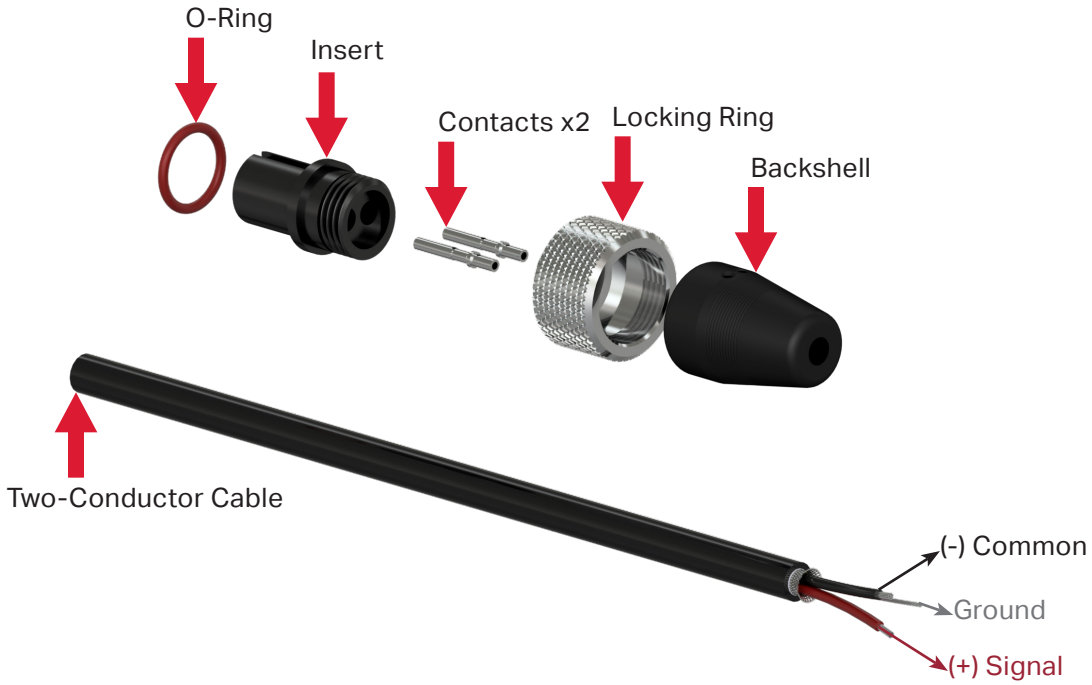



***Figure 1. 2-Socket Connector Kit Materials***

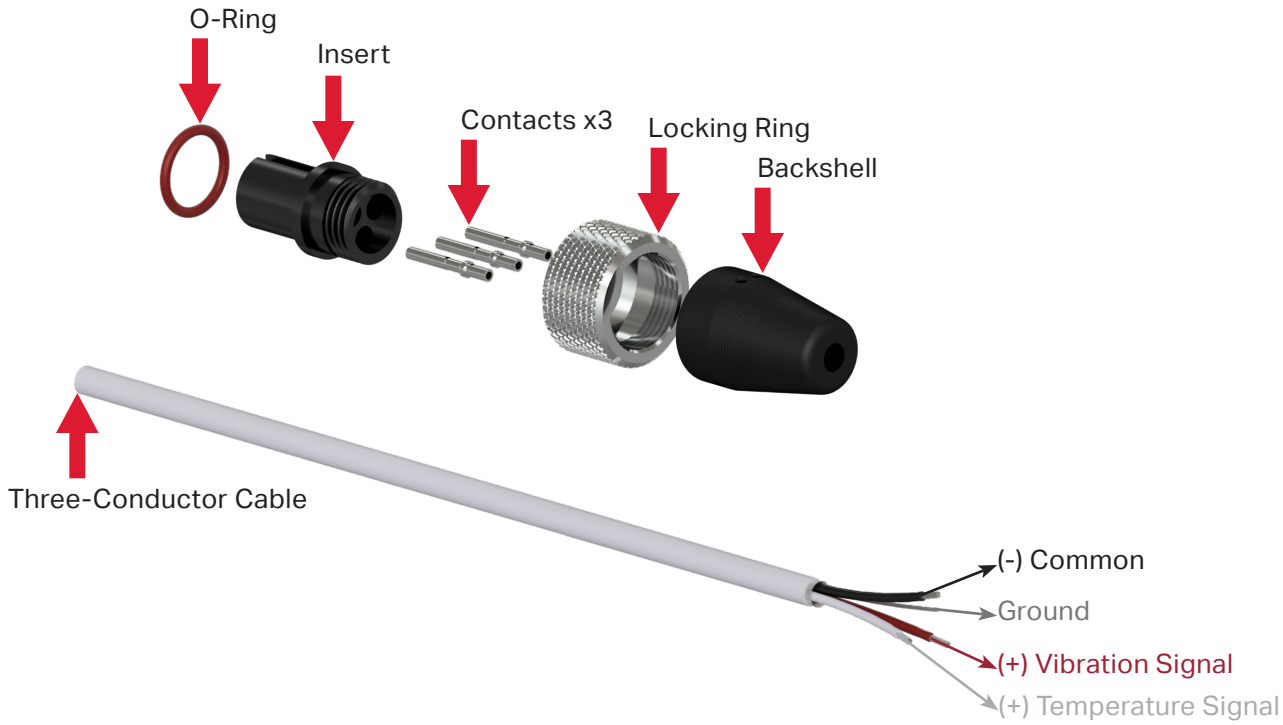



***Figure 2. 3-Socket Connector Kit Materials***

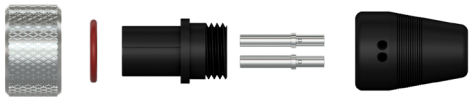
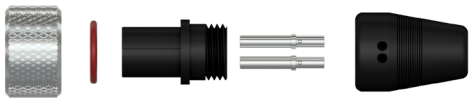
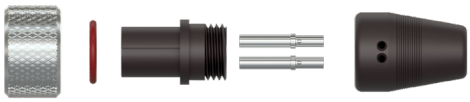
| Part # | Connector Kit Parts | Material | Max Temp. | Connector Kit Parts # | Compatible Cables |
|---|---|---|---|---|---|
| A2A |  CK-A2A | Polycarbonate, 316L Stainless Steel Locking Ring | 250 °F (121 °C) | CK-A2A-175 | CB102<br>CB110 |
| | | | | CK-A2A-190 | CB111 |
| | | | | CK-A2A-250 | CB103<br>CB193<br>CB802<br>CB806<br>CB810<br>CB811 |
| | | | | CK-A2A-310 | CB206<br>CB602<br>CB606<br>CB611 |
| A2A |  CKP-A2A | Polycarbonate, Polycarbonate Locking Ring | 250 °F (121 °C) | CKP-A2A-175 | CB102<br>CB110 |
| | | | | CKP-A2A-190 | CB111 |
| | | | | CKP-A2A-250 | CB103<br>CB193<br>CB802<br>CB806<br>CB810<br>CB811 |
| | | | | CKP-A2A-310 | CB206<br>CB602<br>CB606<br>CB611 |
| A2N |  CK-A2N | Nylon, 316L Stainless Steel Locking Ring | 250 °F (121 °C) | CK-A2N | CB102<br>CB103<br>CB110<br>CB111<br>CB193<br>CB206<br>CB602<br>CB606<br>CB611<br>CB802<br>CB806<br>CB810<br>CB811 |
| A2R |  CK-A2R | Polyphenylene Sulfide (PPS), 316L Stainless Steel Locking Ring | 392 °F (200 °C) | CK-A2R-175 | CB102 |
| | | | | CK-A2R-190 | CB111 |
| | | | | CK-A2R-250 | CB802<br>CB806<br>CB811 |
| | | | | CK-A2R-310 | CB206<br>CB602<br>CB606<br>CB611 |

***Table 1. 2-Conductor Product Selection Guide***

| Part # | Connector Kit Parts | Material | Max Temp. | Connector Kit Parts # | Compatible Cables |
|---|---|---|---|---|---|
| A2S |  CK-A2S | Polyphenylene Sulfide (PPS), PPS Locking Ring | 392 °F (200 °C) | CK-A2S-175 | CB102 |
| | | | | CK-A2S-190 | CB111 |
| | | | | CK-A2S-250 | CB802<br>CB806<br>CB811 |
| | | | | CK-A2S-310 | CB206<br>CB602<br>CB606<br>CB611 |

***Table 1. 2-Conductor Product Selection Guide***

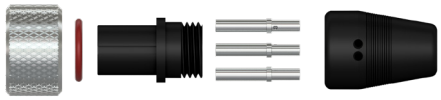
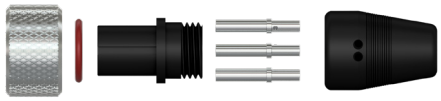
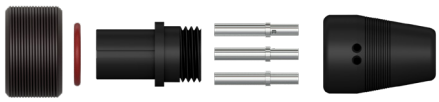
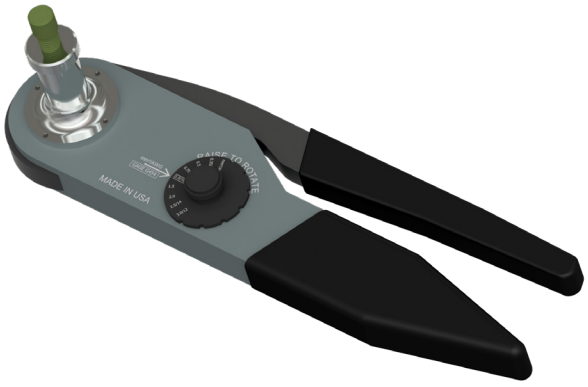
| Part # | Connector Kit Parts | Material | Max Temp. | Connector Kit Parts # | Compatible Cables |
|---|---|---|---|---|---|
| A3A |  CK-A3A | Polycarbonate, 316L Stainless Steel Locking Ring | 250 °F (121 °C) | CK-A3A-175 | CB112 |
| | | | | CK-A3A-250 | CB812 |
| | | | | CK-A3A-310 | CB612 |
| A3N |  CK-A3N | Nylon, 316L Stainless Steel Locking Ring | 250 °F (121 °C) | CK-A3N | CB112<br>CB612<br>CB812 |
| A3R |  CK-A3R | Polyphenylene Sulfide (PPS), 316L Stainless Steel Locking Ring | 392 °F (200 °C) | CK-A3R-175 | CB112 |
| | | | | CK-A3R-250 | CB812 |
| | | | | CK-A3R-310 | CB612 |
| A3S |  CK-A3S | Polyphenylene Sulfide (PPS), PPS Locking Ring | 392 °F (200 °C) | CK-A3S-175 | CB112 |
| | | | | CK-A3S-250 | CB812 |
| | | | | CK-A3S-310 | CB612 |

***Table 2. 3-Conductor Product Selection Guide***

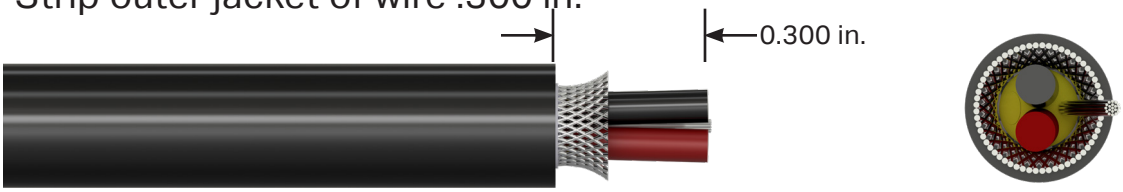



Recommended Tool: CB926-1A


Recommended Epoxy: MH109-3D

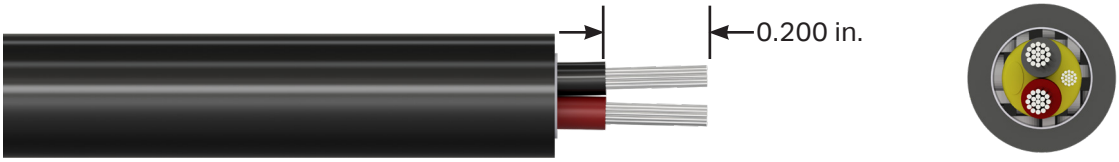
# Assembly for CK-A2X Series

1. Strip outer jacket of wire .300 in.




2. Cut off shield and drain wire (for twisted shielded wires only).

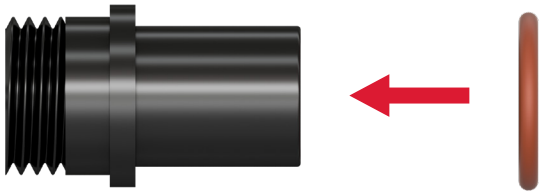
3. Strip the insulation of two conductor wires back .200 in.



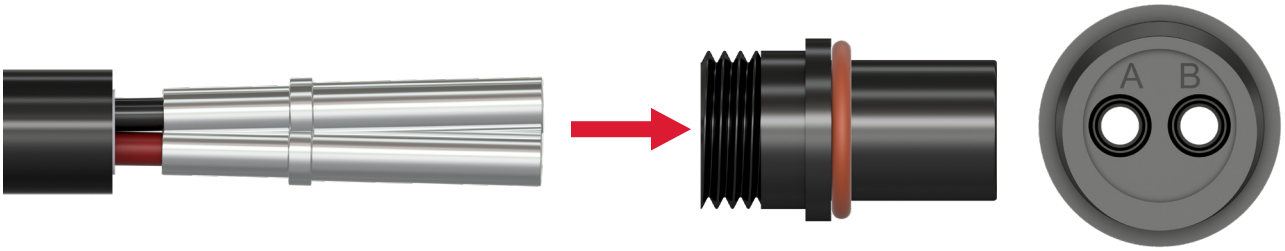

4. Crimp conductor wires into contact sockets. CTC's CB926-1A crimp tool makes crimping fast and easy and can lead to significant time savings when installing a large volume of connector kits. Adjusting the green depth knob to the desired length allows the depth of the contacts to be set manually to ensure a crimp at the correct location every time. Suggested depth for the "A" Series is 0.52 in.

5. Slide backshell and knurled ring onto the cable.

6. Attach O-ring to the front of the insert.

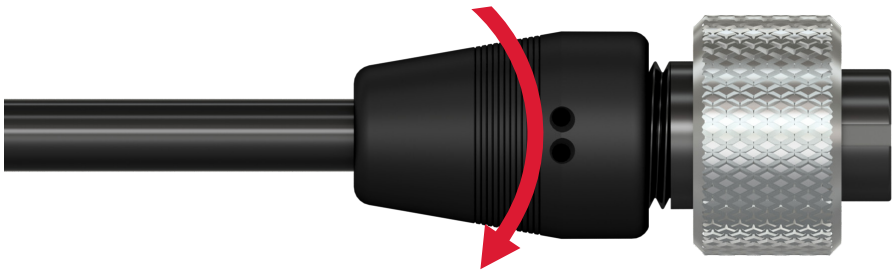


7. Using a fine-tipped punch, gently press each contact into the appropriate position on the insert.
   a. Install accelerometer red (+) wire into the insert socket for Pin A.
   b. Install accelerometer black (-) wire into insert socket for Pin B.

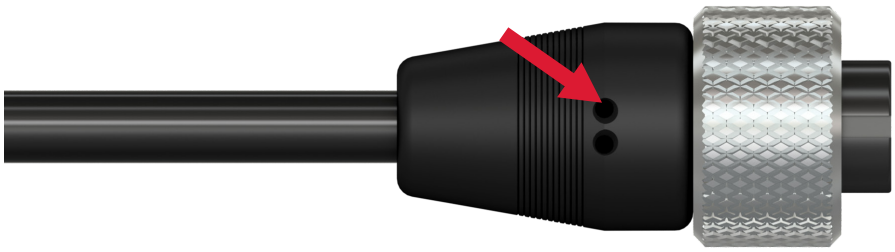



8. Slide the knurled ring over the threaded section of the insert until the metal step inside the ring catches on the plastic lip of the insert.

9. Thread the backshell onto the insert.



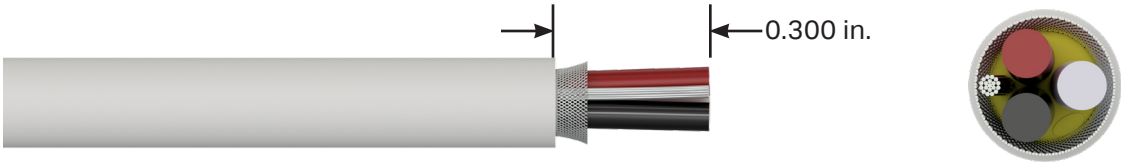
10. Place the assembled connector body horizontally with the two small epoxy injection holes level and facing upward.
11. Mix epoxy. Using a syringe, fill the backshell with epoxy through one of the small injection holes until epoxy begins to seep from the other.



12. Keep the connector in a horizontal position, allowing the epoxy to set and vent any trapped air, refilling as needed.
13. Allow the epoxy to cure for six hours at room temperature. Place a piece of masking tape over the two epoxy holes to prevent leakage and hang the connector vertically with the insert facing downward. This will ensure epoxy encapsulates the cable evenly, especially if the cable diameter is smaller than the backshell opening.

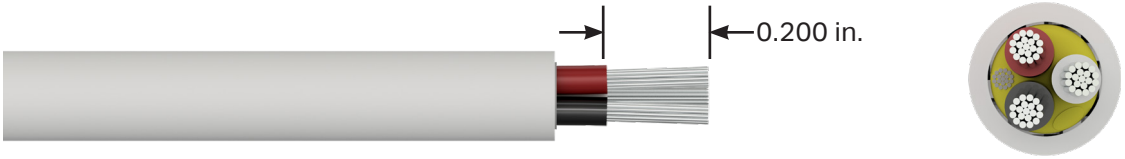
# Assembly for CK-A3X Series

1. Strip outer jacket of wire .300 in.




2. Cut off shield and drain wire (for twisted shielded wires only).

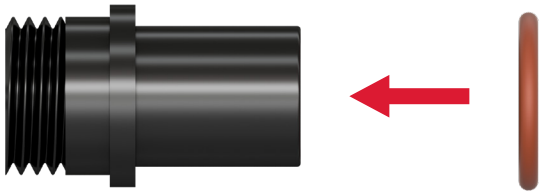
3. Strip the insulation of three conductor wires back .200 in.



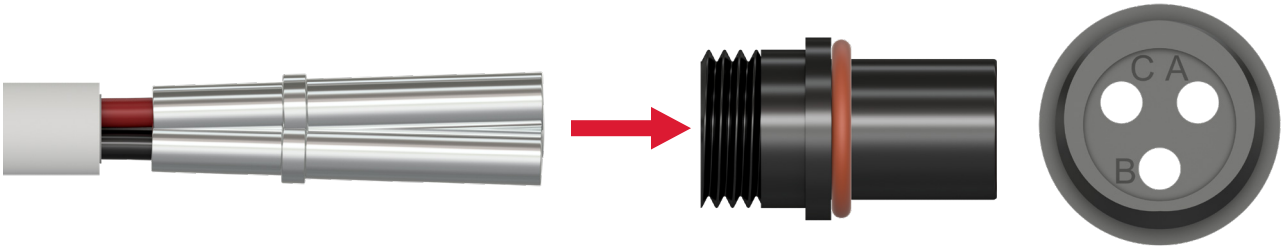

4. Crimp conductor wires into contact sockets. CTC's CB926-1A crimp tool makes crimping fast and easy and can lead to significant time savings when installing a large volume of connector kits. Adjusting the green depth knob to the desired length allows the depth of the contacts to be set manually to ensure a crimp at the correct location every time. Suggested depth for the "A" Series is 0.52 in.

5. Slide backshell and knurled ring onto the cable.

6. Attach O-ring to the front of the insert.

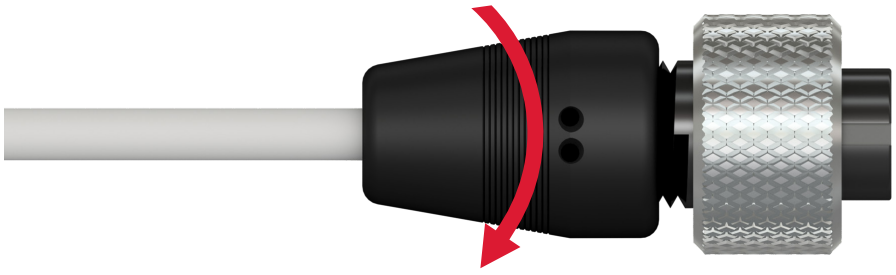


7. Using a fine-tipped punch, gently press each contact into the appropriate position on the insert.
   a. Install accelerometer red (+) wire into the insert socket for Pin A.
   b. Install accelerometer black (-) wire into insert socket for Pin B.
   c. Install accelerometer white (+) wire into the insert socket for Pin C.

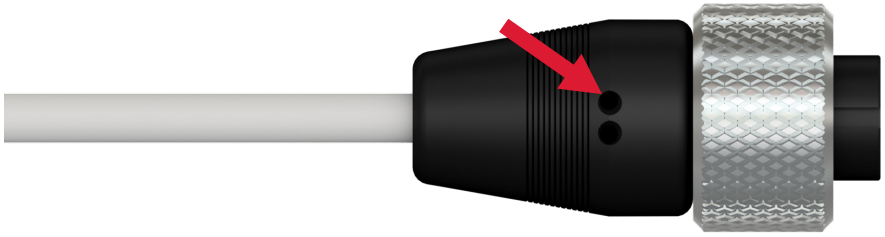



8. Slide the knurled ring over the threaded section of the insert until the metal step inside the ring catches on the plastic lip of the insert.

9. Thread the backshell onto the insert.



10. Place the assembled connector body horizontally with the two small epoxy injection holes level and facing upward.
11. Mix epoxy. Using a syringe, fill the backshell with epoxy through one of the small injection holes until epoxy begins to seep from the other.



12. Keep the connector in a horizontal position, allowing the epoxy to set and vent any trapped air, refilling as needed.
13. Allow the epoxy to cure for six hours at room temperature. Place a piece of masking tape over the two epoxy holes to prevent leakage and hang the connector vertically with the insert facing downward. This will ensure epoxy encapsulates the cable evenly, especially if the cable diameter is smaller than the backshell opening.

# Maintenance

Once the product has been installed, minimal maintenance will be required. Basic visual checks to ensure integrity should be made periodically.

**General**
There are no customer-replaceable parts. The product has been designed for trouble-free service under normal operating conditions.

# Warranty & Refund

**Warranty**
All CTC products are backed by our unconditional lifetime warranty. If any CTC product should ever fail, we will repair or replace it at no charge.

**Refund**
All stock products can be returned for a 25% restocking fee if returned in new condition within 90 days of shipment. Stock products qualify for free cancellation if your order is cancelled within 24 hours of purchase. Build to order products qualify for a 50% refund if returned in new condition within 90 days of shipment. Custom products are quoted and built specifically to the requirements of the customer, which may include completely custom product designs or private labeled versions of standard products for OEM customers. Custom products ordered are non-cancellable, non-returnable and non-refundable.