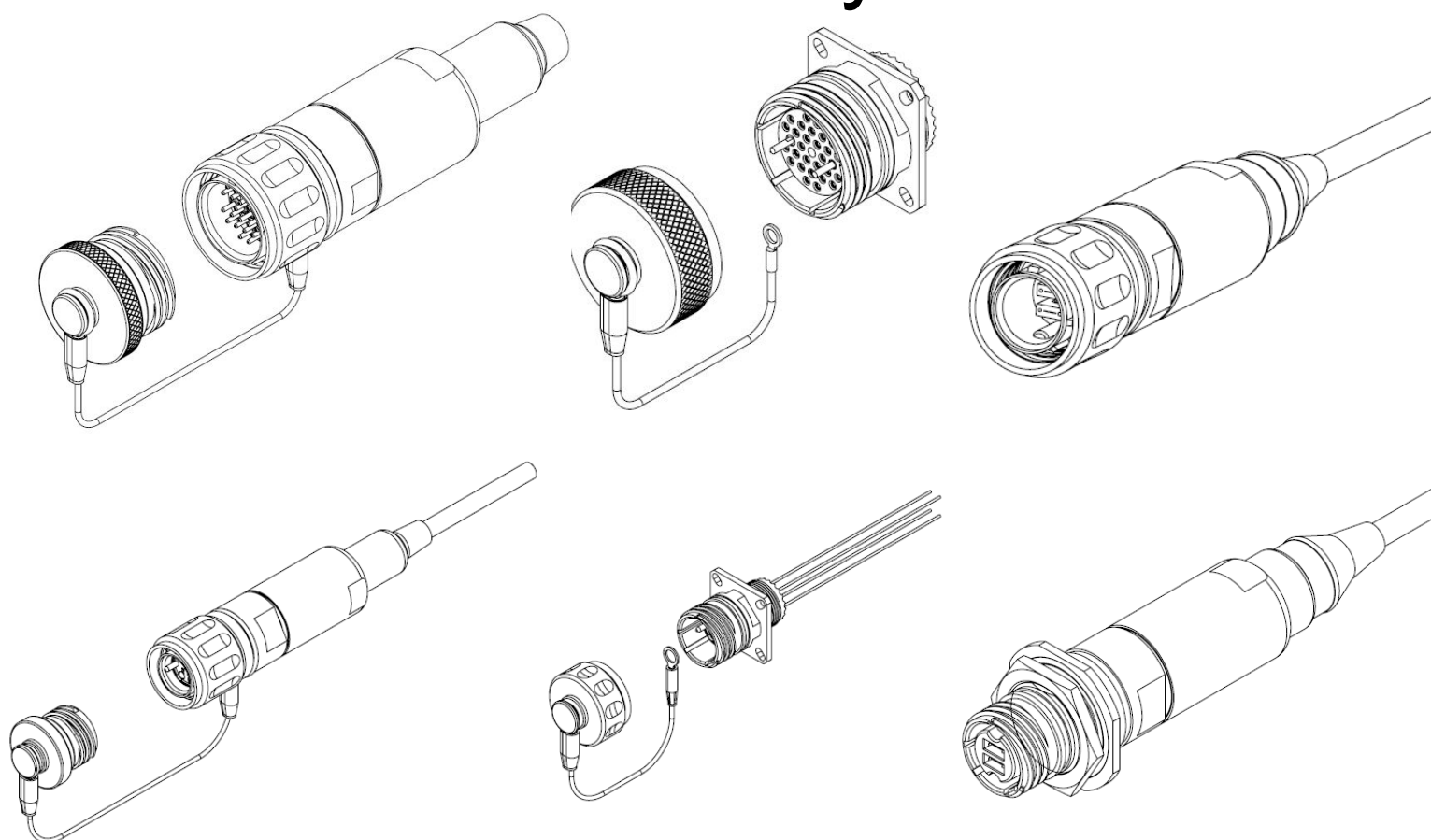


Q38 Connectors

Customer Assembly Instructions



Preparer:	David Gonzalez Dir., Mfg. Eng.	Date:	10/1/2026
Approver 1:	Ramzy Zora Dir., Quality Assurance	Date:	10/1/2026
Approver 2:	Geoffrey Wolfe Design Engineer	Date:	10/1/2026

Document: CAI-Q38
Release Date: 3/01/2022

Revision: 5
Revision Date: 10/1/2026

SCOPE

This document describes the Assembly Instructions for the Q38 Product Line. Please use the Configuration Table below to locate the applicable section(s) based on the products needing assembly.

CONFIGURATION TABLE

Plugs	Page	Receptacles	Page
Q38HD		Q38HD	
No Backshell, Epoxy Cup Option	3	No Backshell	9
Straight Backshell, Heat Shrink Boot	5	Straight Backshell, Heat Shrink Boot	11
Q38EB		Q38EB	
Straight Backshell, Heat Shrink Boot	14	No Backshell	18
		Straight Backshell, Heat Shrink Boot	19
Q38MT		Q38MT	
Straight Backshell, Heat Shrink Boot	23	Straight Backshell, Heat Shrink Boot	27
		No Backshell	31
Connector Mating	33		

SAFETY

Please use caution when following these instructions. This is not an exhaustive list of safety guidelines, refer to local regulations and your own company's policies. For more information, please refer to QPC Fiber Optic General Fiber Handling Instructions (CAI-GEN).

- Be careful when handling bare fibers as sharp ends may penetrate skin.
- Wear appropriate personal protective equipment such as gloves and safety glasses.
- Track all fiber scraps and dispose of properly. Tape may be used to remove scraps from the worktable.
- Wash hands after handling fiber and before touching eyes or face.
- Do not look down fiber ends unless certain there is no light source coming through the fiber.
- Keep all combustible materials safely away from curing ovens.

STANDARD & SPECIALTY ASSEMBLY TOOLS

Refer to QPC CAI-TOOLS for a list of Standard & Specialty Assembly Tools used in this instruction.

TORQUE TABLES

Refer to the Torque Tables below for the torque values for various components used in this instruction.

Component		Backshell			Coupling Nut	Strain Relief	Spacer	Socket-Head / Set Screws
		11 – 15	17 – 19	21 – 25	All	All	All	All
Torque Values / Units	In-lb.	57 – 62	80 – 97	106 – 124	106 – 124	80 – 97	35 – 40	2.25 – 2.75
	N • m	6.5 – 7	9 – 11	12 – 14	12 – 14	9 – 11	4 – 4.5	0.25 – 0.31

Connector Shell Size			Connector Coupling Engagement and Disengagement Torques							
			11	13	15	17	19	21	23	25
Torque Values	Maximum Engagement	In-lb.	12	16	20	24	28	32	36	40
		N • m	1.4	1.8	2.3	1.7	3.2	3.6	4.1	4.6
	Minimum Disengagement	In-lb.	2.0	2.0	3.0	3.0	3.0	5.0	5.0	5.0
		N • m	0.2	0.2	0.3	0.3	0.3	0.6	0.6	0.6

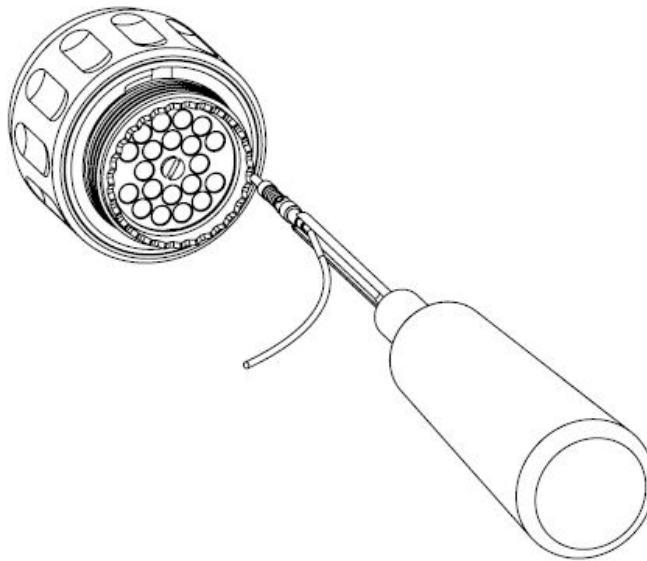
Q38HD PLUG, NO BACKSHELL, EPOXY CUP OPTION

TERMINATION

Use the Stripping Length Diagram located in the Appendix titled Q38HD Epoxy Cup Terminus with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

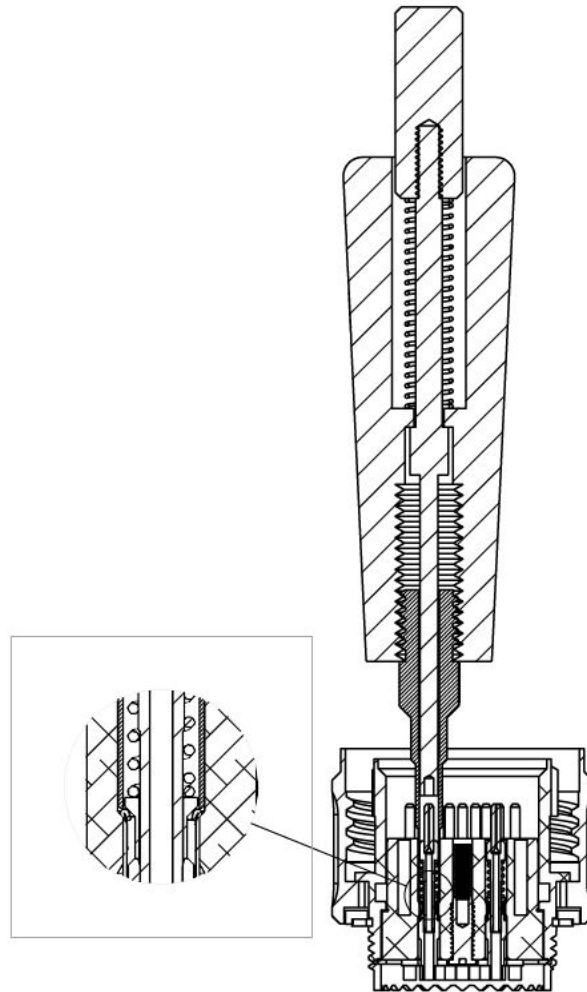
POPULATE INSERT

To populate the Plug Body, use the Fiber Optic Insertion Tool PT-001 to insert the Fiber Optic Termini in desired channel.



CAI-Q38: Q38 Customer Assembly Instructions

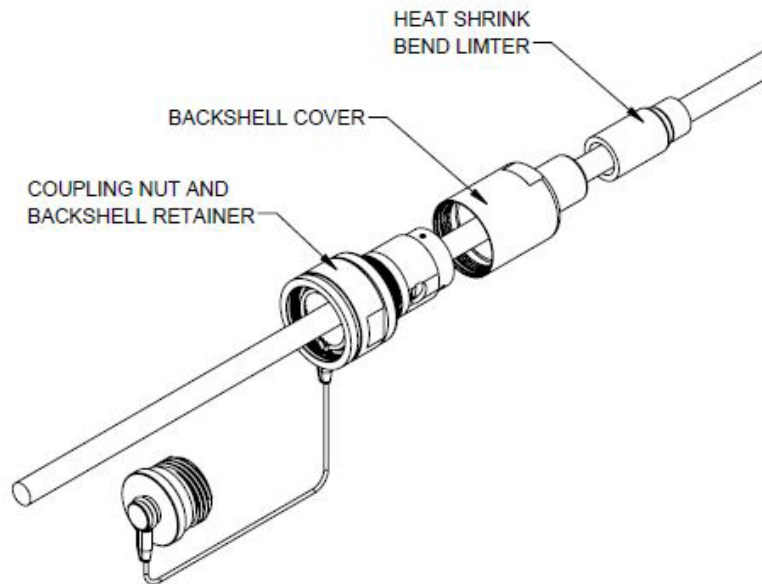
If there is a need to remove the Fiber Optic Termini, use the Hex Screwdriver 5/64" PT-503 to unscrew the Cap Head Screw on the front of the Cap Sleeve Retainer (if applicable) to expose the Fiber Optic Termini. Slide the Fiber Optic Termini Removal Tool PT-002-H over the Fiber Optic Termini until it disengages the locking tab, then depress the release button. Once you replace the Fiber Optic Termini, use the Hex Screwdriver 5/64" PT-503 to screw in the Cap Screw (if applicable).



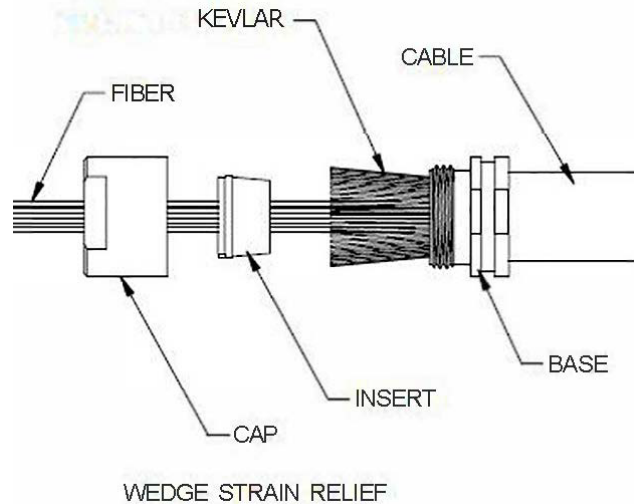
Q38HD PLUG, STRAIGHT BACKSHELL, HEAT SHRINK BOOT

CABLE PREPARATION

Slide parts onto cable in the order below.

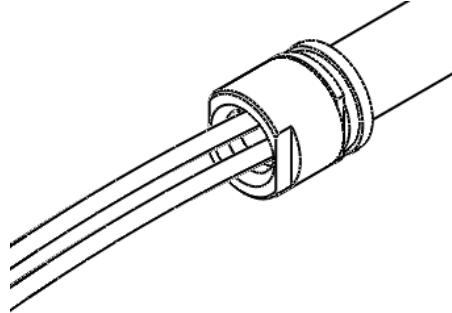


Remove approximately 6-inches (152mm) of the outer jacket from the cable end. Thread the Wedge Strain Relief Base over the fiber and Kevlar and slide it to the cable jacket edge. Thread the Wedge Strain Relief Insert over the fibers. Spread the Kevlar out evenly and slide the Wedge Strain Relief Insert into the Wedge Strain Relief Base. The Kevlar should be trapped between the Wedge Strain Relief Base and the Wedge Strain Relief Insert. Cut Kevlar flush with top of Strain Relief Wedge.



CAI-Q38: Q38 Customer Assembly Instructions

Screw on Wedge Strain Relief Cap to the Wedge Strain Relief Base. Tighten using the Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 and torque to the values in the above Torque Table.

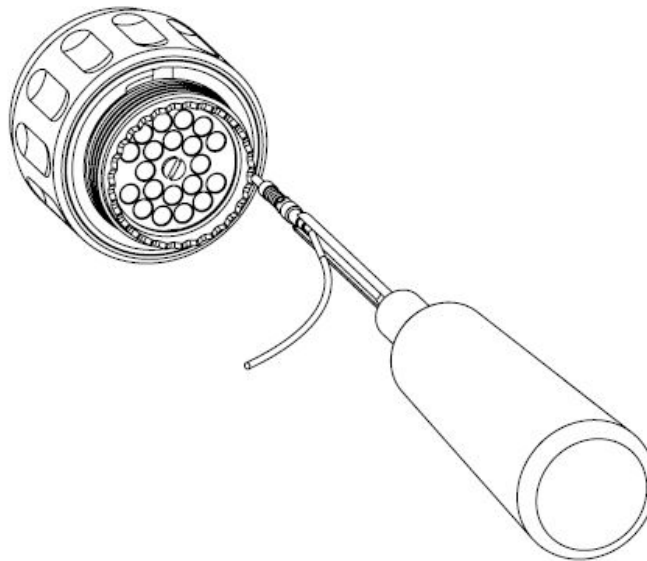


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

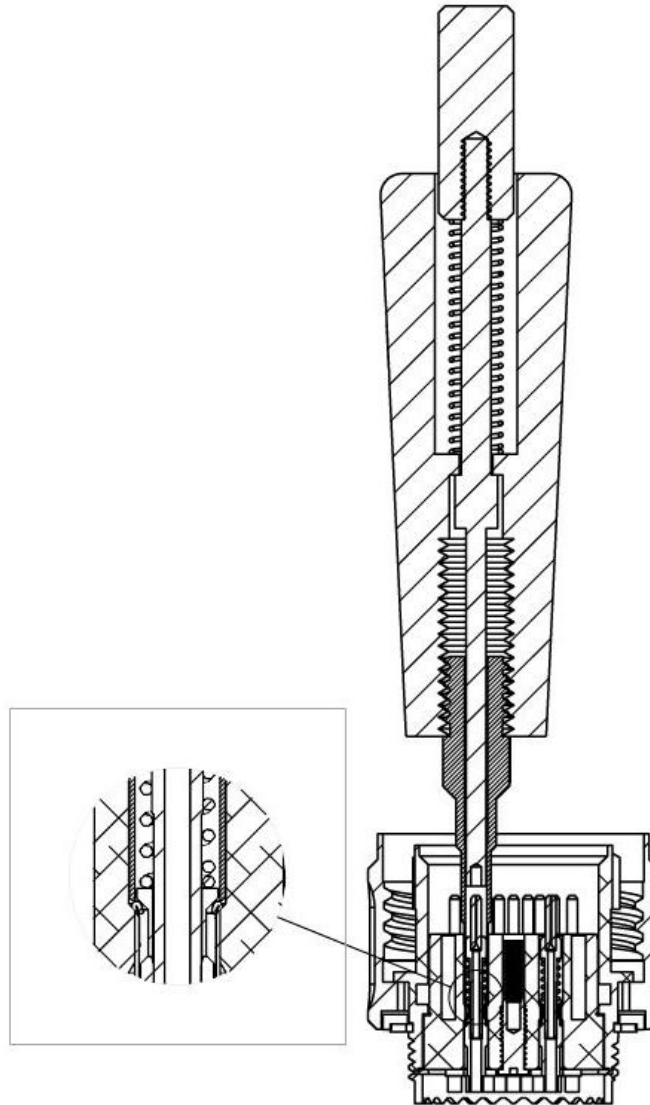
POPULATE INSERT

To populate the Plug Body, use the Fiber Optic Insertion Tool PT-001 to insert the Fiber Optic Termini in desired channel.



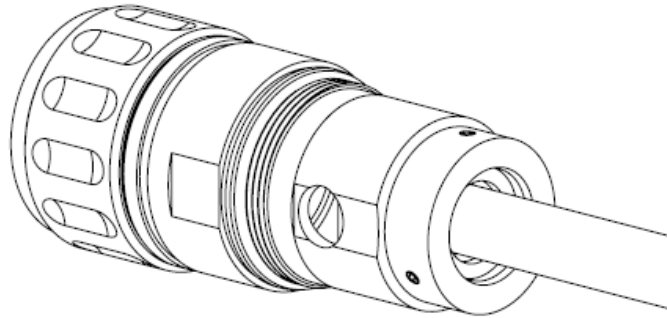
CAI-Q38: Q38 Customer Assembly Instructions

If there is a need to remove the Fiber Optic Termini, use the Hex Screwdriver 5/64" PT-503 to unscrew the Cap Head Screw on the front of the Cap Sleeve Retainer (if applicable) to expose the Fiber Optic Termini. Slide the Fiber Optic Termini Removal Tool PT-002-H over the Fiber Optic Termini until it disengages the locking tab, then depress the release button. Once you replace the Fiber Optic Termini, use the Hex Screwdriver 5/64" PT-503 to screw in the Cap Screw (if applicable).



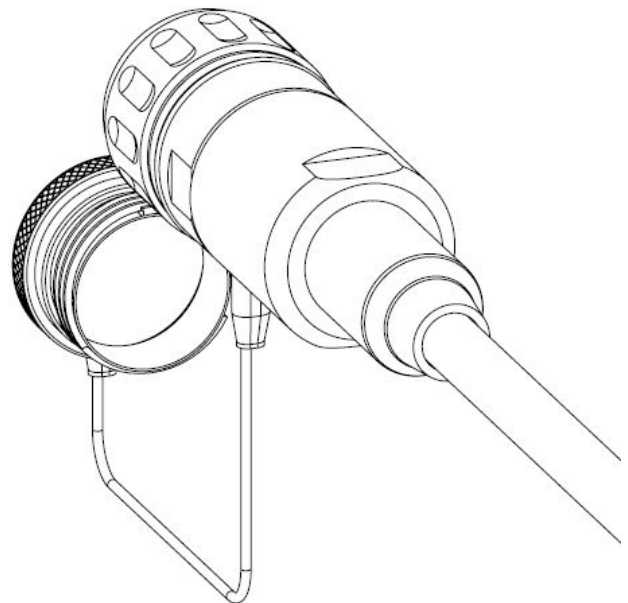
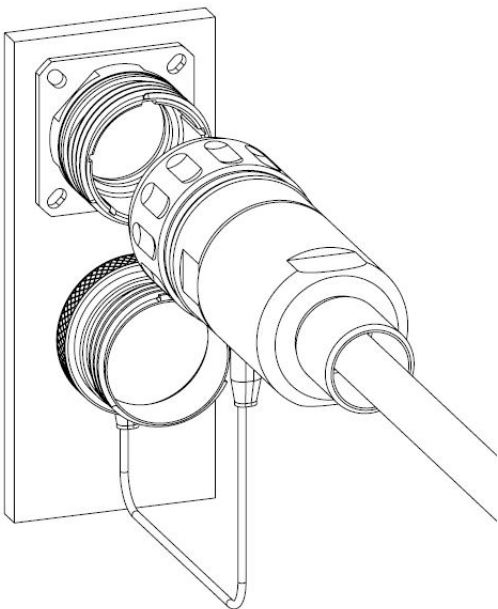
CONNECTOR ASSEMBLY

Slide the Coupling Nut and Backshell Retainer forward and hand tighten. Check the fiber length and position by looking through the holes in the Backshell Retainer to make sure the fiber is not twisted or kinked. To torque Coupling Nut and Backshell Retainer, place the corresponding Torque Fixture into the Vise PT-591. Attach the Adjustable Crow's Foot Wrench PT-536 or PT-546 onto Dial Torque-Measuring Wrench PT-506. Hand-tighten Q38 Plug to Torque Fixture and Torque Coupling Nut and Backshell Retainer according to the values in the above Torque Table. Next, torque the Spacer according to the values in the above Torque Table.



Pull Strain Relief to bottom of Backshell Retainer and tighten set screws using Hex Driver PT-500. Use Torque Hex Driver PT-590 with Hex Bit 0.050" PT-599 and torque Set Screws to the values in the above Torque Table. Perform a final visual check by looking through the holes in the Backshell Retainer to make sure that the fiber is not twisted or kinked.

Slide Backshell forward and hand tighten. Torque Backshell according to the values in the above Torque Table. Use the applicable QPC torque tool or equivalent (Daniels Manufacturing recommended) to hold the connector while torquing. Slide the Heat Shrink Bend Limiter forward and use a Heat Gun to activate the Heat Shrink Bend Limiter.



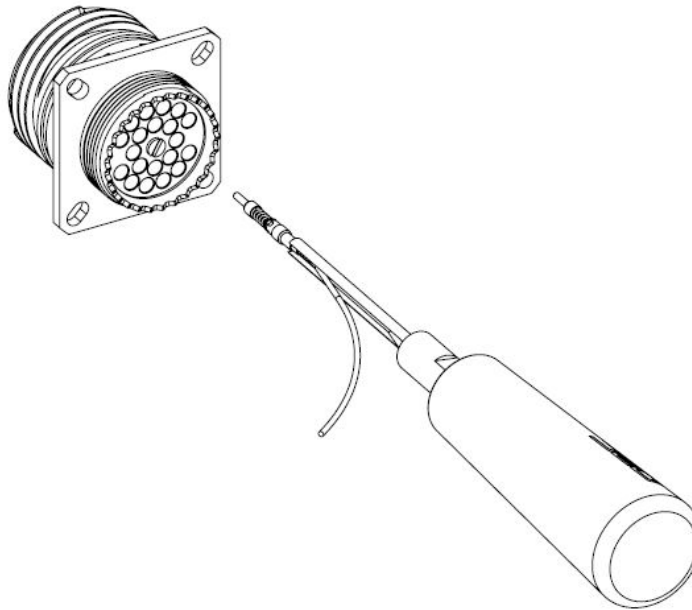
Q38HD RECEPTACLE, NO BACKSHELL

TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

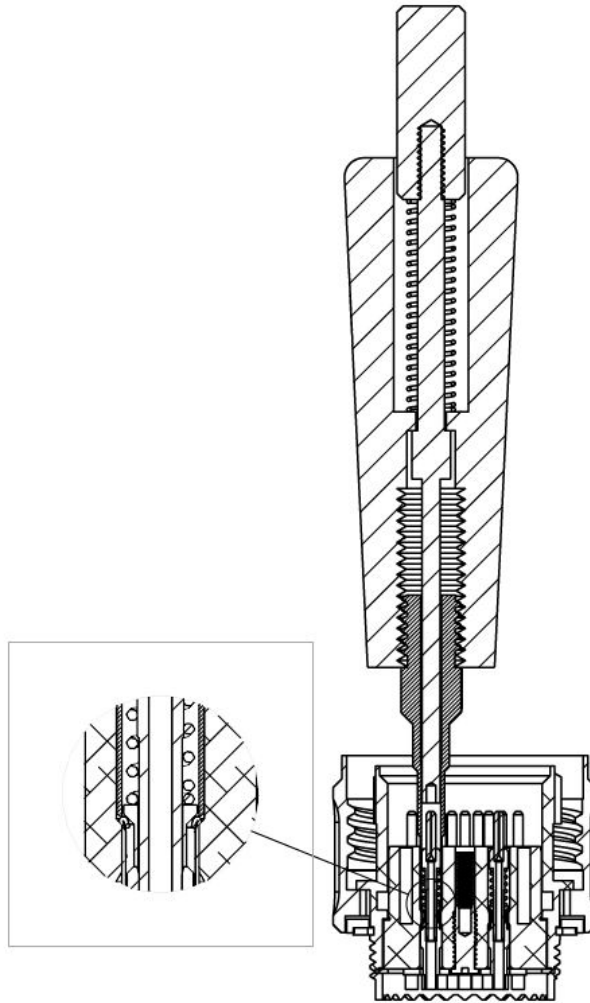
POPULATE INSERT

To populate the Receptacle Body, use the Fiber Optic Insertion Tool PT-001 to insert the Fiber Optic Termini in desired channel.



CAI-Q38: Q38 Customer Assembly Instructions

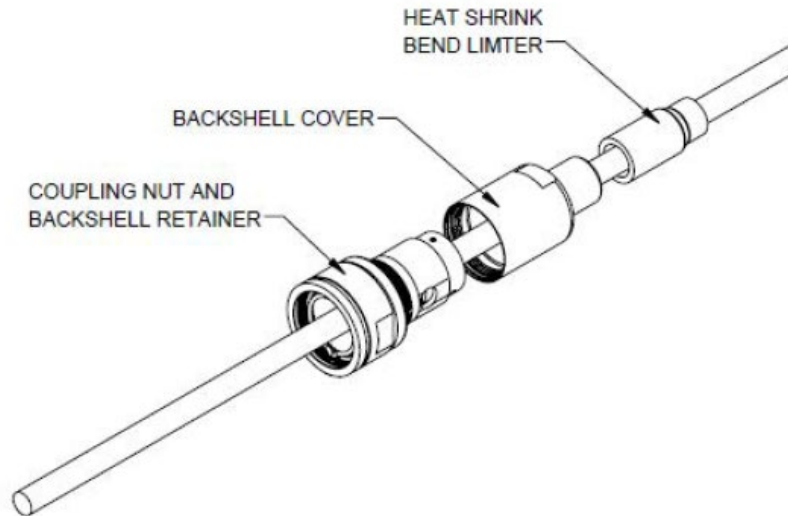
If there is a need to remove the Fiber Optic Termini, use the Hex Screwdriver 5/64" PT-503 to unscrew the Cap Head Screw on the front of the Cap Sleeve Retainer (if applicable) to expose the Fiber Optic Termini. Slide the Fiber Optic Termini Removal Tool PT-002-H over the Fiber Optic Termini until it disengages the locking tab, then depress the release button. Once you replace the Fiber Optic Termini, use the Hex Screwdriver 5/64" PT-503 to screw in the Cap Screw (if applicable).



Q38HD RECEPTACLE, STAIGHT BACKSHELL, HEAT SHRINK BOOT

CABLE PREPARATION

Slide parts onto cable in the order below.

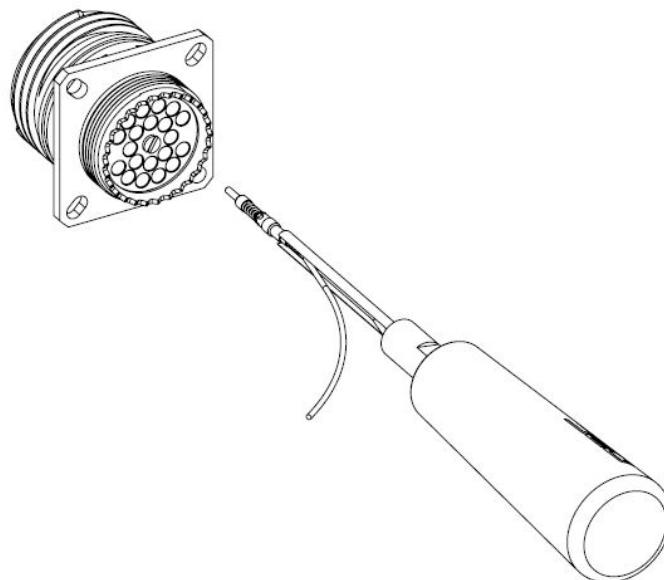


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

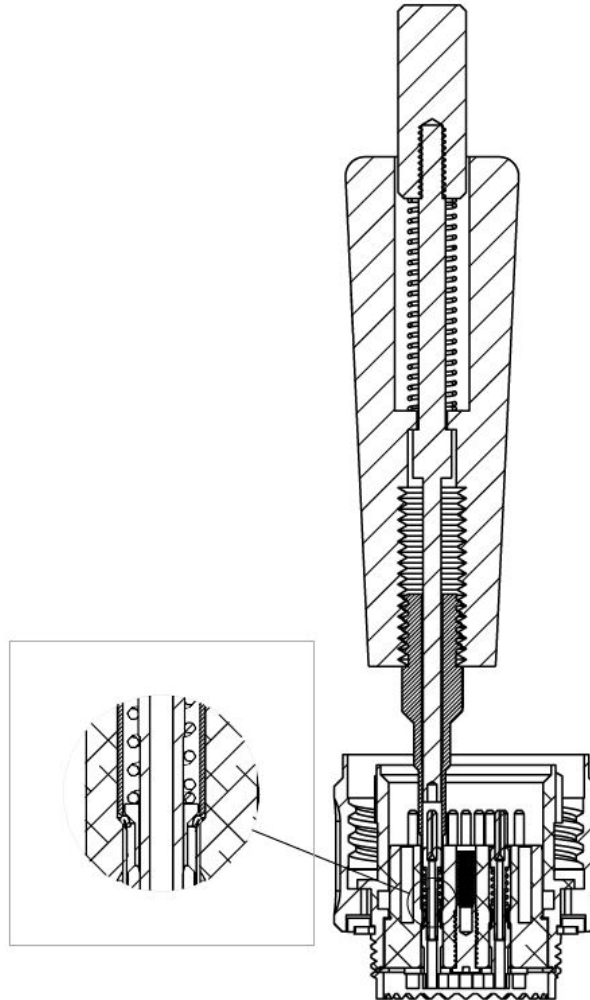
POPULATE INSERT

To populate the Receptacle Body, use the Fiber Optic Insertion Tool PT-001 to insert the Fiber Optic Termini in desired channel.



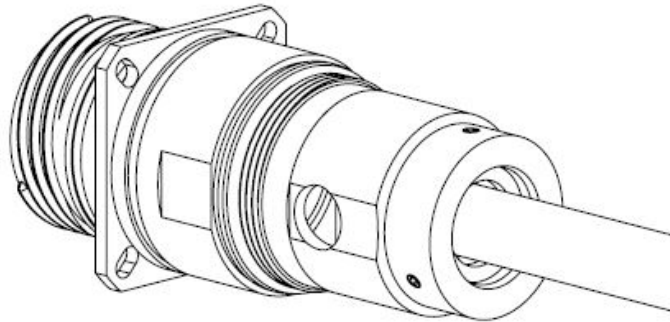
CAI-Q38: Q38 Customer Assembly Instructions

If there is a need to remove the Fiber Optic Termini, use the Hex Screwdriver 5/64" PT-503 to unscrew the Cap Head Screw on the front of the Cap Sleeve Retainer (if applicable) to expose the Fiber Optic Termini. Slide the Fiber Optic Termini Removal Tool PT-002-H over the Fiber Optic Termini until it disengages the locking tab, then depress the release button. Once you replace the Fiber Optic Termini, use the Hex Screwdriver 5/64" PT-503 to screw in the Cap Screw (if applicable).



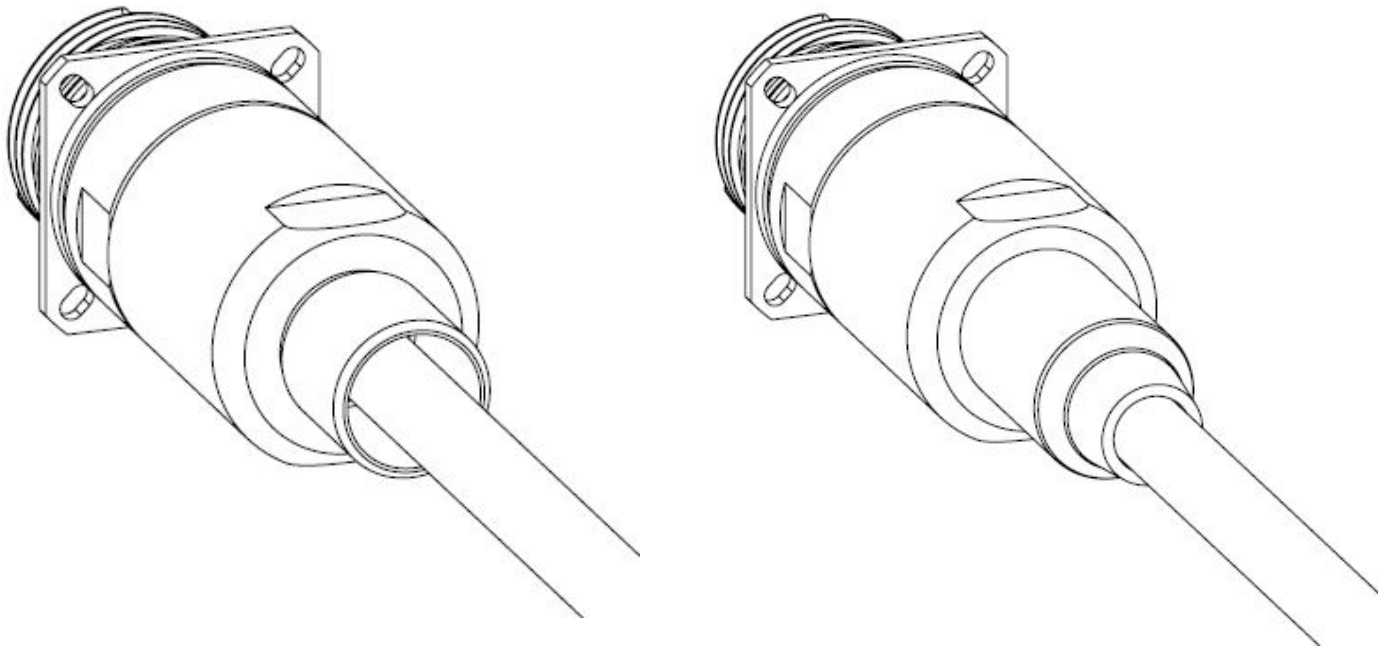
CONNECTOR ASSEMBLY

Slide the Coupling Nut and Backshell Retainer forward and hand tighten. Check the fiber length and position by looking through the holes in the Backshell Retainer to make sure the fiber is not twisted or kinked. To torque Coupling Nut and Backshell Retainer, place the Receptacle Assembly into the Vise PT-591. Attach the Adjustable Crow's Foot Wrench PT-536 or PT-546 onto Dial Torque-Measuring Wrench PT-506 and torque Coupling Nut and Backshell Retainer according to the values in the above Torque Table. Next, torque the Spacer according to the values in the above Torque Table.



Pull Strain Relief to bottom of Backshell Retainer and tighten set screws using Hex Driver PT-500. Use Torque Hex Driver PT-590 with Hex Bit 0.050" PT-599 and torque Set Screws to the values in the above Torque Table. Perform a final visual check by looking through the holes in the Backshell Retainer to make sure that the fiber is not twisted or kinked.

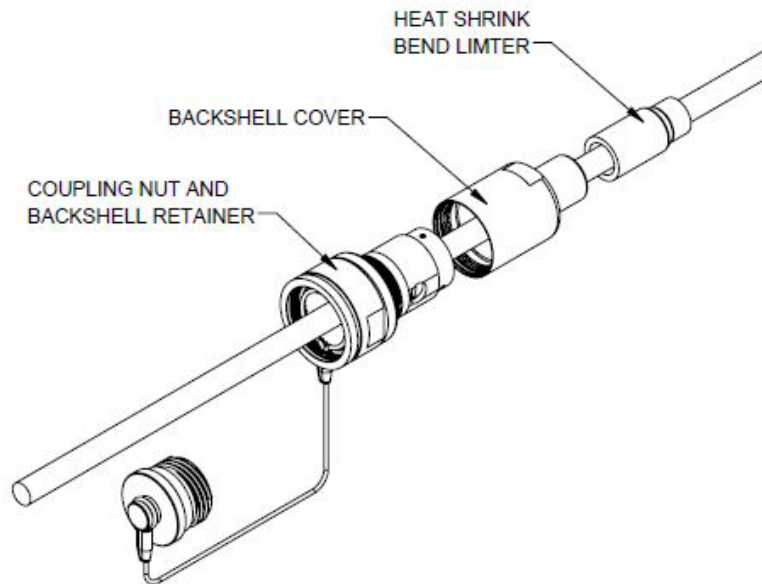
Slide Backshell forward and hand tighten. Torque Backshell according to the values in the above Torque Table. Slide the Heat Shrink Bend Limiter forward and use a Heat Gun to activate the Heat Shrink Bend Limiter.



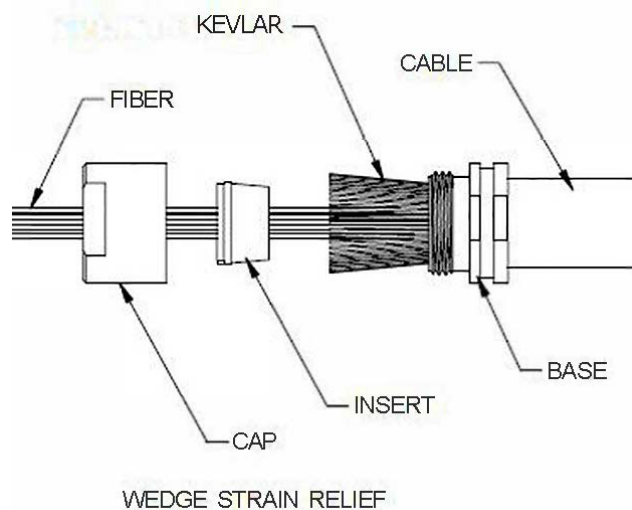
Q38EB PLUG, STRAIGHT BACKSHELL, HEAT SHRINK BOOT

CABLE PREPARATION

Slide parts onto cable in the order below.

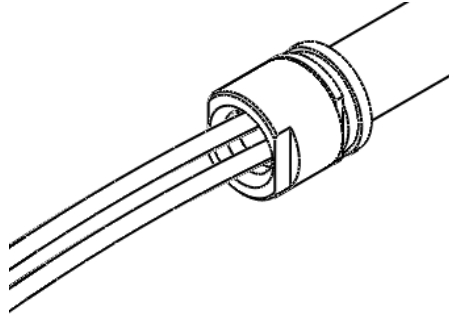


Remove approximately 6-inches (152mm) of the outer jacket from the cable end. Thread the Wedge Strain Relief Base over the fiber and Kevlar and slide it to the cable jacket edge. Thread the Wedge Strain Relief Insert over the fibers. Spread the Kevlar out evenly and slide the Wedge Strain Relief Insert into the Wedge Strain Relief Base. The Kevlar should be trapped between the Wedge Strain Relief Base and the Wedge Strain Relief Insert. Cut Kevlar flush with top of Strain Relief Wedge.



CAI-Q38: Q38 Customer Assembly Instructions

Screw on Wedge Strain Relief Cap to the Wedge Strain Relief Base. Tighten using the Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 and torque to the values in the above Torque Table.

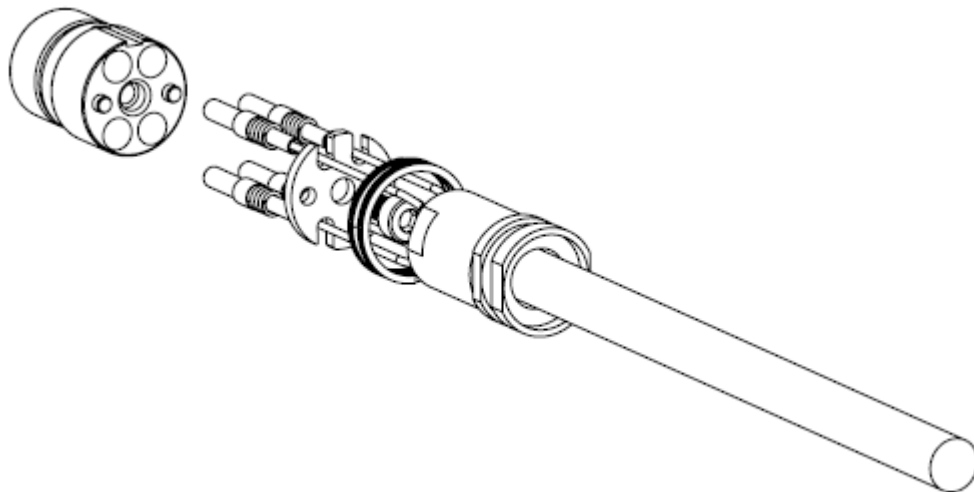


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

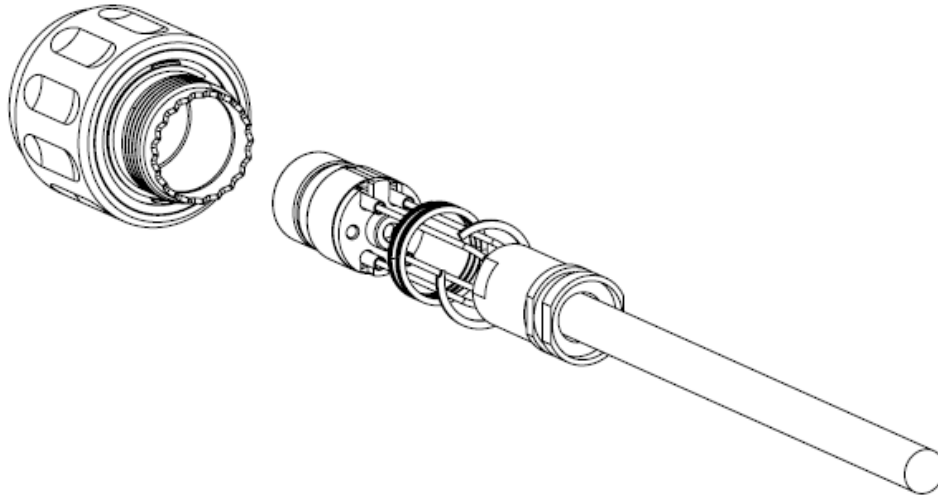
POPULATE INSERT

Insert the Fiber Optic Termini into the back of the Insert Cavities according to the desired pinout. Place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Termini Retainer Plate. Apply a drop of Loctite 222 to the Socket Head Cap Screw and use Hex Tool PT-503 to fasten the Termini Retainer Plate to the Insert. Torque the Socket Head Screw to the values in the above Torque Table using Torque-Measuring Head Drive PT-590 and Bit Size 5/64" PT-599. Use a pair of Long Nose Pliers PT- 532 to ensure the termini are fully seated against the ball lenses.

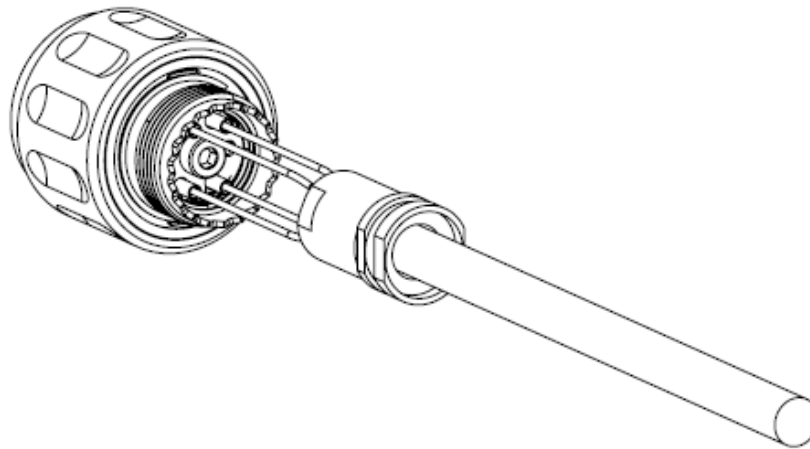


CONNECTOR ASSEMBLY

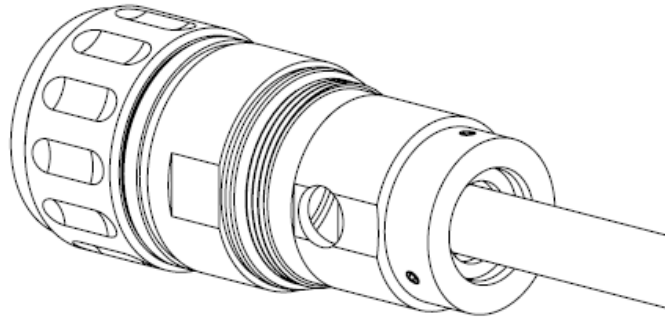
Use the Hex Screwdriver PT-503 to align the key and install the insert into the back of the Body. The Insert should protrude slightly from the seal and the Body. The seal should be visible around the Insert.



Slide the Wave Spring up behind the Insert. Install the Snap Ring behind the Wave Spring into the Snap Ring groove to hold Insert in place.

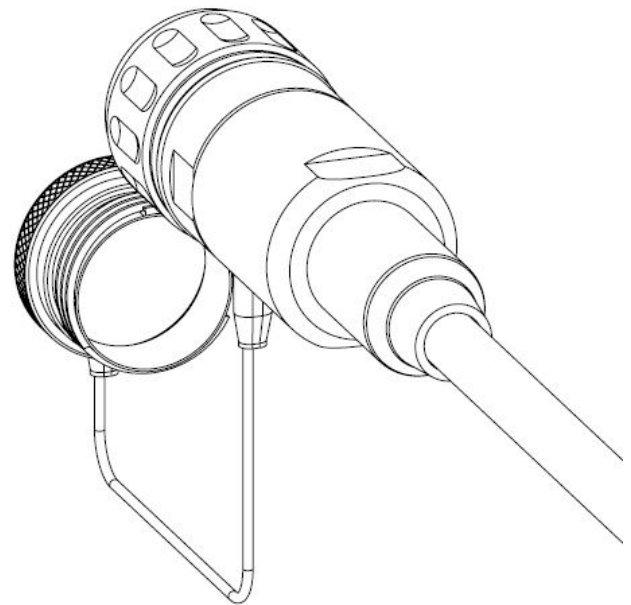
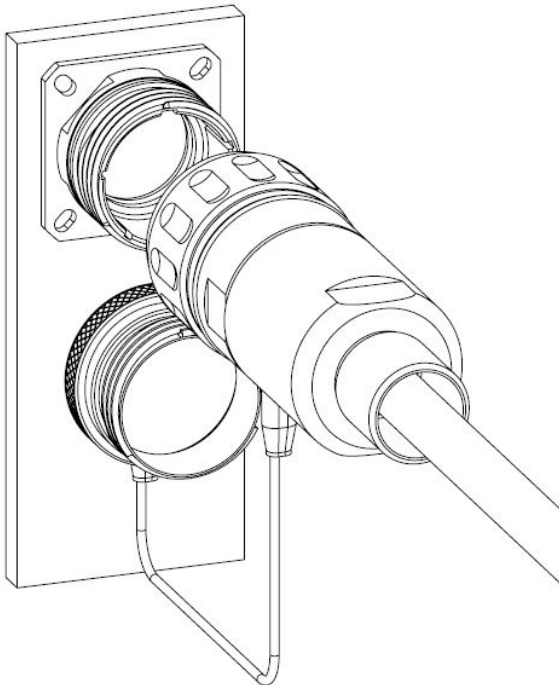


Slide the Coupling Nut forward and hand tighten. To torque the Coupling Nut, place the corresponding Torque Fixture into the Vise PT-591. Attach the Adjustable Crow's Foot Wrench PT-536 or PT-546 onto Dial Torque-Measuring Wrench PT-506. Hand-tighten Q38 Plug to Torque Fixture and Torque Coupling Nut according to the values in the above Torque Table. Next, slide the Spacer up and hand tighten. Torque the Spacer according to the values in the above Torque Table.



Pull Strain Relief to bottom of Spacer and tighten Set Screws using Hex Driver PT-500. Use Torque Hex Driver PT-590 with Hex Bit 0.050" PT-599 and torque Set Screws to the values in the above Torque Table. Perform a final visual check by looking through the holes in the Spacer to make sure that the fiber is not twisted or kinked.

Slide Backshell forward and hand tighten. Torque Backshell according to the values in the above Torque Table. Use the applicable QPC torque tool or equivalent (Daniels Manufacturing recommended) to hold the connector while torquing. Slide the Heat Shrink Bend Limiter forward and use a Heat Gun to activate the Heat Shrink Bend Limiter.



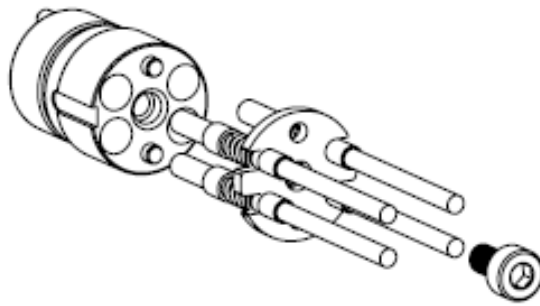
Q38EB RECEPTACLE, NO BACKSHELL

TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

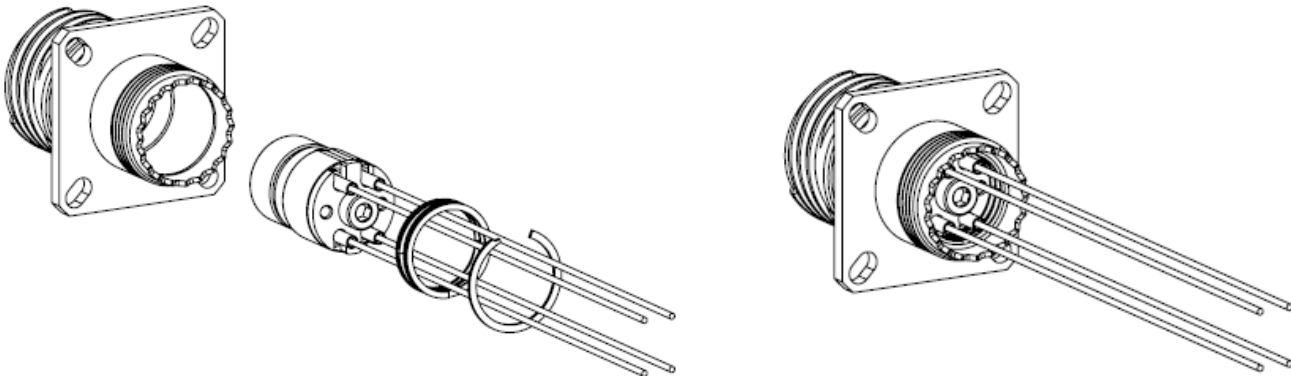
POPULATE INSERT

Insert the Fiber Optic Termini into the back of the Insert Cavities according to the desired pinout. Place the Termini Retainer Plate between the 900µm or 2mm fibers making sure that the springs are between the Fiber Optic Termini and Termini Retainer Plate. Apply a drop of Loctite 222 to the Socket Head Cap Screw and use Hex Tool PT-503 to fasten the Termini Retainer Plate to the Insert. Torque the Socket Head Screw to the values in the above Torque Table using Torque-Measuring Head Drive PT-590 and Bit Size 5/64" PT-599. Use a pair of Long Nose Pliers PT- 532 to ensure the termini are fully seated against the ball lenses.



CONNECTOR ASSEMBLY

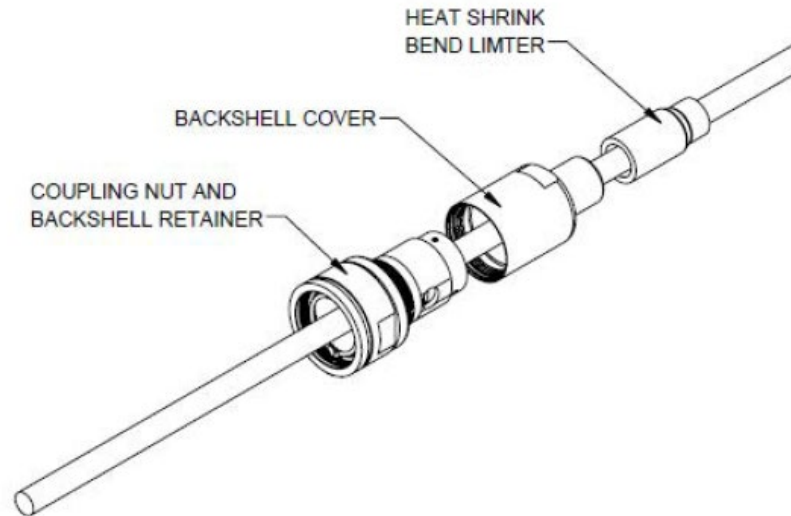
Use the Hex Screwdriver PT-503 to align the key and install the insert into the Receptacle Body. Slide the Wave Spring up behind the Insert. Install the Snap Ring behind the Wave Spring into the Snap Ring groove to hold Insert in place.



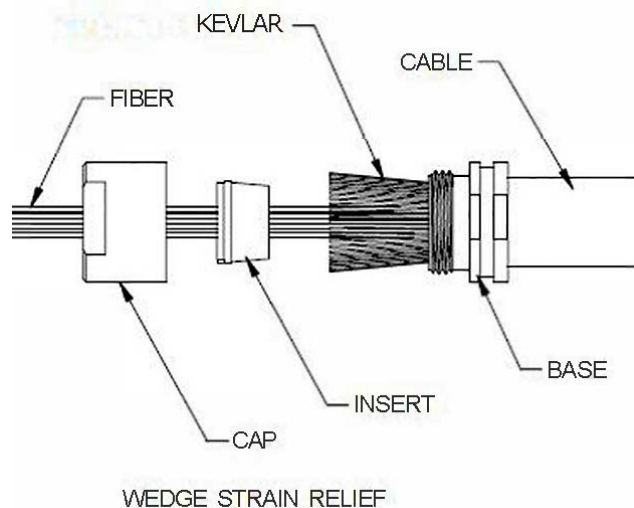
Q38EB RECEPTACLE, STRAIGHT BACKSHELL, HEAT SHRINK BOOT

CABLE PREPARATION

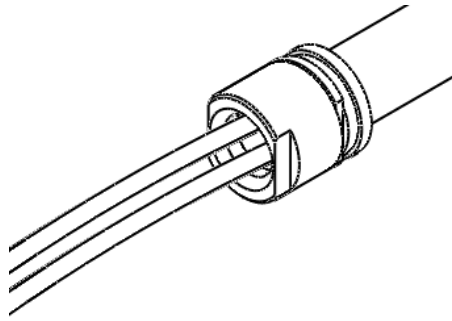
Slide parts onto cable in the order below.



Remove approximately 6-inches (152mm) of the outer jacket from the cable end. Thread the Wedge Strain Relief Base over the fiber and Kevlar and slide it to the cable jacket edge. Thread the Wedge Strain Relief Insert over the fibers. Spread the Kevlar out evenly and slide the Wedge Strain Relief Insert into the Wedge Strain Relief Base. The Kevlar should be trapped between the Wedge Strain Relief Base and the Wedge Strain Relief Insert. Cut Kevlar flush with top of Strain Relief Wedge.



Screw on Wedge Strain Relief Cap to the Wedge Strain Relief Base. Tighten using the Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 and torque to the values in the above Torque Table.

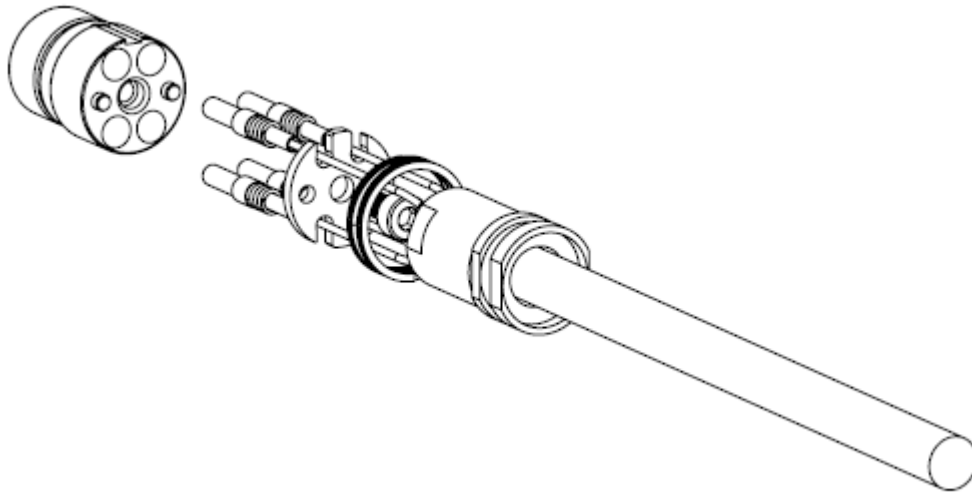


TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM) to terminate each fiber.

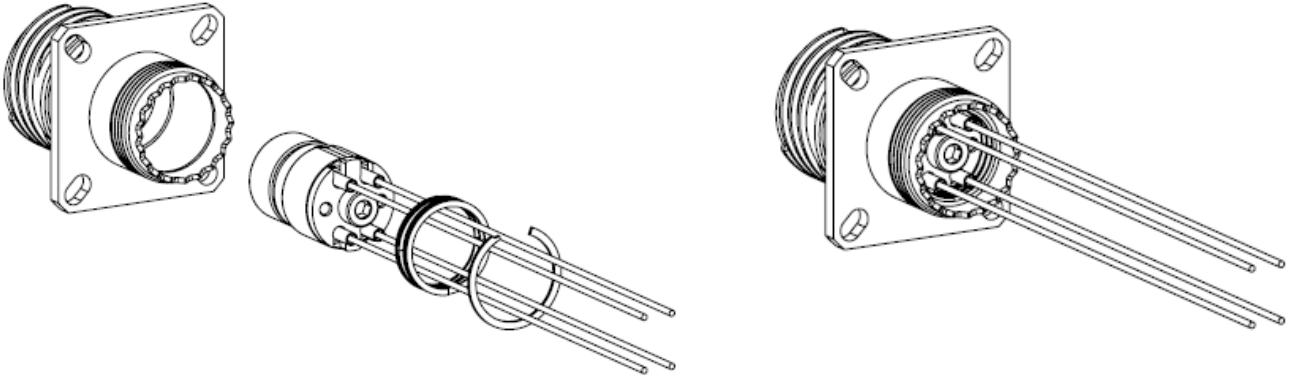
POPULATE INSERT

Insert the Fiber Optic Termini into the back of the Insert Cavities according to the desired pinout. Place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Termini Retainer Plate. Apply a drop of Loctite 222 to the Socket Head Cap Screw and use Hex Tool PT-503 to fasten the Termini Retainer Plate to the Insert. Torque the Socket Head Screw to the values in the above Torque Table using Torque-Measuring Head Drive PT-590 and Bit Size 5/64" PT-599. Use a pair of Long Nose Pliers PT- 532 to ensure the termini are fully seated against the ball lenses.

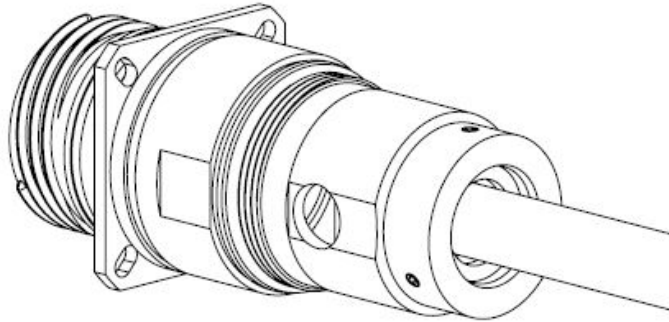


CONNECTOR ASSEMBLY

Use the Hex Screwdriver PT-503 to align the key and install the insert into the Receptacle Body. The Insert should protrude slightly from the Body. Slide the Wave Spring up behind the Insert. Install the Snap Ring behind the Wave Spring into the Snap Ring groove to hold Insert in place



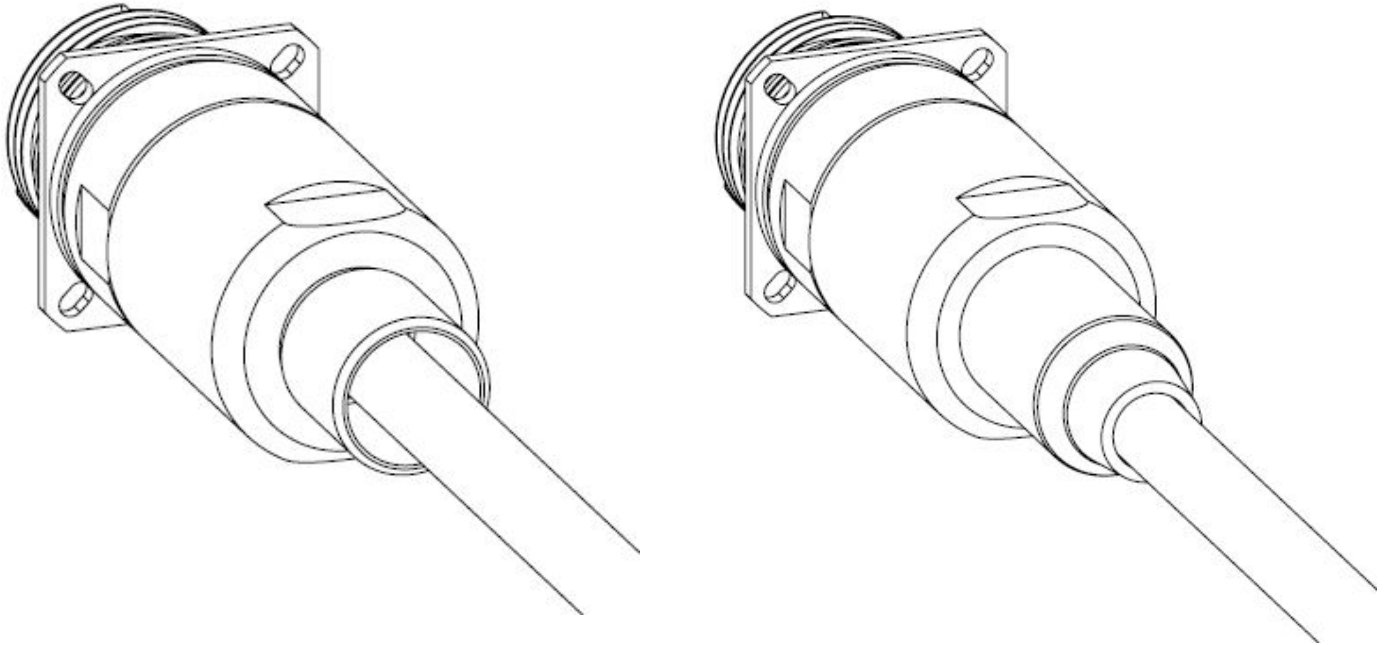
Slide the Coupling Nut and Backshell Retainer forward and hand tighten. Check the fiber length and position by looking through the holes in the Backshell Retainer to make sure the fiber is not twisted or kinked. To torque Coupling Nut and Backshell Retainer, place the Receptacle Assembly into the Vise PT-591. Attach the Adjustable Crow's Foot Wrench PT-536 or PT-546 onto Dial Torque-Measuring Wrench PT-506 and torque Coupling Nut and Backshell Retainer according to the values in the above Torque Table. Next, torque the Spacer according to the values in the above Torque Table.



Pull Strain Relief to bottom of Backshell Retainer and tighten set screws using Hex Driver PT-500. Use Torque Hex Driver PT-590 with Hex Bit 0.050" PT-599 and torque Set Screws to the values in the above Torque Table. Perform a final visual check by looking through the holes in the Backshell Retainer to make sure that the fiber is not twisted or kinked.

CAI-Q38: Q38 Customer Assembly Instructions

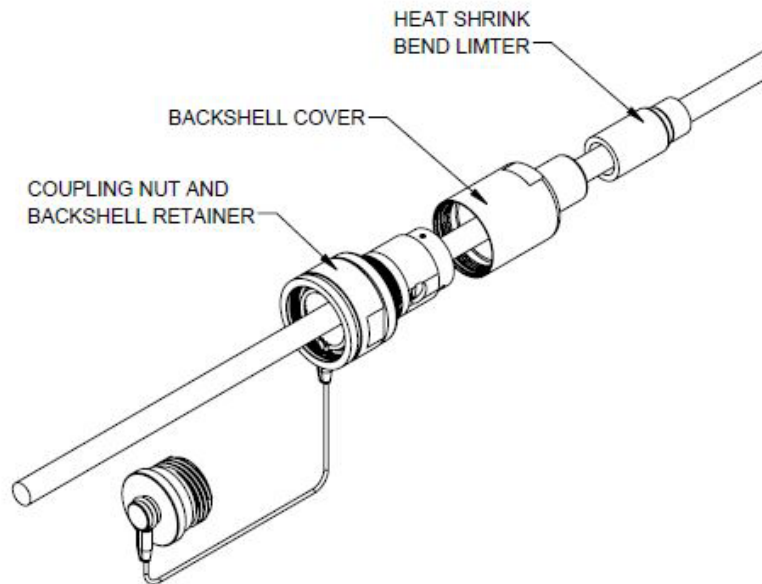
Slide Backshell forward and hand tighten. Torque Backshell according to the values in the above Torque Table. Slide the Heat Shrink Bend Limiter forward and use a Heat Gun to activate Heat Shrink Bend Limiter.



Q38MT PLUG, STRAIGHT BACKSHELL, HEAT SHRINK BOOT

CABLE PREPARATION

Slide parts onto cable in the order below.



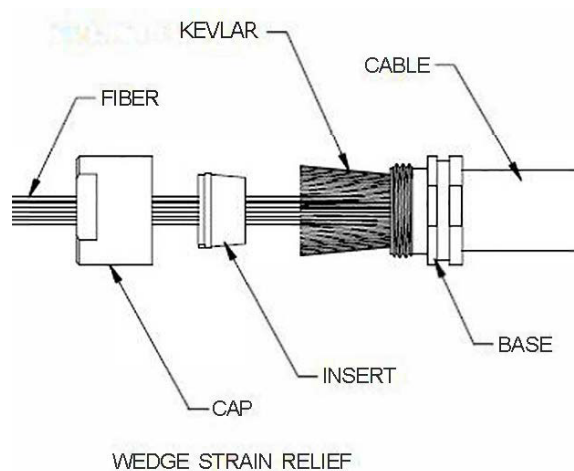
Remove approximately 6 inches (152 mm) of the outer jacket from the cable end.

Thread the Wedge Strain Relief Base over the exposed fibers and Kevlar and slide it forward until it is positioned against the edge of the cable jacket.

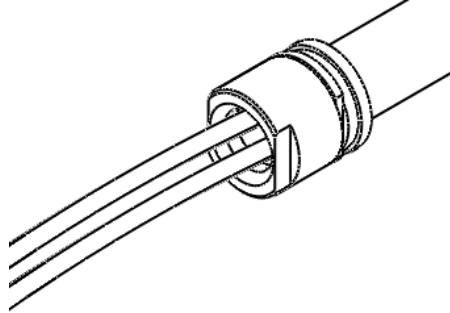
Thread the Wedge Strain Relief Insert over the exposed fibers. Evenly distribute the Kevlar around the Wedge Strain Relief Insert, then slide the Insert into the Wedge Strain Relief Base.

Ensure the Kevlar is evenly distributed and securely captured between the Wedge Strain Relief Base and Wedge Strain Relief Insert.

Cut the excess Kevlar flush with the top of the Strain Relief Wedge.



Screw on Wedge Strain Relief Cap to the Wedge Strain Relief Base. Tighten using the Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 and torque to the values in the above Torque Table.



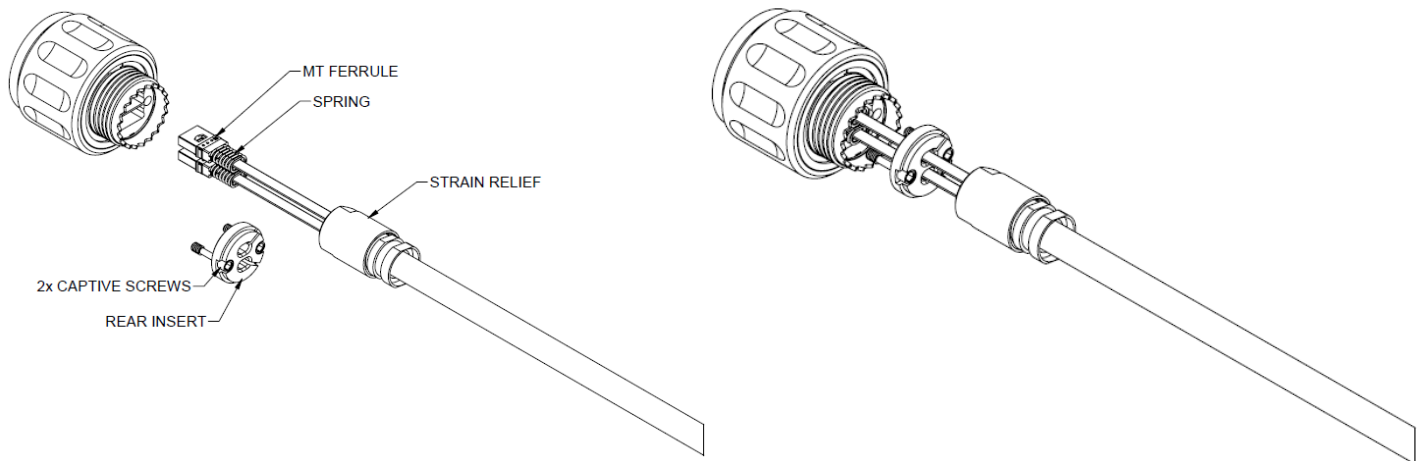
TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM). Perform MT ferrule termination and polishing in accordance with the ferrule vendor's recommended procedures and process parameters.

POPULATE INSERT

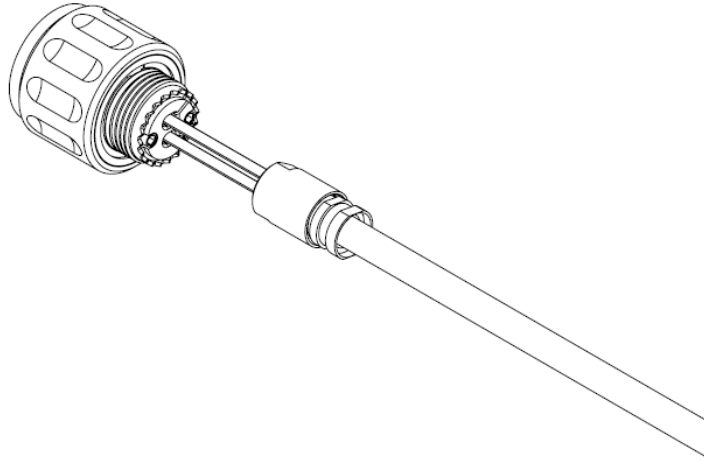
Insert the MT ferrules into the rear of the Connector Insert Cavities according to the corresponding reference designators.

Place the Rear Insert between the ribbon fibers, ensuring the springs are properly captured between the MT ferrules and the Rear Insert.



Apply one small drop of low-strength Loctite 222 to the threads of each Socket Head Cap Screw. Using Hex Tool PT-503, install and tighten the Socket Head Cap Screws to secure the Rear Insert to the Connector Insert.

Torque the Socket Head Cap Screws to the values specified in the Torque Table using the PT-590 Torque-Measuring Head Drive with the 5/64-inch PT-599 bit.



CONNECTOR ASSEMBLY

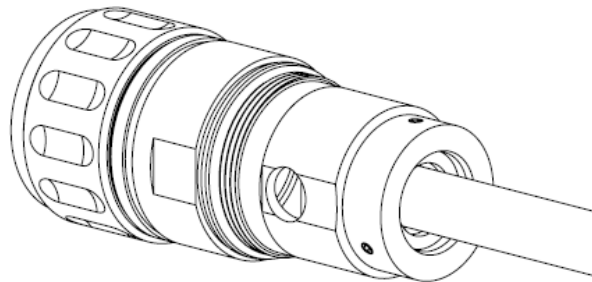
Slide the Coupling Nut and Backshell Retainer forward and hand-tighten.

Inspect the fiber length and position through the holes in the Backshell Retainer. Ensure the fibers are not twisted or kinked.

To torque the Coupling Nut and Backshell Retainer, secure the Receptacle Assembly in Vise PT-591. Attach the appropriate Adjustable Crow's Foot Wrench (PT-536 or PT-546) to the Dial Torque-Measuring Wrench PT-506.

Torque the Coupling Nut and Backshell Retainer to the values specified in the Torque Table above.

Next, torque the Spacer to the value specified in the Torque Table above.



Pull the Strain Relief toward the bottom of the Spacer and hand-tighten the Set Screws using Hex Driver PT-500.

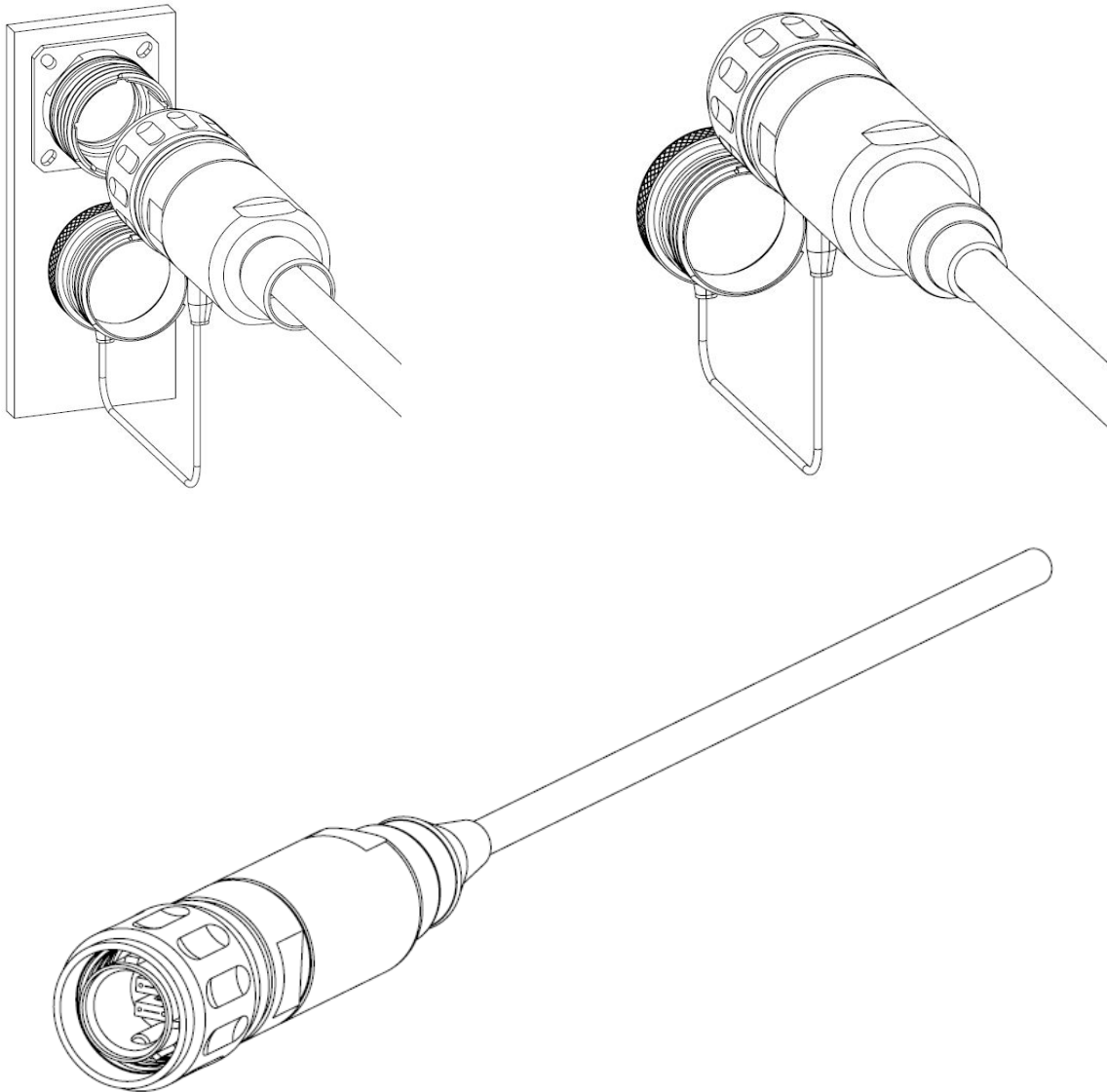
Using the PT-590 Torque Hex Driver with the 0.050-inch PT-599 Hex Bit, torque the Set Screws to the values specified in the Torque Table.

Perform a final visual inspection through the holes in the Spacer to verify that the fibers are not twisted, kinked, or otherwise constrained.

CAI-Q38: Q38 Customer Assembly Instructions

Slide the Backshell forward and hand-tighten. Torque the Backshell to the value specified in the Torque Table. Use the applicable QPC torque tool, or an equivalent tool (Daniels Manufacturing recommended), to hold the connector while torquing.

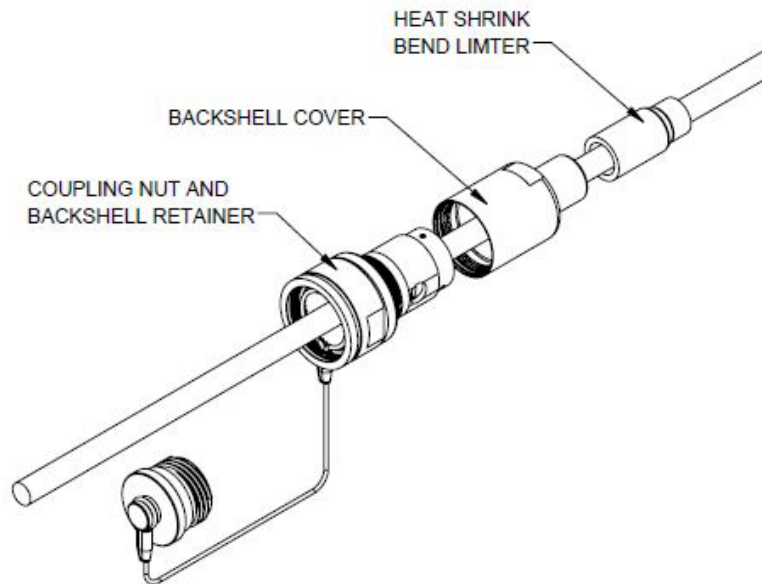
Slide the Heat Shrink Bend Limiter forward into position and use a heat gun to shrink and activate the Heat Shrink Bend.



Q38MT RECEPTACLE, STRAIGHT BACKSHELL, HEAT SHRINK BOOT

CABLE PREPARATION

Slide parts onto cable in the order below.



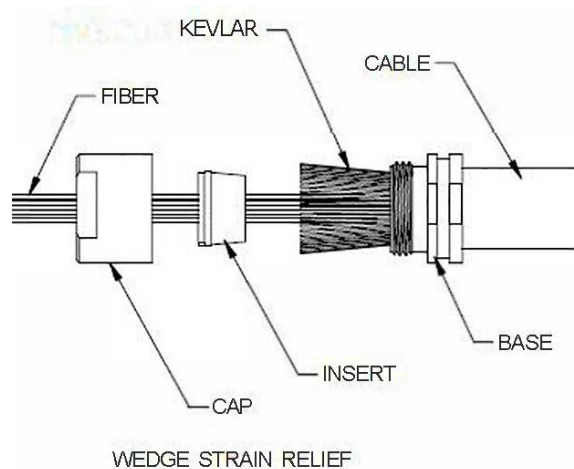
Remove approximately 6 inches (152 mm) of the outer jacket from the cable end.

Thread the Wedge Strain Relief Base over the exposed fibers and Kevlar and slide it forward until it is positioned against the edge of the cable jacket.

Thread the Wedge Strain Relief Insert over the exposed fibers. Evenly distribute the Kevlar around the Wedge Strain Relief Insert, then slide the Insert into the Wedge Strain Relief Base.

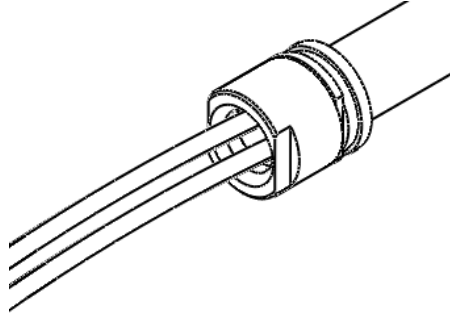
Ensure the Kevlar is evenly distributed and securely captured between the Wedge Strain Relief Base and Wedge Strain Relief Insert.

Cut the excess Kevlar flush with the top of the Strain Relief Wedge.



CAI-Q38: Q38 Customer Assembly Instructions

Screw on Wedge Strain Relief Cap to the Wedge Strain Relief Base. Tighten using the Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 and torque to the values in the above Torque Table.



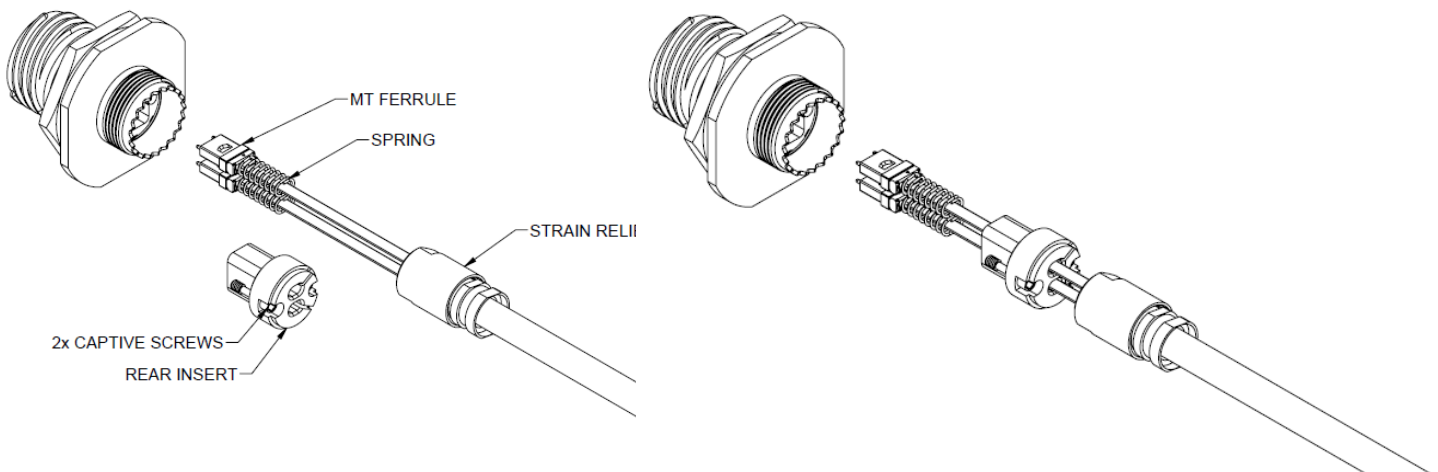
TERMINATION

Use the Stripping Length Diagrams located in the Appendix with the Fiber Optic Termination and Polishing Assembly Instructions (reference CAI-TERM).

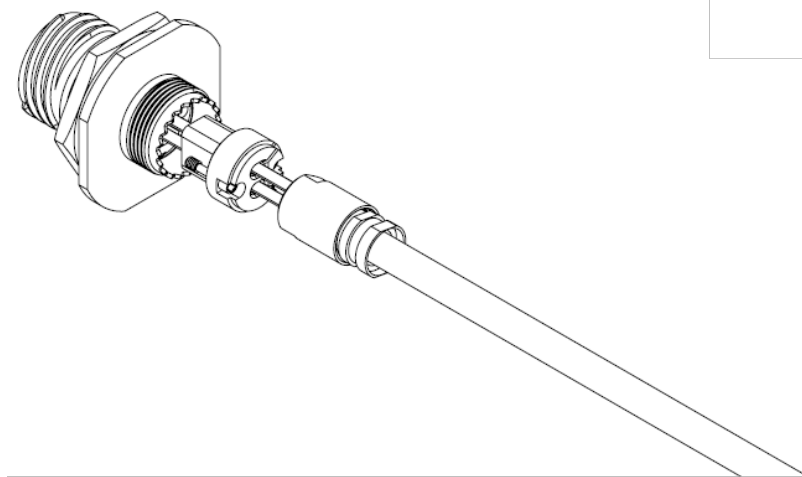
Perform MT ferrule termination and polishing in accordance with the ferrule vendor's recommended procedures and process parameters.

POPULATE INSERT

Place the Rear Insert between the ribbon fibers, ensuring the springs are properly captured between the MT ferrules and the Rear Insert.

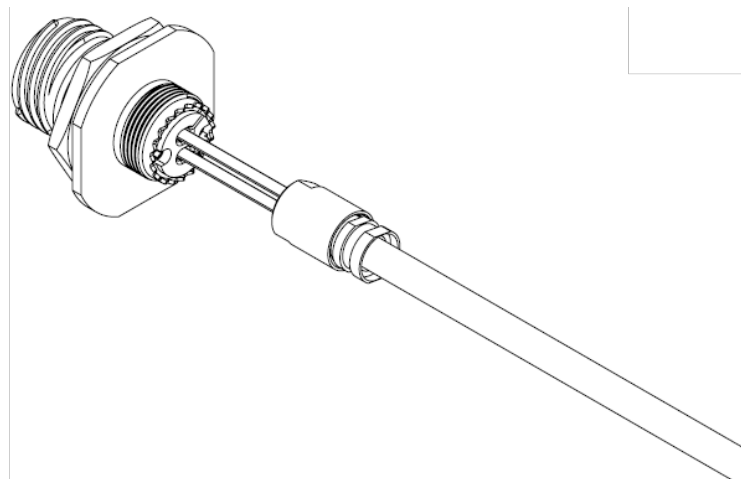


Insert the MT ferrules into the rear of the Connector Insert Cavities according to the corresponding reference designators.



Apply one small drop of low-strength Loctite 222 to the threads of each Socket Head Cap Screw. Using Hex Tool PT-503, install and tighten the Socket Head Cap Screws to secure the Rear Insert to the Connector Insert.

Torque the Socket Head Cap Screws to the values specified in the Torque Table using the PT-590 Torque-Measuring Head Drive with the 5/64-inch PT-599 bit.



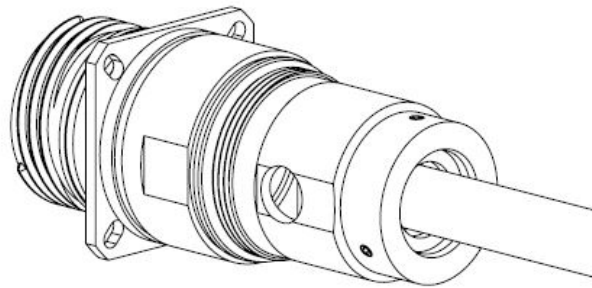
CONNECTOR ASSEMBLY

Slide the Coupling Nut forward and hand-tighten.

To torque the Coupling Nut, secure the corresponding Torque Fixture in Vise PT-591. Attach the appropriate Adjustable Crow's Foot Wrench (PT-536 or PT-546) to the Dial Torque-Measuring Wrench PT-506.

Hand-tighten the Q38 Receptacle into the Torque Fixture, then torque the Coupling Nut to the value specified in the Torque Table.

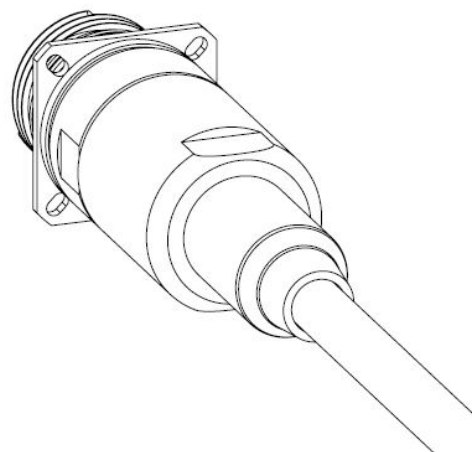
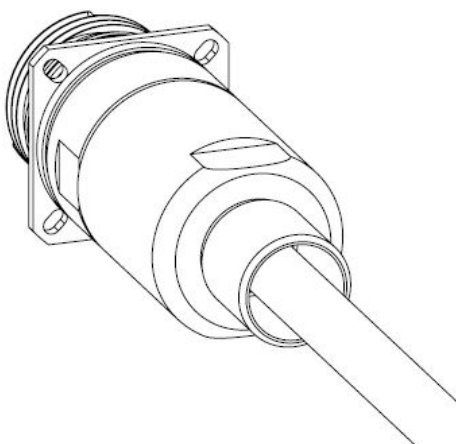
Slide the Spacer forward and hand-tighten. Torque the Spacer to the value specified in the Torque Table above.



Pull the Strain Relief toward the bottom of the Spacer and hand-tighten the Set Screws using Hex Driver PT-500.

Using the PT-590 Torque Hex Driver with the 0.050-inch PT-599 Hex Bit, torque the Set Screws to the values specified in the Torque Table.

Perform a final visual inspection through the holes in the Spacer to verify that the fibers are not twisted, kinked, or otherwise constrained.



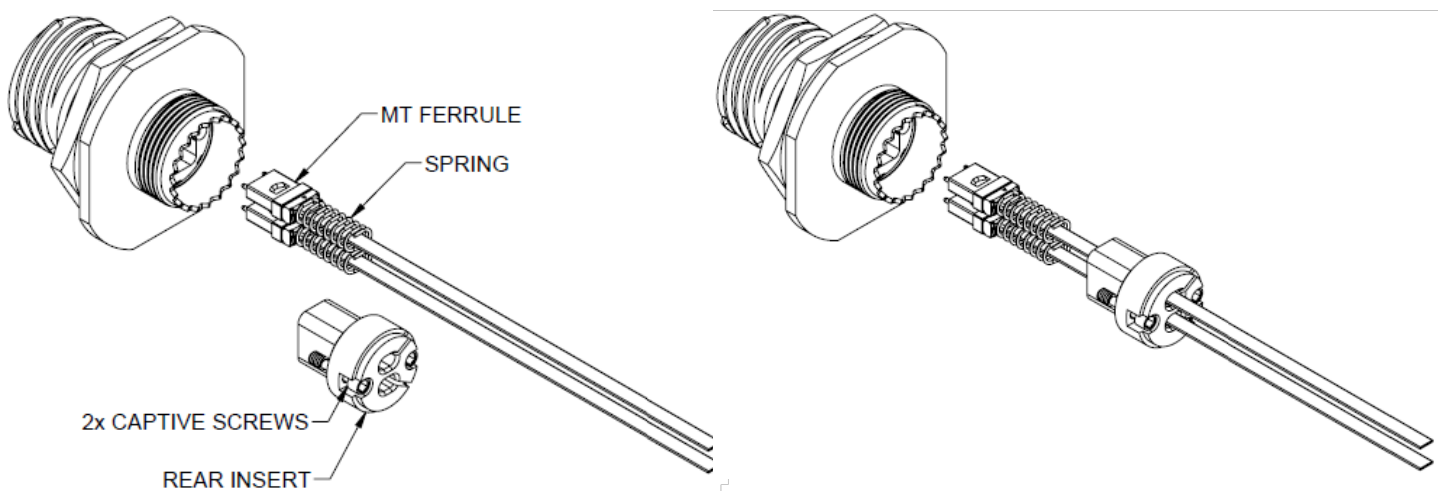
Q38MT RECEPTACLE, NO BACKSHELL

TERMINATION

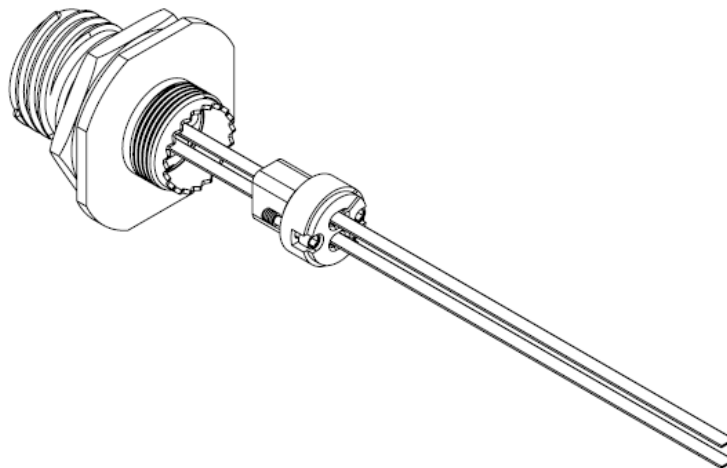
Perform MT ferrule termination and polishing in accordance with the ferrule vendor's recommended procedures and process parameters.

POPULATE INSERT

Place the Rear Insert between the ribbon fibers, ensuring the springs are properly captured between the MT ferrules and the Rear Insert.



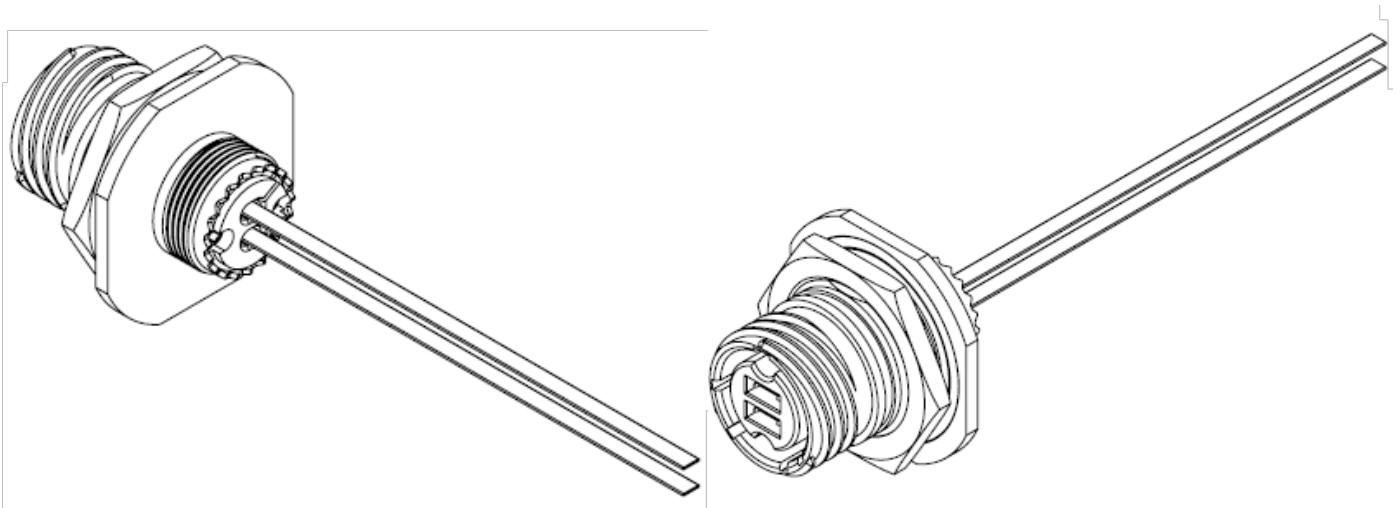
Insert the MT ferrules into the rear of the Connector Insert Cavities according to the corresponding reference designators.



CAI-Q38: Q38 Customer Assembly Instructions

Apply one small drop of low-strength Loctite 222 to the threads of each Socket Head Cap Screw. Using Hex Tool PT-503, install and tighten the Socket Head Cap Screws to secure the Rear Insert to the Connector Insert.

Torque the Socket Head Cap Screws to the values specified in the Torque Table using the PT-590 Torque-Measuring Head Drive with the 5/64-inch PT-599 bit.



CONNECTOR MATING

Follow the instructions below when mating the Q38 Plug and Receptacles.

Align the plug to the Receptacle keyways to ensure proper orientation. Begin threading the Plug Coupling Ring onto the Receptacle by hand. Continue hand-tightening until the Coupling Ring bottoms out. Use the recommended values in the Torque Table on page 2 to torque the mated pair. A complete stop will be felt once fully seated. Check to make sure the red band indicator on the Receptacle has been completely passed by the Plug Coupling Ring.

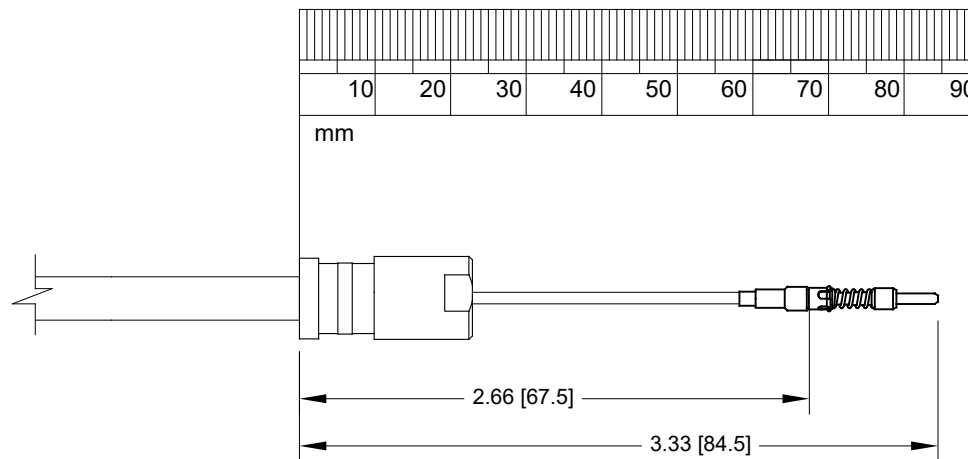
Appendix

STRIPPING LENGTHS – Q38 CONNECTORS

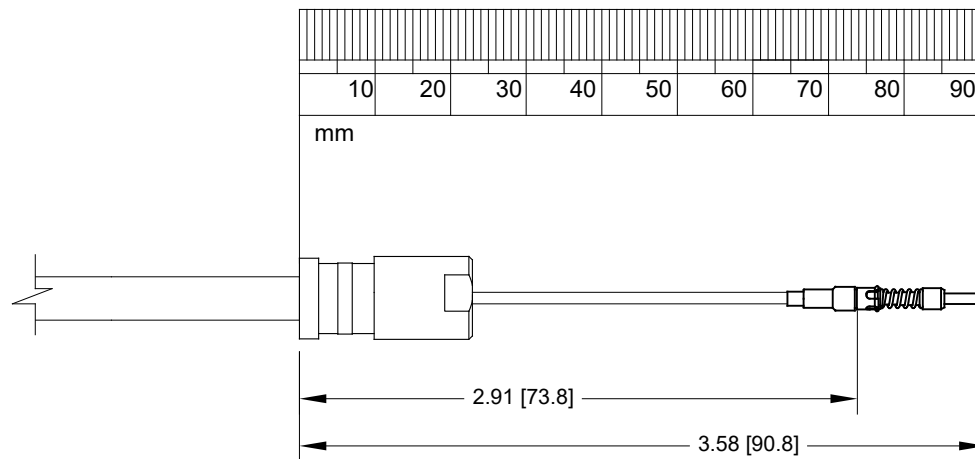
- WI 851-62 - FIGURE 11.1 – Q38HD PLUG AND RECEPTACLE WITH STRAIGHT BACKSHELL SIZE 11 – 19
- WI 851-62 - FIGURE 11.2 – Q38HD PLUG AND RECEPTACLE WITH STRAIGHT BACKSHELL SIZE 21 – 25
- WI 851-62 - FIGURE 11.3 – Q38HD EPOXY CUP TERMINUS
- WI 851-62 - FIGURE 11.4 – Q38EB PLUG WITH CRIMP STYLE BACKSHELL
- WI 851-62 - FIGURE 11.5 – Q38EB RECEPTACLE, SIMPLEX
- WI 851-62 - FIGURE 11.6 – Q38HD PLUG AND RECEPTACLE WITH 90DEG BACKSHELL SIZE 21-25
- WI 851-62 - FIGURE 11.7 – Q38MT PLUG WITH STRAIGHT BACKSHELL SIZE 11-15
- WI 851-62 - FIGURE 11.8 – Q38MT RECEPTACLE WITH STRAIGHT BACKSHELL SIZE 11-15

<u>Revision Change Record</u>				
Revision	Date	Section	Description	Approval
0	3/02/2022	All	Newly Released Document	CN
1	5/27/2022	Q38EB	Added New Instructions for the Q38EB	CN
2	8/10/2023	Q38EB / Q38HD	Added instructions for Receptacle with Backshell	RZ
3	8/27/2025	Connector Mating	Described the method to properly mate the Plug with the Receptacle	SV
4	9/15/2025	Connector Coupling Torque Table	Added table with recommended torque values for Connector Coupling Engagement	SV
5	10/1/2026	Q38MT Plug and Receptacle	Added assembly instructions	RNZ

Q38HD PLUG AND RECEPTACLE WITH STRAIGHT BACKSHELL SIZE 11-19



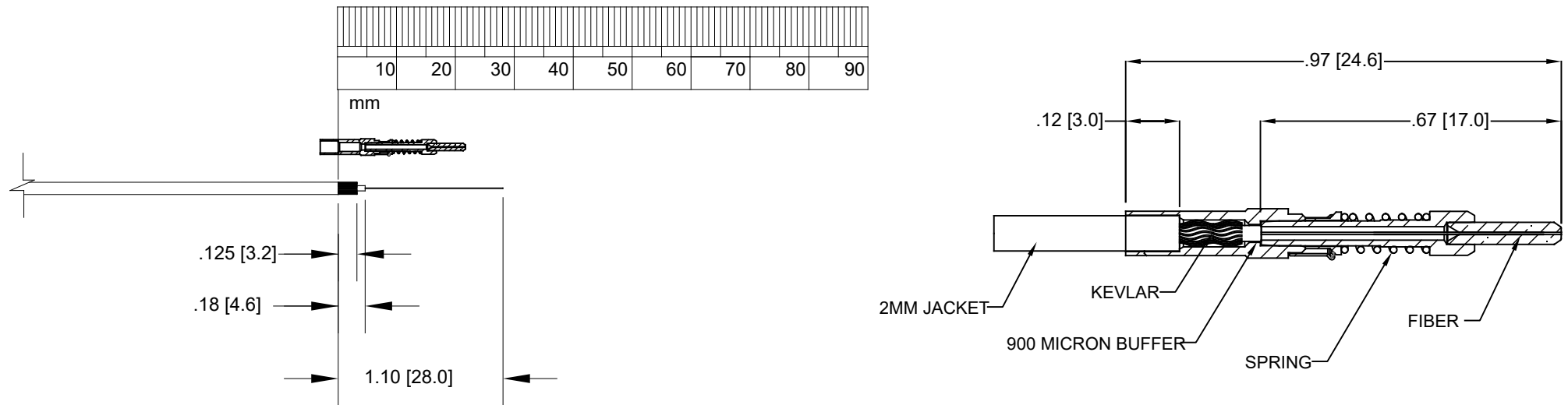
Q38HD PLUG AND RECEPTACLE WITH STRAIGHT BACKSHELL SIZE 21-25



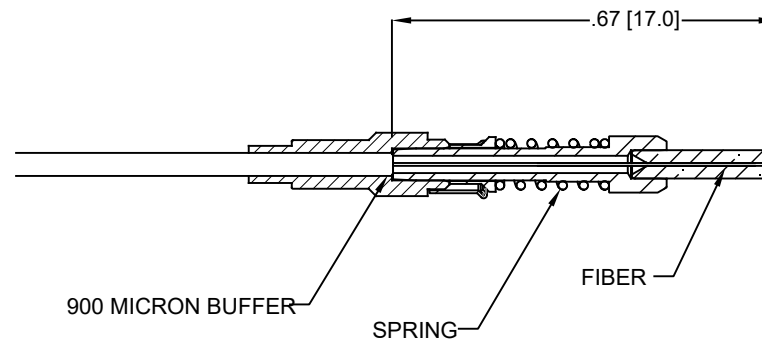
Q38HD

RECEPTACLE SIMPLEX CABLE

EPOXY CUP OPTION (E2)

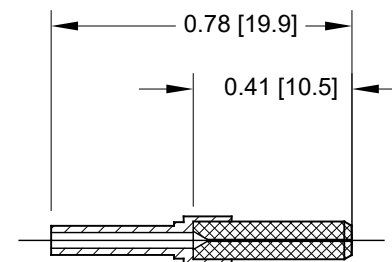
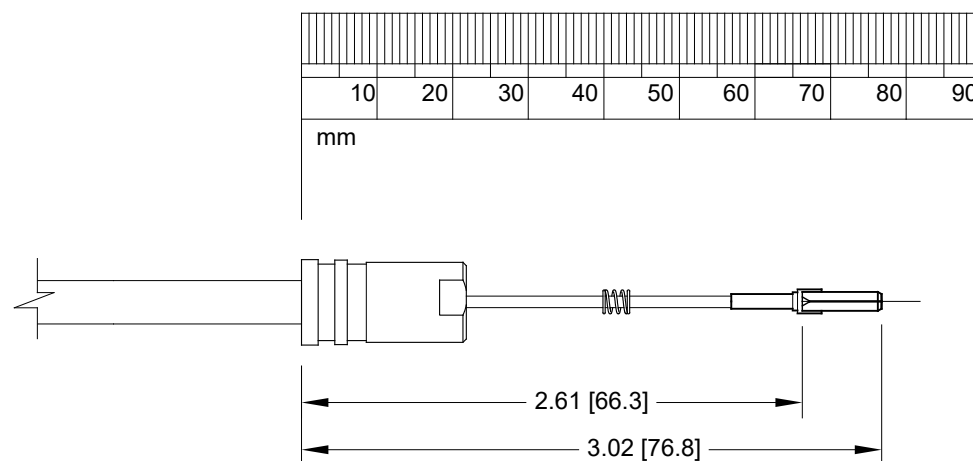


900μm OPTION



Q38EB CONNECTOR

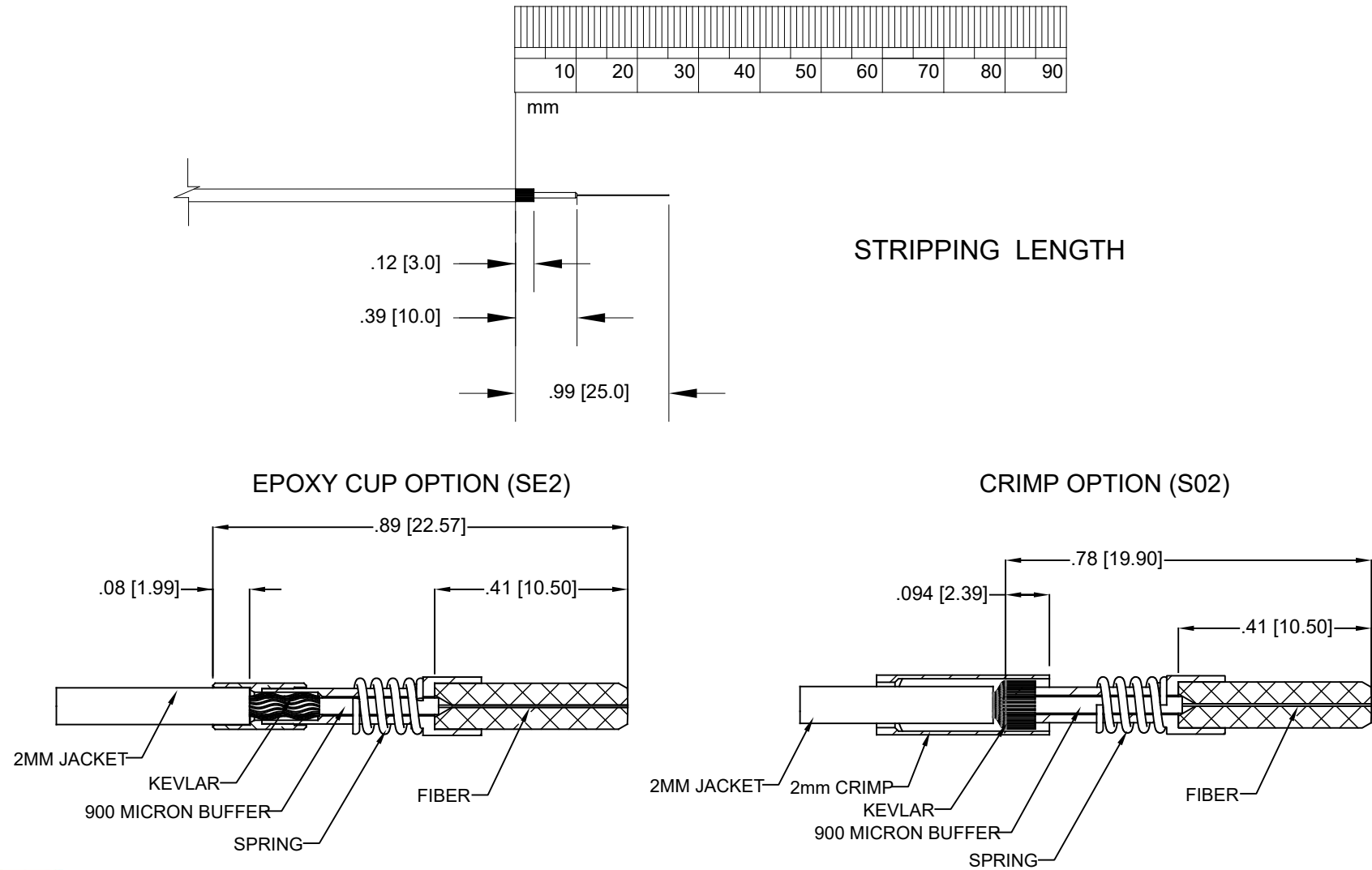
PLUG, WITH CRIMP STYLE BACKSHELL



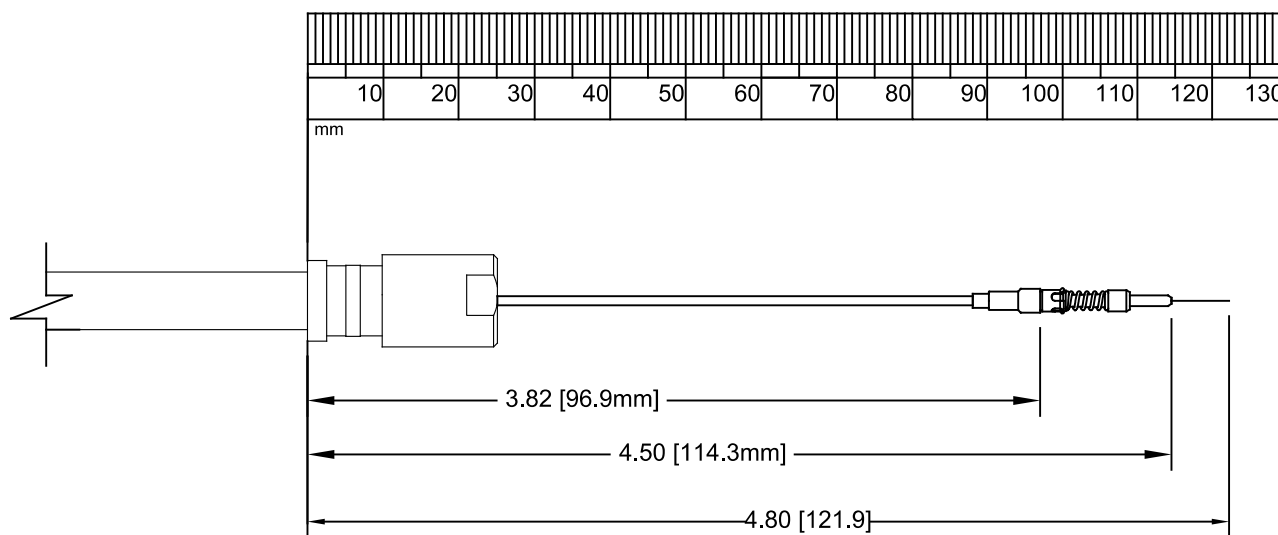
NOT TO SCALE

Q38EB CONNECTOR

RECEPTACLE, SIMPLEX CABLE

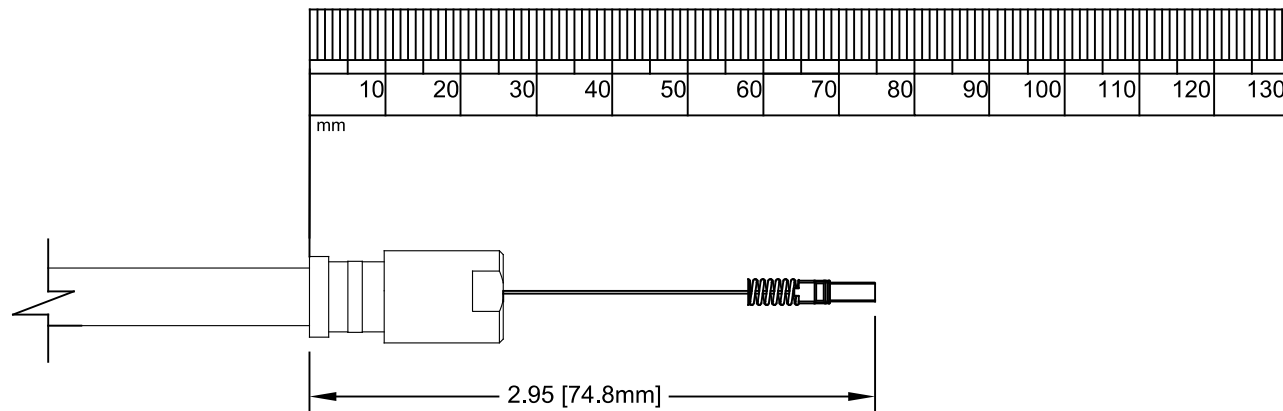


Q38HD PLUG AND RECEPTACLE WITH 90DEG BACKSHELL SIZE 21-25



Q38MT PLUG WITH STRAIGHT BACKSHELL

SIZE 11-15



Q38MT RECEPTACLE WITH STRAIGHT BACKSHELL SIZE 11-15

