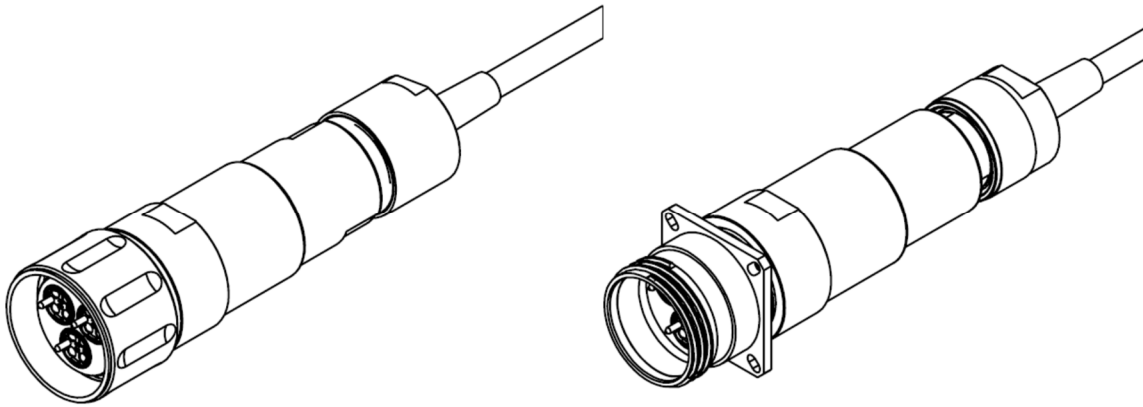


QPlex Connectors

Customer Assembly Instructions



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SCOPE

This document describes the Assembly Instructions for the QPlex 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
QPlex3, Straight Backshell, Boot	7	QPlex3, No Backshell	25
QPlex3, Straight Backshell, Mesh Grip	10	QPlex3, Straight Backshell, Boot	27
QPlex4, Straight Backshell, Boot	13	QPlex3, Straight Backshell, Mesh Grip	30
QPlex4, Straight Backshell, Mesh Grip	16	QPlex4, No Backshell	33
QPlex6, Straight Backshell, Boot	19	QPlex4, Straight Backshell, Boot	36
QPlex6, Straight Backshell, Mesh Grip	22	QPlex4, Straight Backshell, Mesh Grip	39
		QPlex6, No Backshell	42
		QPlex6, Straight Backshell, Boot	45
		QPlex6, Straight Backshell, Mesh Grip	49

Table 1, Configuration Table

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 TABLE

Refer to table 2 below for the recommended torque values for components used in this instruction.

Component		Backshell / Backshell Body	Back Nut	Strain Relief	Set Screws	Socket Head Cap Screw
Torque Values / Units	In-lb.	75 – 79	66 – 71	84 – 88	2.5 – 3.0	2.5 – 3.0
	N • m	8.5 – 9.0	7.5 – 8.0	9.5 – 10	0.28 – 0.34	0.28 – 0.34

Table 2, Torque Values

QPlex3, PLUG, STRAIGHT BACKSHELL, BOOT

CABLE PREPARATION

Slide parts onto cable in the order below.

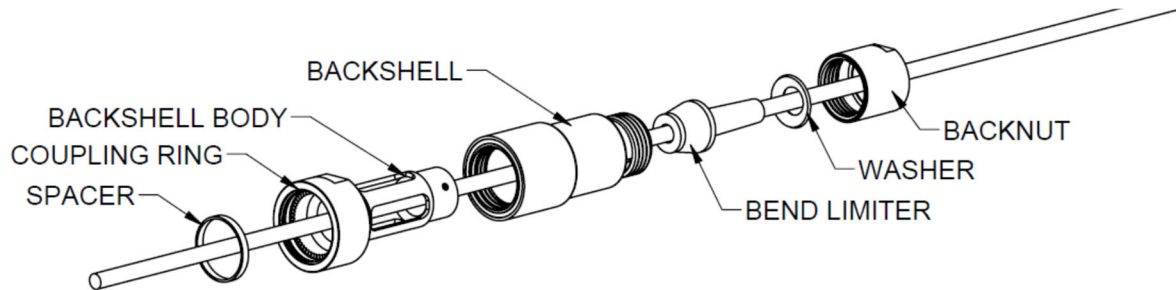


Figure 1, QPlex3, Cable Prep, Plug, Straight Backshell with Boot

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 Table.

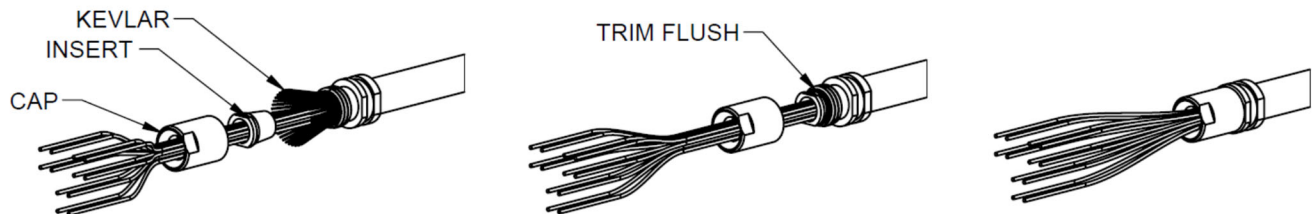


Figure 2, QPlex3, Strain Relief Assembly, Plug, Straight Backshell with Boot

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A" QPlex3 CONNECTOR PLUG for strain relief to ferrule tip.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

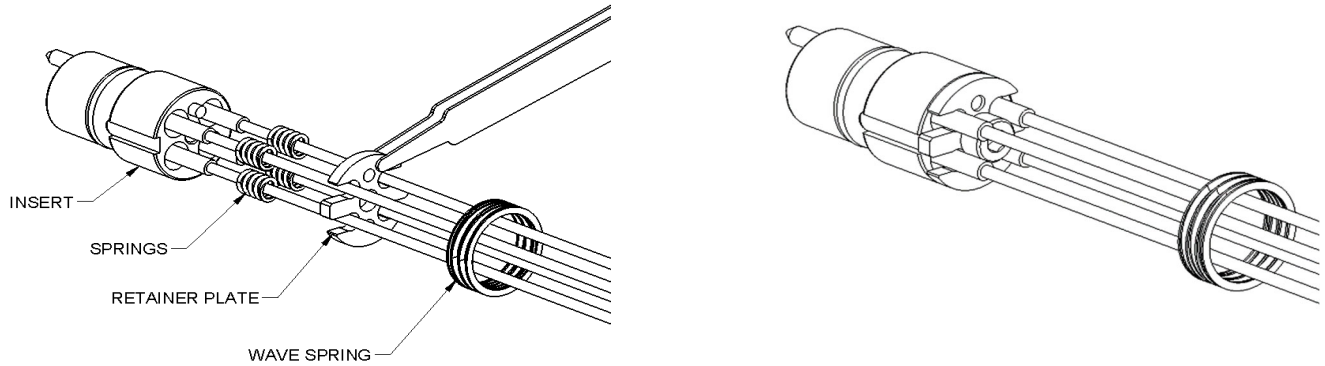


Figure 3, QPlex3, Insert Assembly, Plug, Straight Backshell with Boot

CONNECTOR ASSEMBLY

Populate QPlex3 Plug Body according to the desired channel count. Use the Dummy Inserts to populate the unneeded cavities in the Plug Body.

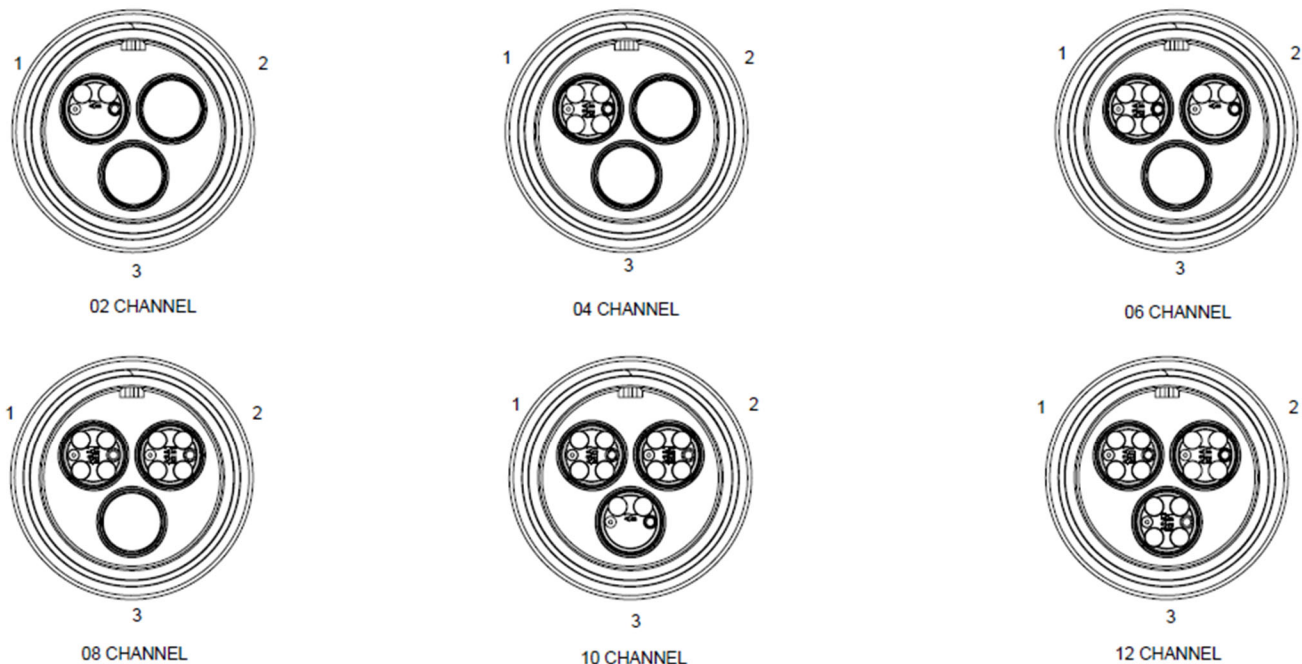


Figure 4, QPlex3, Connector Cavity Insert Arrangement, Plug, Straight Backshell with Boot

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Slide the Wave Spring in behind the Inserts. The front of the Inserts should protrude slightly from the front of the connector. Position the Retainer Plate so that it aligns with the pin on the Plug Body. Slide the Spacer up into the back of the Connector Plug Body.

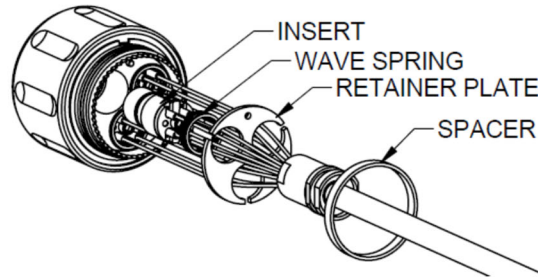


Figure 5, QPlex3, Connector Assembly, Plug, Straight Backshell with Boot

Place Torque Fixture PT-389 into the 4" Drill Press Vise PT-591. Hand tighten the Backshell Body with Coupling Ring onto the Torque Fixture and torque the Backshell Body with Coupling Ring using Dial Torque-Measuring Wrench PT-506 with PT-546 Adapter and Crow's Foot Wrench PT-545 to the value specified in Table 2. Check the fiber through the holes in the Backshell Body to make sure they are not twisted or kinked.

Pull Strain Relief to the bottom of Backshell Body with Coupling Ring and tighten the Set Screws using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

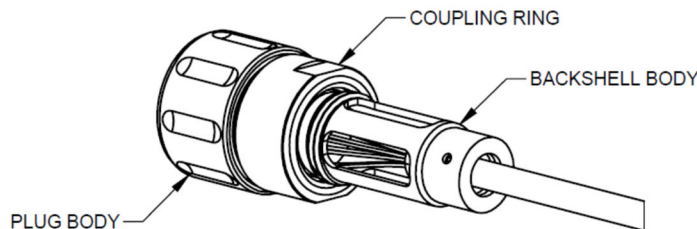


Figure 6, QPlex3, Coupling Ring assembly, Plug, Straight Backshell with Boot

Slide the Backshell with Dust Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 to the values in Table 2. Slide the Bend Limiter and Washer into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.



Figure 7, QPlex3, Backshell Assembly, Plug, Straight Backshell with Boot

QPlex3, PLUG, STRAIGHT BACKSHELL, MESH GRIP

CABLE PREPARATION

Slide parts onto cable in the order below.

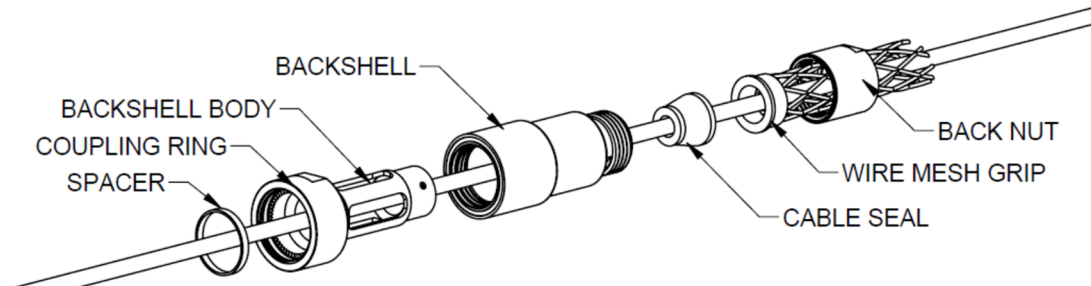


Figure 8, QPlex3, Cable Prep, Plug, Straight Backshell with Mesh Grip

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 value specified in Table 2.

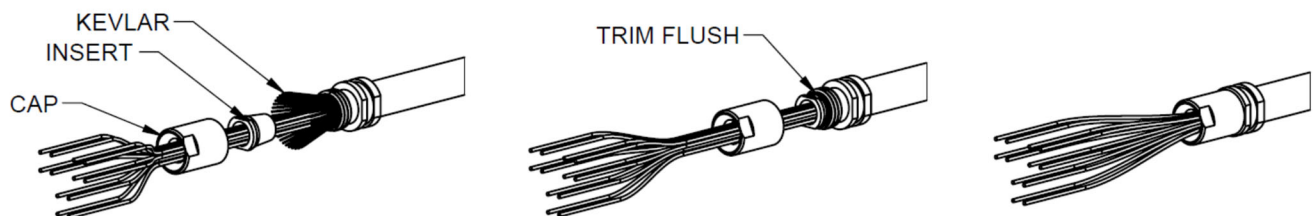


Figure 9, QPlex3, Strain Relief Assembly, Plug, Straight Backshell with Mesh Grip

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A" QPlex3 CONNECTOR PLUG for strain relief to ferrule tip.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

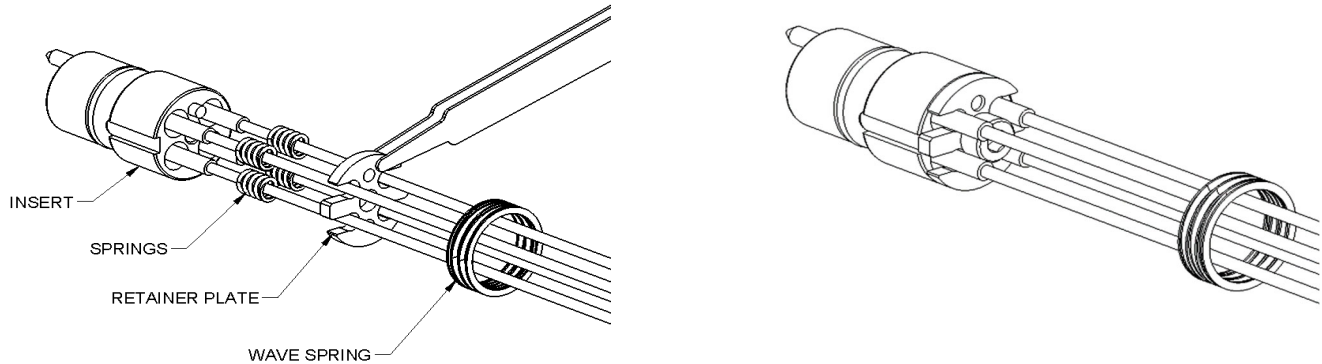


Figure 10, QPlex3, Insert Assembly, Plug, Straight Backshell with Mesh Grip

CONNECTOR ASSEMBLY

Populate QPlex3 Plug Body according to the desired channel count. Use the Dummy Inserts to populate the unused cavities in the Plug Body.

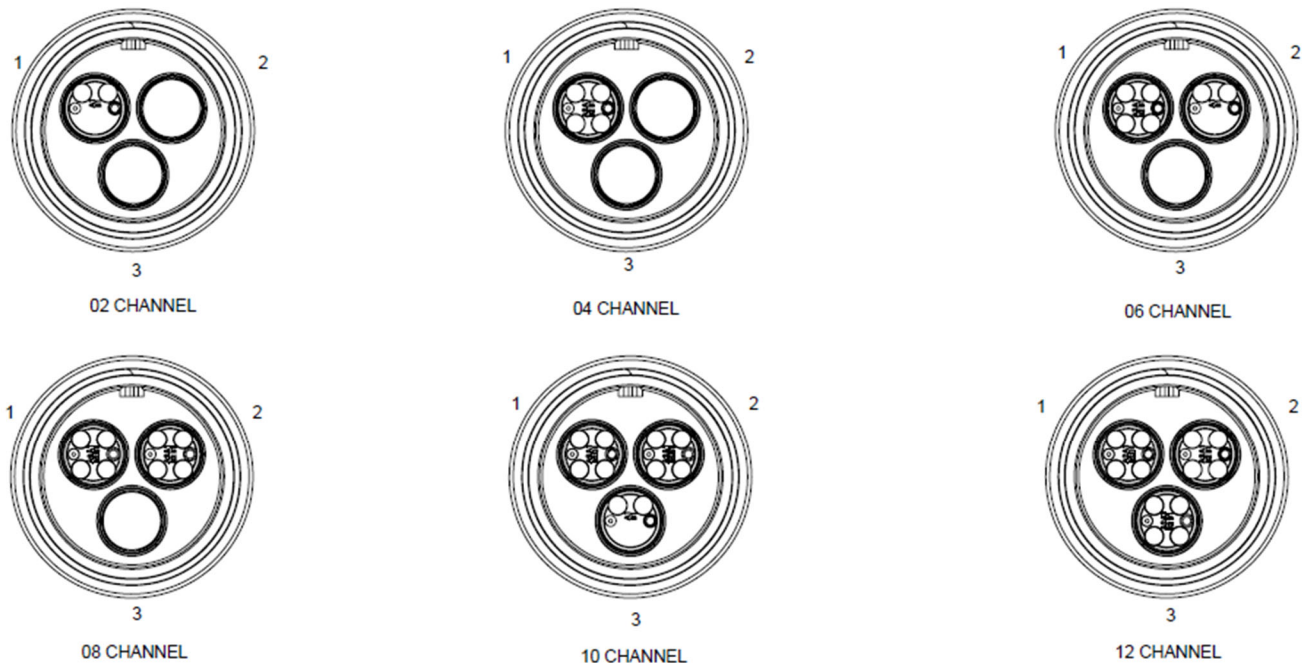


Figure 11, QPlex3, Connector Cavity Insert Arrangement, Plug, Straight Backshell with Mesh Grip

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Slide the Wave Spring in behind the Insert. The front of the Insert should protrude slightly from the front of the connector. Position the Retainer Plate so that it aligns with the pin on the Plug Body. Slide the Spacer up into the back of the Connector Plug Body.

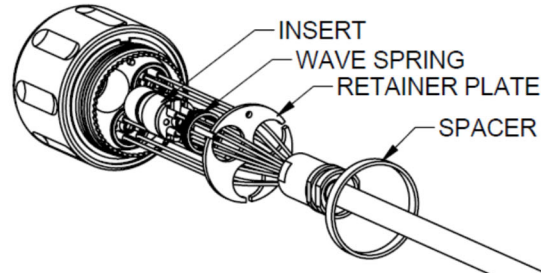


Figure 12, QPlex3, Connector Assembly, Plug, Straight Backshell with Mesh Grip

Place Torque Fixture PT-389 into the 4" Drill Press Vise PT-591. Hand tighten the Backshell Body with Coupling Ring onto the Torque Fixture and torque the Backshell Body with Coupling Ring using Dial Torque-Measuring Wrench PT-506 with PT-546 Adapter and Crow's Foot Wrench PT-545 to the values specified in Table 2. Check the fiber through the holes in the Backshell Body to make sure they are not twisted or kinked.

Pull Strain Relief to the bottom of Backshell Body with Coupling Ring and tighten the Set Screws using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the values specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

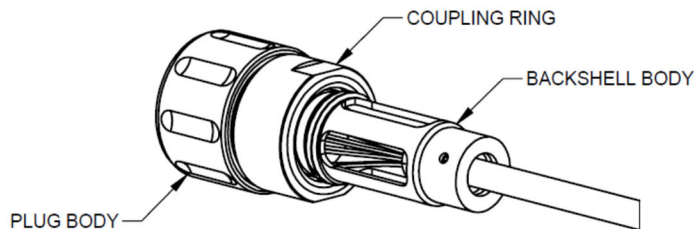


Figure 13, QPlex3, Coupling Ring assembly, Plug, Straight Backshell with Mesh Grip

Slide the Backshell with Dust Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 to the values specified in Table 2. Slide the Cable Seal and Wire Mesh Grip into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

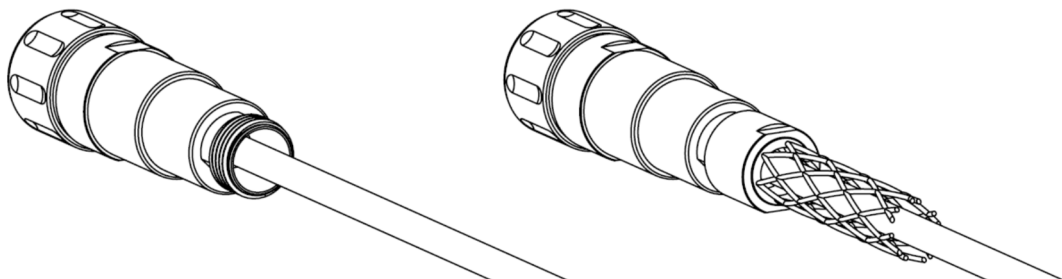


Figure 14, QPlex3, Backshell Assembly, Plug, Straight Backshell with Mesh Grip

QPlex4, PLUG, STRAIGHT BACKSHELL, BOOT

CABLE PREPARATION

Slide parts onto cable in the order below.

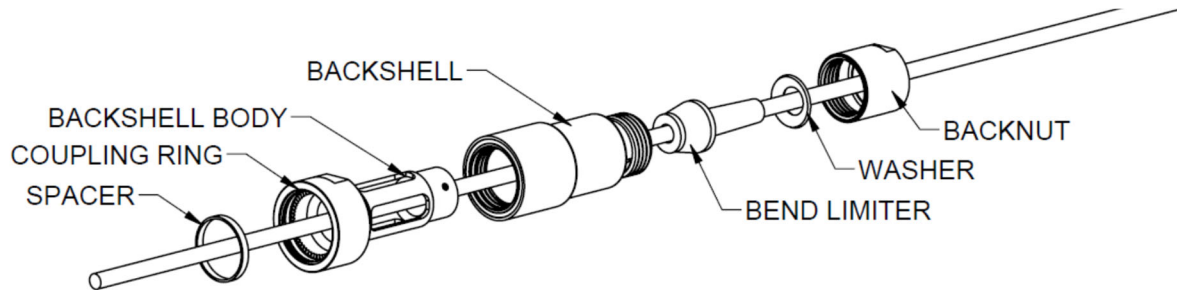


Figure 15, QPlex4, Cable Prep, Plug, Straight Backshell with Boot

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 value specified in Table 2.

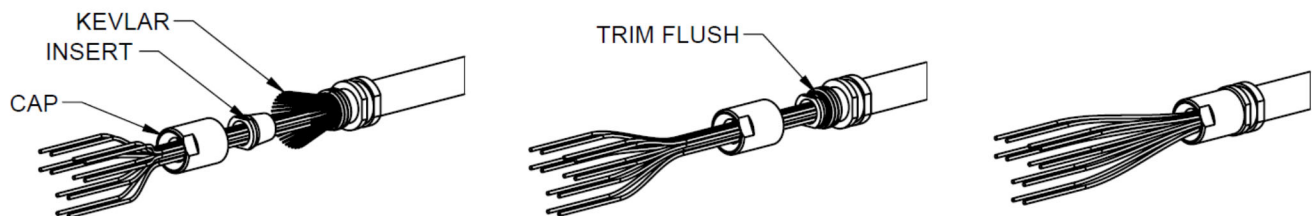


Figure 16, QPlex4, Strain Relief Assembly, Plug, Straight Backshell with Boot

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A" QPlex4 CONNECTOR PLUG for strain relief to ferrule tip.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

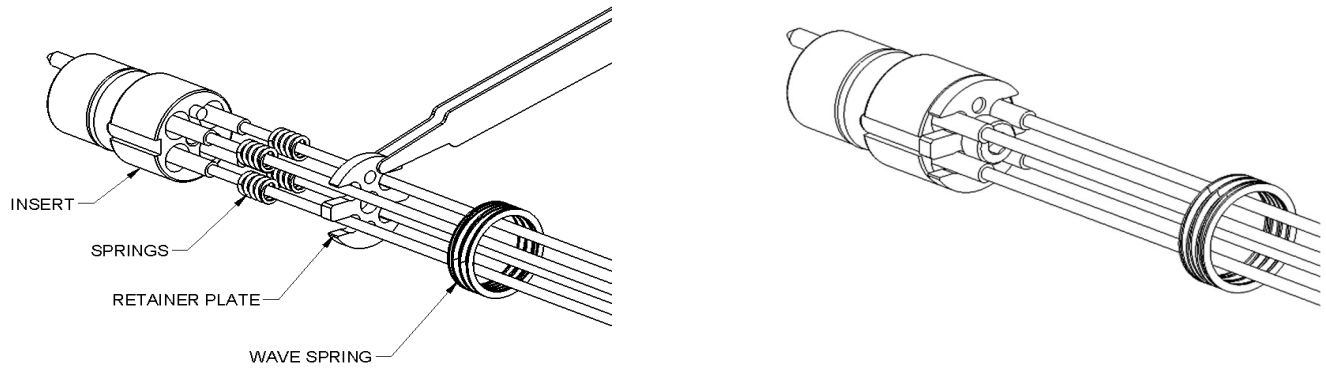


Figure 17, QPlex4, Insert Assembly, Plug, Straight Backshell with Boot

CONNECTOR ASSEMBLY

Populate QPlex4 Insert according to the desired channel count. Use the Dummy Inserts to populate the unneeded cavities.

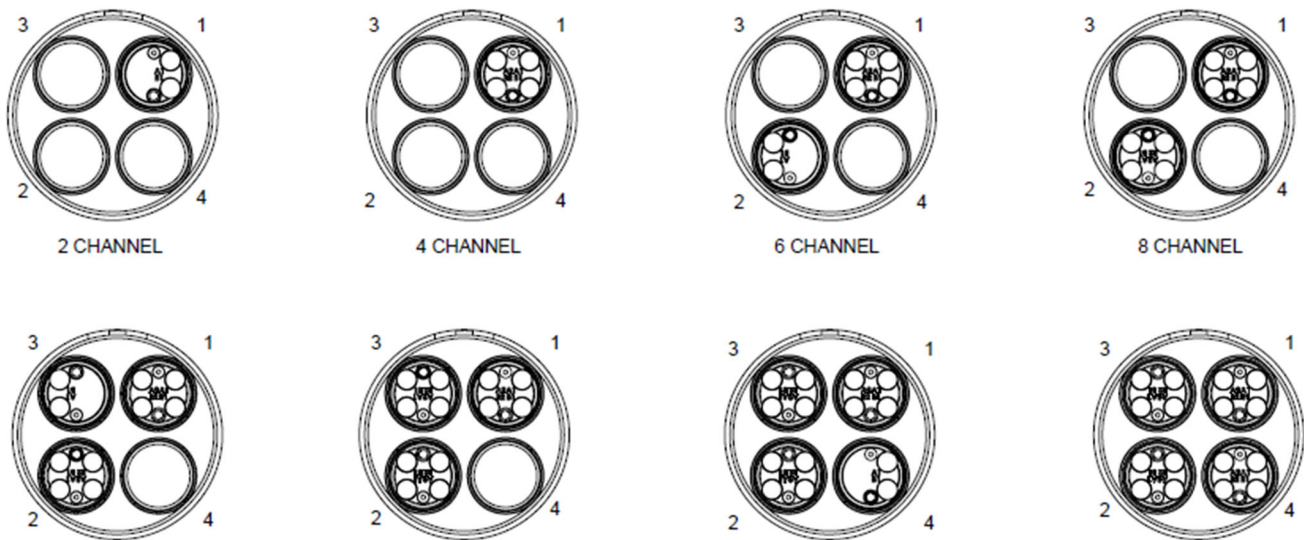


Figure 18, QPlex4, Connector Cavity Insert Arrangement, Plug, Straight Backshell with Boot

Slide the Inserts into the Insert Body. Slide the Wave Spring in behind the Inserts. The front of the Insert should protrude slightly from the front of the Insert Body. Align the Retainer Plate with the pin on the Insert Body. Screw the Insert Retainer Plate into the back of the Insert Body. Loctite 222 or equivalent may be used on the screw threads. Use 3/32" Hex Screwdriver PT-502 to tighten screw and torque using Torque-Measuring Screwdriver PT-590 with Hex Bit 3/32" PT-599.

Slide the Insert Body Assembly into the Plug Coupling Ring. Slide Spacer into the back of the Connector Plug Body. Ensure that the Key on the Insert Body aligns with the Keyway in the Plug Coupling Ring.

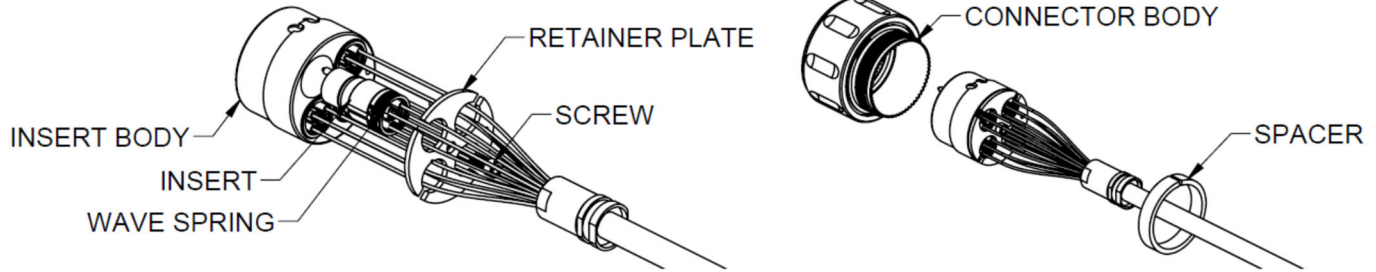


Figure 19, QPlex4, Connector Assembly, Plug, Straight Backshell with Boot

Place Torque Fixture PT-389 into the 4" Drill Press Vise PT-591. Hand tighten the Backshell Body with Coupling Ring onto the Torque Fixture and torque the Backshell Body with Coupling Ring using Dial Torque-Measuring Wrench PT-506 with PT-546 Adapter and Crow's Foot Wrench PT-545 to the value specified in Table 2. Check the fiber through the holes in the Backshell Body to make sure they are not twisted or kinked.

Pull Strain Relief to the bottom of Backshell Body with Coupling Ring and tighten the Set Screws using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

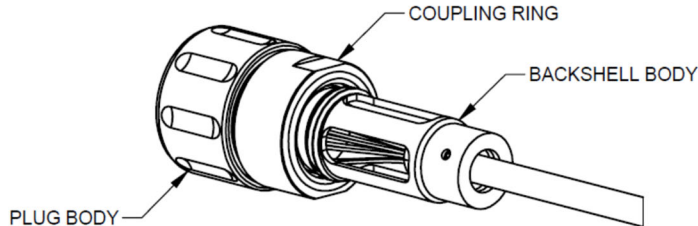


Figure 20, QPlex4, Coupling Ring Assembly, Plug, Straight Backshell with Boot

Slide the Backshell with Dust Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 to the value specified in Table 2. Slide the Bend Limiter and Washer into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

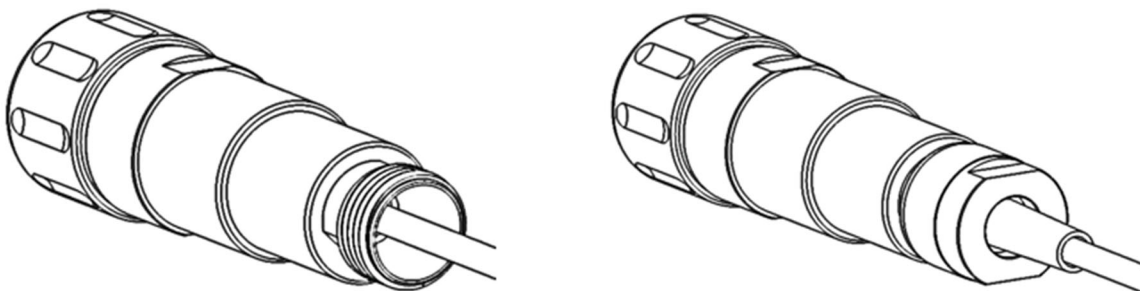


Figure 21, QPlex4, Backshell Assembly, Plug, Straight Backshell with Boot

QPlex4, PLUG, STRAIGHT BACKSHELL, MESH GRIP

CABLE PREPARATION

Slide parts onto cable in the order below.

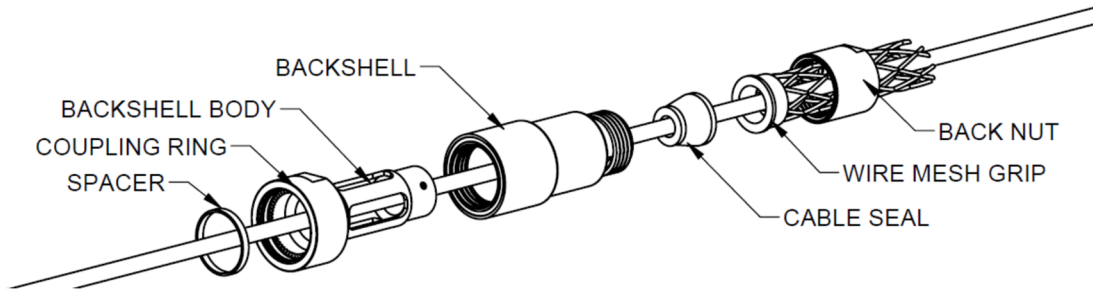


Figure 22, QPlex4, Cable Prep, Plug, Straight Backshell with Mesh Grip

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 value specified in Table 2.

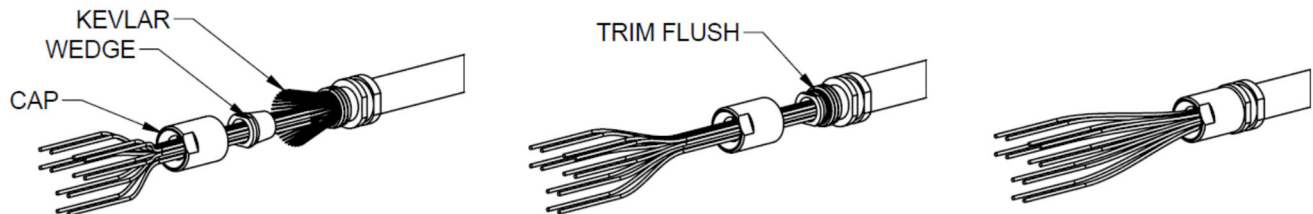


Figure 23, QPlex4, Strain Relief Assembly, Plug, Straight Backshell with Mesh Grip

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A" QPlex4 CONNECTOR PLUG for strain relief to ferrule tip.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

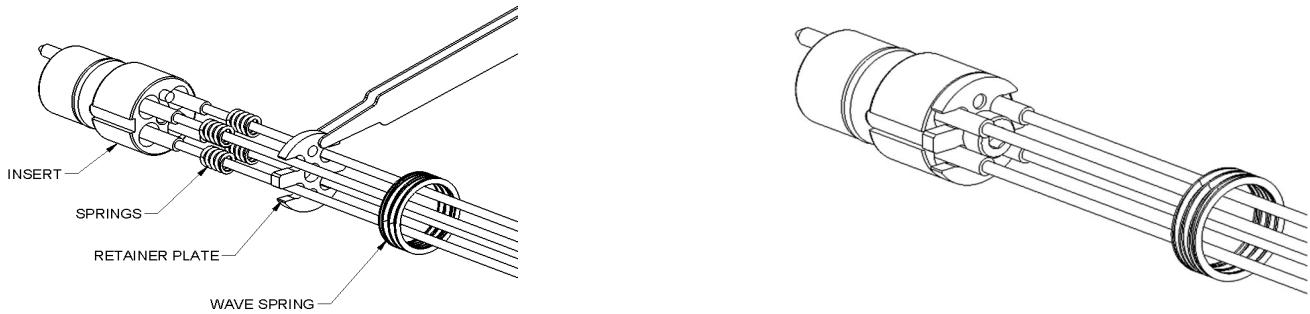


Figure 24, QPlex4, Insert Assembly, Plug, Straight Backshell with Mesh Grip

CONNECTOR ASSEMBLY

Populate QPlex4 Insert according to the desired channel count. Use the Dummy Inserts to populate the unneeded cavities.

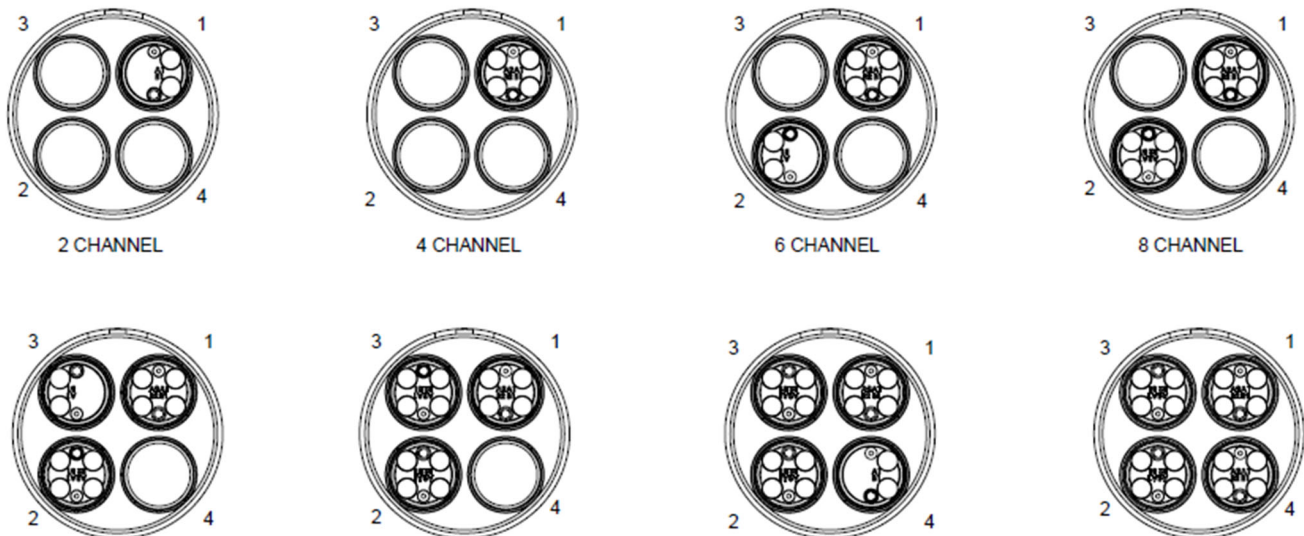


Figure 25, QPlex4, Connector Cavity Insert Arrangement, Plug, Straight Backshell with Mesh Grip

Slide the Inserts into the Insert Body. Slide the Wave Spring in behind the Inserts. The front of the Insert should protrude slightly from the front of the Insert Body. Align the Retainer Plate with the pin on the Insert Body. Screw the Insert Retainer Plate into the back of the Insert Body. Loctite 222 or equivalent may be used on the screw threads. Use 3/32" Hex Screwdriver PT-502 to tighten screw and torque using Torque-Measuring Screwdriver PT-590 with Hex Bit 3/32" PT-599.

Slide the Insert Body Assembly into the Plug Coupling Ring. Slide Spacer into the back of the Connector Plug Body. Ensure that the Key on the Insert Body aligns with the Keyway in the Plug Coupling Ring.

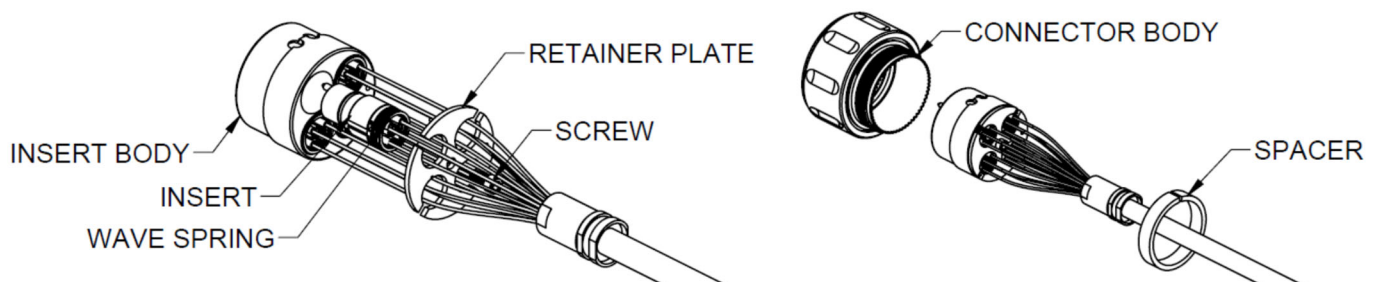


Figure 26, QPlex4, Connector Assembly, Plug, Straight Backshell with Mesh Grip

CAI-QPlex: QPlex Customer Assembly Instructions

Place Torque Fixture PT-389 into the 4" Drill Press Vise PT-591. Hand tighten the Backshell Body with Coupling Ring onto the Torque Fixture and torque the Backshell Body with Coupling Ring using Dial Torque-Measuring Wrench PT-506 with PT-546 Adapter and Crow's Foot Wrench PT-545 to the value specified in Table 2, Torque Table. Check the fiber through the holes in the Backshell Body to make sure they are not twisted or kinked.

Pull Strain Relief to the bottom of Backshell Body with Coupling Ring and tighten the Set Screws using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

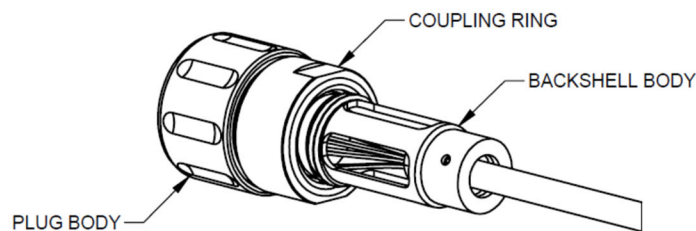


Figure 27, QPlex4, Coupling Ring Assembly, Plug, Straight Backshell with Mesh Grip

Slide the Backshell with Dust Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 to the value specified in Table 2. Slide the Cable Seal and Wire Mesh Grip into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

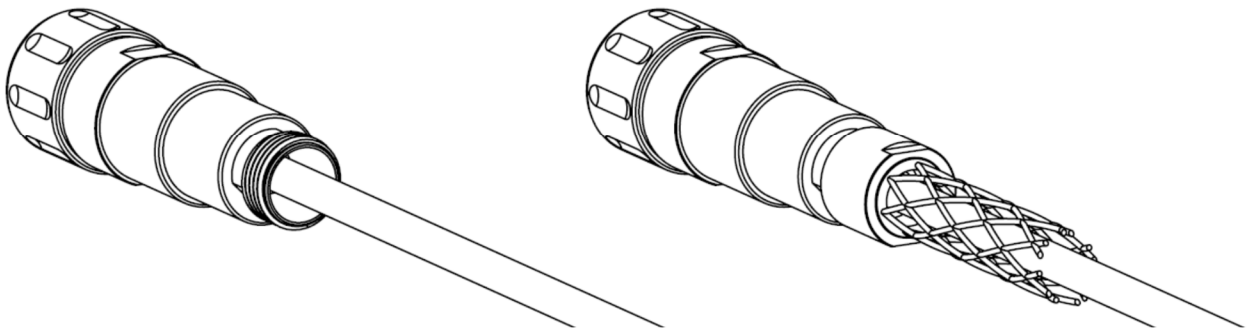


Figure 28, QPlex4, Backshell Assembly, Plug, Straight Backshell with Mesh Grip

QPlex6, PLUG, STRAIGHT BACKSHELL, BOOT

CABLE PREPARATION

Slide components onto cable in the order below.

Note: Bushing is only required for 12.5 mm or lower cable diameter

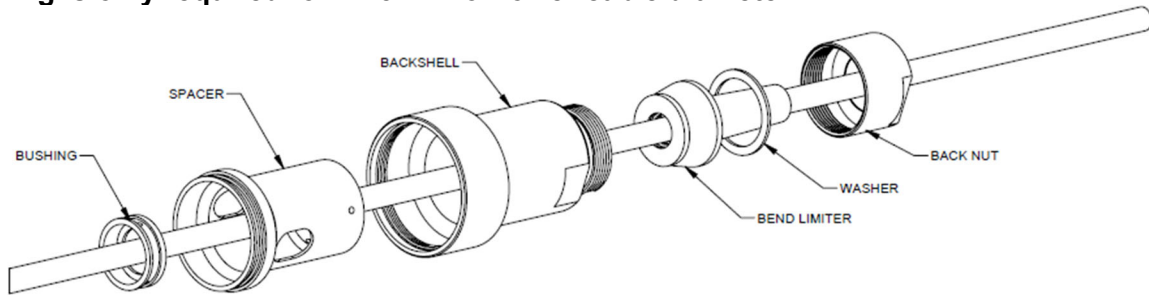


Figure 29, QPlex6, Cable Prep, Plug, Straight Backshell with Boot

Remove approximately 6-inches (152mm) of the outer jacket from the cable end. Load the Wedge Strain Relief Base over the fiber and Kevlar bundle, slide it until it bottoms with the cable's outer jacket edge. Load the Strain Relief Insert over the fiber bundle only. Spread the Kevlar out evenly around the Strain Relief Base, slide the Strain Relief Insert into the Wedge Strain Relief Base. The Kevlar should be trapped between the Wedge Strain Relief Base and the 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 value specified in Table 2.

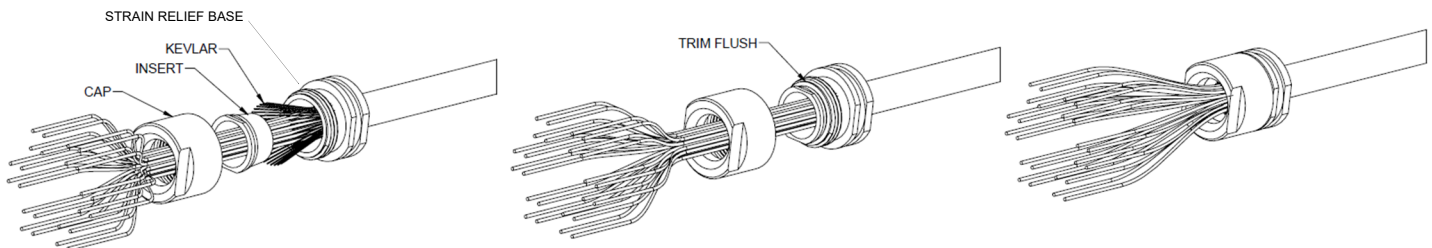


Figure 30, QPlex6, Strain Relief Assembly, Plug, Straight Backshell with Boot

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A" QPlex6 CONNECTOR PLUG & FLANGE MOUNT RECEPTACLE WITH BACKSHELL for strain relief to ferrule tip and for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.



Figure 31, QPlex6, Insert Assembly, Plug, Straight Backshell with Boot

CONNECTOR ASSEMBLY

Populate QPlex6 Insert Body according to the desired channel count. Use the Dummy Inserts to populate the unneeded cavities.

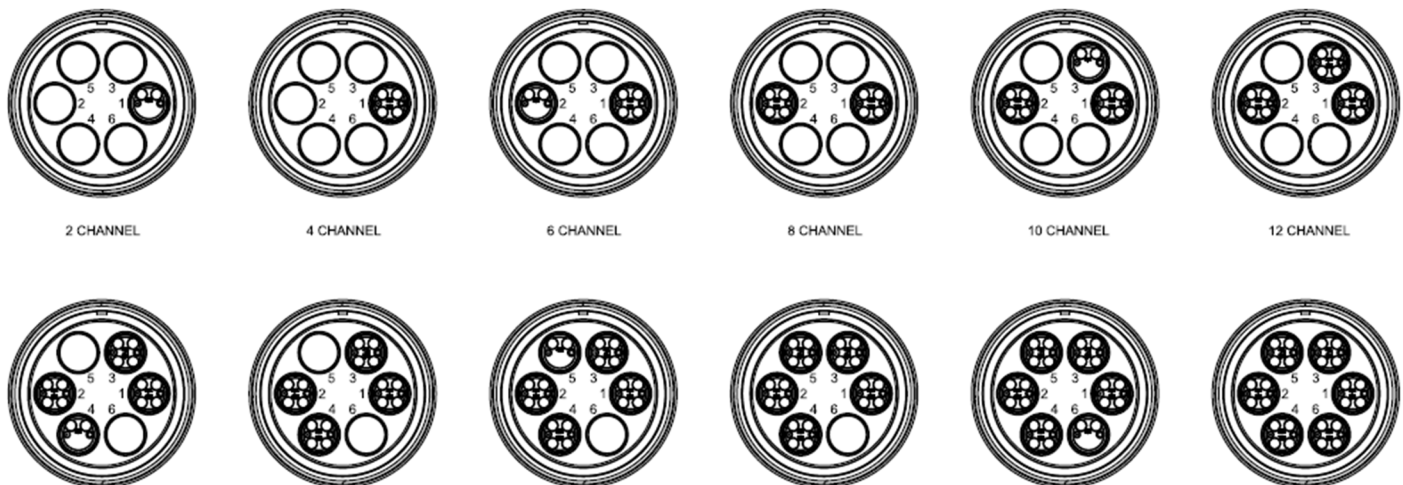


Figure 32, QPlex6, Connector Cavity Insert Arrangement, Plug, Straight Backshell with Boot

Align the insert key to the keyway of the Insert Body cavity and slide Inserts into the appropriate Insert Body cavity. Slide the Wave Spring and Snap Ring in behind the Insert. The front of the Insert should protrude slightly from the front of the Insert Body. Load the Snap Ring into the Insert Body groove.

Align the Key to the Insert Body with the Keyway in the Connector Body Assembly and slide the Insert Body Assembly into the Connector Body. Snap retaining ring into the back of the Connector Body groove.

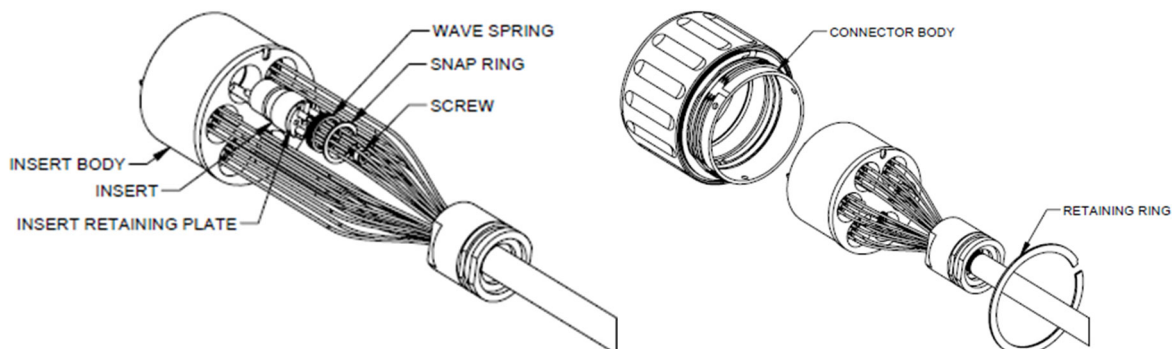


Figure 33, QPlex6, Connector Assembly, Plug, Straight Backshell with Boot

Note: Bushing is only required for 12.5 mm or lower cable diameter.

When using 12.5 mm (or lower) cable diameter, slide Bushing over Strain Relief base, and tighten set screws using .050" (1.27mm) Hex Driver PT-500. Then use Torque-Measuring Screwdriver PT-590 with Hex Bit .050" PT-599 and torque to the values specified on table 2.

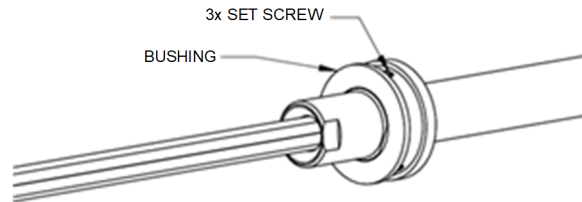


Figure 34, QPlex6, Bushing Assembly, Plug, Straight Backshell with Boot

Pull Strain Relief to the bottom of Spacer with Coupling Ring and hand-tighten only the top Set Screws evenly using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Strain Relief Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Spacer to make sure that the fibers are not twisted or kinked.

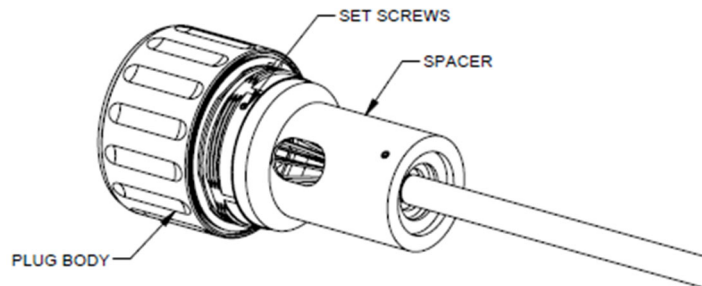


Figure 35, QPlex6, Coupling Ring Assembly, Plug, Straight Backshell with Boot

Slide the Backshell with Dust Cover over the assembly and hand-tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-545 with Male Square Driver Adapter PT-546 to the value specified in Table 2. Slide the Bend Limiter and Washer into place Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

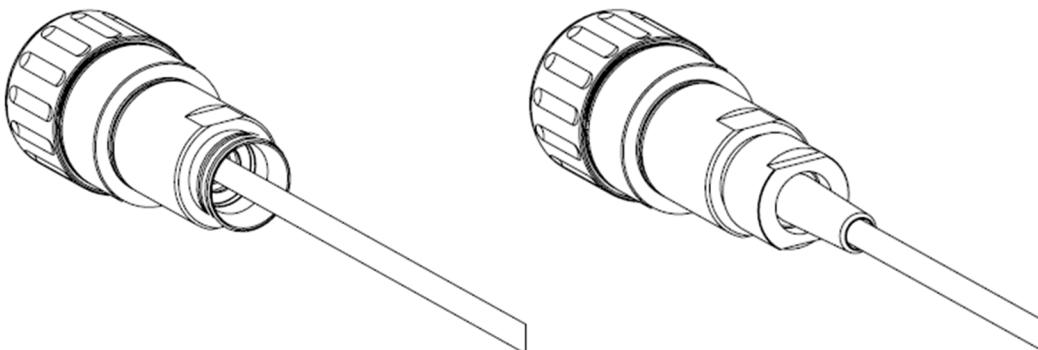


Figure 36, QPlex6, Backshell Assembly, Plug, Straight Backshell with Boot

QPlex6, PLUG, STRAIGHT BACKSHELL, MESH GRIP

CABLE PREPARATION

Slide parts onto cable in the order below.

Note: Bushing is only required for 12.5 mm or lower cable diameter.

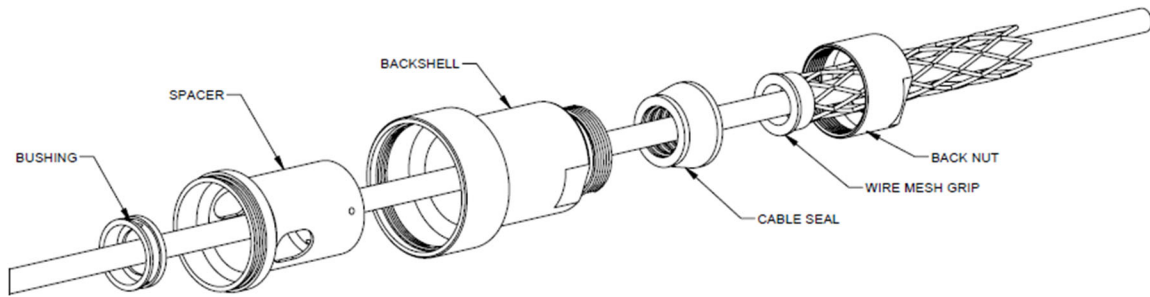


Figure 37, QPlex6, Cable Prep, Plug, Straight Backshell with Mesh Grip

Remove approximately 6-inches (152mm) of the outer jacket from the cable end. Load the Wedge Strain Relief Base over the fiber and Kevlar bundle, slide it until it bottoms with the cable's outer jacket edge. Load the Strain Relief Insert over the fiber bundle only. Spread the Kevlar out evenly around the Strain Relief Base, slide the Strain Relief Insert into the Wedge Strain Relief Base. The Kevlar should be trapped between the Wedge Strain Relief Base and the 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 value specified in Table 2.

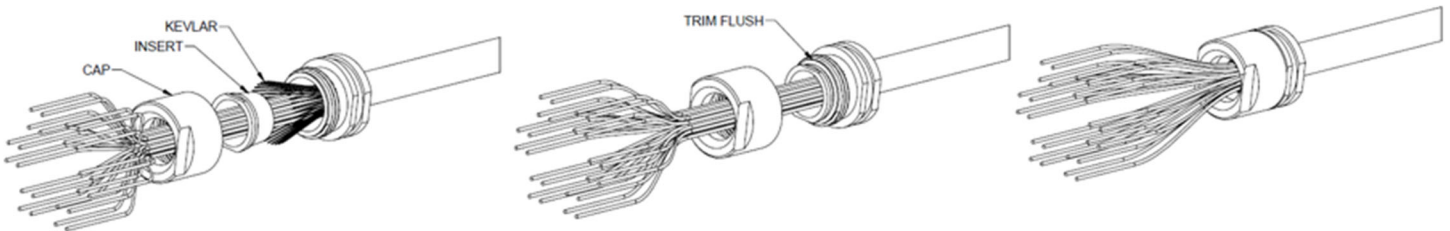


Figure 38, QPlex6, Strain Relief Assembly, Plug, Straight Backshell with Mesh Grip

TERMINATION

Use the Stripping Length Diagram located in the Appendix "A" QPlex6 CONNECTOR PLUG & FLANGE MOUNT RECEPTACLE WITH BACKSHELL for strain relief to ferrule tip and for termini strip lengths

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.



Figure 39, QPlex6, Insert Assembly, Plug, Straight Backshell with Mesh Grip

CONNECTOR ASSEMBLY

Populate QPlex6 Insert Body according to the desired channel count. Use the Dummy Inserts to populate the unneeded cavities.

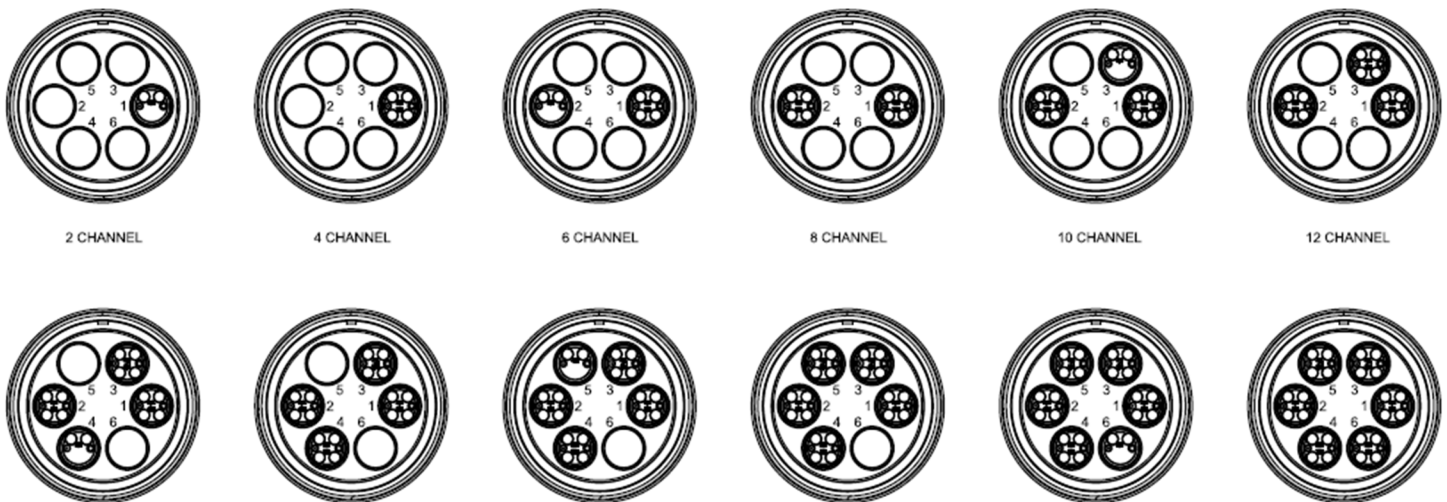


Figure 40, QPlex6, Connector Cavity Insert Arrangement, Plug, Straight Backshell with Mesh Grip

Align the insert keyway to the keyway of the Insert Body cavity and slide Inserts into the appropriate Insert Body cavity. Slide the Wave Spring and Snap Ring in behind the Insert. The front of the Insert should protrude slightly from the front of the Insert Body. Load the Snap Ring into the Insert Body groove.

Align the Key to the Insert Body with the Keyway in the Connector Body Assembly and slide the Insert Body Assembly into the Connector Body. Snap retaining ring into the back of the Connector Body groove.

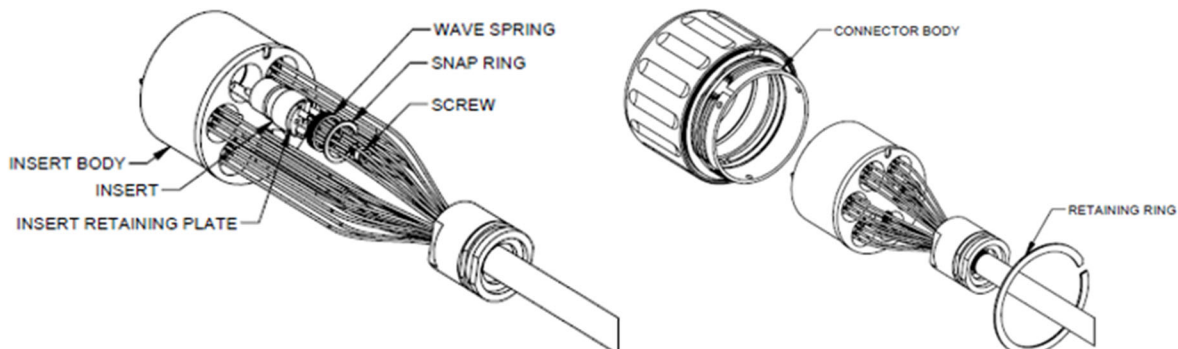


Figure 41, QPlex6, Connector Assembly, Plug, Straight Backshell with Mesh Grip

Note: Bushing is only required for 12.5 mm or lower cable diameter.

When using 12.5 mm (or lower) cable diameter, slide Bushing over Strain Relief base, and tighten set screws using .050" (1.27mm) Hex Driver PT-500. Then use Torque-Measuring Screwdriver PT-590 with Hex Bit .050" PT-599 and torque to the values in the above Torque Table.

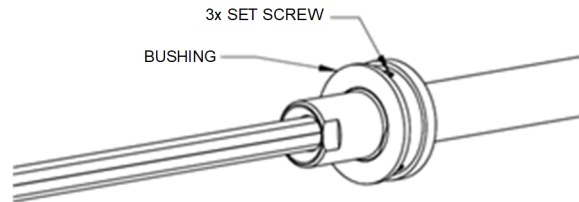


Figure 42, QPlex6, Bushing Assembly, Plug, Straight Backshell with Mesh Grip

Pull Strain Relief to the bottom of Spacer with Coupling Ring and hand-tighten only the top Set Screws evenly using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Strain Relief Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Spacer to make sure that the fibers are not twisted or kinked.

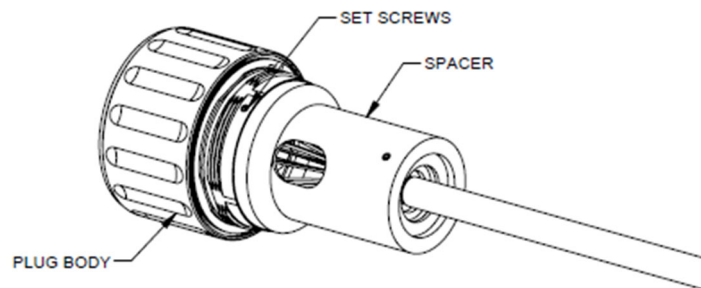


Figure 43, QPlex6, Coupling Ring Assembly, Plug, Straight Backshell with Mesh Grip

Slide the Backshell with Dust Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-545 with Male Square Driver Adapter PT-546 to the value specified in Table 2. Slide the Cable Seal and Wire Mesh Grip into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

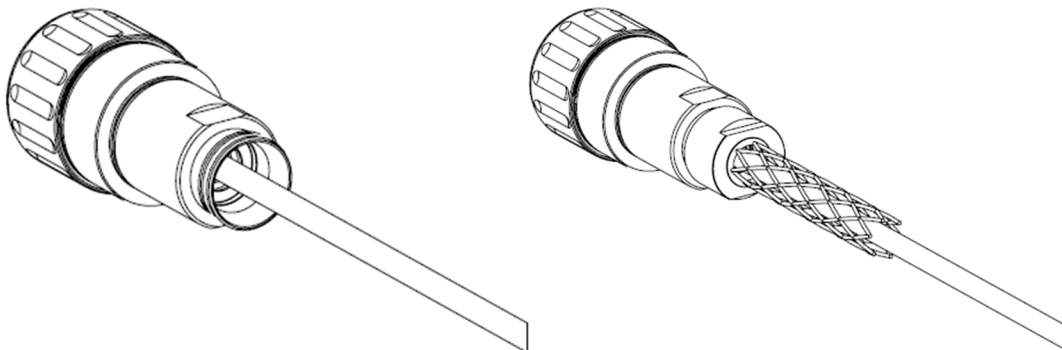


Figure 44, QPlex6, Backshell Assembly, Plug, Straight Backshell with Mesh Grip

QPlex3, RECEPTACLE, NO BACKSHELL

CABLE PREPARATION

Remove approximately 1-inch (25mm) of the outer jacket from the cable end.

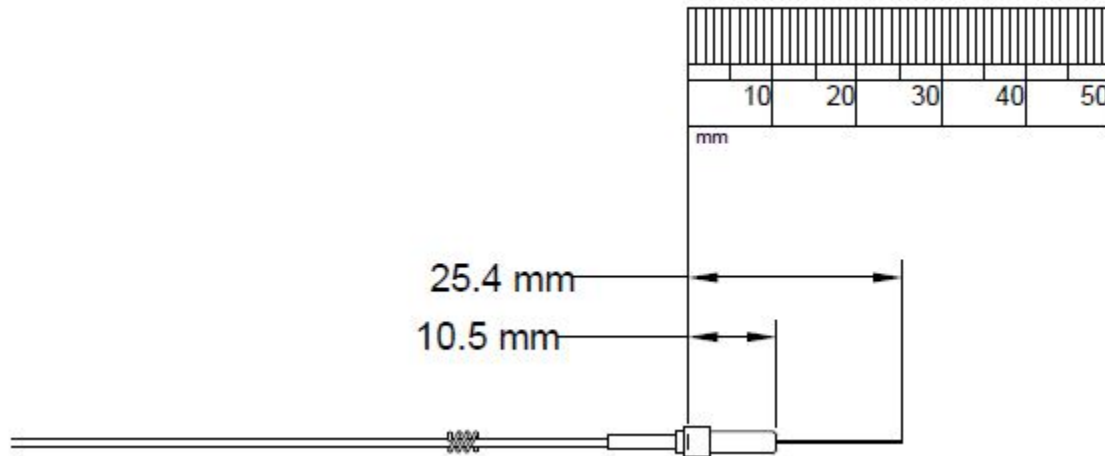


Figure 45, QPlex3, Cable Prep, Receptacle, no Backshell

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A", QPlex3 RECEPTACLE NO BACKSHELL for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

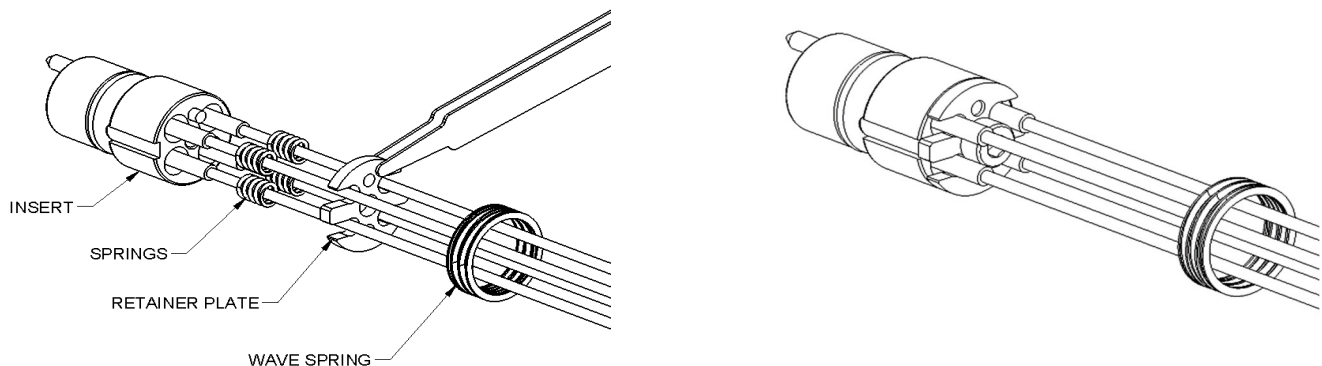


Figure 46, QPlex3, Insert Assembly, Receptacle, no Backshell

CONNECTOR ASSEMBLY

Populate QPlex3 Receptacle Body according to the desired channel count. Use the Dummy Inserts to populate the unneeded cavities in the Receptacle Body.

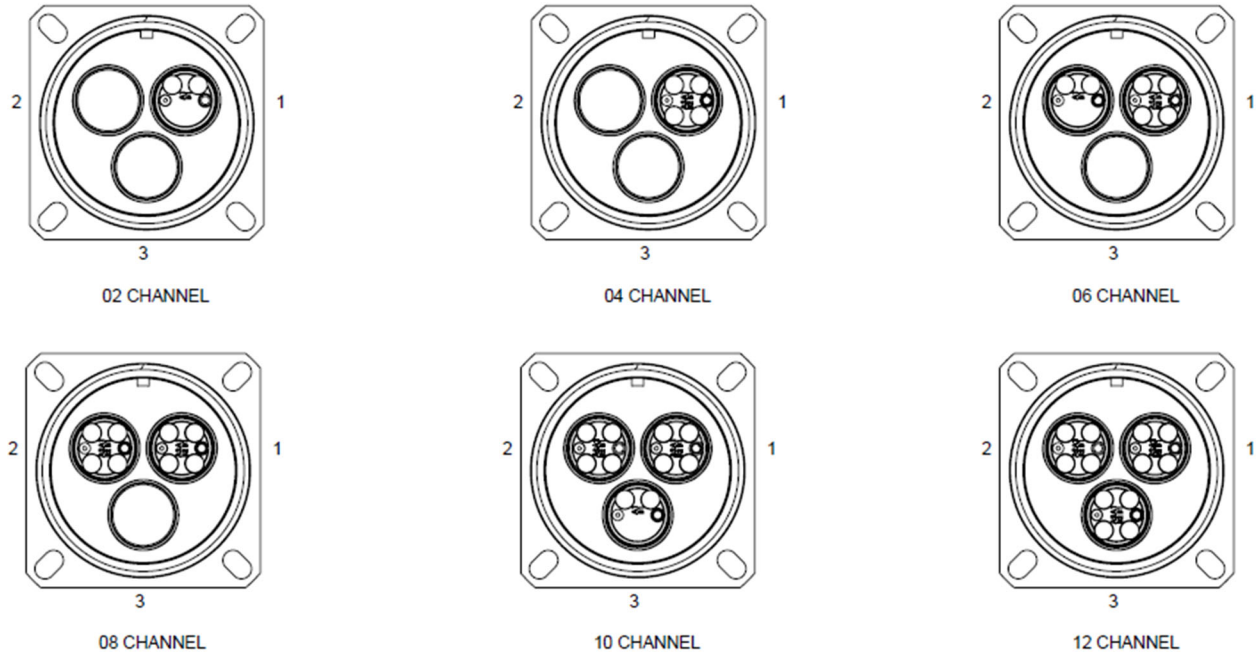


Figure 47, QPlex3, Connector Cavity Insert Arrangement, Receptacle, no Backshell

Slide the Wave Spring in behind the Insert. The front of the Insert should protrude slightly from the front of the connector. Position the Retainer Plate so that it aligns with the pin on the Receptacle Body. **NOTE: For Jam Nut Configuration, slide the Spacer up into the back of the Connector Receptacle Body.**

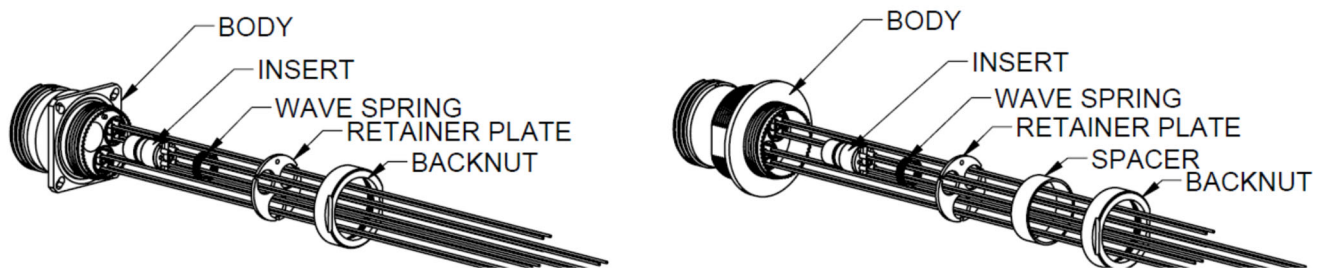


Figure 48, QPlex3, Connector Assembly, Receptacle, no Backshell

Place the Receptacle Body into the 4" Drill Press Vise PT-591. Slide the Back Nut up and hand-tighten onto the Receptacle Body. Torque using Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to the values in Table 2, Torque Table. Use a drop of Loctite 222 and the .050" Hex Screwdriver PT-500 to tighten Set Screws on the Back Nut. Torque the Set Screws to the values in Table 2 using Torque-Measuring Screwdriver PT-590 with Hex Bit .050" PT-599.

QPlex3, RECEPTACLE, STRAIGHT BACKSHELL, BOOT

CABLE PREPARATION

Slide parts onto cable in the order below. **NOTE: Jam Nut Configuration includes Spacer.**

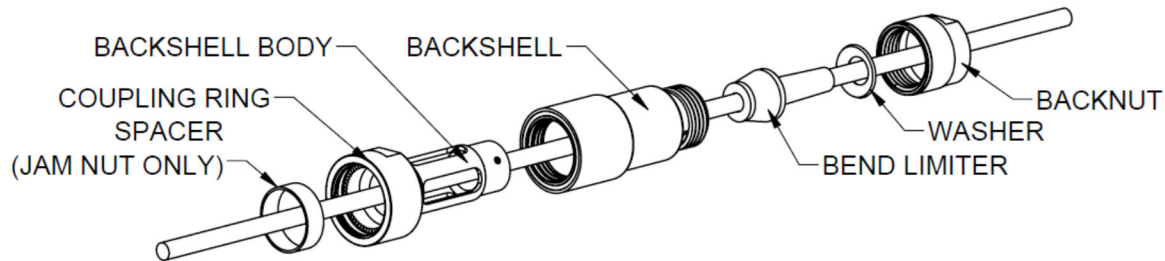


Figure 49, QPlex3, Cable Prep, Receptacle, Straight Backshell with Boot

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 value specified in Table 2.

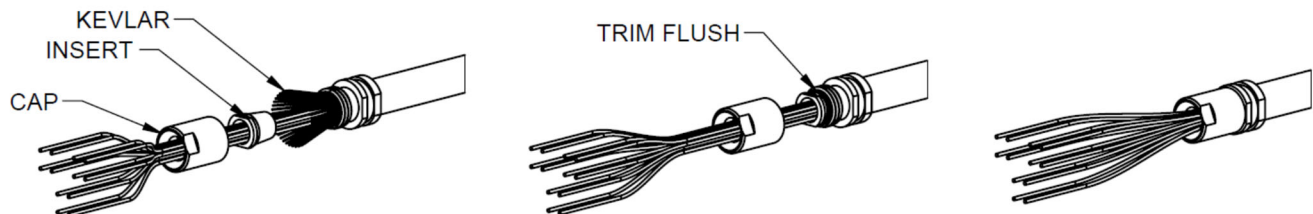


Figure 50, QPlex3, Strain Relief Assembly, Receptacle, Straight Backshell with Boot

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A", QPlex3 CONNECTOR FLANGE MOUNT RECEPTACLE WITH BACKSHELL or QPlex3 CONNECTOR JAM NUT RECEPTACLE WITH BACKSHELL for strain relief to ferrule tip and Appendix "B" for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

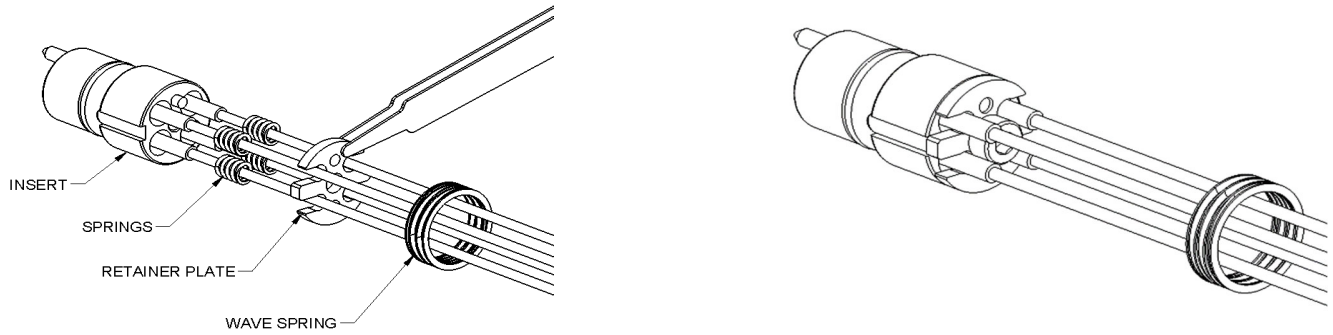


Figure 51, QPlex3, Insert Assembly, Receptacle, Straight Backshell with Boot

CONNECTOR ASSEMBLY

Populate QPlex3 Receptacle Body according to the desired channel count. Use the Dummy Inserts to populate the unused cavities in the Receptacle Body.

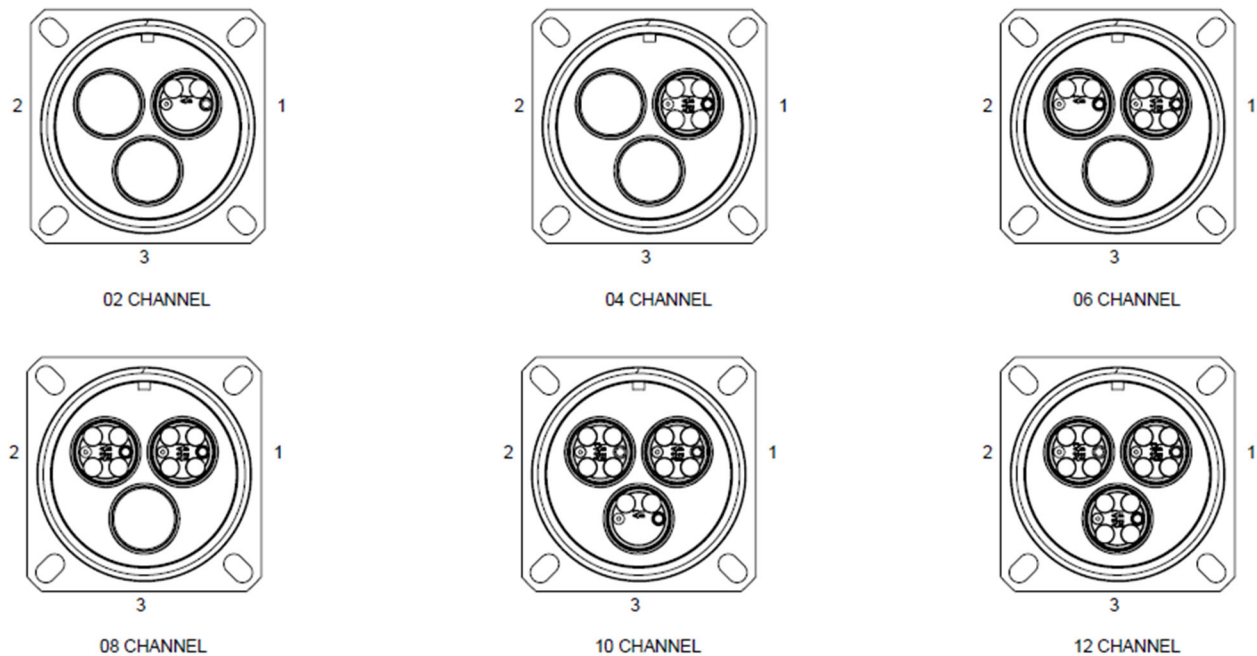


Figure 52, QPlex3, Connector Cavity Insert Arrangement, Receptacle, Straight Backshell with Boot

Slide the Wave Spring in behind the Insert. The front of the Insert should protrude slightly from the front of the connector. Position the Retainer Plate so that it aligns with the pin on the Receptacle Body. **NOTE: For Jam Nut Configuration, slide the Spacer up into the back of the Connector Receptacle Body.**

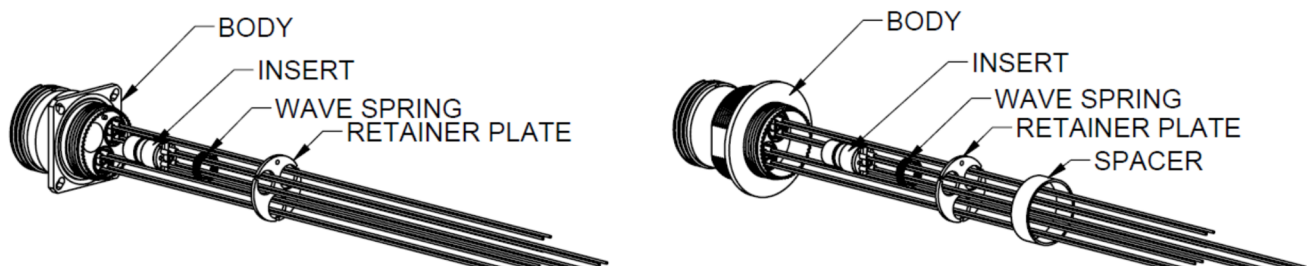


Figure 53, QPlex3, Connector Assembly, Receptacle, Straight Backshell with Boot

CAI-QPlex: QPlex Customer Assembly Instructions

Place Receptacle Assembly into the 4" Drill Press Vise PT-591. Slide the Backshell Body with Coupling Ring up and hand-tighten. Torque the Backshell Body with Coupling Ring using Dial Torque-Measuring Wrench PT-506 with PT-546 Adapter and Crow's Foot Wrench PT-545 to the value specified in Table 2. Check the fiber through the holes in the Backshell Body to make sure they are not twisted or kinked.

Pull Strain Relief to the bottom of Backshell Body with Coupling Ring and tighten the Set Screws using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

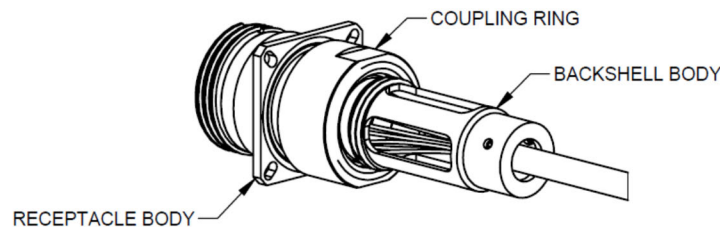


Figure 54, QPlex3, Coupling Ring Assembly, Receptacle, Straight Backshell with Boot

Slide the Backshell Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 to the value specified in Table 2. Slide the Bend Limiter and Washer into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

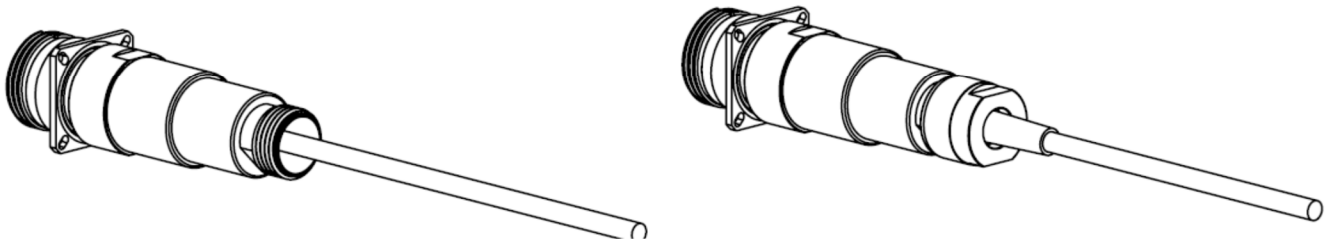


Figure 55, QPlex3, Backshell Assembly, Receptacle, Straight Backshell with Boot

QPlex3, RECEPTACLE, STRAIGHT BACKSHELL, MESH GRIP

CABLE PREPARATION

Slide parts onto cable in the order below. **NOTE: Jam Nut Configuration includes Spacer.**

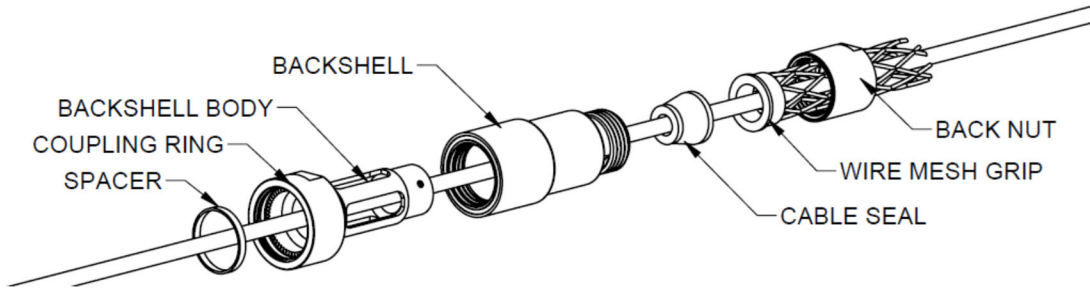


Figure 56, QPlex3, Cable Prep, Receptacle, Straight Backshell with Mesh Grip

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 value specified in Table 2.

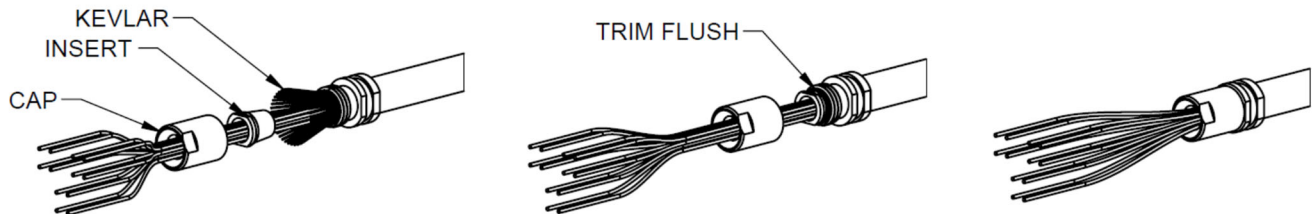


Figure 57, QPlex3, Strain Relief Assembly, Receptacle, Straight Backshell with Mesh Grip

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A", QPlex3 CONNECTOR FLANGE MOUNT RECEPTACLE WITH BACKSHELL or QPlex3 CONNECTOR JAM NUT RECEPTACLE WITH BACKSHELL for strain relief to ferrule tip and Appendix "B" for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

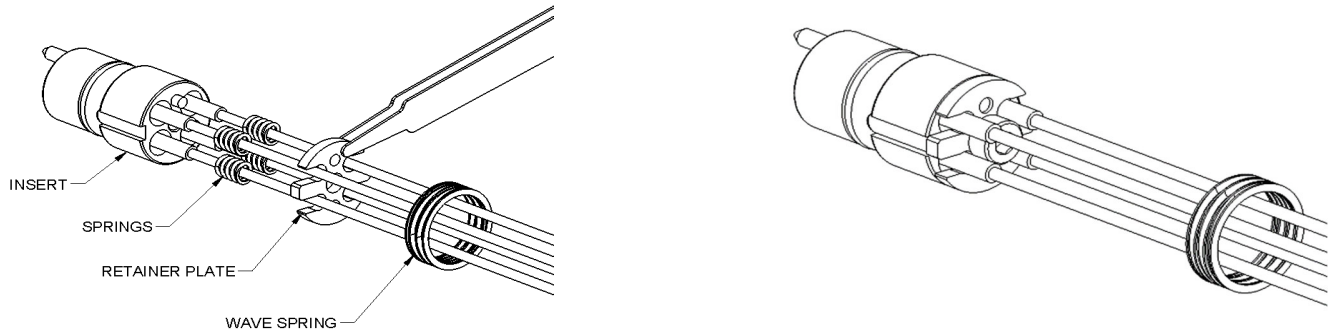


Figure 58, QPlex3, Insert Assembly, Receptacle, Straight Backshell with Mesh Grip

CONNECTOR ASSEMBLY

Populate QPlex 3 Receptacle Body according to the desired channel count. Use the Dummy Inserts to populate the unused cavities in the Receptacle Body.

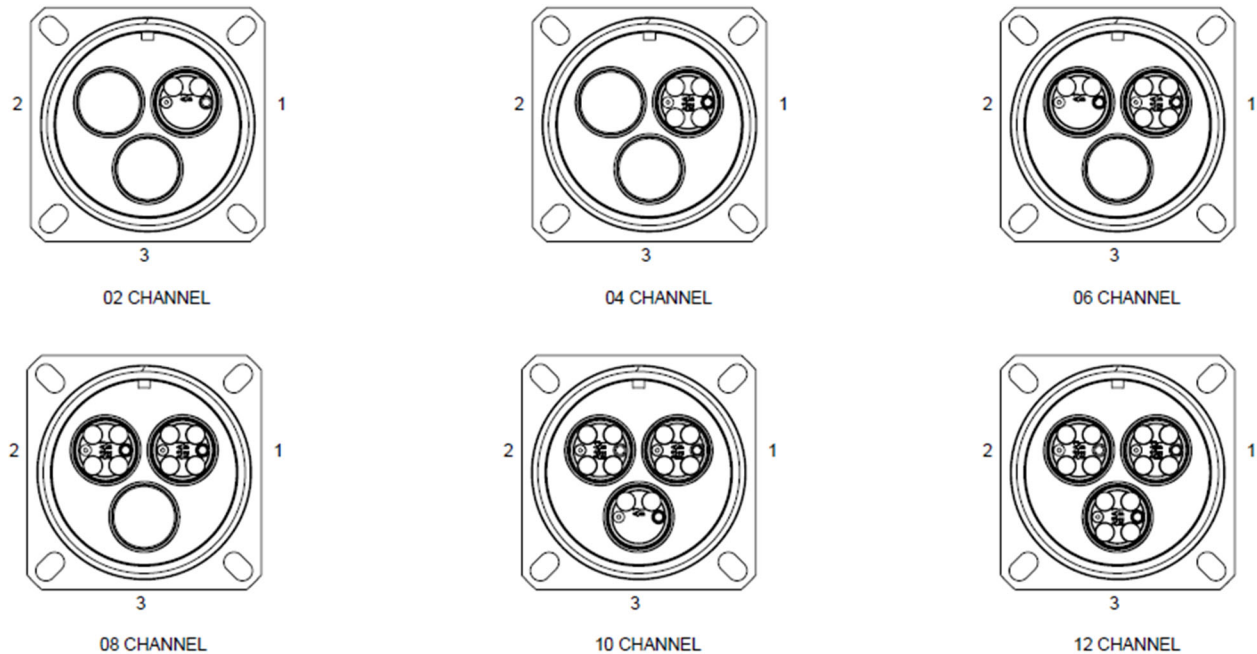


Figure 59, QPlex3, Insert Cavity Arrangement, Receptacle, Straight Backshell with Mesh Grip

Slide the Wave Spring in behind the Insert. The front of the Insert should protrude slightly from the front of the connector. Position the Retainer Plate so that it aligns with the pin on the Receptacle Body. **NOTE: For Jam Nut Configuration, slide the Spacer up into the back of the Connector Receptacle Body.**

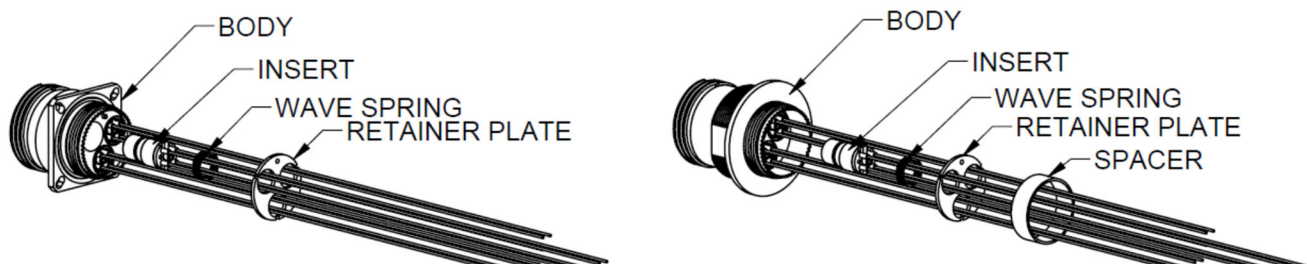


Figure 60, QPlex3, Connector Assembly, Receptacle, Straight Backshell with Mesh Grip

CAI-QPlex: QPlex Customer Assembly Instructions

Place Receptacle Assembly into the 4" Drill Press Vise PT-591. Slide the Backshell Body with Coupling Ring up and hand-tighten. Torque the Backshell Body with Coupling Ring using Dial Torque-Measuring Wrench PT-506 with PT-546 Adapter and Crow's Foot Wrench PT-545 to the value specified in Table 2. Check the fiber through the holes in the Backshell Body to make sure they are not twisted or kinked.

Pull Strain Relief to the bottom of Backshell Body with Coupling Ring and tighten the Set Screws using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

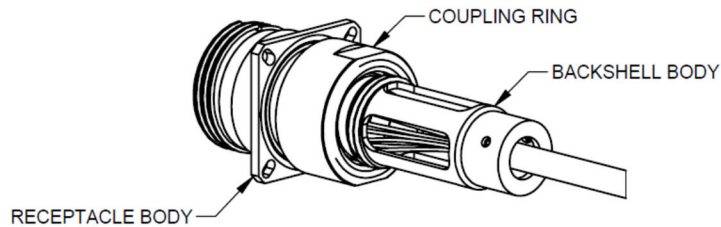


Figure 61, QPlex3, Coupling Ring Assembly, Receptacle, Straight Backshell with Mesh Grip

Slide the Backshell Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 to the value specified in Table 2. Slide the Cable Seal and Wire Mesh Grip into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

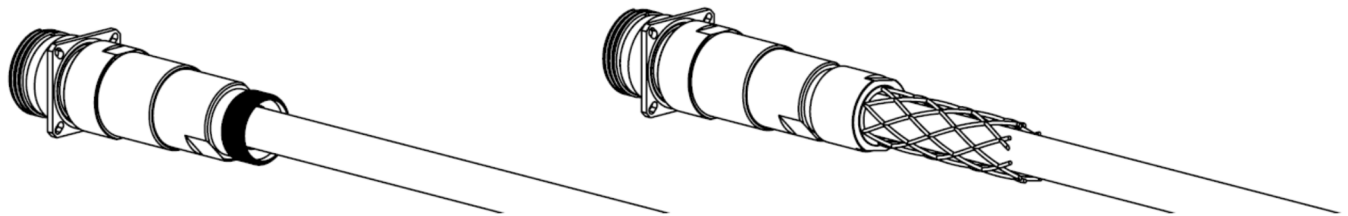


Figure 62, QPlex3, Backshell Assembly, Receptacle, Straight Backshell with Mesh Grip

QPlex4, RECEPTACLE, NO BACKSHELL

CABLE PREPARATION

Remove approximately 1-inche (25mm) of the outer jacket from the cable end.

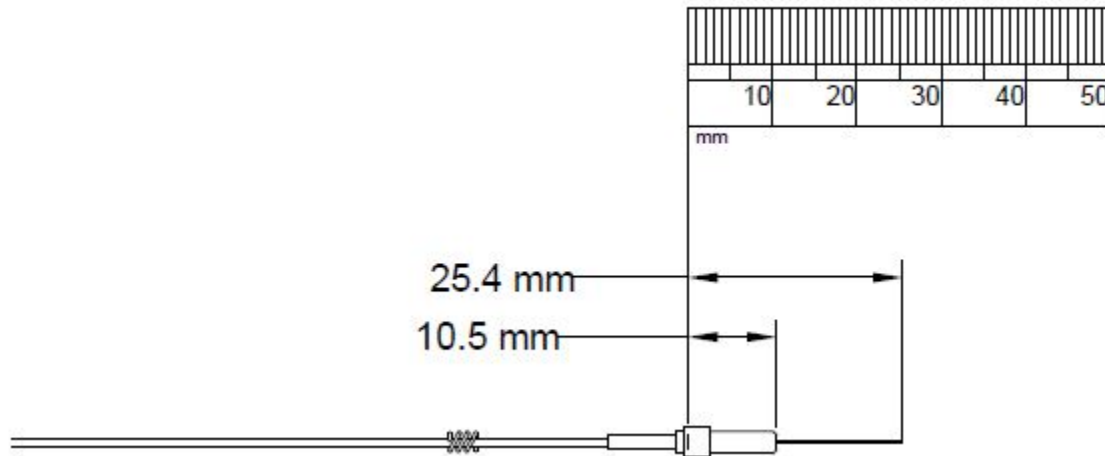


Figure 63, QPlex4, Cable Prep, Receptacle, no Backshell

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "B", QPlex4 RECEPTACLE NO BACKSHELL for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

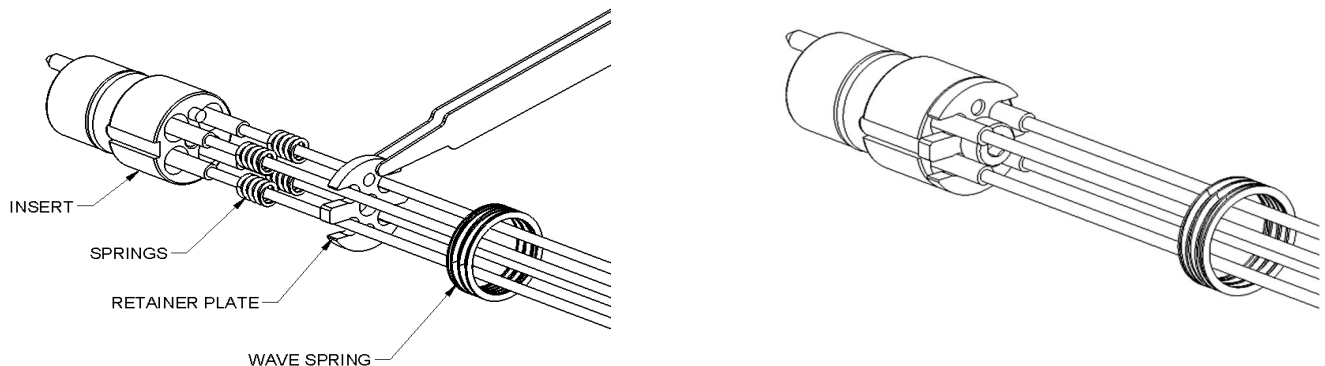


Figure 42, QPlex4, Insert Assembly, Receptacle, no Backshell

CAI-QPlex: QPlex Customer Assembly Instructions

Slide the Inserts into the Insert Body to Populate the QPlex4 Insert according to the desired channel count. Use the Dummy Inserts to populate the unused cavities in the Receptacle Body. Slide the Wave Spring in behind the Inserts. The front of the Insert should protrude slightly from the front of the Insert Body. Align the Retainer Plate with the pin on the Insert Body. Screw the Insert Retainer Plate into the back of the Insert Body. Loctite 222 or equivalent may be used on the screw threads. Use 3/32" Hex Screwdriver PT-502 to tighten screw and torque using Torque Measuring Driver PT-590 with Hex Bit 3/32" PT-599 to the value specified in Table 2.

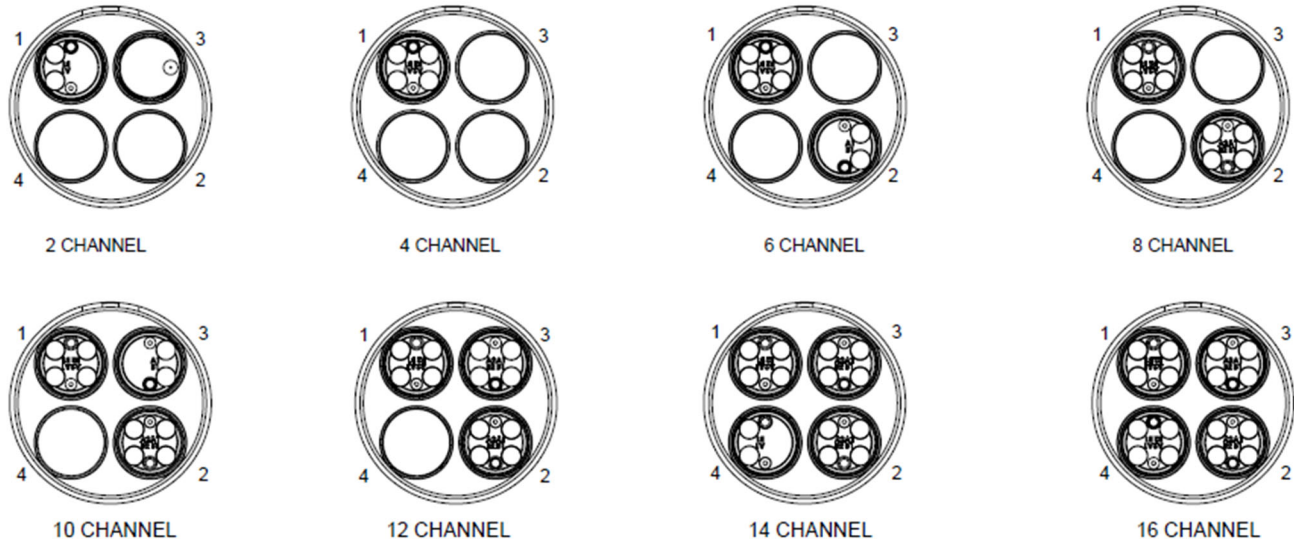


Figure 65, QPlex4, Connector Cavity Insert Arrangement, Receptacle, no Backshell

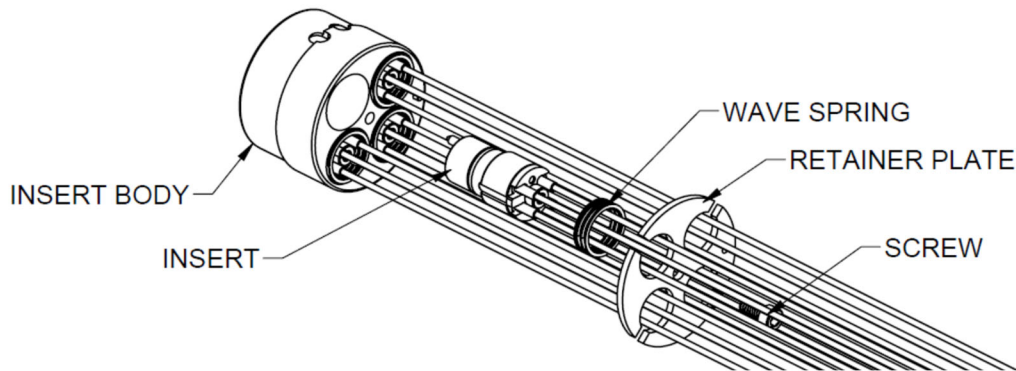


Figure 66, QPlex4, Connector Insert Assembly, Receptacle, no Backshell

CONNECTOR ASSEMBLY

Slide the Insert Body Assembly into the Receptacle Body. **NOTE: For Jam Nut Configuration, slide the Spacer up into the back of the Connector Receptacle Body.** Ensure that the Key on the Insert Body aligns with the Keyway in the Receptacle Body.

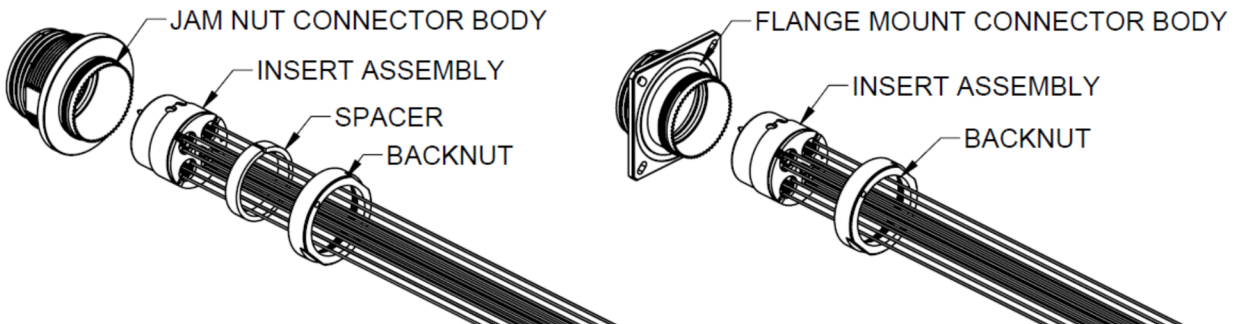


Figure 67, QPlex4, Connector Assembly, Receptacle, no Backshell

Place the Receptacle Body into the 4" Drill Press Vise PT-591. Slide the Back Nut up and hand-tighten onto the Receptacle Body. Torque using Dial Torque-Measuring Wrench PT-506 with the Crow's Foot Wrench Adjustable PT-536 to the value specified in Table 2. Use a drop of Loctite 222 and the .050" Hex Screwdriver PT-500 to tighten Set Screws on the Back Nut. Torque the Set Screws to the value specified in Table 2 using Torque-Measuring Screwdriver PT-590 with Hex Bit .050" PT-599.

QPlex4, RECEPTACLE, STRAIGHT BACKSHELL, BOOT

CABLE PREPARATION

Slide parts onto cable in the order below. **NOTE: Jam Nut Configuration includes Spacer.**

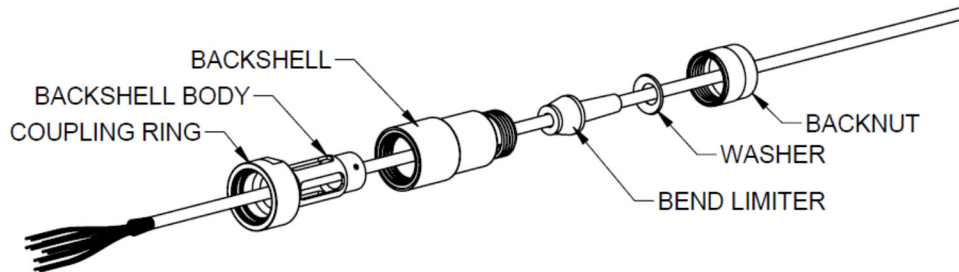


Figure 68, QPlex4, Cable Prep, Receptacle, Straight Backshell with Boot

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 value specified in Table 2.

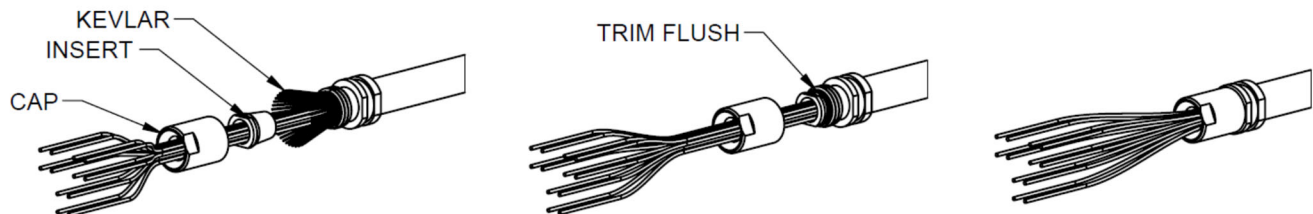


Figure 69, QPlex4, Strain Relief Assembly, Receptacle, Straight Backshell with Boot

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A", QPlex4 CONNECTOR FLANGE MOUNT RECEPTACLE WITH BACKSHELL or QPlex4 CONNECTOR JAM NUT RECEPTACLE WITH BACKSHELL for strain relief to ferrule tip and Appendix "B" for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

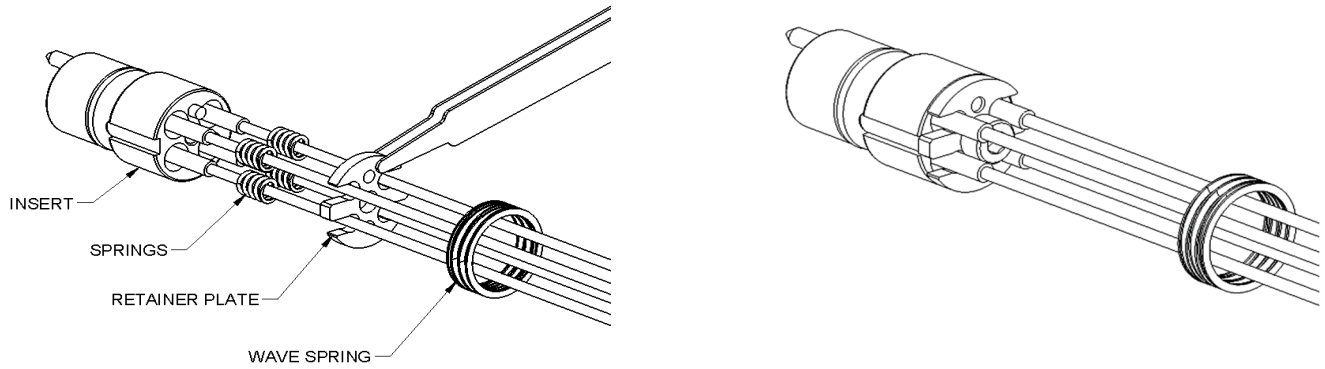


Figure 70, QPlex4, Insert Assembly, Receptacle, Straight Backshell with Boot

Slide the Inserts into the Insert Body to Populate the QPlex4 Insert according to the desired channel count. Use the Dummy Inserts to populate the unused cavities in the Receptacle Body. Slide the Wave Spring in behind the Inserts. The front of the Insert should protrude slightly from the front of the Insert Body. Align the Retainer Plate with the pin on the Insert Body. Screw the Insert Retainer Plate into the back of the Insert Body. Loctite 222 or equivalent may be used on the screw threads. Use 3/32" Hex Screwdriver PT-502 to tighten screw and torque using Torque Measuring Driver PT-590 with Hex Bit 3/32" PT-599 to the value specified in Table 2.

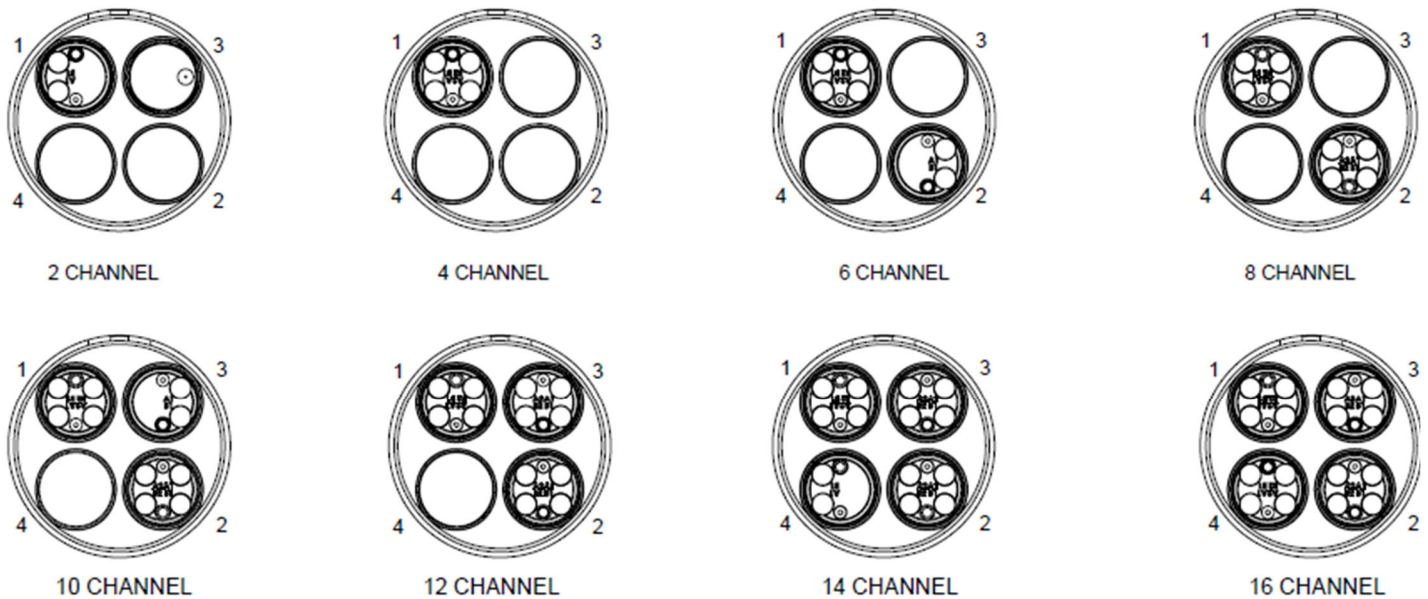


Figure 71, QPlex4, Connector Cavity Insert Arrangement, Receptacle, Straight Backshell with Boot

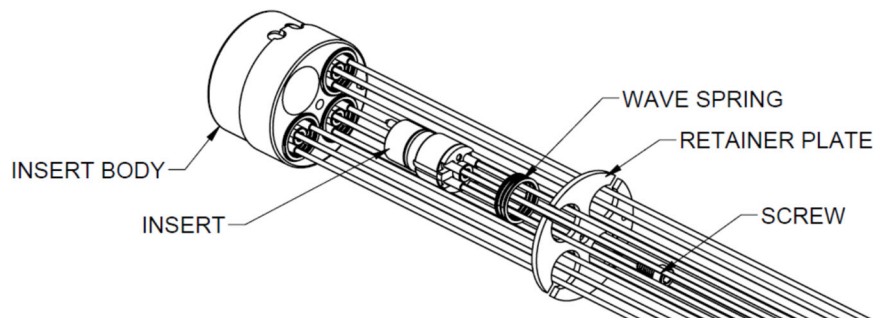


Figure 72, QPlex4, Connector Assembly, Receptacle, Straight Backshell with Boot

CONNECTOR ASSEMBLY

Slide the Wave Spring in behind the Insert. The front of the Insert should protrude slightly from the front of the connector. Position the Retainer Plate so that it aligns with the pin on the Receptacle Body. **NOTE: For Jam Nut Configuration, slide the Spacer up into the back of the Connector Receptacle Body.**

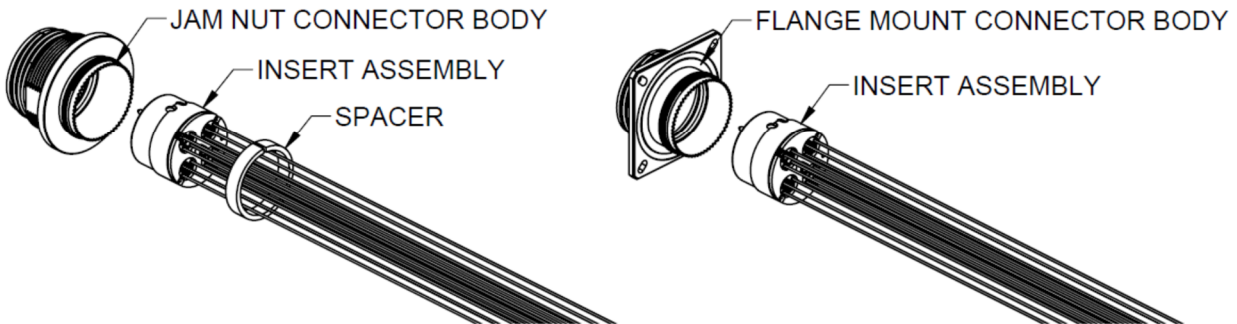


Figure 73, QPlex4, Connector Insert Assembly, Receptacle, Straight Backshell with Boot

Place Receptacle Assembly into the 4" Drill Press Vise PT-591. Slide the Backshell Body with Coupling Ring up and hand-tighten. Torque the Backshell Body with Coupling Ring using Dial Torque-Measuring Wrench PT-506 with PT-546 Adapter and Crow's Foot Wrench PT-545 to the value specified in Table 2. Check the fiber through the holes in the Backshell Body to make sure they are not twisted or kinked.

Pull Strain Relief to the bottom of Backshell Body with Coupling Ring and tighten the Set Screws using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

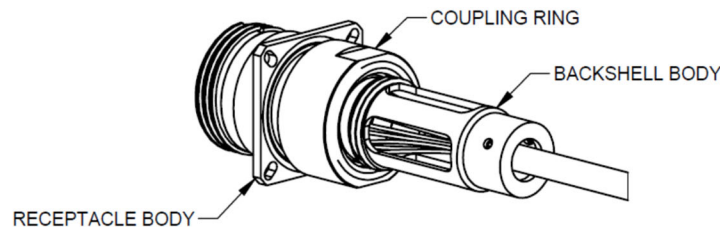


Figure 74, QPlex4, Coupling Ring Assembly, Receptacle, Straight Backshell with Boot

Slide the Backshell Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 to the value specified in Table 2. Slide the Bend Limiter and Washer into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

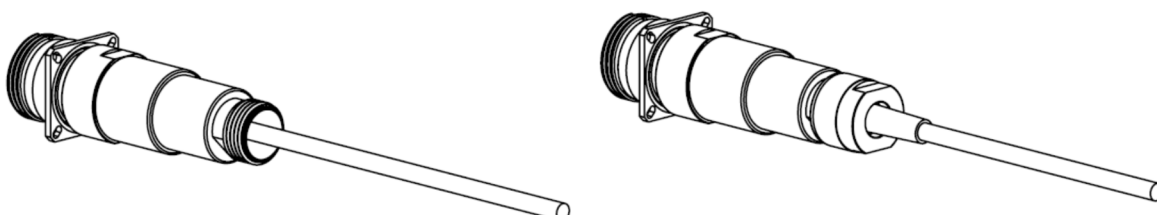


Figure 75, QPlex4, Backshell Assembly, Receptacle, Straight Backshell with Boot

QPlex4, RECEPTACLE, STRAIGHT BACKSHELL, MESH GRIP

CABLE PREPARATION

Slide parts onto cable in the order below. **NOTE: Jam Nut Configuration includes Spacer.**

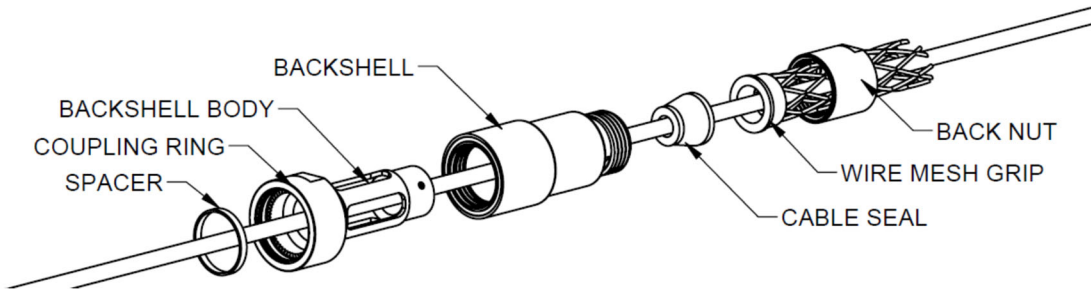


Figure 76, QPlex4, Cable Prep, Receptacle, Straight Backshell with Mesh Grip

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 value specified in Table 2.

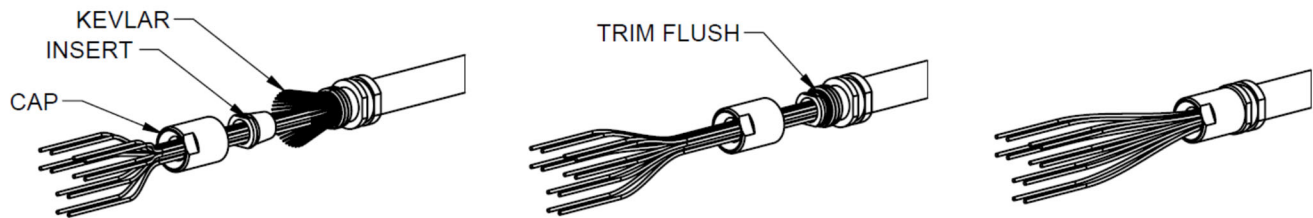


Figure 77, QPlex4, Strain Relief Assembly, Receptacle, Straight Backshell with Mesh Grip

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A", QPlex4 CONNECTOR FLANGE MOUNT RECEPTACLE WITH BACKSHELL or QPlex4 CONNECTOR JAM NUT RECEPTACLE WITH BACKSHELL for strain relief to ferrule tip and Appendix "B" for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

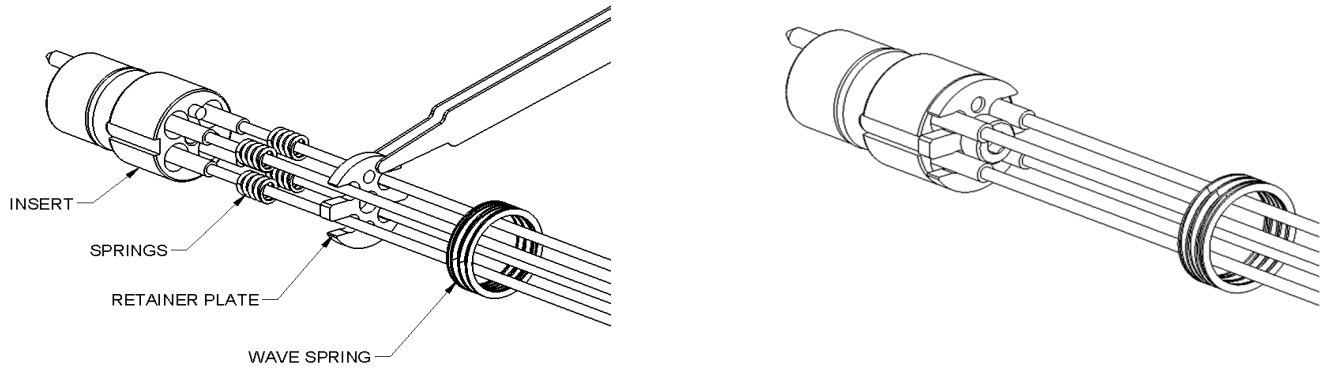


Figure 78, QPlex4, Insert Assembly, Receptacle, Straight Backshell with Mesh Grip

Slide the Inserts into the Insert Body to Populate the QPlex4 Insert according to the desired channel count. Use the Dummy Inserts to populate the unused cavities in the Receptacle Body. Slide the Wave Spring in behind the Inserts. The front of the Insert should protrude slightly from the front of the Insert Body. Align the Retainer Plate with the pin on the Insert Body. Screw the Insert Retainer Plate into the back of the Insert Body. Loctite 222 or equivalent may be used on the screw threads. Use 3/32" Hex Screwdriver PT-502 to tighten screw and torque using Torque Measuring Driver PT-590 with Hex Bit 3/32" PT-599 to the value specified in Table 2.

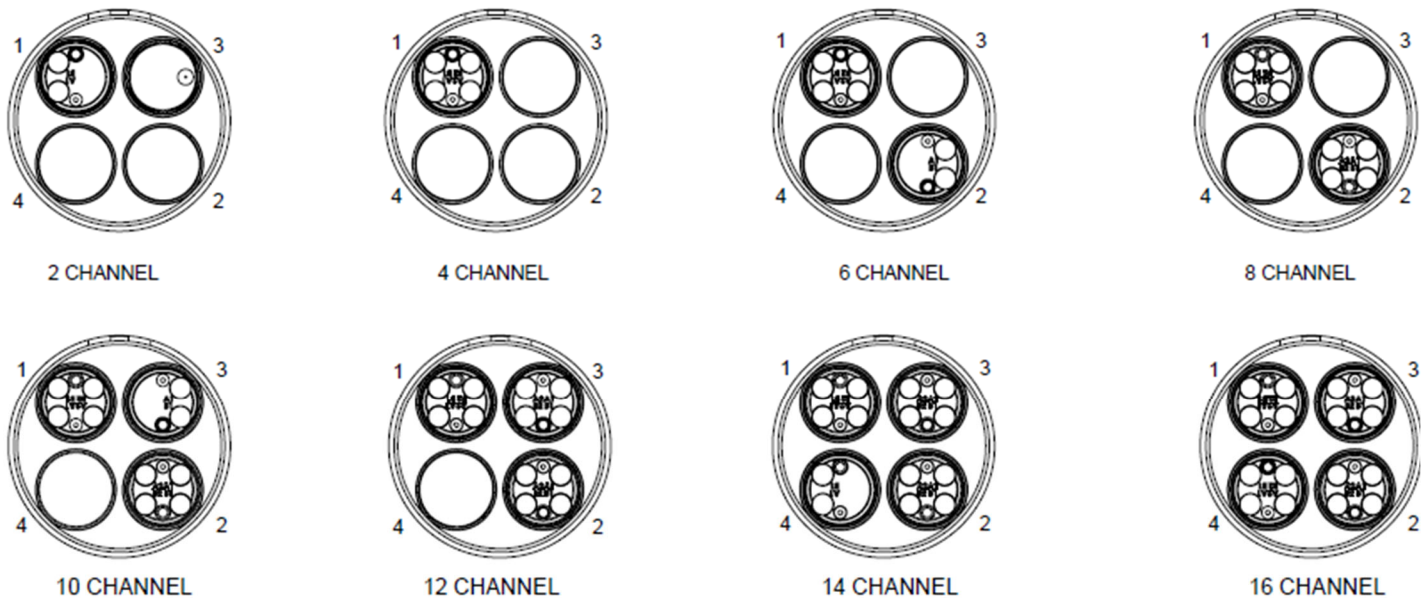


Figure 79, QPlex4, Insert Cavity Arrangement, Receptacle, Straight Backshell with Mesh Grip

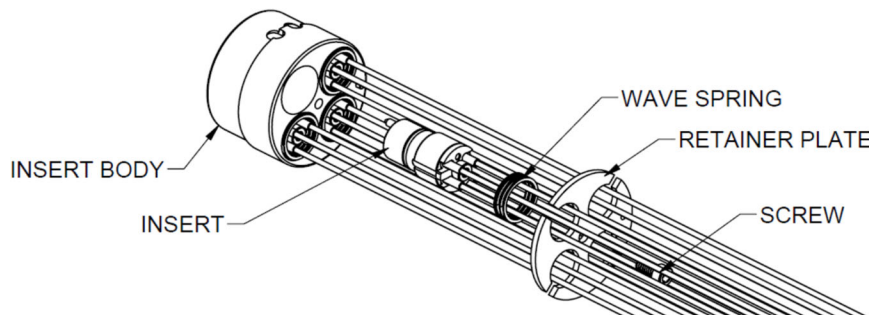


Figure 80, QPlex4, Connector Assembly, Receptacle, Straight Backshell with Mesh Grip

CONNECTOR ASSEMBLY

Slide the Wave Spring in behind the Insert. The front of the Insert should protrude slightly from the front of the connector. Position the Retainer Plate so that it aligns with the pin on the Receptacle Body. **NOTE: For Jam Nut Configuration, slide the Spacer up into the back of the Connector Receptacle Body**

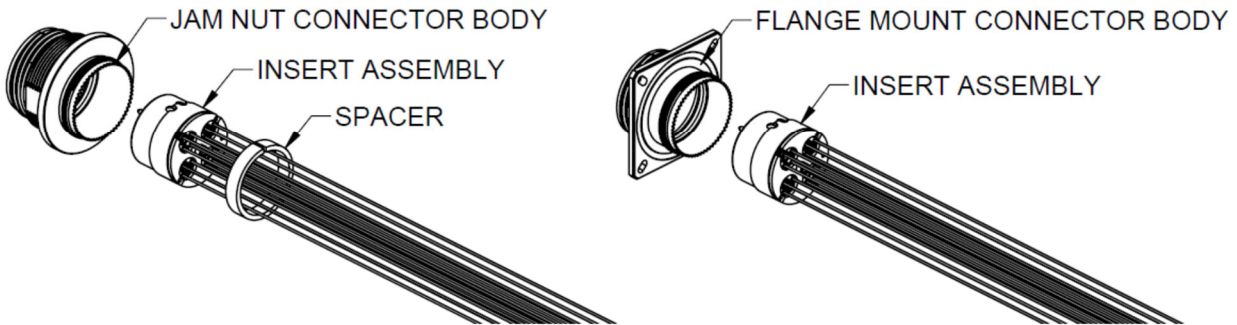


Figure 81, QPlex4, Connector Insert Assembly, Receptacle, Straight Backshell with Mesh Grip

Place Receptacle Assembly into the 4" Drill Press Vise PT-591. Slide the Backshell Body with Coupling Ring up and hand-tighten. Torque the Backshell Body with Coupling Ring using Dial Torque-Measuring Wrench PT-506 with PT-546 Adapter and Crow's Foot Wrench PT-545 to the value specified in Table 2. Check the fiber through the holes in the Backshell Body to make sure they are not twisted or kinked.

Pull Strain Relief to the bottom of Backshell Body with Coupling Ring and tighten the Set Screws using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

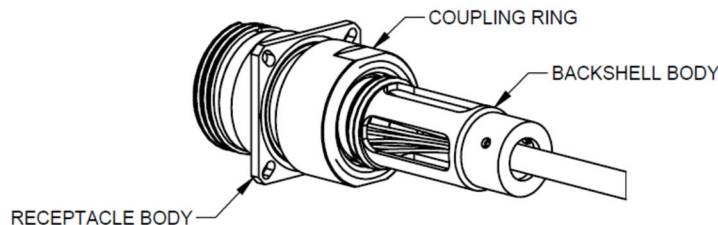


Figure 82, QPlex4, Coupling Ring Assembly, Receptacle, Straight Backshell with Mesh Grip

Slide the Backshell Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-536 to the value specified in Table 2. Slide the Cables Seal and Wire Mesh Grip into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

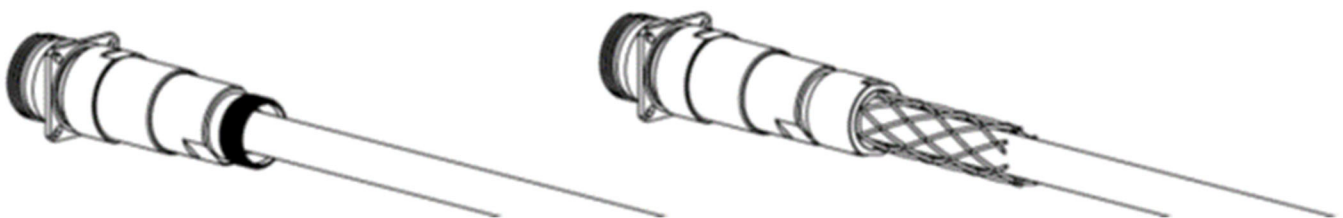


Figure 83, QPlex4, Backshell Assembly, Receptacle, Straight Backshell with Mesh Grip

QPlex6, RECEPTACLE, NO BACKSHELL

CABLE PREPARATION

Use the Stripping Length Diagrams located in the Appendix "A" QPlex6 CONNECTOR RECEPTACLE WITHOUT BACKSHELL for termini strip lengths

TERMINATION

Reference CAI-TERM to terminate each fiber.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μm fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

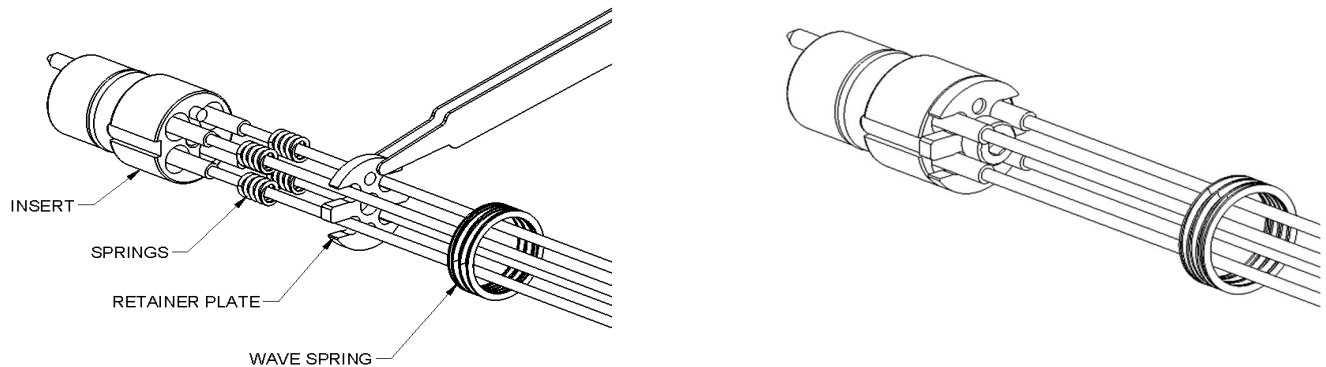


Figure 84, QPlex6, Insert Assembly, Receptacle, no Backshell

CAI-QPlex: QPlex Customer Assembly Instructions

Populate QPlex 6 Insert Body according to the desired channel count. Use the Dummy Inserts to populate the unneeded cavities.

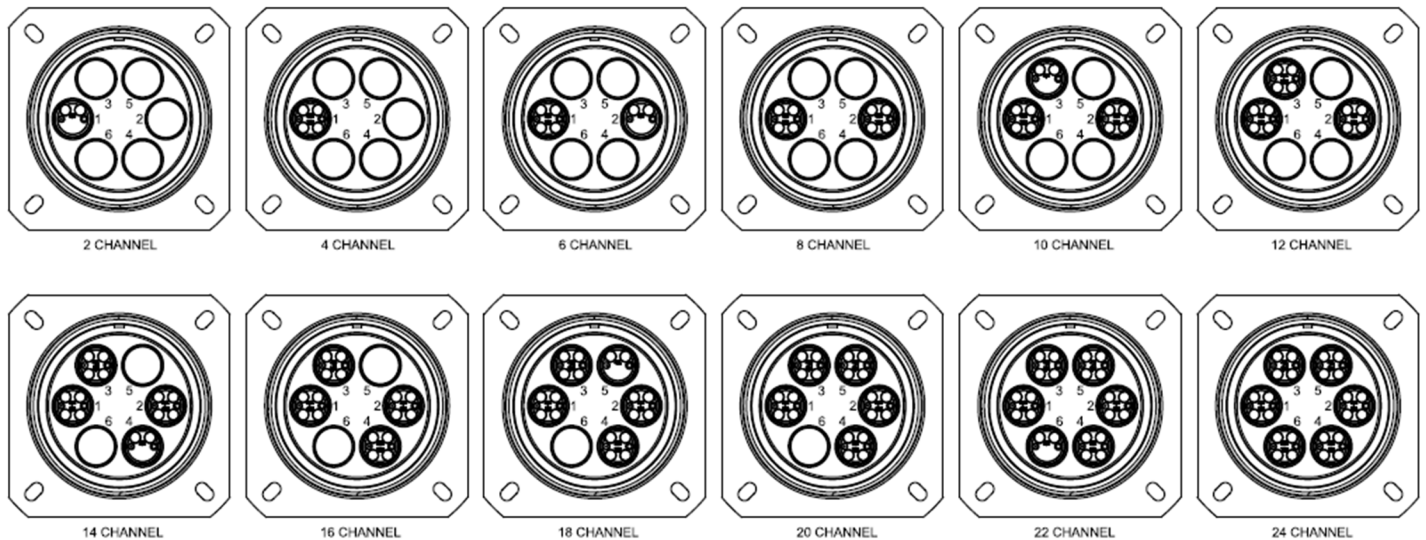


Figure 85, QPlex6, Connector Cavity Insert Arrangement, Receptacle, no Backshell

Align the insert keyway to the keyway of the Insert Body cavity and slide Inserts into the appropriate Insert Body cavity. Slide the Wave Spring and Snap Ring in behind the Insert. The front of the Insert should protrude slightly from the front of the Insert Body. Load the Snap Ring into the Insert Body groove.

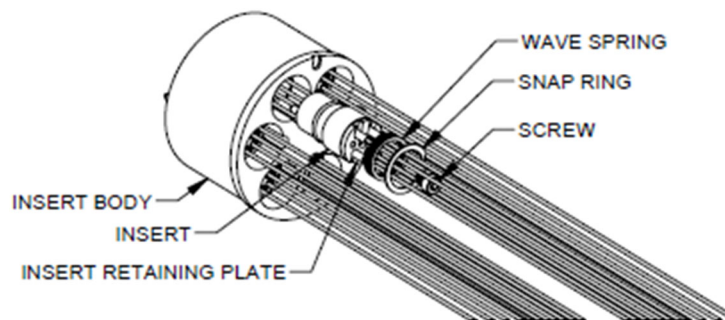


Figure 86, QPlex6, Connector Insert Assembly, Receptacle, no Backshell

CONNECTOR ASSEMBLY

Align the Key to the Insert Body with the Keyway in the Connector Body Assembly and slide the Insert Body Assembly into the Connector Body. Snap retaining ring into the back of the Connector Body groove.

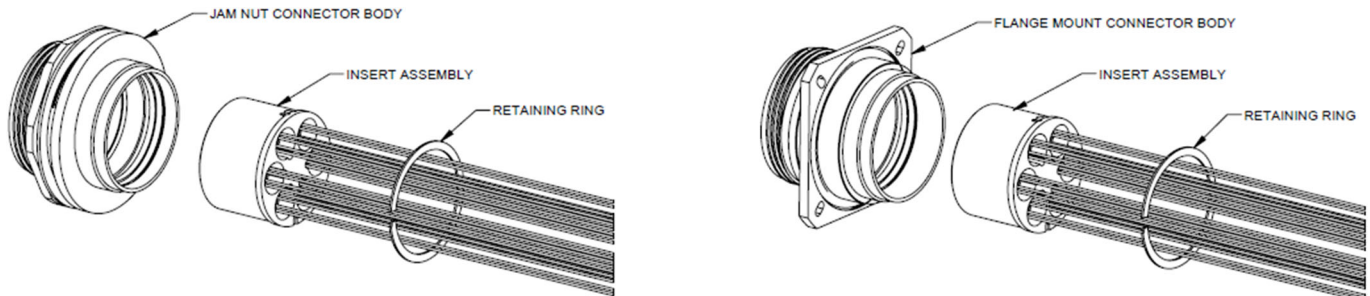


Figure 87, QPlex6, Connector Assembly, Receptacle, no Backshell

QPlex6, RECEPTACLE, STRAIGHT BACKSHELL, BOOT

CABLE PREPARATION

Slide parts onto cable in the order below.

Note: Bushing is only required for 12.5 mm or lower cable diameter.

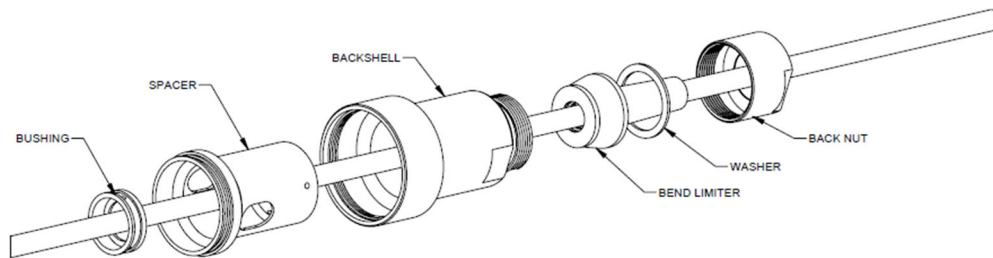


Figure 88, QPlex6, Cable Prep, Receptacle, Straight Backshell with Boot

Remove approximately 6-inches (152mm) of the outer jacket from the cable end. Load the Wedge Strain Relief Base over the fiber and Kevlar bundle, slide it until it bottoms with the cable's outer jacket edge. Load the Strain Relief Insert over the fiber bundle only. Spread the Kevlar out evenly around the Strain Relief Base, slide the Strain Relief Insert into the Wedge Strain Relief Base. The Kevlar should be trapped between the Wedge Strain Relief Base and the 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 value specified in Table 2.

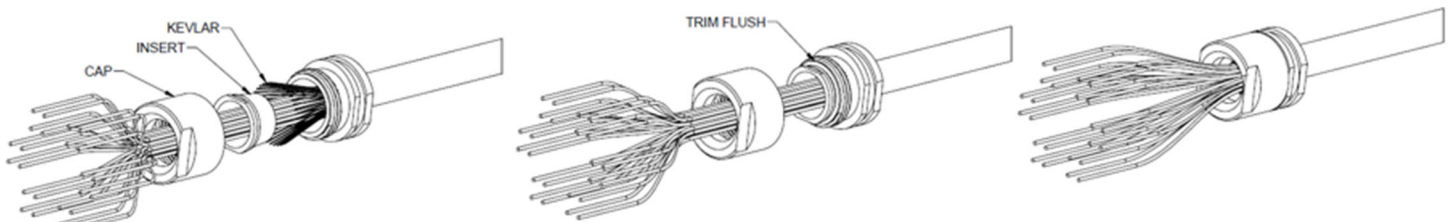


Figure 89, QPlex6, Strain Relief Assembly, Receptacle, Straight Backshell with Boot

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A", QPlex6 CONNECTOR, PLUG & FLANGE MOUNT RECEPTACLE WITH BACKSHELL for strain relief to ferrule tip and Appendix and for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

CAI-QPlex: QPlex Customer Assembly Instructions

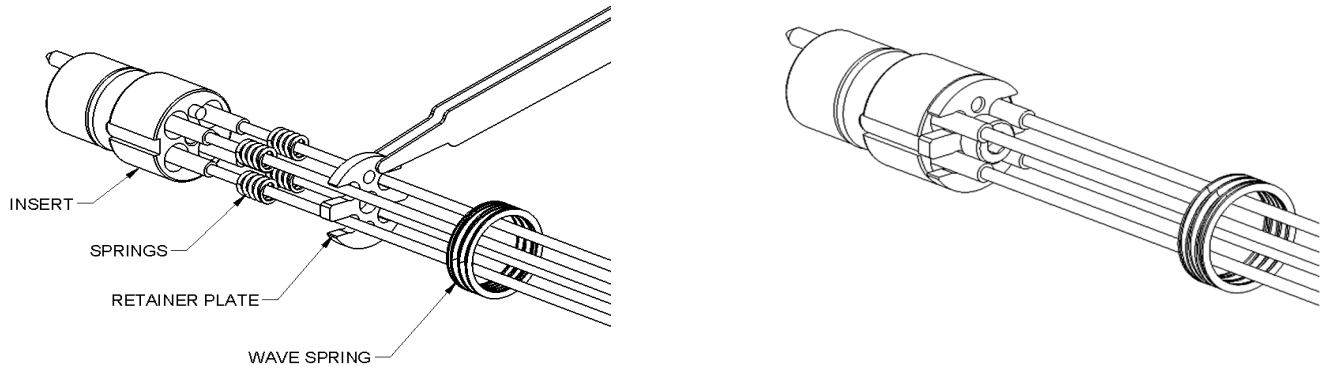


Figure 90, QPlex6, Insert Assembly, Receptacle, Straight Backshell with Boot

Align the insert keyway to the keyway of the Insert Body cavity and slide Inserts into the appropriate Insert Body cavity. Slide the Wave Spring and Snap Ring in behind the Insert. The front of the Insert should protrude slightly from the front of the Insert Body. Load the Snap Ring into the Insert Body groove. Use Dummy Inserts to populate the empty cavities.

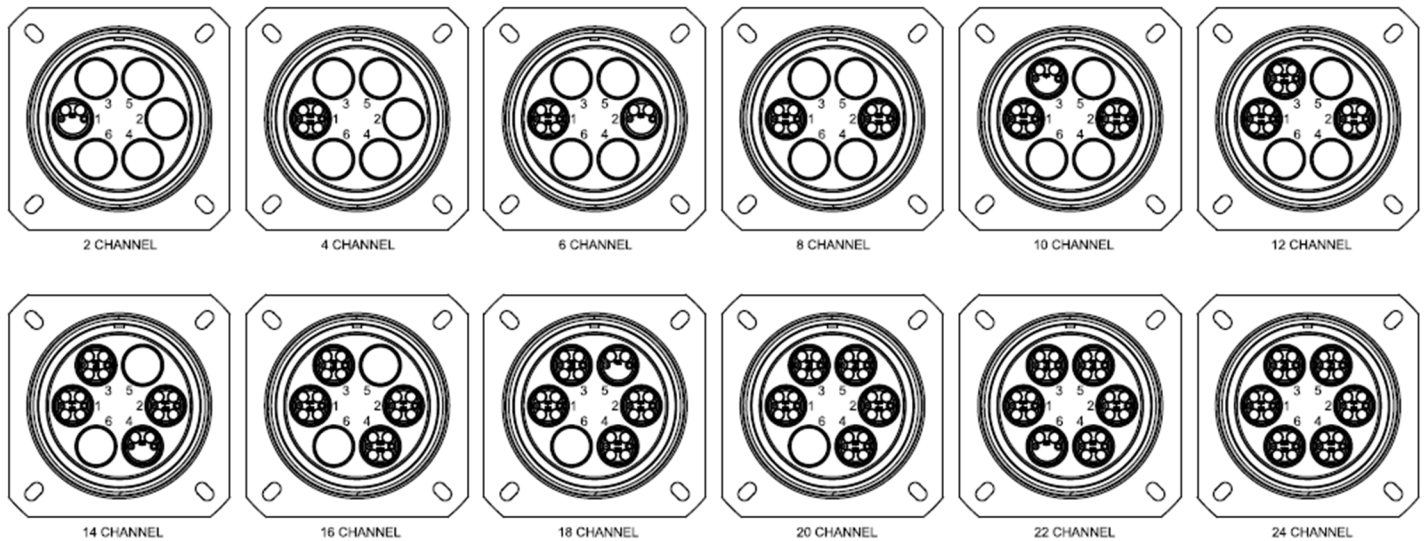


Figure 91, QPlex6, Connector Cavity Insert Arrangement, Receptacle, Straight Backshell with Boot

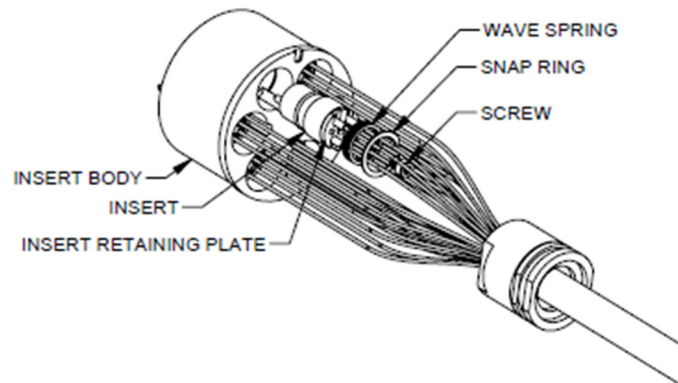


Figure 92, QPlex6, Connector Assembly, Receptacle, Straight Backshell with Boot

CONNECTOR ASSEMBLY

Align the Key of the Insert Assembly with the Keyway in the Connector Body and slide the Insert Assembly into the Connector Body. Snap retaining ring into the back of the Connector Body groove.

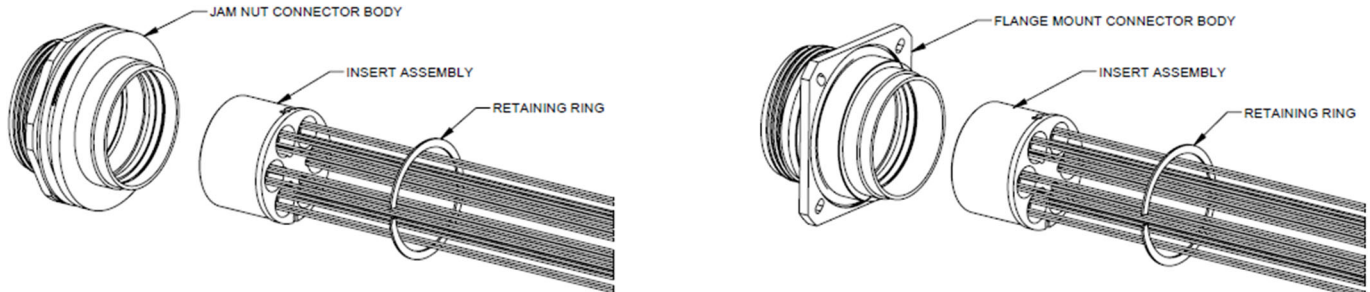


Figure 93, QPlex6, Connector Insert Assembly, Receptacle, Straight Backshell with Boot

Note: Bushing is only required for 12.5 mm or lower cable diameter.

When using 12.5 mm (or lower) cable diameter, slide Bushing over Strain Relief base, and tighten set screws using .050" (1.27mm) Hex Driver PT-500. Then use Torque-Measuring Screwdriver PT-590 with Hex Bit .050" PT-599 and torque to the values in the above Torque Table.

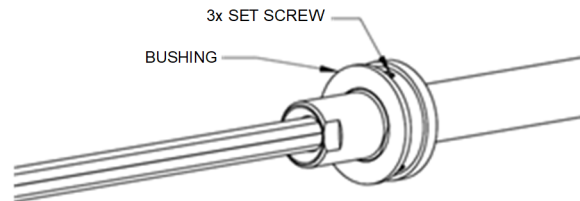


Figure 94, QPlex6, Bushing Assembly, Plug, Straight Backshell with Boot

Pull Strain Relief to the bottom of Spacer and hand-tighten only the top Set Screws evenly using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Strain Relief Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a visual check by looking through the holes in Spacer to make sure that the fibers are not twisted or kinked.

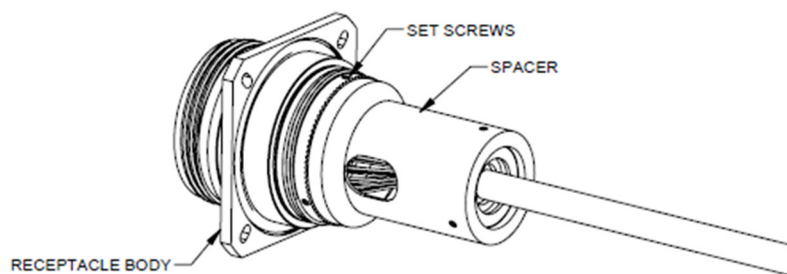


Figure 95, QPlex6, Coupling Ring Assembly, Receptacle, Straight Backshell with Boot

CAI-QPlex: QPlex Customer Assembly Instructions

Slide the Backshell with Dust Cover over the assembly and hand-tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-545 with Male Square Driver Adapter PT-546 to the value specified in Table 2. Slide the Bend Limiter and Washer into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

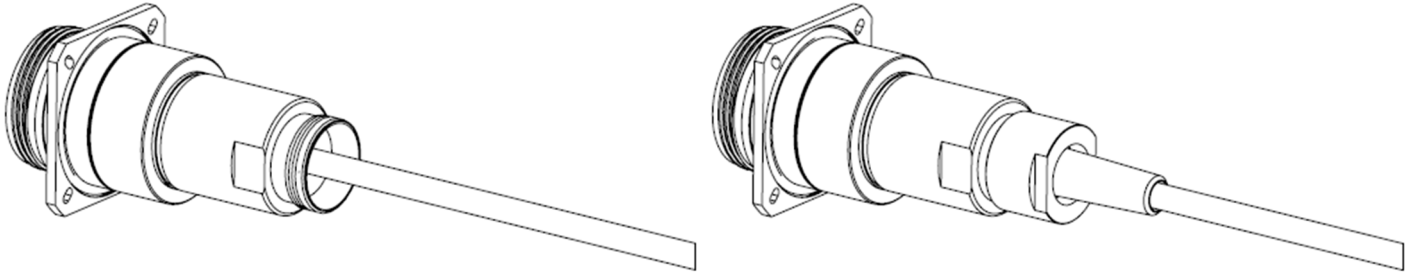


Figure 96, QPlex6, Backshell Assembly, Receptacle, Straight Backshell with Boot

QPlex6, RECEPTACLE, STRAIGHT BACKSHELL, MESH GRIP

CABLE PREPARATION

Slide parts onto cable in the order below. **NOTE: Jam Nut Configuration includes Spacer.**

Note: Bushing is only required for 12.5 mm or lower cable diameter.

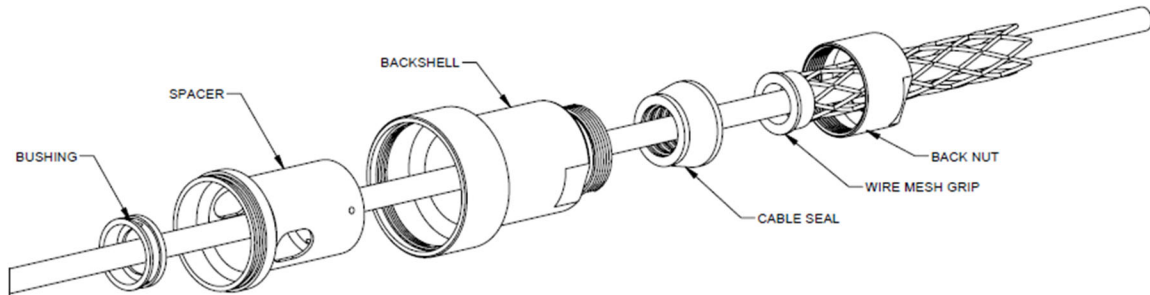


Figure 97, QPlex6, Cable Prep, Receptacle, Straight Backshell with Mesh Grip

Remove approximately 6-inches (152mm) of the outer jacket from the cable end. Load the Wedge Strain Relief Base over the fiber and Kevlar bundle, slide it until it bottoms with the cable's outer jacket edge. Load the Strain Relief Insert over the fiber bundle only. Spread the Kevlar out evenly around the Strain Relief Base, slide the Strain Relief Insert into the Wedge Strain Relief Base. The Kevlar should be trapped between the Wedge Strain Relief Base and the 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 value specified in Table 2.

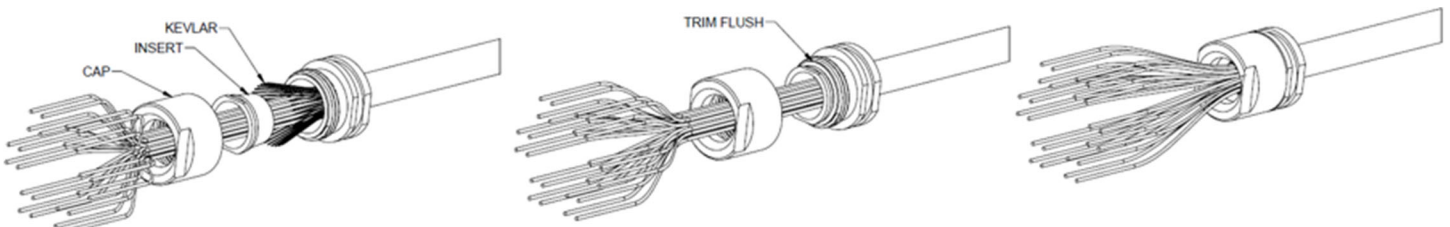


Figure 98, QPlex6, Strain Relief Assembly, Receptacle, Straight Backshell with Mesh Grip

TERMINATION

Use the Stripping Length Diagrams located in the Appendix "A", QPlex6 CONNECTOR, PLUG & FLANGE MOUNT RECEPTACLE WITH BACKSHELL for strain relief to ferrule tip and Appendix and for termini strip lengths.

POPULATE INSERT

Slide the Wave Spring over the fiber/termini bundle before loading the termini into the Insert cavities. Insert the Termini into their corresponding Insert Cavities. Ensure termini are fully seated inside the insert cavities. Using Tweezers PT-628, place the Termini Retainer Plate between the 900 μ m fibers making sure that the springs are between the Fiber Optic Termini and Retainer Plate. Apply a drop of Loctite 222 or equivalent to the Socket Head Cap Screw threads, use 5/64" Hex Screwdriver PT-503 to fasten the Retainer Plate into the Insert. Using Torque-Measuring Screwdriver PT-590 and Bit Size 5/64" PT-599, torque the Socket Head Screw to the value specified in Table 2.

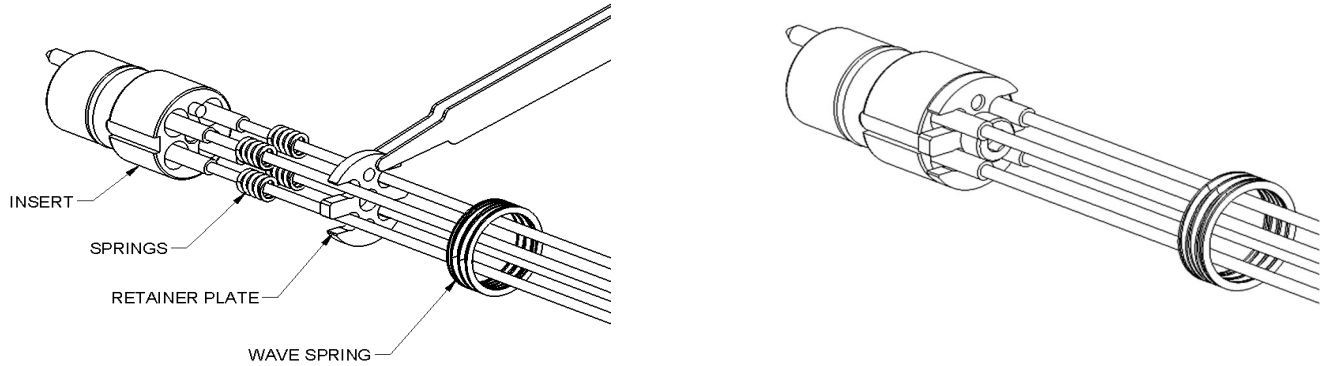


Figure 99, QPlex6, Insert Assembly, Receptacle, Straight Backshell with Mesh Grip

Align the insert keyway to the keyway of the Insert Body cavity and slide Inserts into the appropriate Insert Body cavity. Slide the Wave Spring and Snap Ring in behind the Insert. The front of the Insert should protrude slightly from the front of the Insert Body. Load the Snap Ring into the Insert Body groove. Use Dummy Inserts to populate the empty cavities.

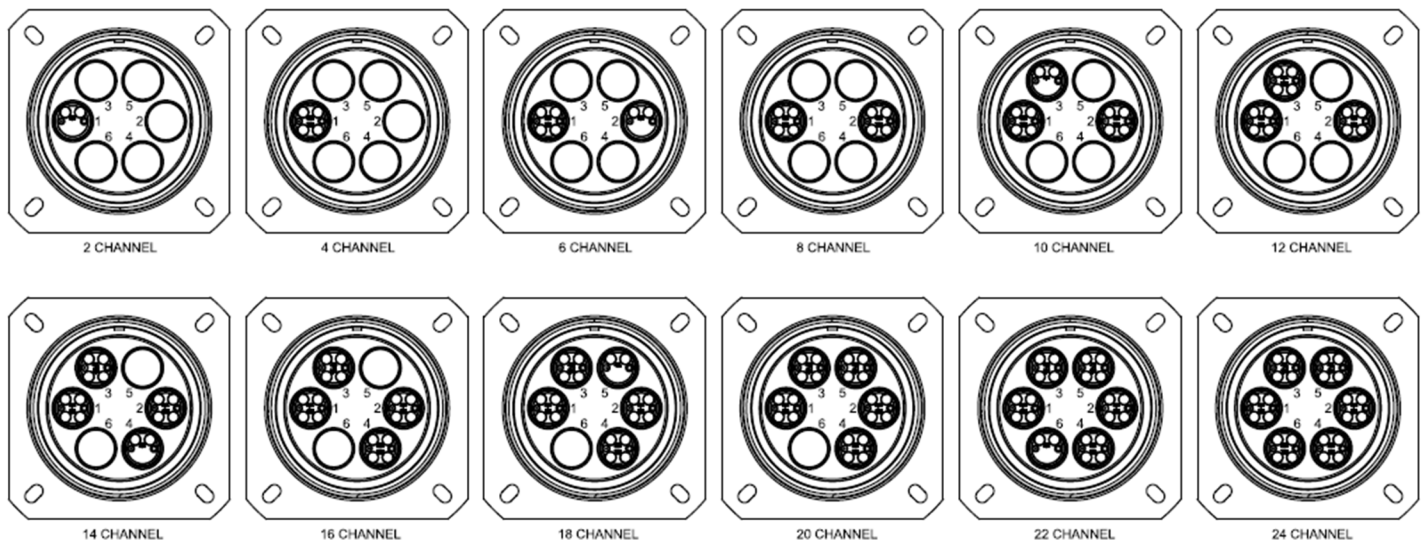


Figure 100, QPlex6, Insert Cavity Arrangement, Receptacle, Straight Backshell with Mesh Grip

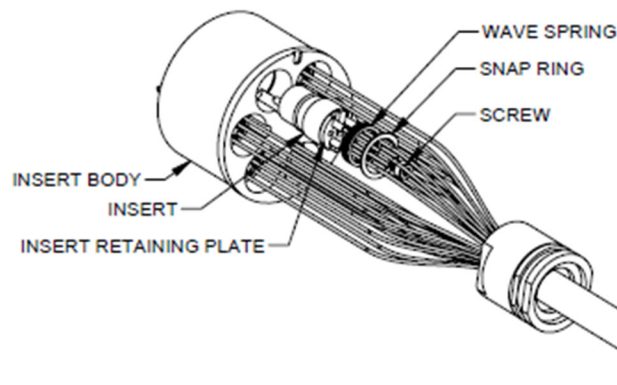


Figure 101, QPlex6, Connector Assembly, Receptacle, Straight Backshell with Mesh Grip.

CONNECTOR ASSEMBLY

Align the Key of the Insert Assembly with the Keyway in the Connector Body and slide the Insert Assembly into the Connector Body. Snap retaining ring into the back of the Connector Body groove.

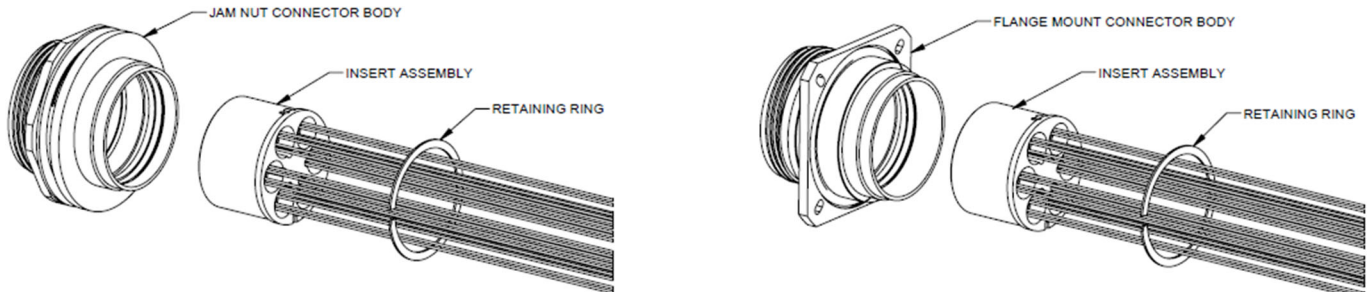


Figure 102, QPlex6, Connector Insert Assembly, Receptacle, Straight Backshell with Mesh Grip

Note: Bushing is only required for 12.5 mm or lower cable diameter.

When using 12.5 mm (or lower) cable diameter, slide Bushing over Strain Relief base, and tighten set screws using .050" (1.27mm) Hex Driver PT-500. Then use Torque-Measuring Screwdriver PT-590 with Hex Bit .050" PT-599 and torque to the values in the above Torque Table.

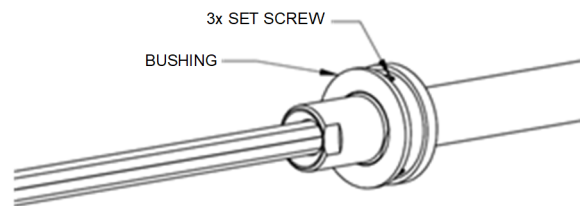


Figure 103, QPlex6, Bushing Assembly, Plug, Straight Backshell with Mesh Grip

Pull Strain Relief to the bottom of Spacer and hand-tighten only the top Set Screws evenly using the 1/16" Hex Screwdriver PT-501. A drop of Loctite 222 may be used. Torque the Strain Relief Set Screws using Torque-Measuring Screwdriver PT-590 and Hex Bit 1/16-inch PT-599 to the value specified in Table 2.

Perform a final visual check by looking through the holes in the Backshell Body to make sure that the fiber is not twisted or kinked.

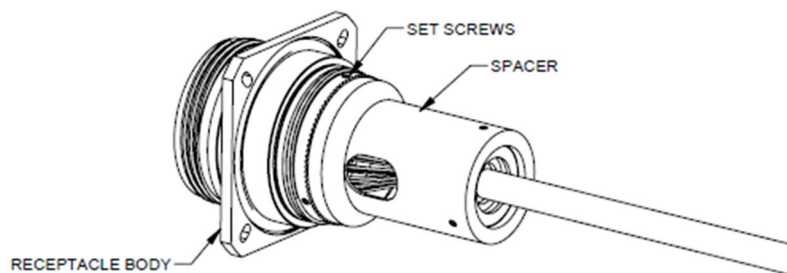


Figure 104, QPlex6, Coupling Ring Assembly, Receptacle, Straight Backshell with Mesh Grip

CAI-QPlex: QPlex Customer Assembly Instructions

Slide the Backshell with Dust Cover over the assembly and hand tighten. Torque using Dial Torque-Measuring Wrench PT-506 and Crow's Foot Wrench PT-545 with Male Square Driver Adapter PT-546 to the value specified in Table 2. Slide the Cable Seal and Wire Mesh Grip into place. Slide the Back Nut up and hand tighten. Torque the Back Nut to the value specified in Table 2.

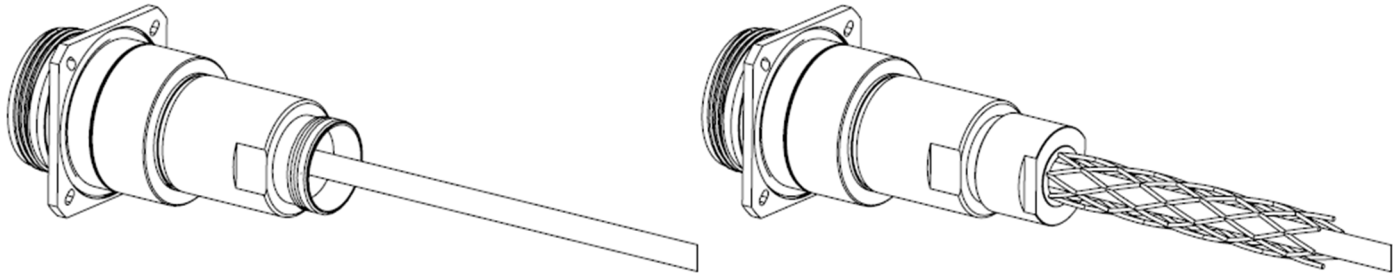
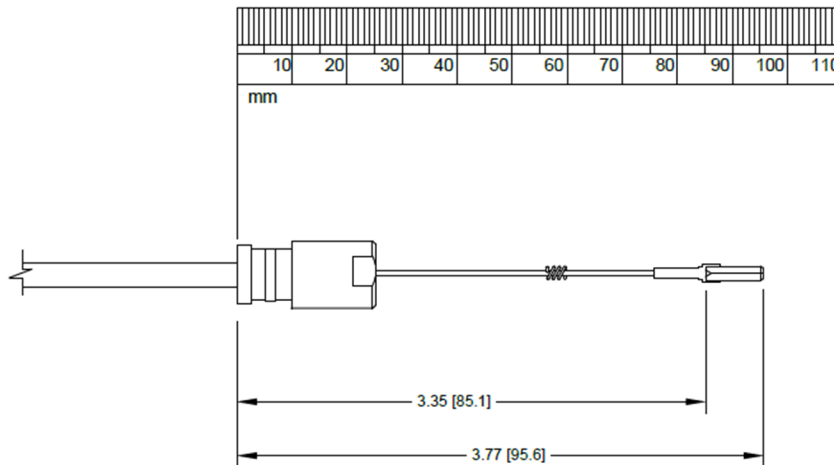


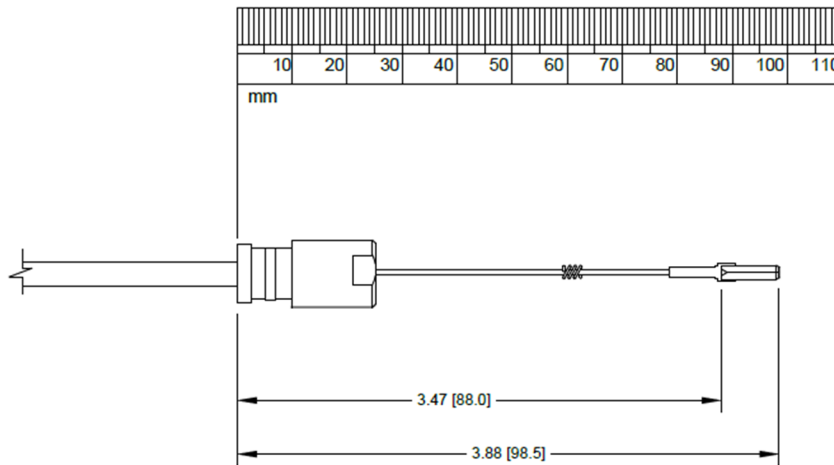
Figure 105, QPlex6, Backshell Assembly, Receptacle, Straight Backshell with Mesh Grip

Appendix A

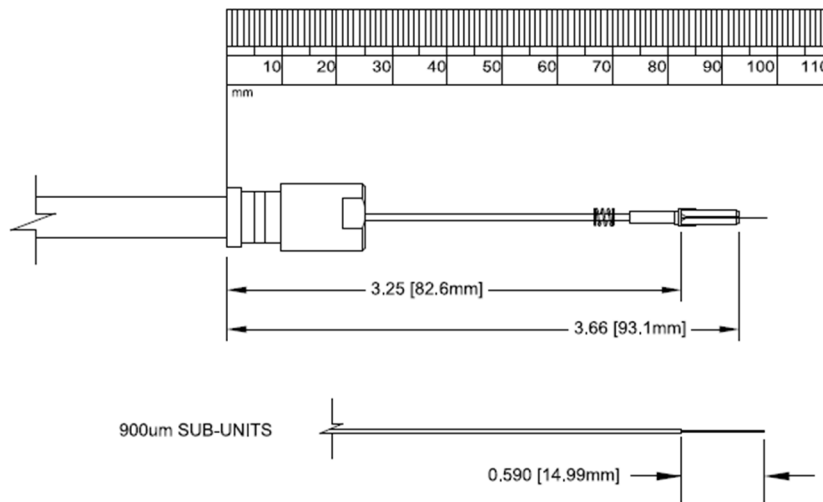
QPLEX3 CONNECTOR PLUG



QPLEX4 CONNECTOR PLUG

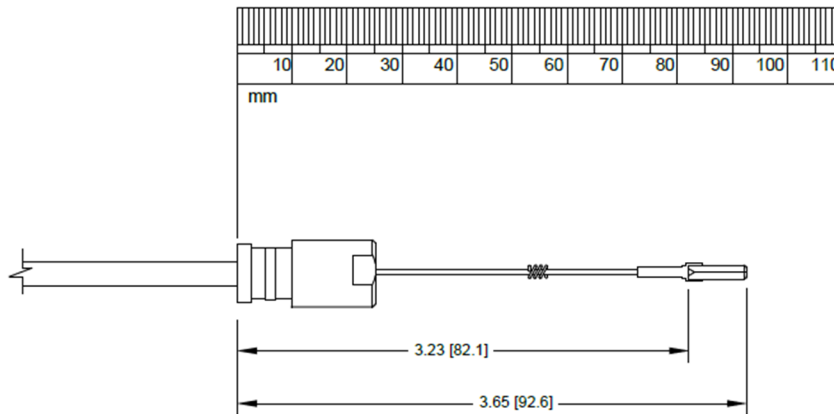


QPLEX6 CONNECTOR PLUG & FLANGE MOUNT RECEPTACLE WITH BACKSHELL



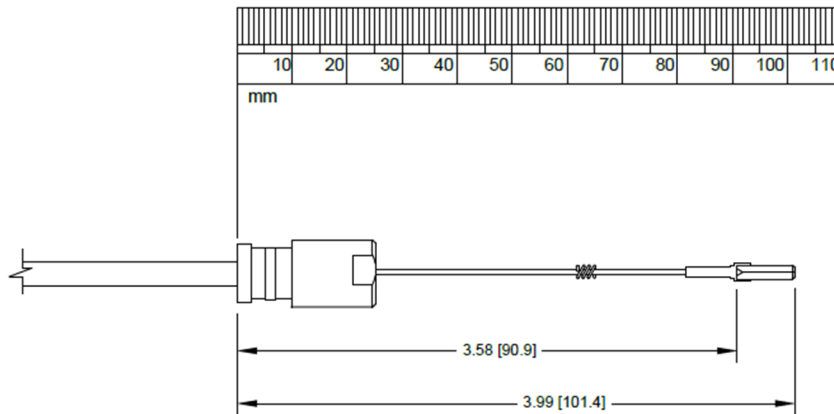
QPLEX3 CONNECTOR

FLANGE MOUNT RECEPTACLE WITH BACKSHELL



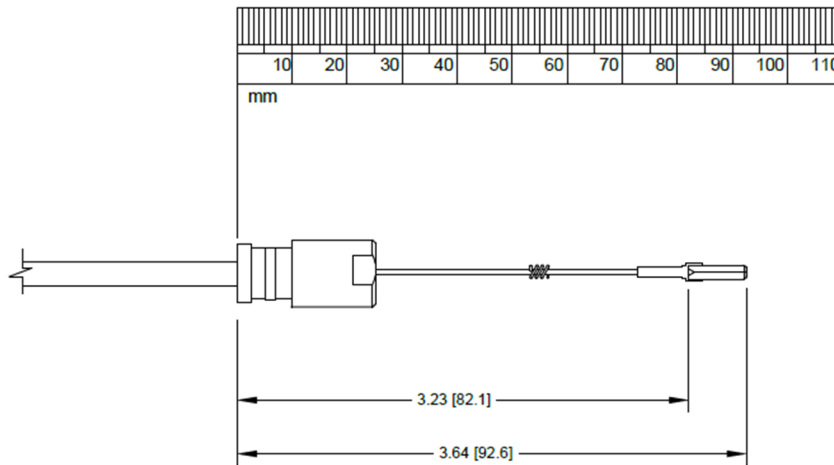
QPLEX3 CONNECTOR

JAM NUT RECEPTACLE WITH BACKSHELL



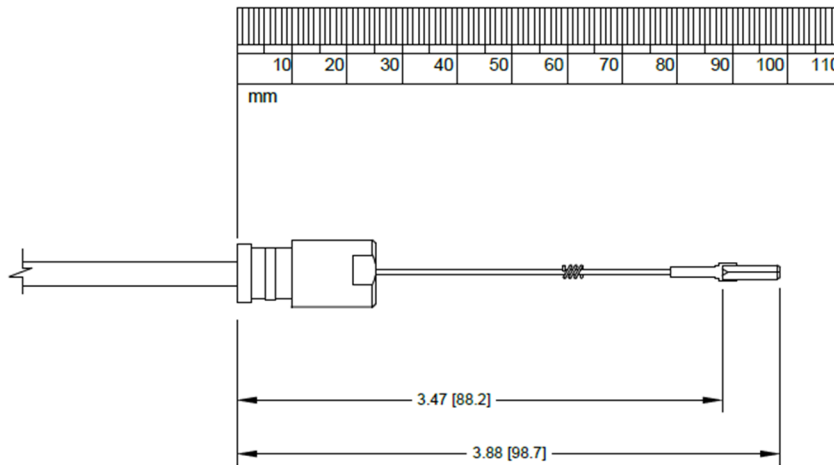
QPLEX4 CONNECTOR

FLANGE MOUNT RECEPTACLE WITH BACKSHELL

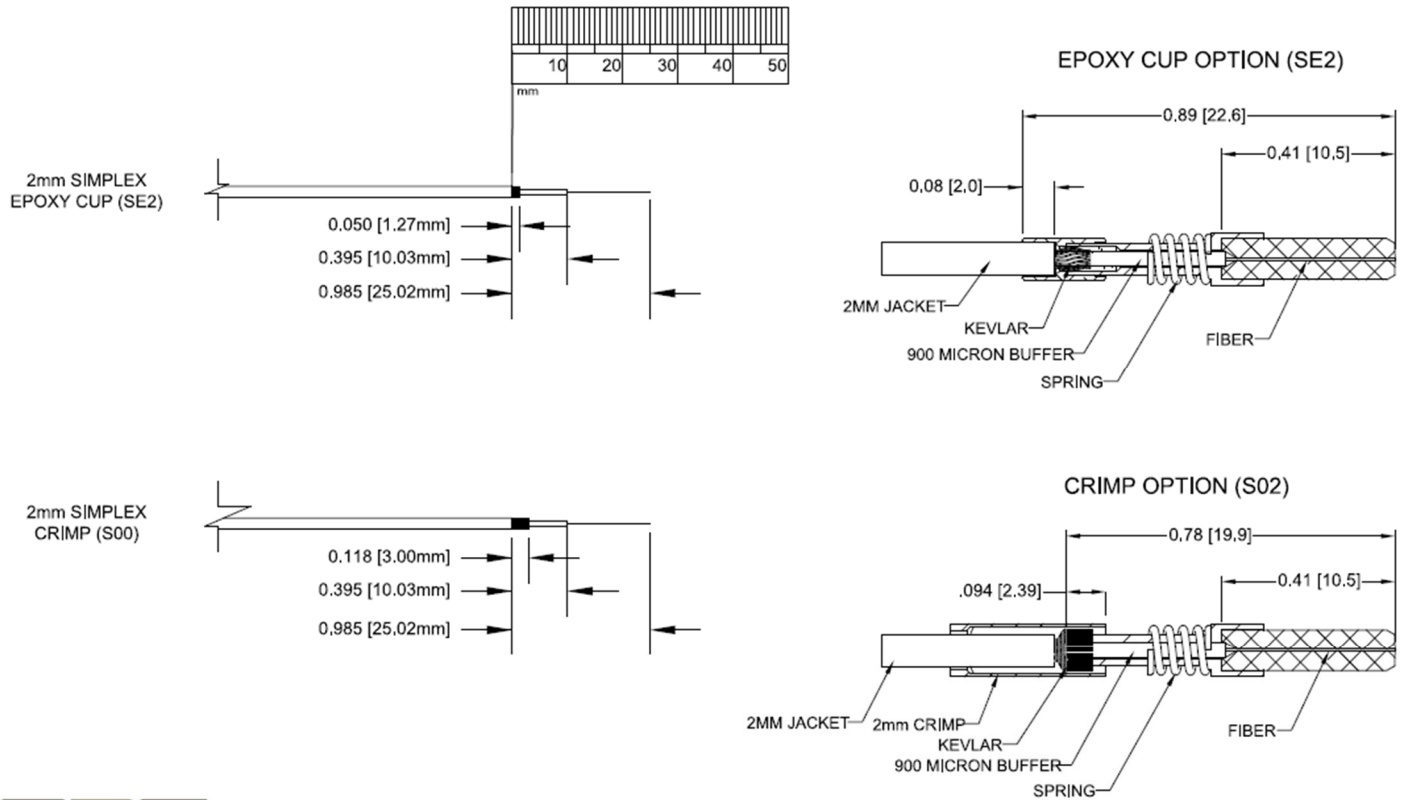


QPLEX4 CONNECTOR

JAM NUT RECEPTACLE WITH BACKSHELL



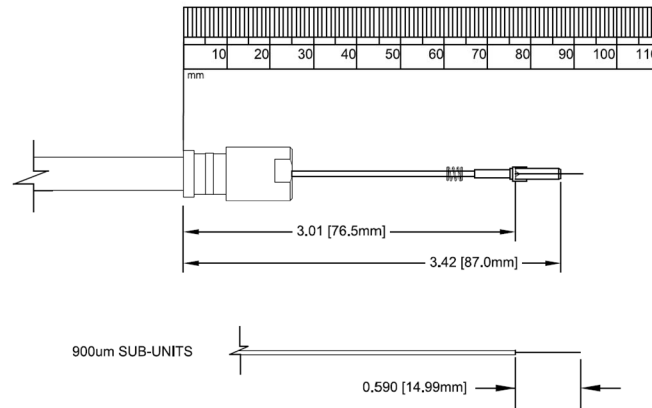
QPLEX6 CONNECTOR RECEPTACLE WITHOUT BACKSHELL



CABLE PREPARATION

WI 851-62 - FIGURE 6.9

QPLEX6 CONNECTOR JAM NUT RECEPTACLE WITH BACKSHELL



Revision Change Record

Revision	Date	Section	Description	Approval
0	1/31/2023	All	New Customer Assembly Instruction	CN
1	11/18/2025	QPlex6	Added assembly Instructions for QPlex6 connector, Table of Contents, List of Figures, List of Tables and Appendix A.	RNZ