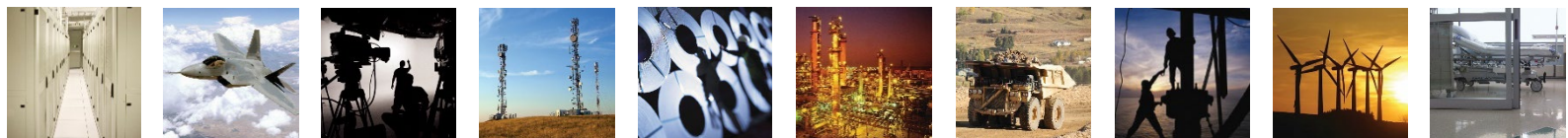


QMini Expanded Beam Connectors



Military Aerospace Shipboard Industrial Mining Transportation Oil & Gas Broadcast Manufacturing Marine Energy Medical



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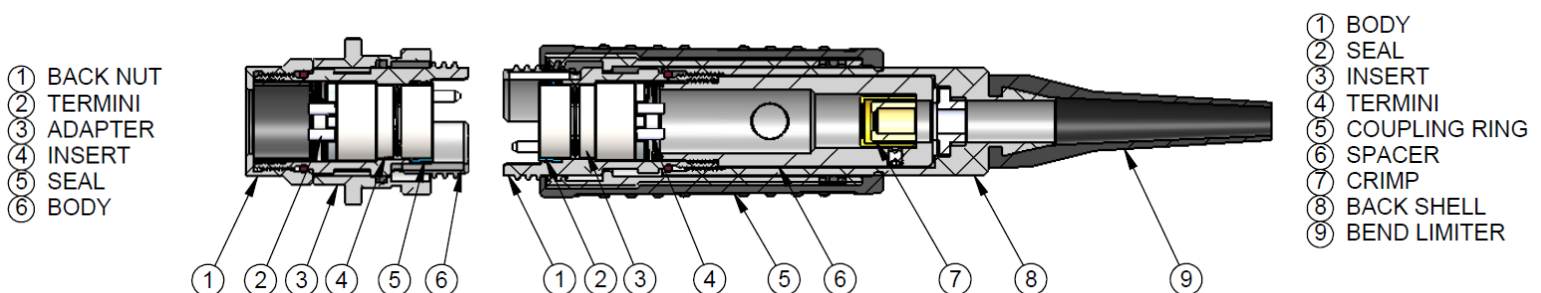


QPC's QMini Expanded Beam Fiber Optic Connectors are designed to meet the requirements of MIL-PRF-83526/20 & /21 Military Specifications. Expanded Beam fiber optic connectors are designed to operate in harsh environments, they use non-physical contact fiber optic termini that are fully sealed behind an anti-reflective coated ball lens. This lens expands the beam to many times its original size aiding optical alignment and minimizing the effects of dust, debris, vibration, and other environmental conditions. Because there is no wear on the optical surfaces / end faces of the termini during use, the QMini connector has excellent durability, in excess of 3,000 mating cycles, providing a long service life interconnect solution.

QMini is a hermaphroditic connector allowing multiple plug-to-plug cable assemblies to be combined to extend the length of the system. These connectors are available with two or four channels and with singlemode or multimode lenses. In addition to the standard plugs and receptacles, QPC offers a 90 Degree option for plugs and a Low Profile Backshell for receptacles for applications with space constraints. A QMini Receptacle to LC Adapter is also offered which provides a QMini interface on one end and LC Duplex on the other.

QMini Connectors are used in Oil & Gas, Mining, Factory Automation, Heavy Equipment, Marine, Broadcast, Medical, Military, Aerospace, and Defense for Communications, Audio / Video, and Sensing Applications.

- 2Ch / 4Ch Hermaphroditic Expanded Beam Connector System
- Plugs: With and without Rubber Grip, with Straight or 90 Degree Backshell
- Receptacles: Jam Nut, Flange Mount, and XLR Compatible Flange Mount, with or without Backshells, QMini to LC adapter
- Standard Cable OD up to 7.5mm, Extended Heat Shrink Strain Relief up to 10.5mm
- Designed to MIL-DTL-83526/20 (Plug) & MIL-DTL-83526/21 (Jam Nut Receptacle)
- Intermateability: Tyco Pro Beam Jr., Amphenol TACBeam, Glenair GMA, Stratos HMA, Fibreco Junior, DiGiCo Compatible
- Sealed to IP68



Specifications:

Insertion Loss: SM (9/125µm)	0.75-2.0dB Max.
MM (50/125µm)	0.50-1.5dB Max.
MM (62.5/125µm)	0.50-1.5dB Max.
Return Loss: SM (9/125µm)	-34dB
Operating Temperature:	-46°C to +85°C
Vibration:	10 to 500Hz / 10g
Mating Durability:	3000 Cycles
Impact:	8 Impacts @ 8FT (2.5MT), EIA/TIA-455-2
Shock:	50g for 11ms, EIA/TIA-455-14, Condition A
IP Rating:	IP68 - Dust Tight, No ingress of dust; complete protection against contact, Water Immersion, 1m
Material & Plating Specification:	Black Hard Anodize: 6061-T6 Aluminum; Anodize per MIL-A-8625 TYPE III CLASS 2, .0022/.0018 Thick (50% Penetration), Black Stainless Steel: 303 Stainless Steel; PASSIVATE PER QQ-P-35 Olive Drab Zinc-Nickel: 6061-T6 Aluminum; Zinc-Nickel Followed by Olive Drab Chromate per AMS-2417 Electroless Nickel Plate .0003 to .00035 thickness as per AMS-C-26074 Alkaline Zinc-Nickel Plate .0003 to .0004 thickness as per AMS 2417 "H" TY 2 Zinc Strike - .00005 - .000150 Thickness per ASTM B 633 "11" Dark Green Olive Drab Chromate Black Zinc-Nickel: 6061-T6 Aluminum; Zinc-Nickel Followed by Black Chromate per AMS-2417 Electroless Nickel Plate .0003 to .00035 thickness as per AMS-C-26074 Alkaline Zinc-Nickel Plate .0003 to .0004 thickness as per AMS 2417 "H" TY 2 Zinc Strike - .00005 - .000150 Thickness per ASTM B 633 "11" Black Chromate

Part Number Builder, QMini Plugs and Receptacles:

Sample Part Number: QMINI-PHHN-02SM-S75		QMINI	-	PHH	N	-	02	SM	-	S	75
1 <u>Series</u> QMINI											
2 <u>Product Type</u> PHH - PLUG, W/ RUBBER GRIP, COMPOSITE DUSTCOVER PEE - PLUG, W/ METAL COUPLING RING, METAL DUSTCOVER RFH - RECP FLANGE MOUNT, COMPOSITE DUSTCOVER RFE - RECP FLANGE MOUNT, METAL DUSTCOVER RJH - RECP JAM NUT, COMPOSITE DUSTCOVER RJE - RECP JAM NUT, METAL DUSTCOVER RXH - RECP FLANGE MOUNT RX, COMPOSITE DUSTCOVER RXE - RECP FLANGE MOUNT RX, METAL DUSTCOVER											
3 <u>Material & Finish Code</u> N - ALUMINUM, HARD ANODIZE, BLACK S - STAINLESS STEEL, PASSIVATED Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB K - ALUMINUM, ZINC OVER NICKEL, BLACK (CONSULT QPC FOR OTHER OPTIONS)											
4 <u>Channel Count</u> 02 - 2 CHANNEL, 2x 126µm TERMINI 04 - 4 CHANNEL, 4x 126µm TERMINI 00 - NO INSERT OR TERMINI (MUST BE ORDERED WITH STRAIN RELIEF "SXX")*											
5 <u>Fiber Type</u> SM - SINGLEMODE, 1310/1550nm MM - MULTIMODE, 850/1300nm XX - NO INSERT OR TERMINI (MUST BE ORDERED WITH STRAIN RELIEF "SXX")*											
6 <u>Strain Relief</u> S00 - NO BACKSHELL, NO CRIMPS (FOR 900µm BUFFER FIBER) (RECEPTACLE ONLY) S02 - NO BACKSHELL, 2mm CRIMPS (FOR 2mm BUFFER JACKET) (RECEPTACLE ONLY) SE2 - NO BACKSHELL, EPOXY CUP TERMINI FOR 2MM CABLE OD (RECEPTACLE ONLY) S45 - STRAIN RELIEF FOR 3.6mm TO 4.5mm O.D. CABLE S55 - STRAIN RELIEF FOR 4.6mm TO 5.5mm O.D. CABLE S65 - STRAIN RELIEF FOR 5.6mm TO 6.5mm O.D. CABLE S75 - STRAIN RELIEF FOR 6.6mm TO 7.5mm O.D. CABLE S105 - HEAT SHRINK STRAIN RELIEF FOR 7.6mm TO 10.5mm O.D. CABLE SXX - NO CABLE INTERFACE KIT (MUST BE ORDERED WITH CHANNEL COUNT "00" AND FIBER TYPE "XX")*											
*For Spare Termini, Insert, and Cable Interface Kit ordering information, see Pages 27-29											

Part Number Builder, QMini 90° Plugs:

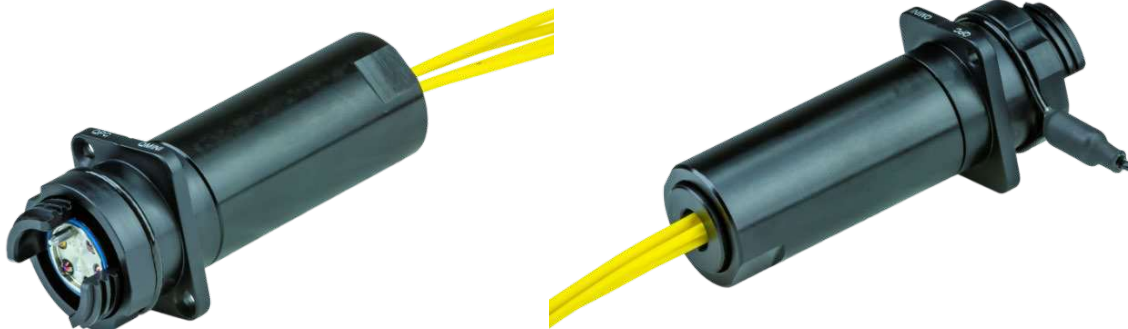
Sample Part Number: QMINI90-PEHN-02SM-S75		QMINI90	-	PEH	N	-	02	SM	-	S 75
1 <u>Series</u> QMINI90										
2 <u>Product Type</u> PEH - PLUG, W/ METAL COUPLING RING, COMPOSITE DUSTCOVER PEE - PLUG, W/ METAL COUPLING RING, METAL DUSTCOVER										
3 <u>Material & Finish Code</u> N - ALUMINUM, HARD ANODIZE, BLACK S - STAINLESS STEEL, PASSIVATED Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB K - ALUMINUM, ZINC OVER NICKEL, BLACK (CONSULT QPC FOR OTHER OPTIONS)										
4 <u>Channel Count</u> 02 - 2 CHANNEL, 2x 126µm TERMINI 04 - 4 CHANNEL, 4x 126µm TERMINI 00 - NO INSERT OR TERMINI (MUST BE ORDERED WITH STRAIN RELIEF "SXX")*										
5 <u>Fiber Type</u> SM - SINGLEMODE, 1310/1550nm MM - MULTIMODE, 850/1300nm XX - NO INSERT OR TERMINI (MUST BE ORDERED WITH STRAIN RELIEF "SXX")*										
6 <u>Strain Relief</u> S45 - STRAIN RELIEF FOR 3.6mm TO 4.5mm O.D. CABLE S55 - STRAIN RELIEF FOR 4.6mm TO 5.5mm O.D. CABLE S65 - STRAIN RELIEF FOR 5.6mm TO 6.5mm O.D. CABLE S75 - STRAIN RELIEF FOR 6.6mm TO 7.5mm O.D. CABLE SXX - NO CABLE INTERFACE KIT (MUST BE ORDERED WITH CHANNEL COUNT "00" AND FIBER TYPE "XX")*										
*For Spare Termini, Insert, and Cable Interface Kit ordering information, see Pages 27-29										



Part Number Shown: QMINI-PEHN-04SM-S75

Part Number Builder QMini Receptacle, Low Profile Backshell:

Sample Part Number: QMINI-RFHN-02SM-L42		QMINI	-	RFH		N	-	02		SM	-	L 42
1 Series QMINI												
2 Product Type RFH - RECP FLANGE MOUNT, COMPOSITE DUSTCOVER RFE - RECP FLANGE MOUNT, METAL DUSTCOVER RJH - RECP JAM NUT, COMPOSITE DUSTCOVER RJE - RECP JAM NUT, METAL DUSTCOVER RXH - RECP FLANGE MOUNT RX, COMPOSITE DUSTCOVER RXE - RECP FLANGE MOUNT RX, METAL DUSTCOVER												
3 Material & Finish Code N - ALUMINUM, HARD ANODIZE, BLACK S - STAINLESS STEEL, PASSIVATED Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB K - ALUMINUM, ZINC OVER NICKEL, BLACK (CONSULT QPC FOR OTHER OPTIONS)												
4 Channel Count 02 - 2 CHANNEL, 2x 126µm TERMINI 04 - 4 CHANNEL, 4x 126µm TERMINI 00 - NO INSERT OR TERMINI (MUST BE ORDERED WITH STRAIN RELIEF "LXX")*												
5 Fiber Type SM - SINGLEMODE, 1310/1550nm MM - MULTIMODE, 850/1300nm XX - NO INSERT OR TERMINI (MUST BE ORDERED WITH STRAIN RELIEF "LXX")*												
6 Strain Relief L42 - STRAIN RELIEF FOR 4X 2mm O.D. INDIVIDUAL JACKETED FIBERS L45 - STRAIN RELIEF FOR 3.6mm TO 4.5mm O.D. CABLE L55 - STRAIN RELIEF FOR 4.6mm TO 5.5mm O.D. CABLE L65 - STRAIN RELIEF FOR 5.6mm TO 6.5mm O.D. CABLE LXX - NO CABLE CRIMPS (MUST BE ORDERED WITH CHANNEL COUNT "00" AND FIBER TYPE "XX")*												
*For Insert and Cable Crimp ordering information, see Pages 27-28												



Part Number Shown: QMINI-RXHN-04SM-L42

Part Number Builder, QMini LC Adapter:

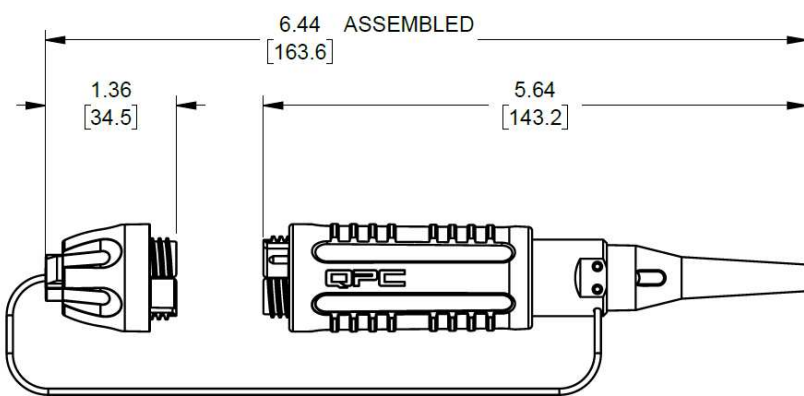
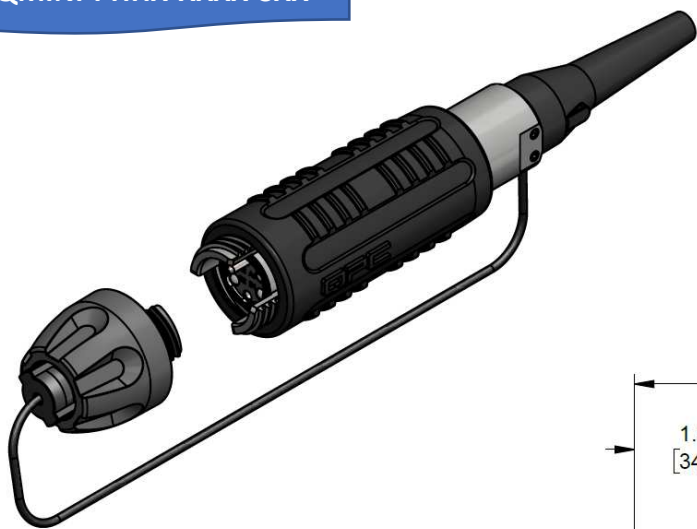
Sample Part Number: QMINILC-RFHN-02SM-09		QMINILC	-	RFH	N	-	02	SM	-	09
1 Series QMINILC										
2 Product Type RFH - RECP FLANGE MOUNT, COMPOSITE HERM DUSTCOVER RFE - RECP FLANGE MOUNT, METAL HERM DUSTCOVER RJH - RECP JAM NUT, COMPOSITE HERM DUSTCOVER RJE - RECP JAM NUT, METAL HERM DUSTCOVER RXH - RECP FLANGE MOUNT RX, COMPOSITE HERM DUSTCOVER RXE - RECP FLANGE MOUNT RX, METAL HERM DUSTCOVER										
3 Material & Finish Code N - ALUMINUM, BLACK HARD ANODIZE S - STAINLESS STEEL, PASSIVATED Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB K - ALUMINUM, ZINC OVER NICKEL, BLACK (CONSULT QPC FOR OTHER OPTIONS)										
4 Channel Count 02 - 2 CHANNEL 04 - 4 CHANNEL (JAM NUT RJH & RJE ONLY)										
5 Fiber Type SM - SINGLEMODE, 1310/1550nm MM - MULTIMODE, 850/1300nm										
6 Fiber Size 09 - 9/125µm SINGLEMODE 50 - 50/125µm MULTIMODE 62 - 62.5/125µm MULTIMODE										



Part Number Shown: QMINI-RXHN-02SM-09

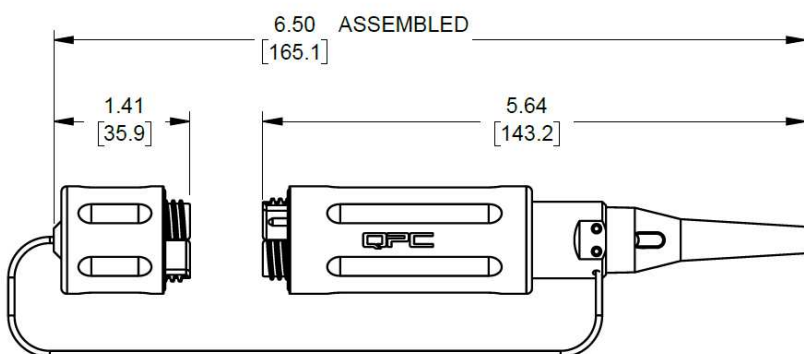
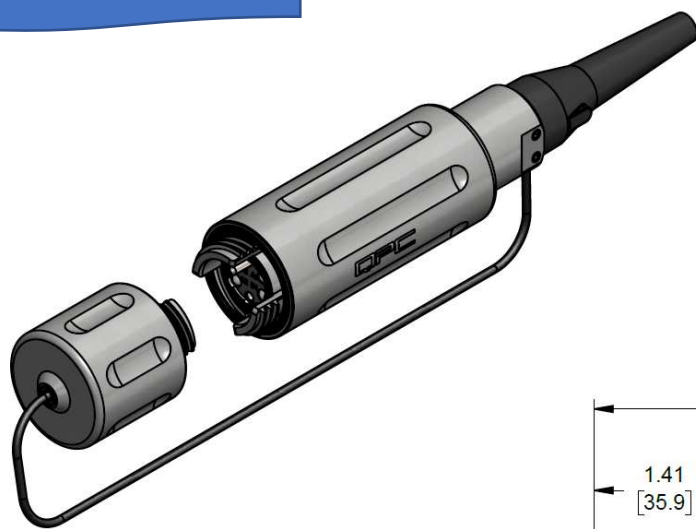
QMini Plug, Hermaphroditic, Composite Dustcover:

QMINI-PHHX-XXXX-SXX



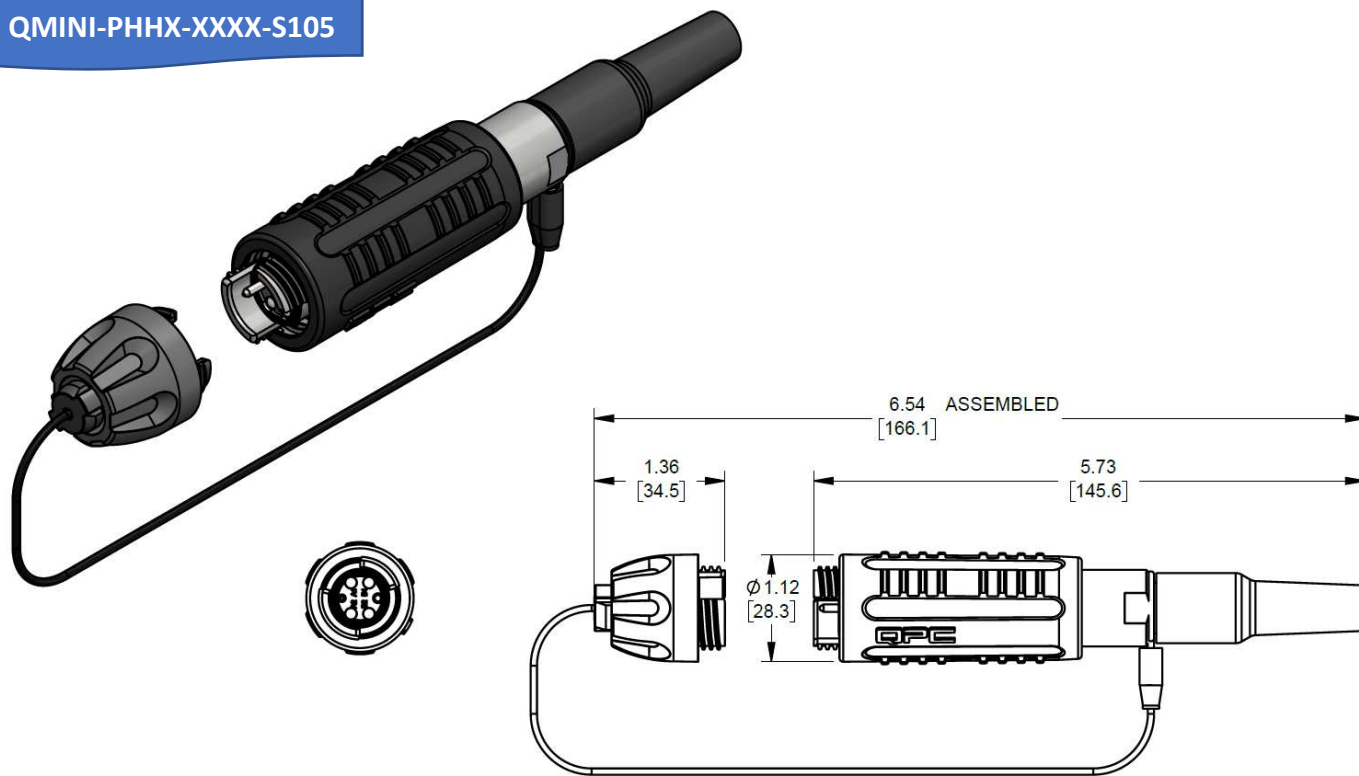
QMini Plug, Metal Coupling Ring, Metal Dustcover:

QMINI-PEEX-XXXX-SXX



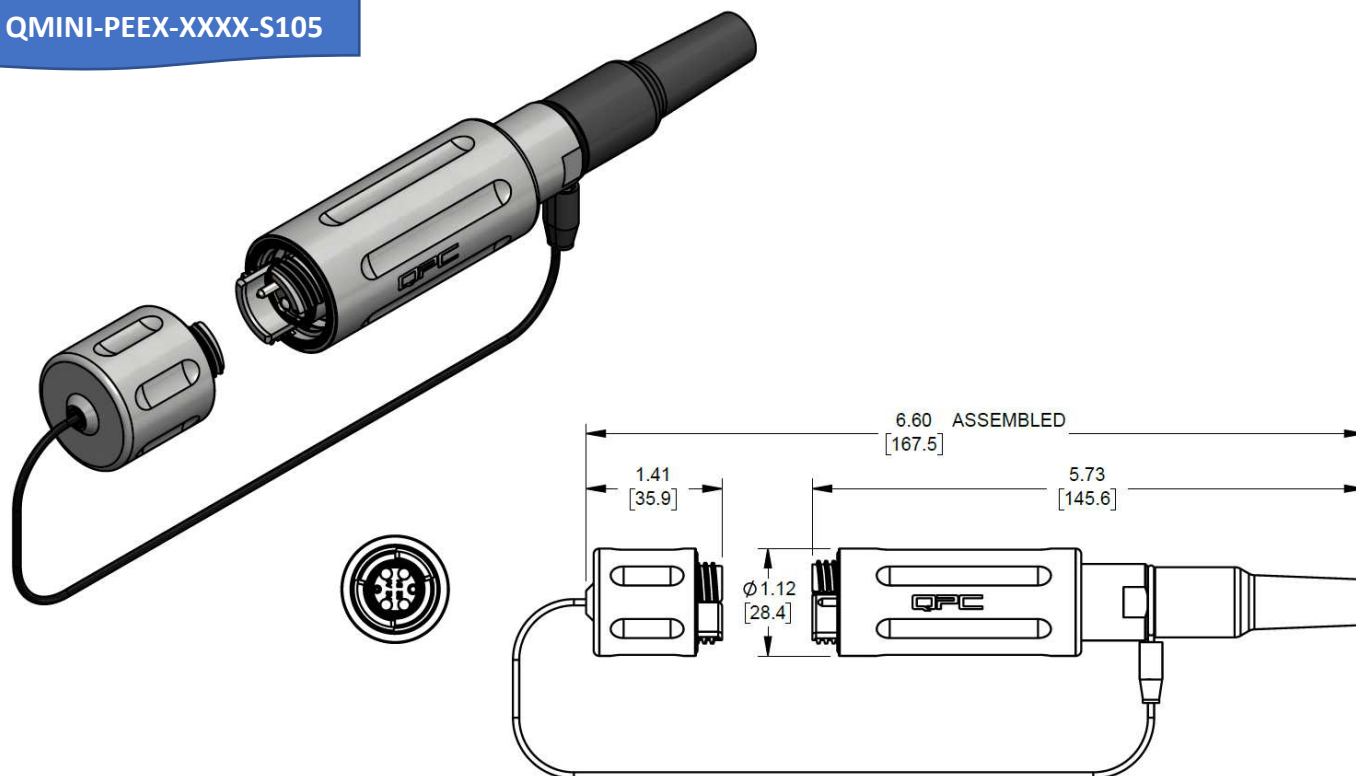
QMini Plug, Hermaphroditic, 10.5mm Heat Shrink Strain Relief, Composite Dustcover:

QMINI-PHHX-XXXX-S105



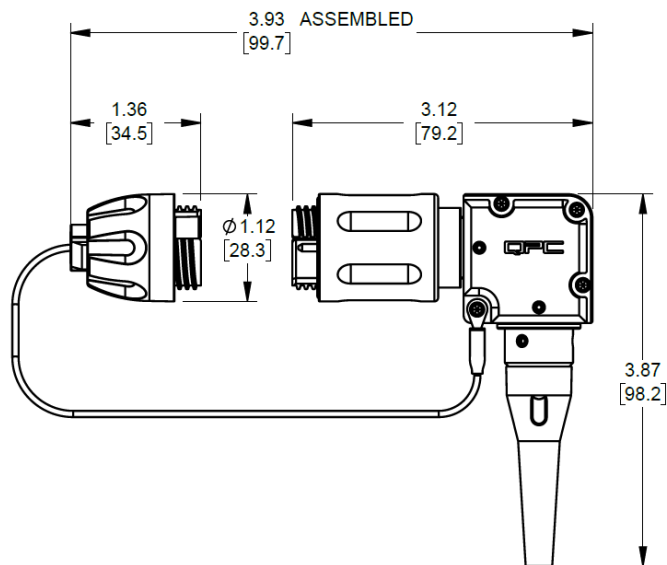
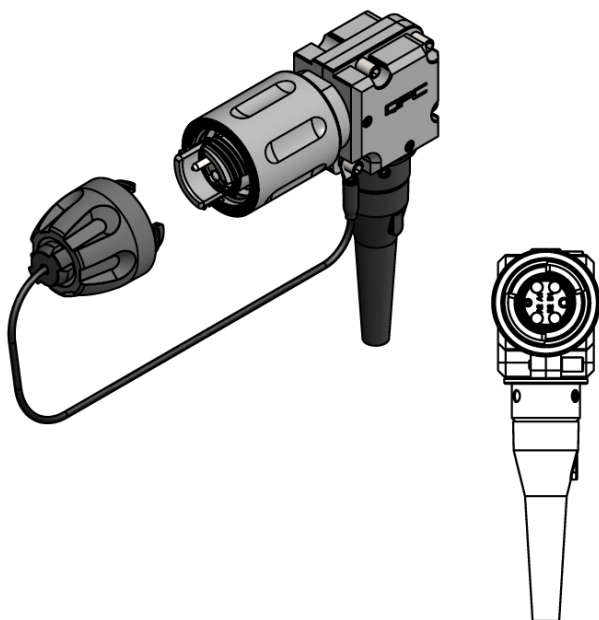
QMini Plug, Hermaphroditic, 10.5mm Heat Shrink Strain Relief, Metal Dustcover:

QMINI-PEEX-XXXX-S105



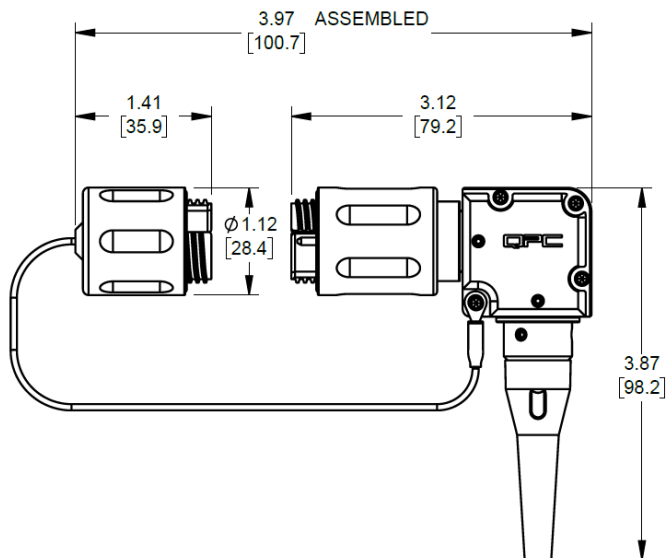
QMini 90° Plug, Hermaphroditic, Metal Coupling Ring, Composite Dustcover:

QMINI90-PEHX-XXXX-SXX



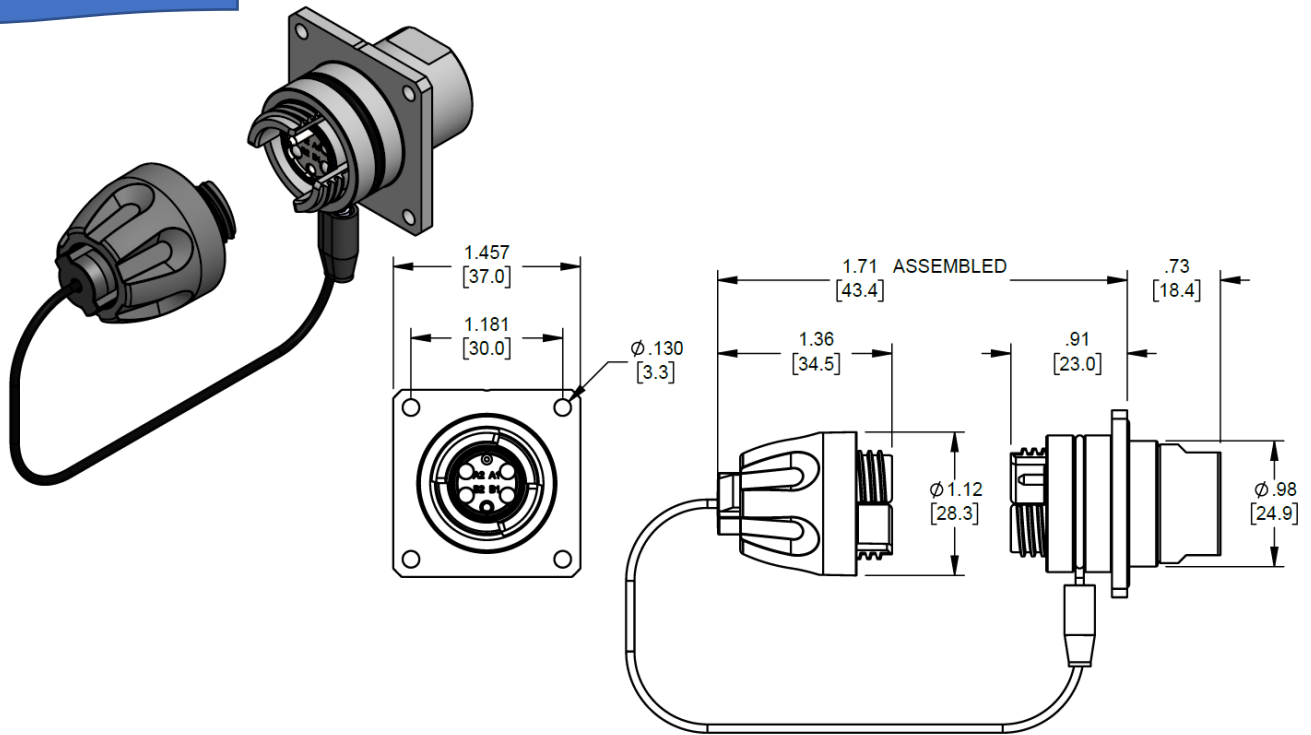
QMini 90° Plug, Hermaphroditic, Metal Coupling Ring, Metal Dustcover:

QMINI90-PEEX-XXXX-SXX



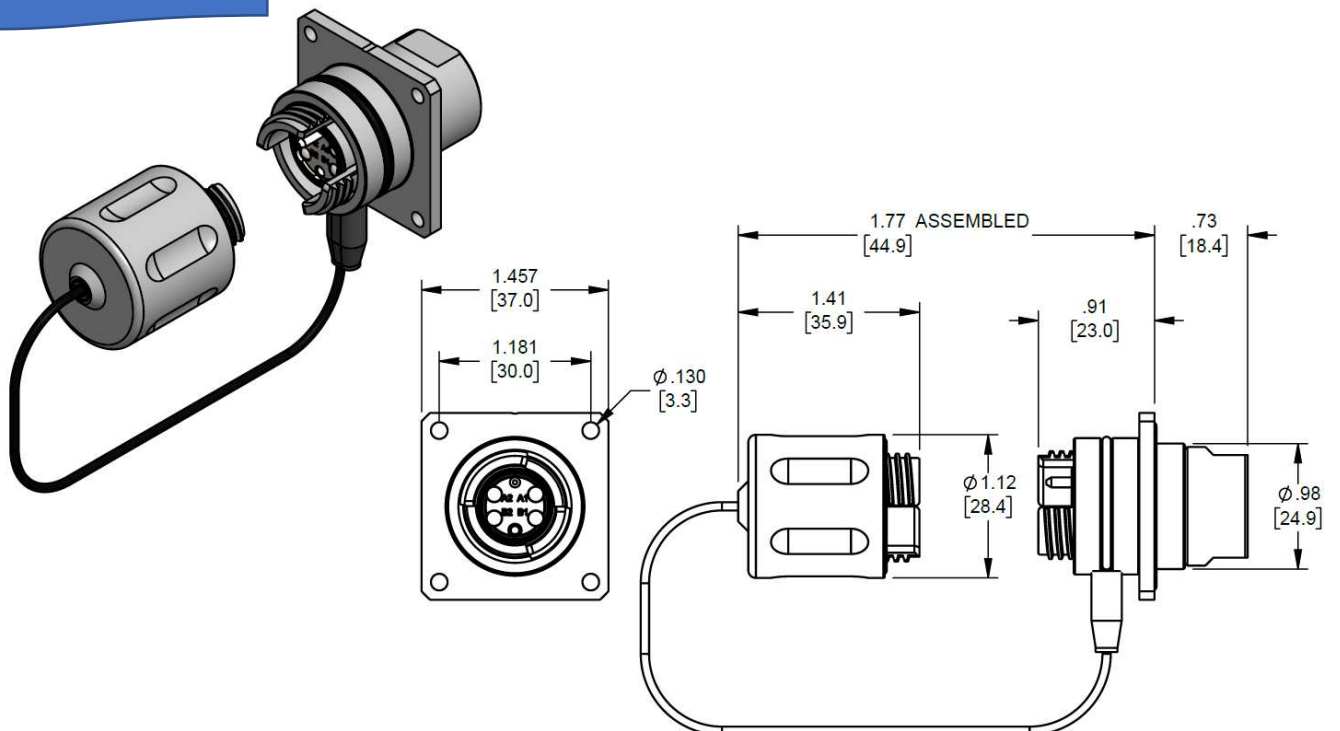
QMini Receptacle, Flange Mount, Composite Dustcover:

QMINI-RFHX-XXXX-S0X



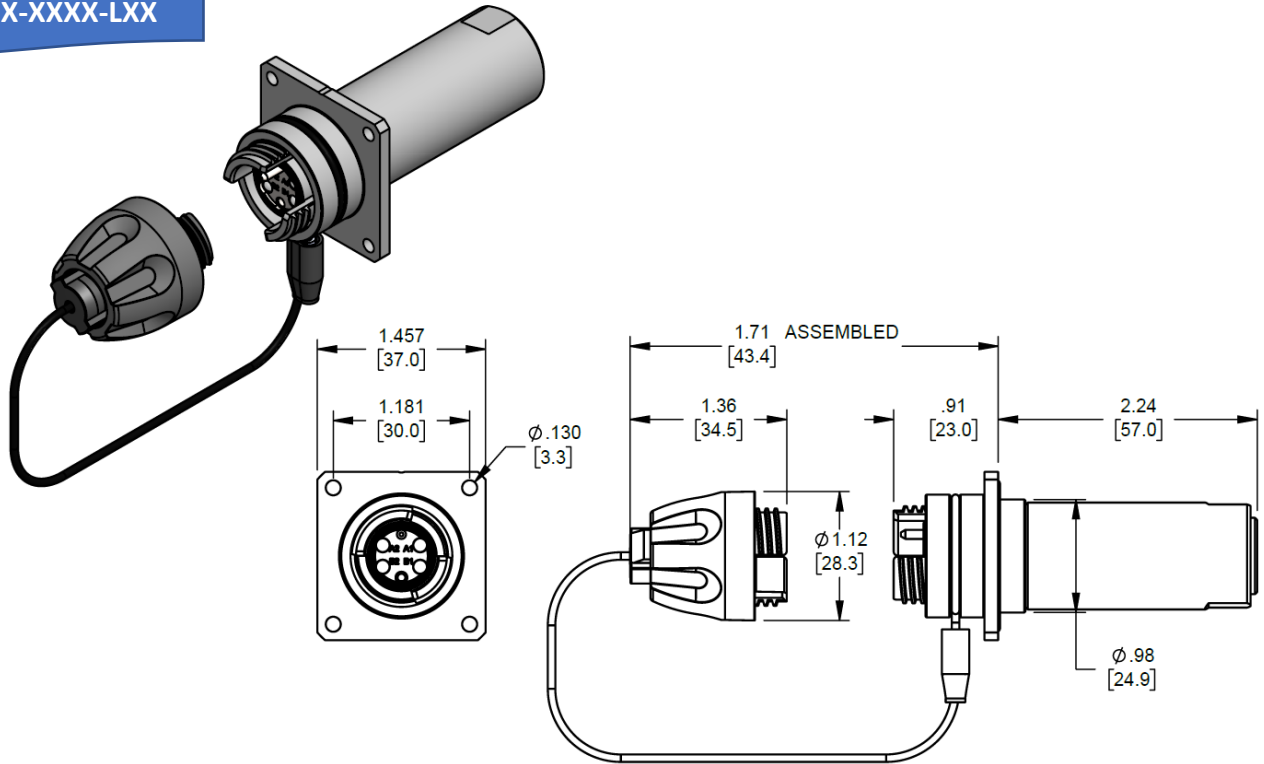
QMini Receptacle, Flange Mount, Metal Dustcover:

QMINI-RFEX-XXXX-S0X



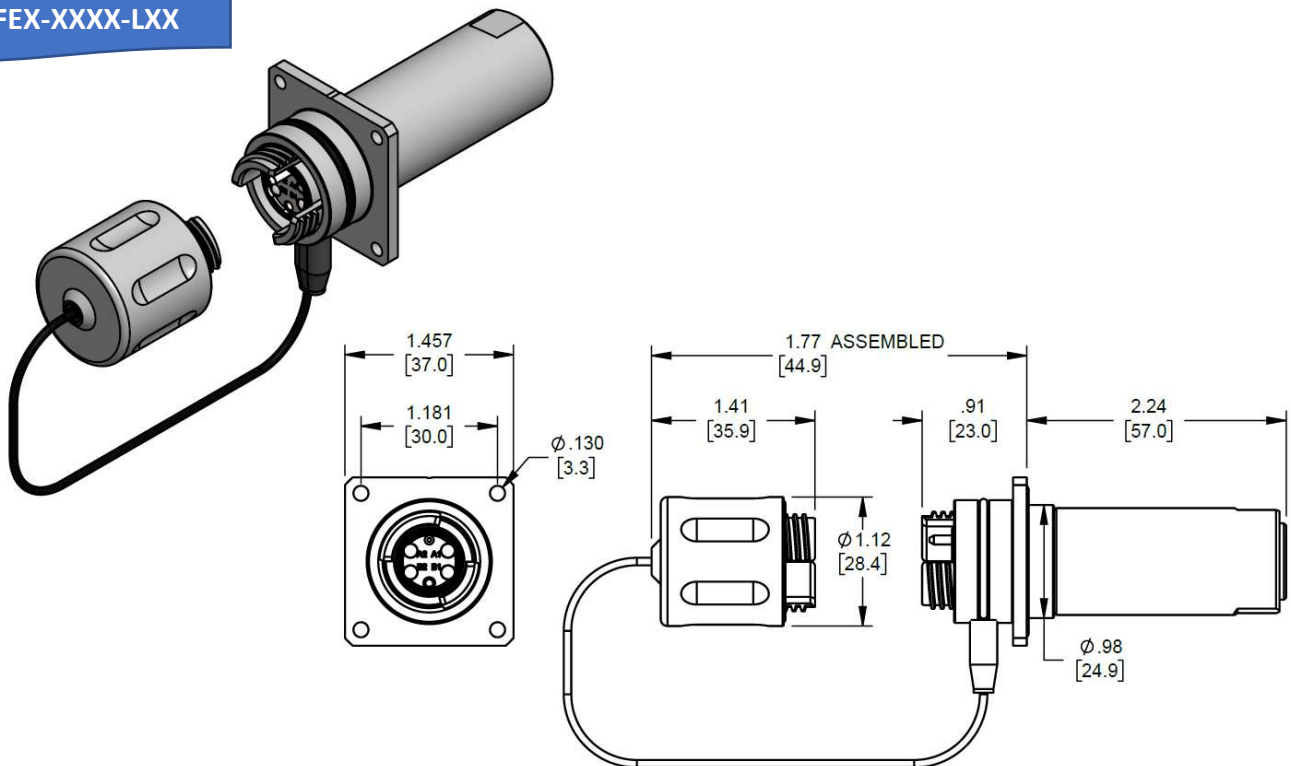
QMini Receptacle, Flange Mount, Low Profile Backshell, Composite Dustcover:

QMINI-RFHX-XXXX-LXX



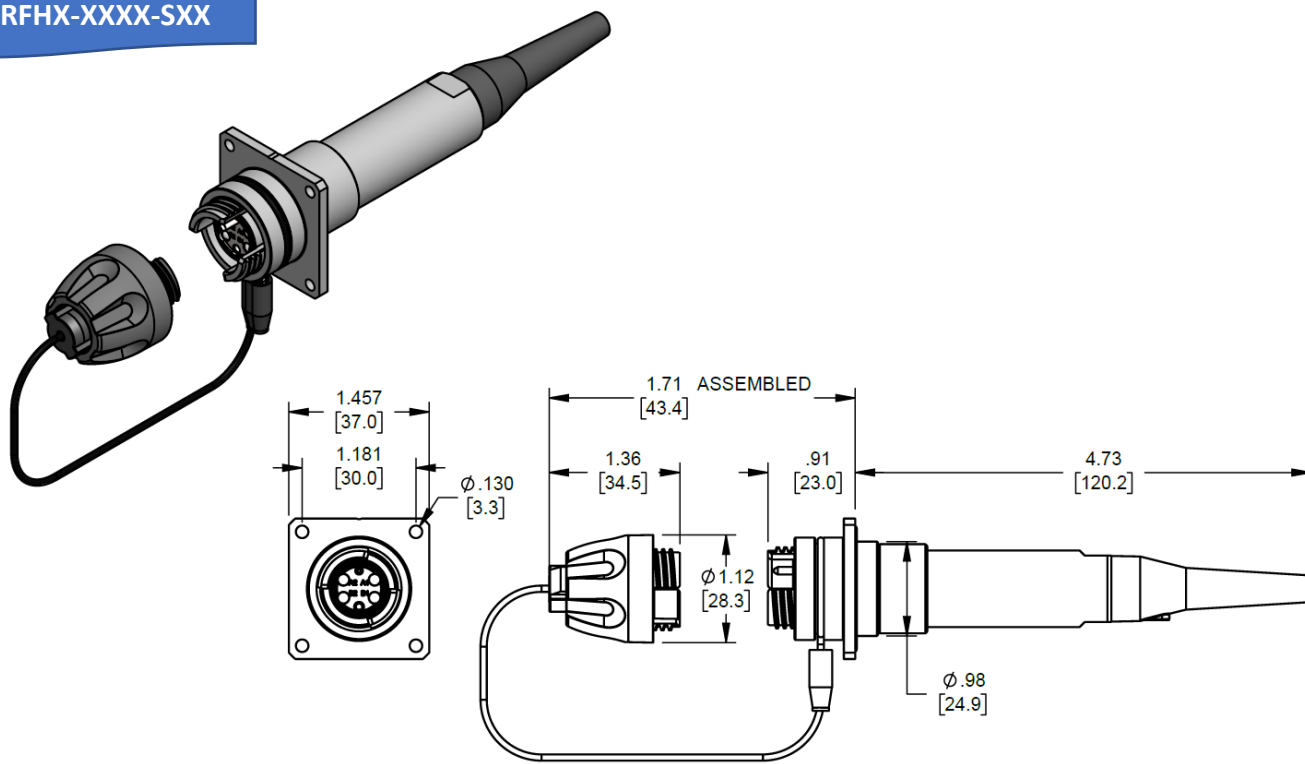
QMini Receptacle, Flange Mount, Low Profile Backshell, Metal Dustcover:

QMINI-RFEX-XXXX-LXX



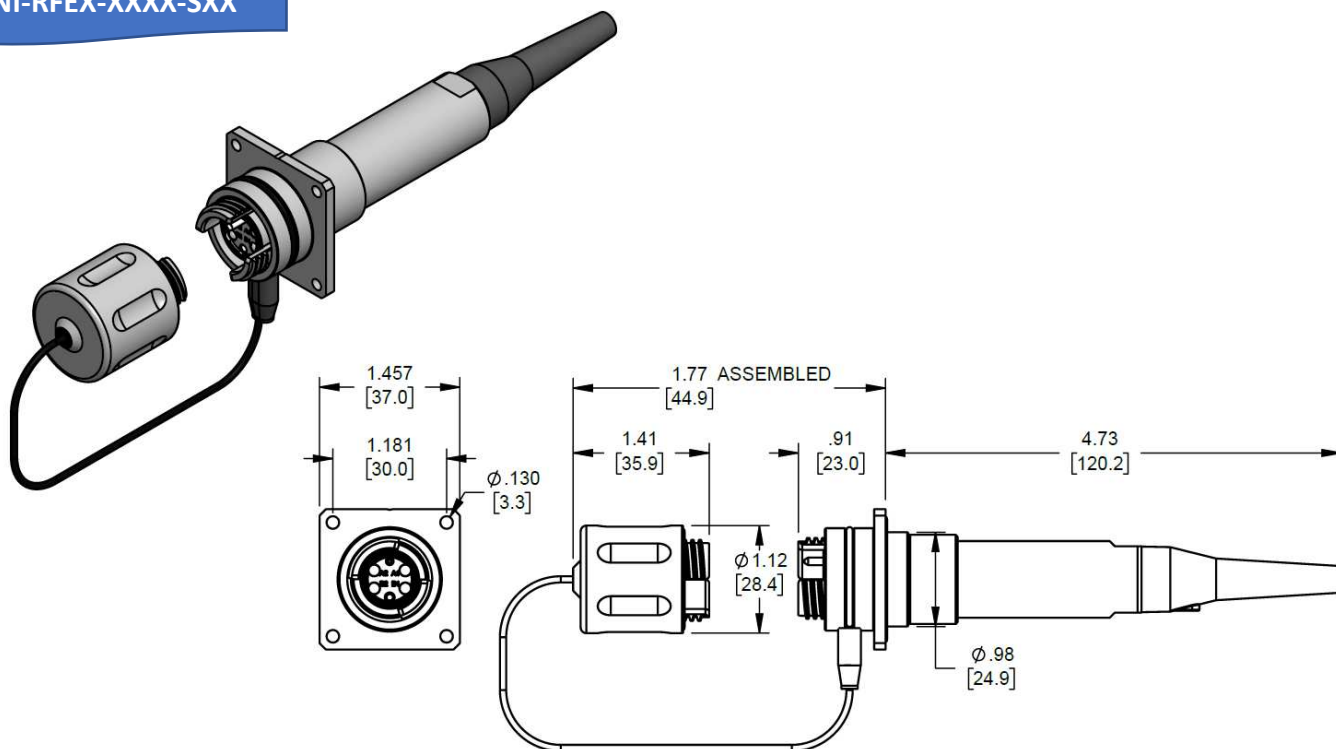
QMini Receptacle, Flange Mount, Backshell, Composite Dustcover:

QMINI-RFHX-XXXX-SXX



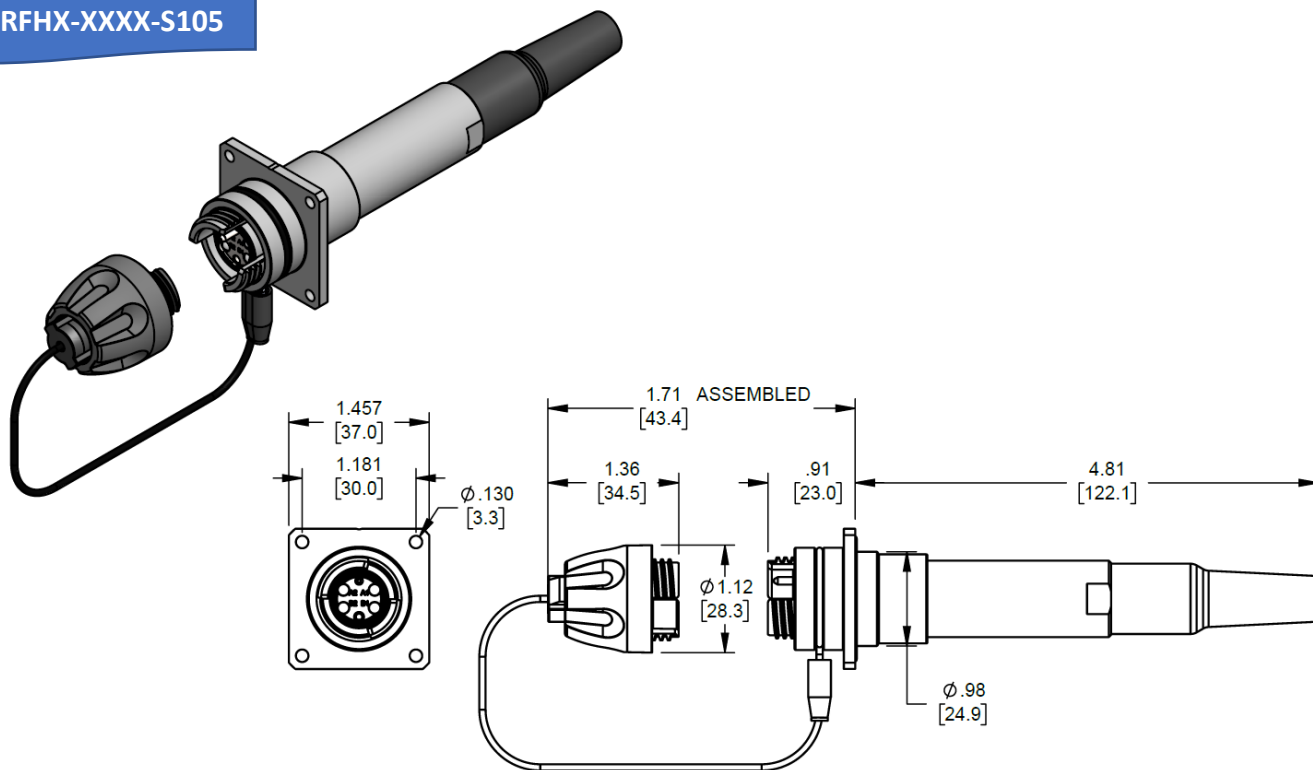
QMini Receptacle, Flange Mount, Backshell, Metal Dustcover:

QMINI-RFEX-XXXX-SXX



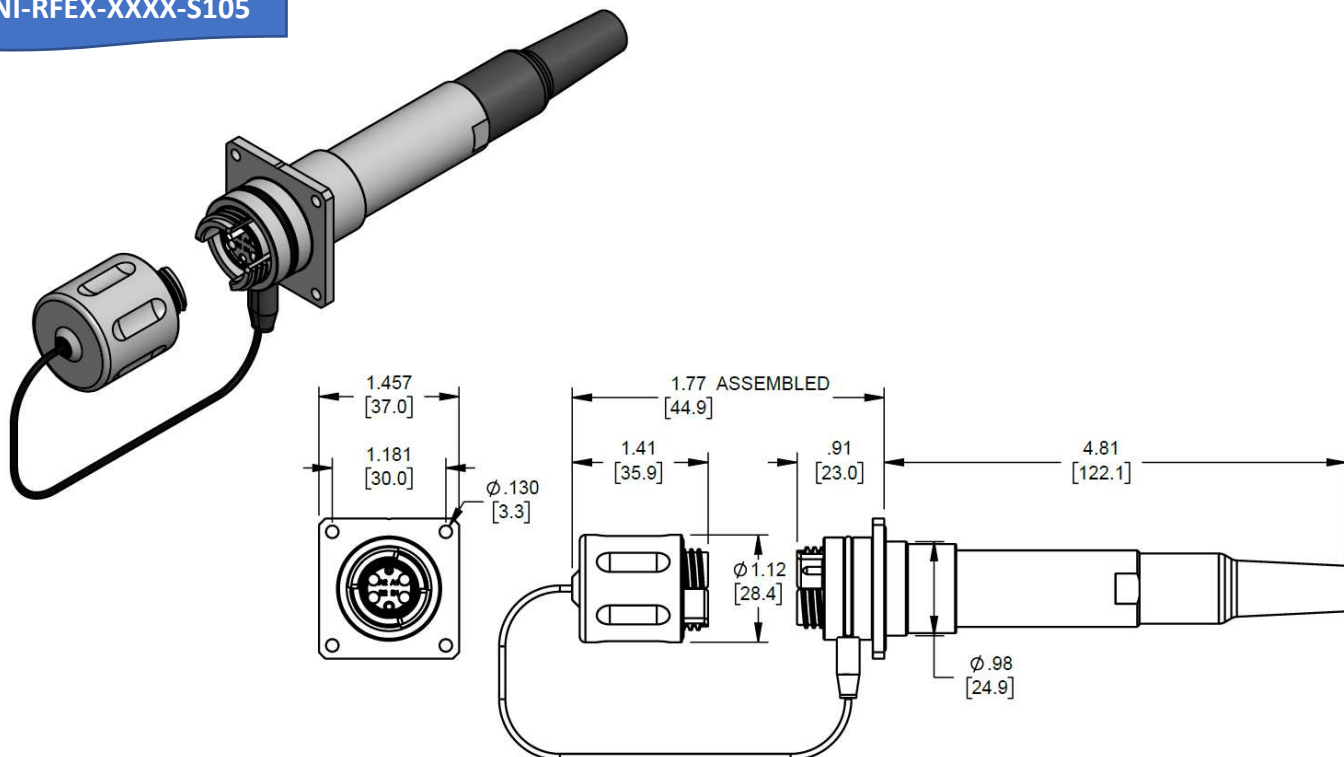
QMini Receptacle, Flange Mount, 10.5mm Heat Shrink Strain Relief, Composite Dustcover:

QMINI-RFHX-XXXX-S105



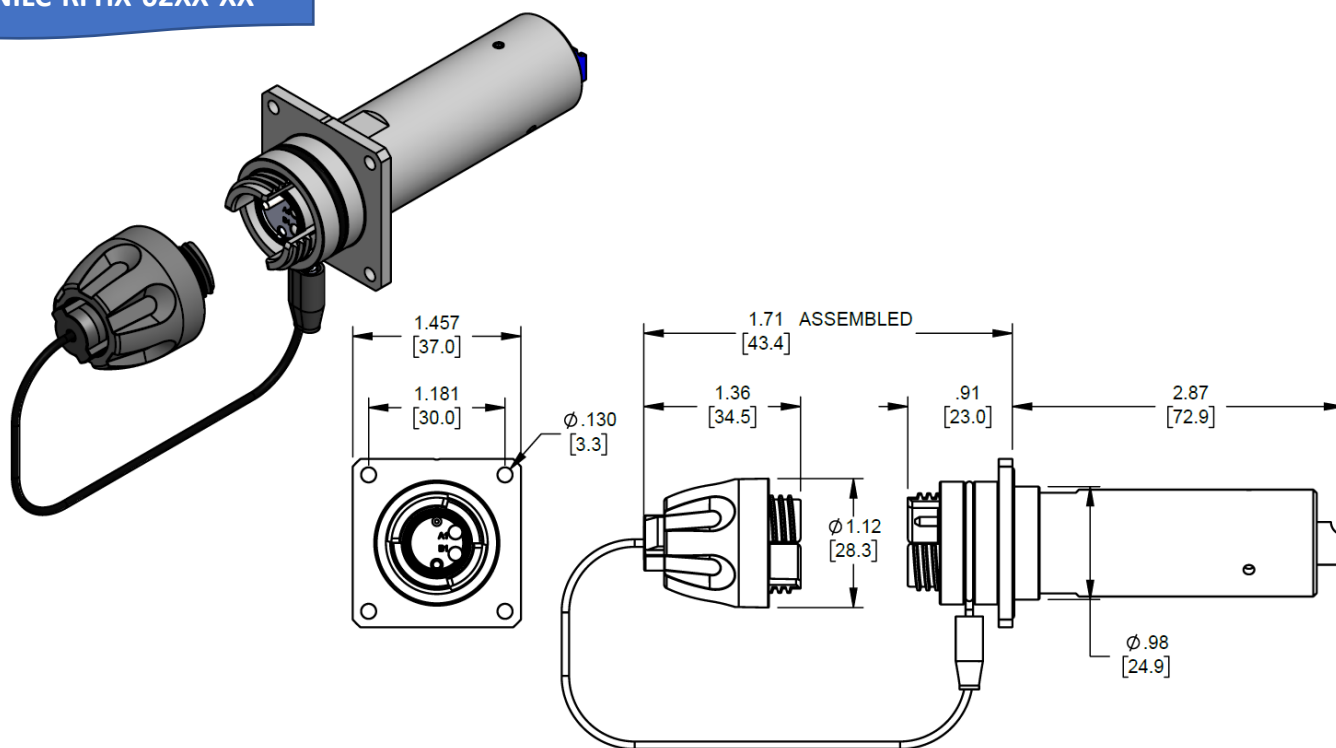
QMini Receptacle, Flange Mount, 10.5mm Heat Shrink Strain Relief, Metal Dustcover:

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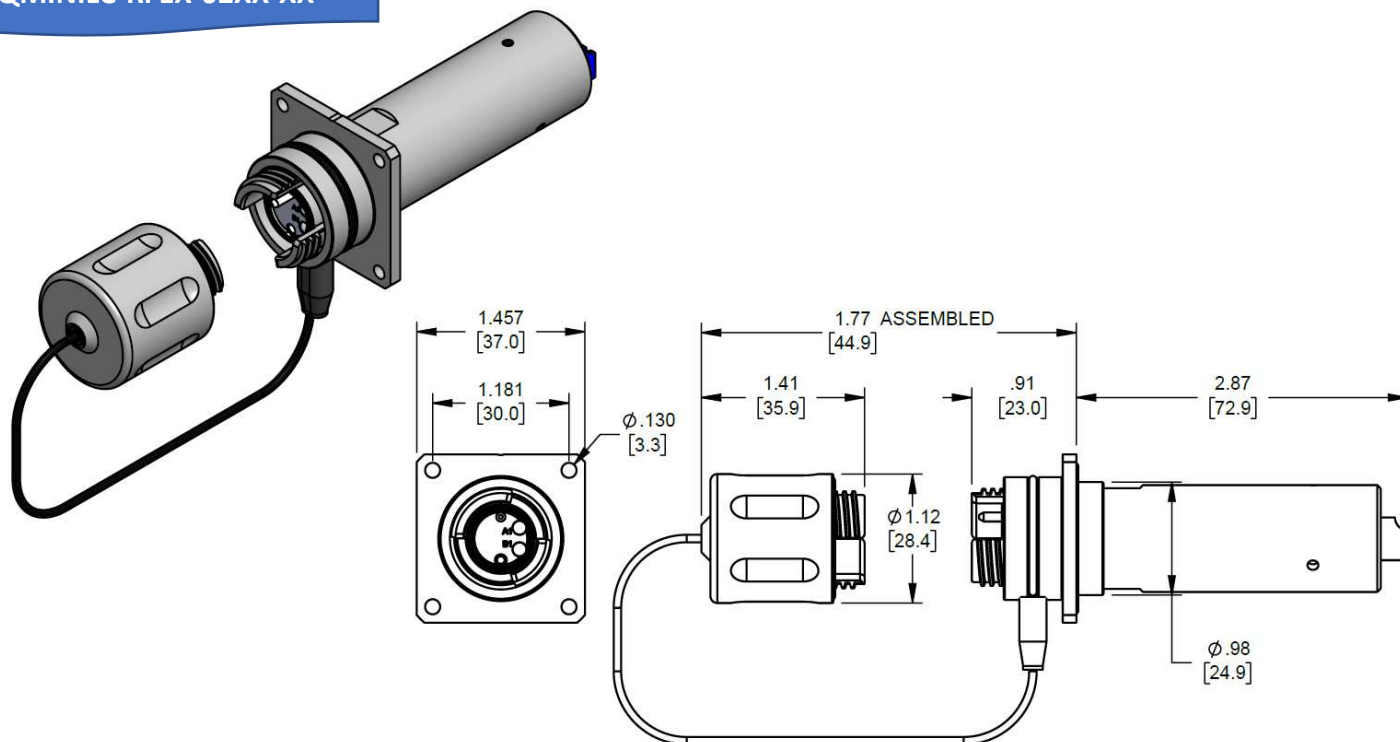
QMini LC Adapter, Flange Mount, 2CH, Composite Dustcover:

QMINILC-RFHX-02XX-XX



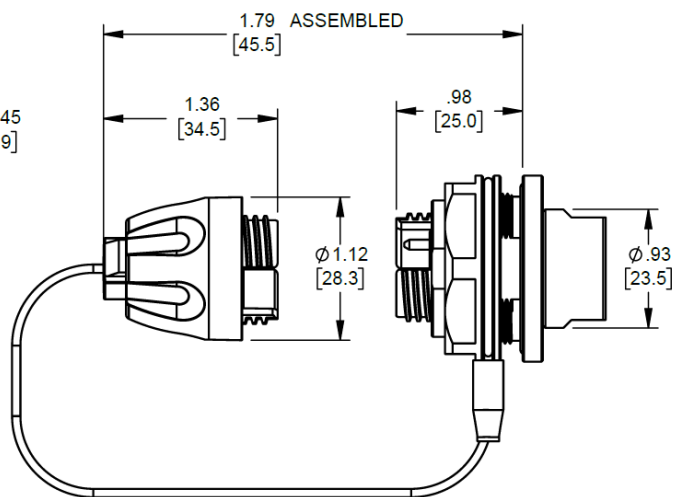
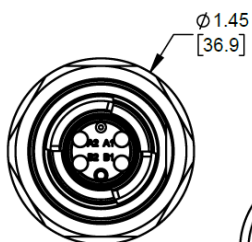
QMini LC Adapter, Flange Mount, 2CH, Metal Dustcover:

QMINILC-RFEX-02XX-XX



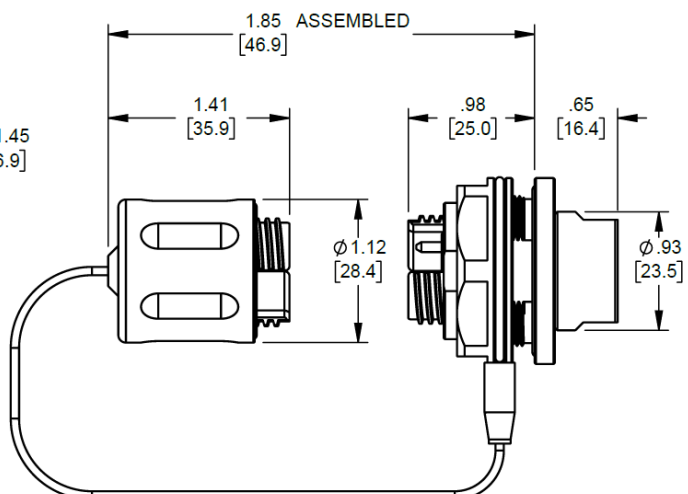
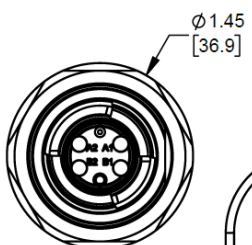
QMini Receptacle, Jam Nut, Composite Dustcover:

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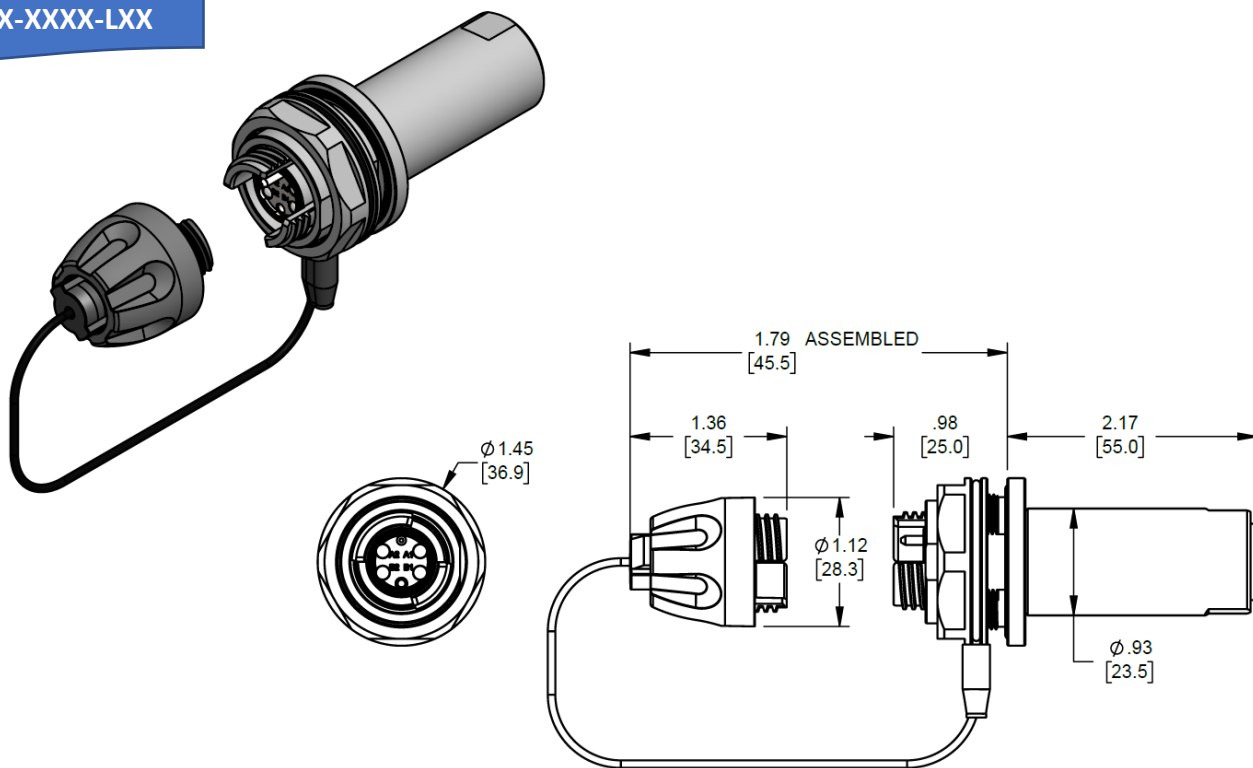
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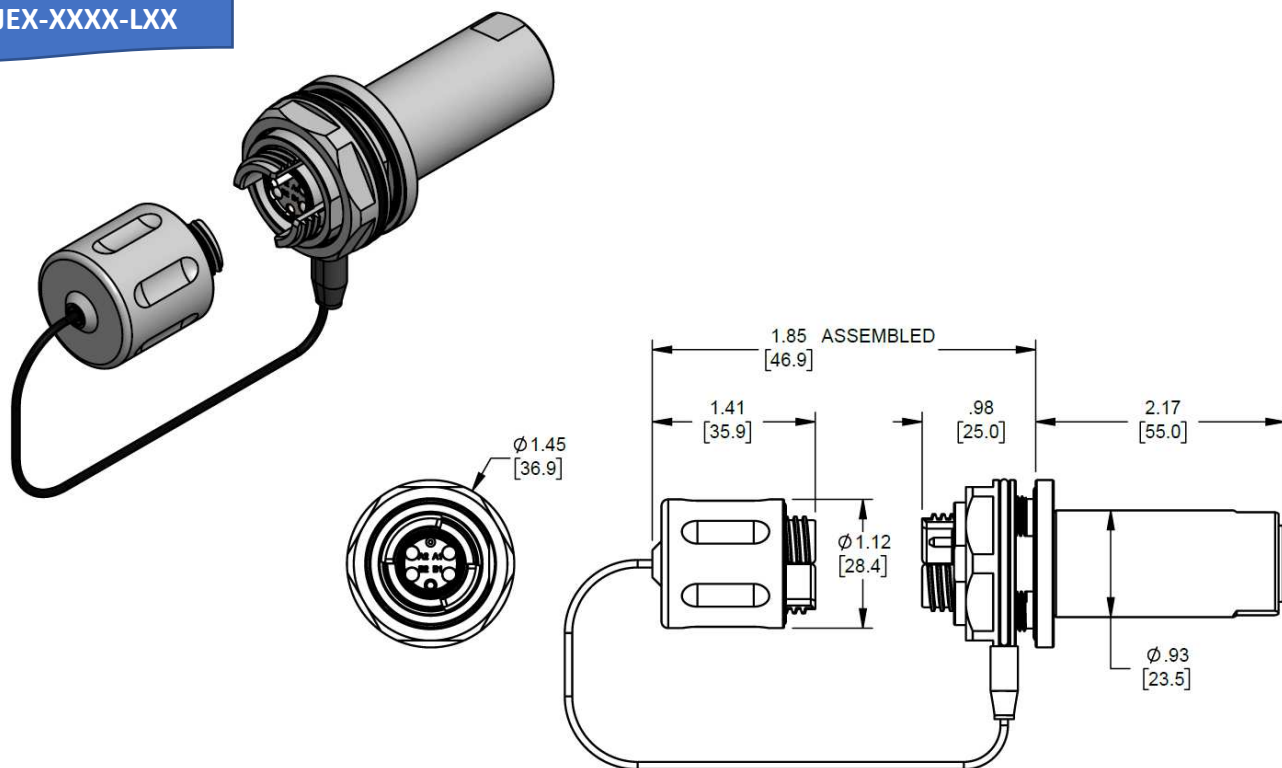
QMini Receptacle, Jam Nut, Low Profile Backshell, Composite Dustcover:

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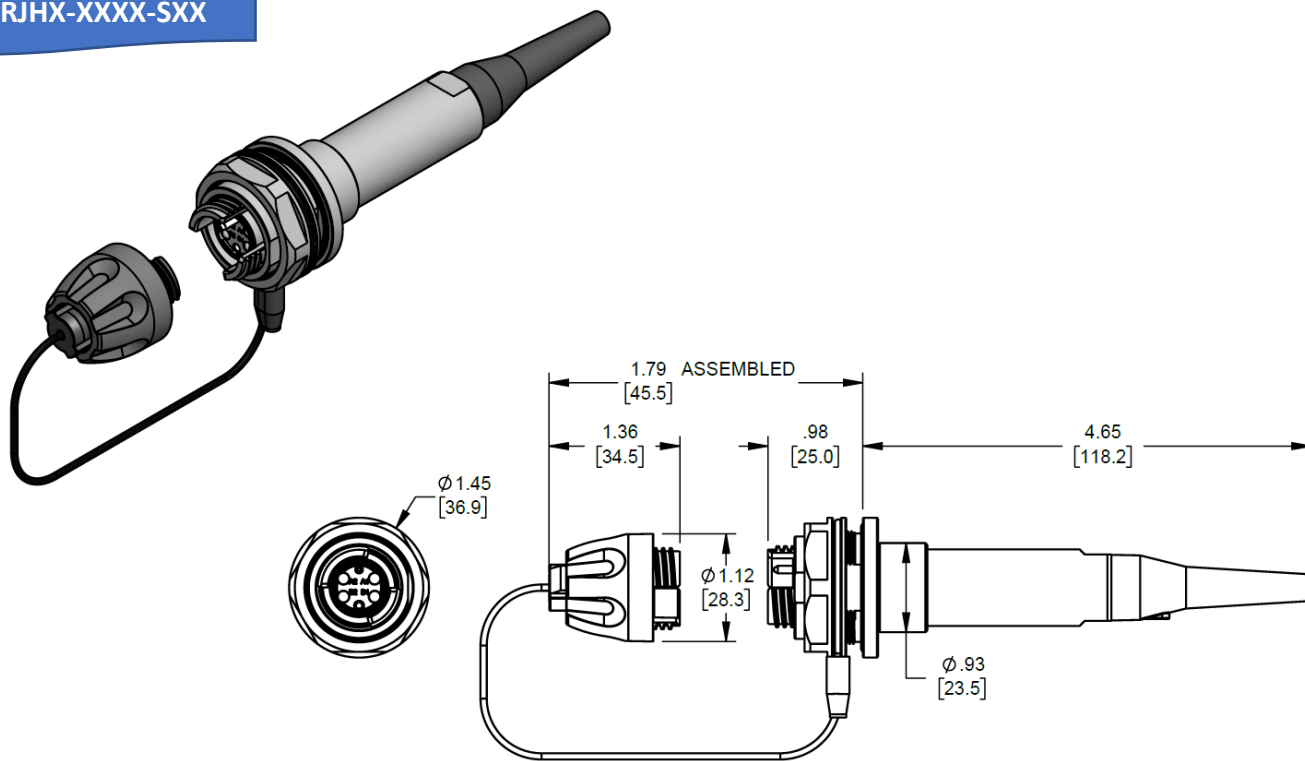
QMini Receptacle, Jam Nut, Low Profile Backshell, Metal Dustcover:

QMINI-RJEX-XXXX-LXX



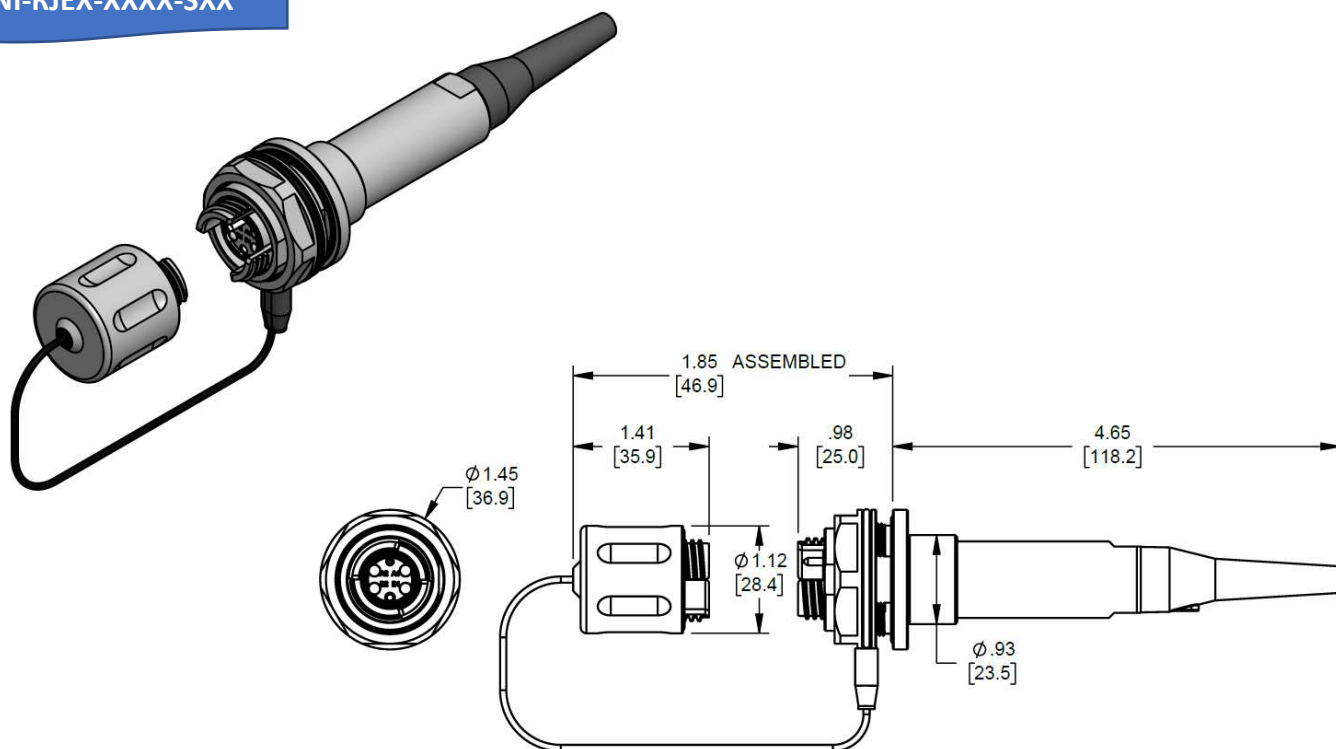
QMini Receptacle, Jam Nut, Backshell, Composite Dustcover:

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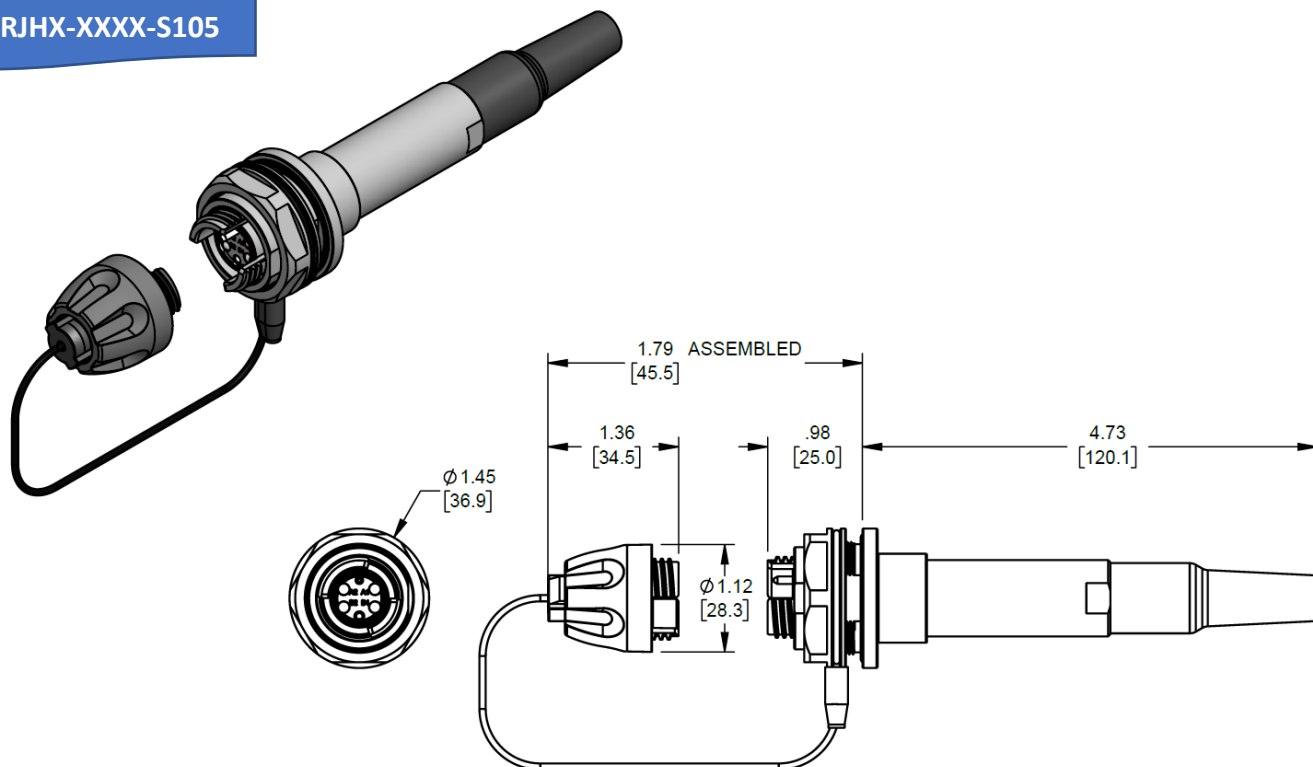
QMini Receptacle, Jam Nut, Backshell, Metal Dustcover:

QMINI-RJEX-XXXX-SXX



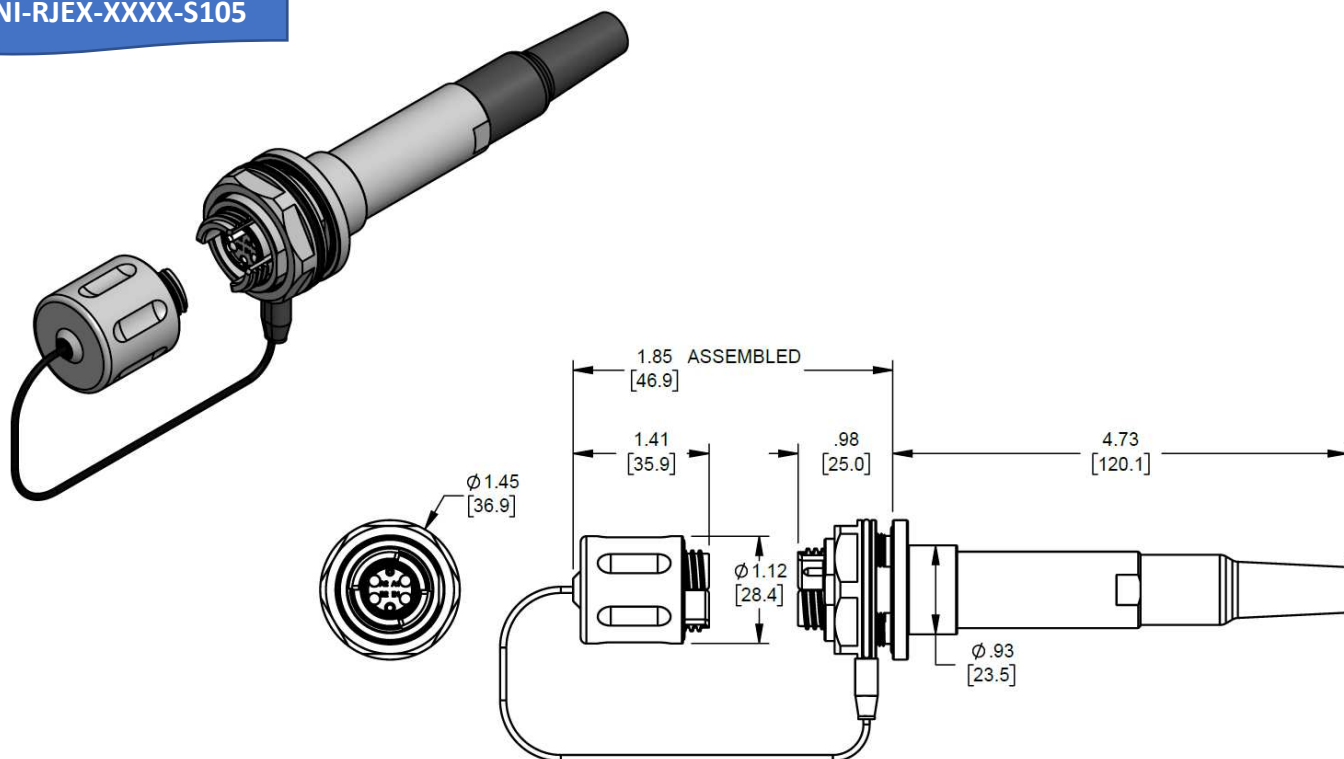
QMini Receptacle, Jam Nut, 10.5mm Heat Shrink Strain Relief, Composite Dustcover:

QMINI-RJHX-XXXX-S105



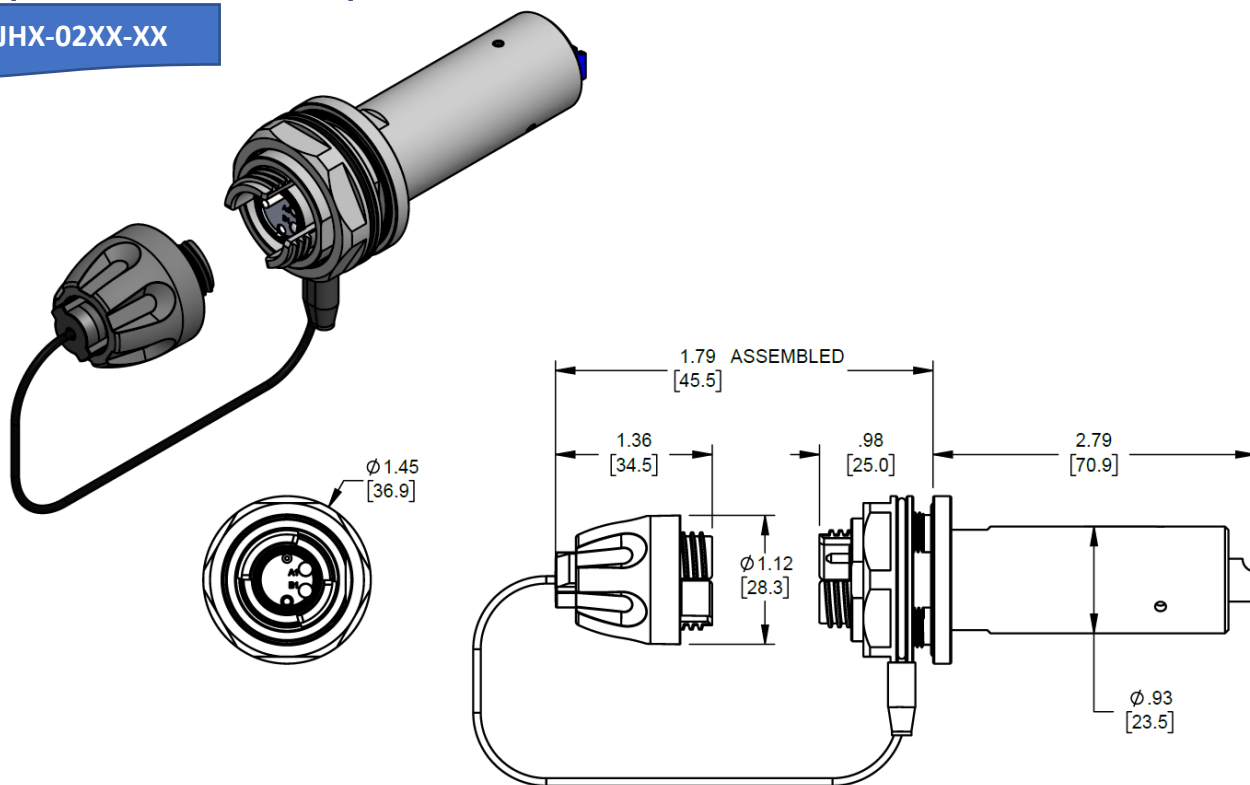
QMini Receptacle, Jam Nut, 10.5mm Heat Shrink Strain Relief, Metal Dustcover:

QMINI-RJEX-XXXX-S105



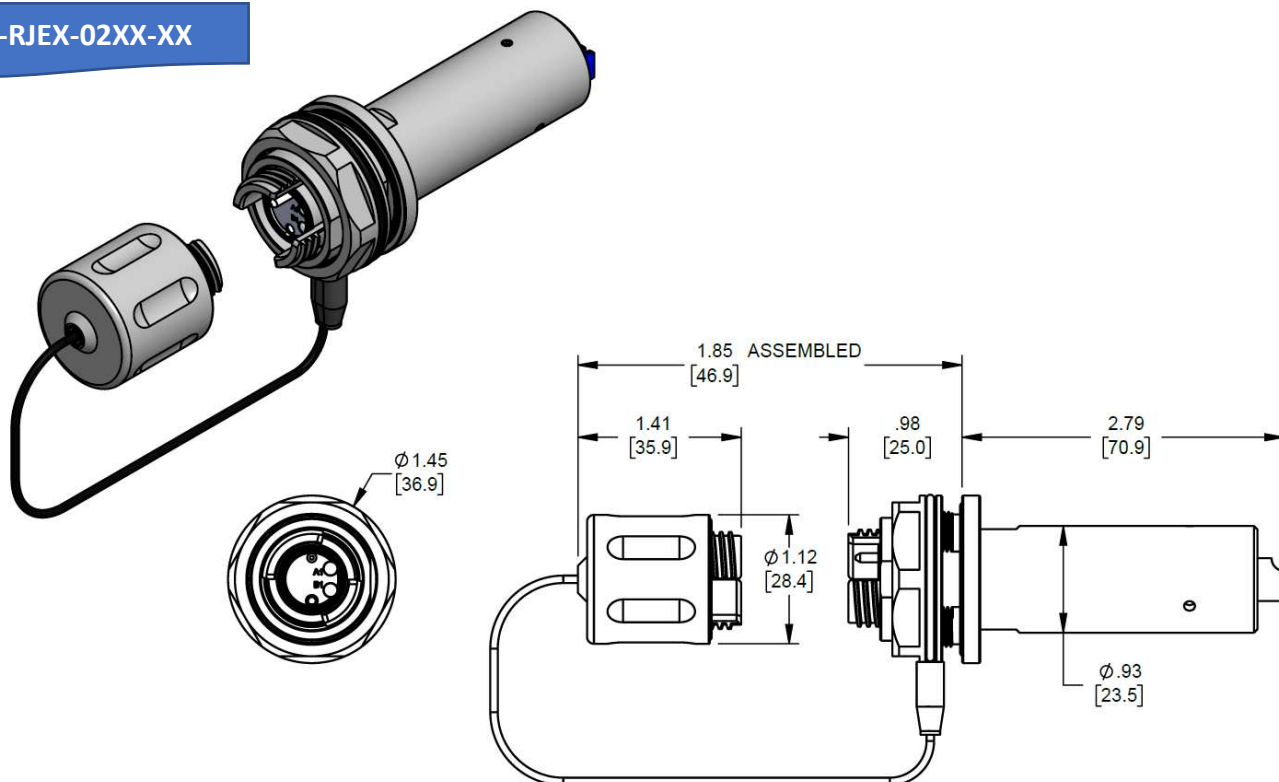
QMini LC Adapter, Jam Nut, 2CH, Composite Dustcover:

QMINILC-RJHX-02XX-XX



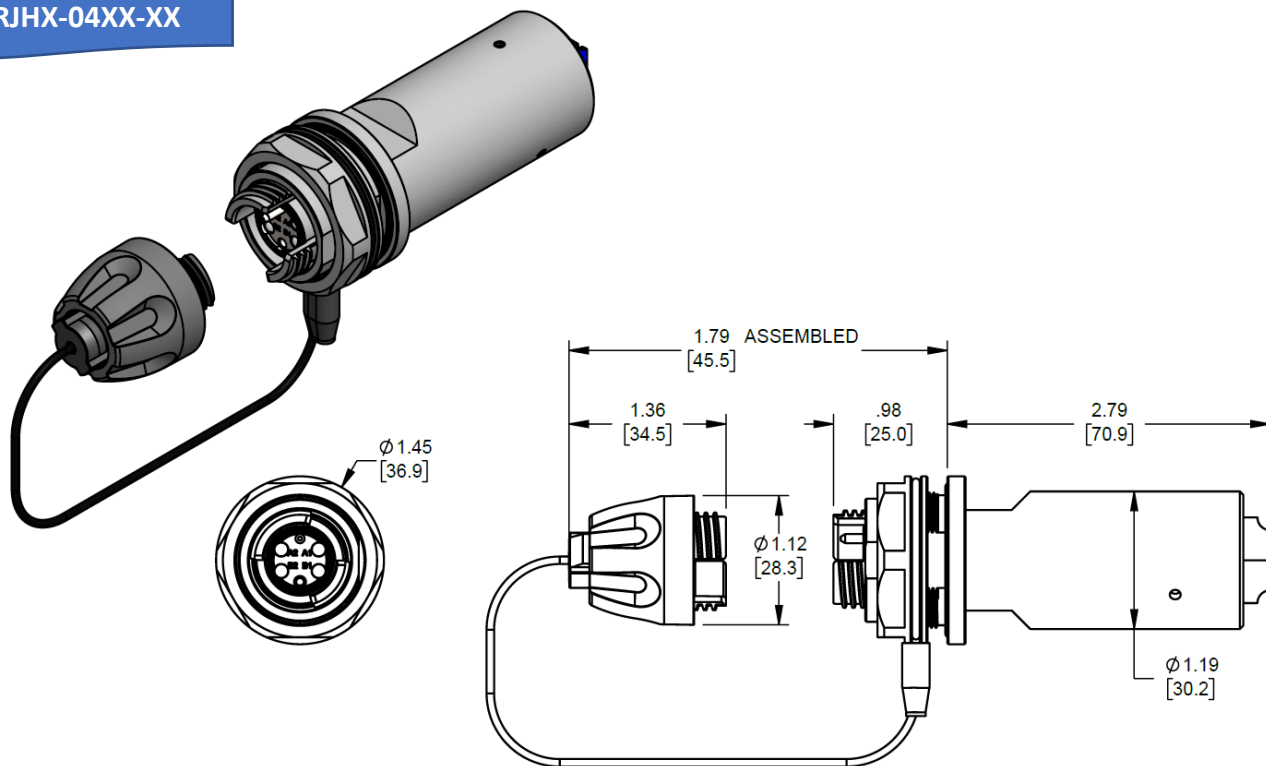
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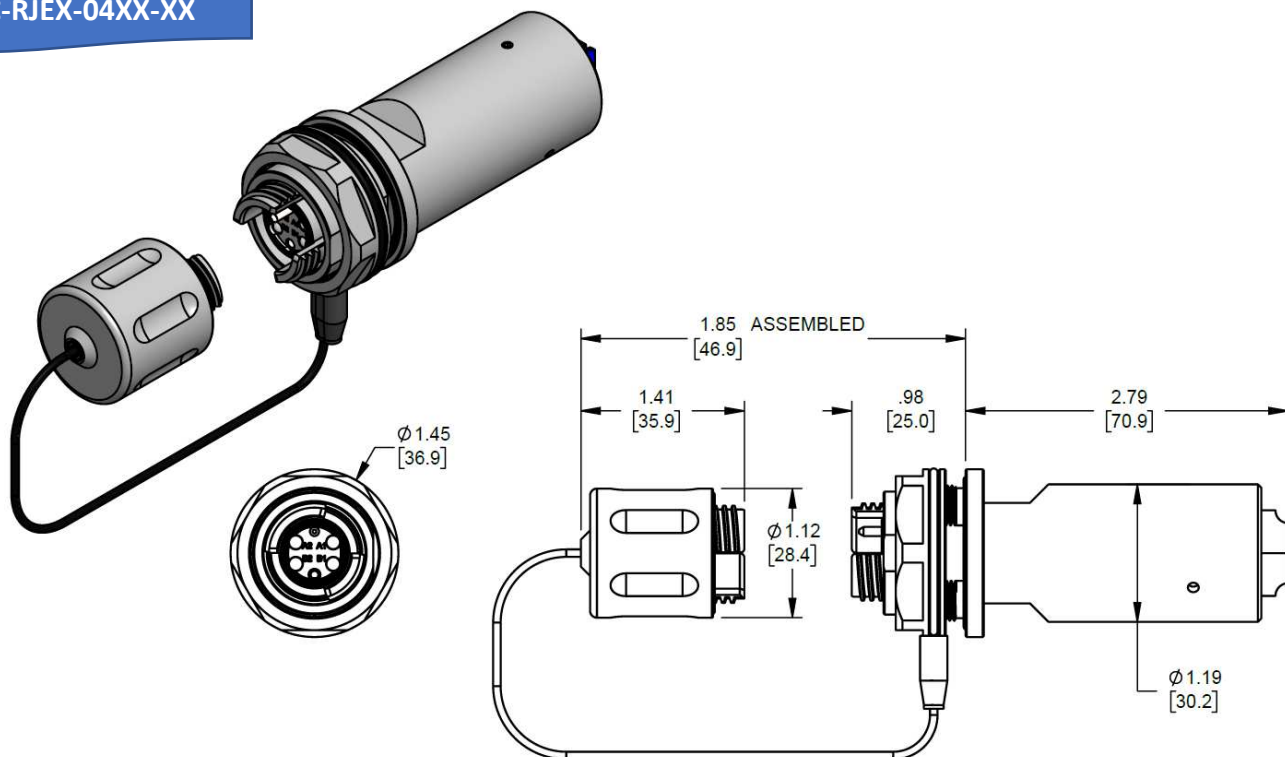
QMini LC Adapter, Jam Nut, 4CH, Composite Dustcover:

QMINILC-RJHX-04XX-XX



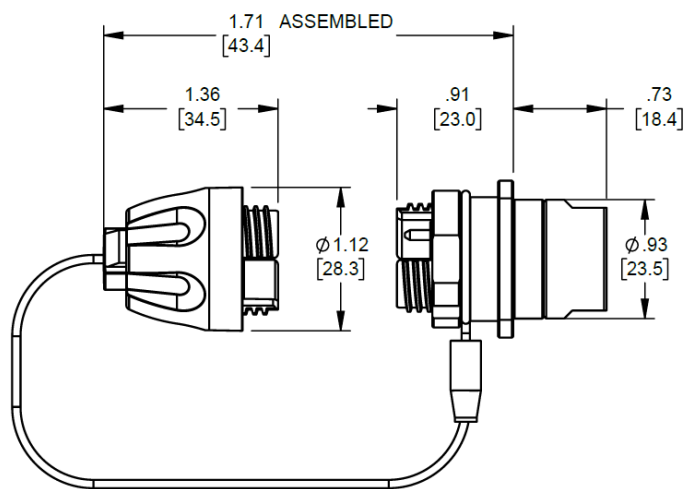
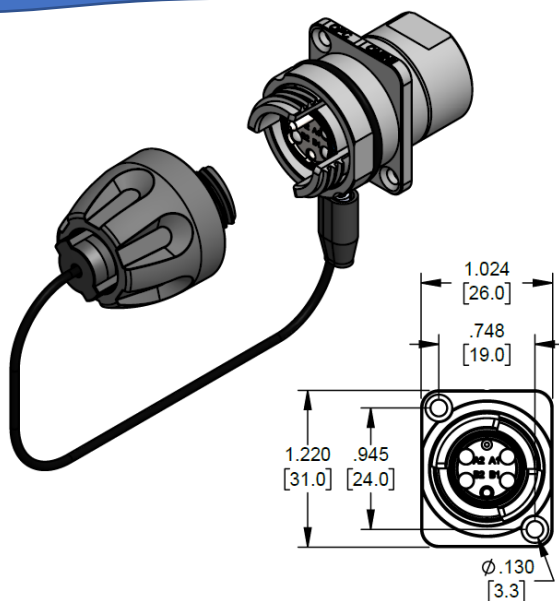
QMini LC Adapter, Jam Nut, 4CH, Metal Dustcover:

QMINILC-RJEX-04XX-XX



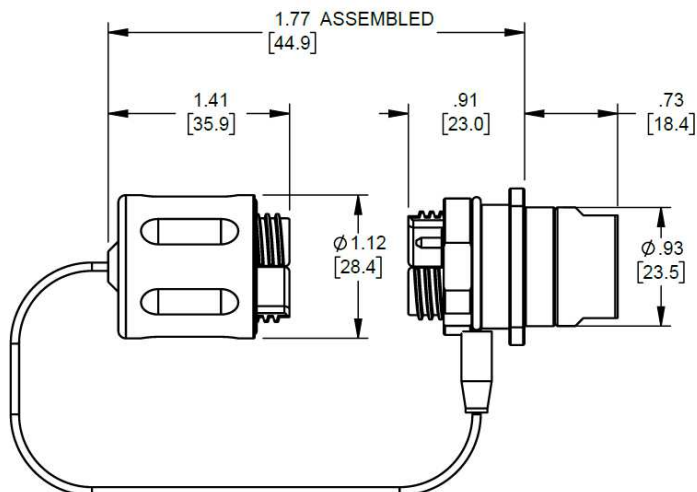
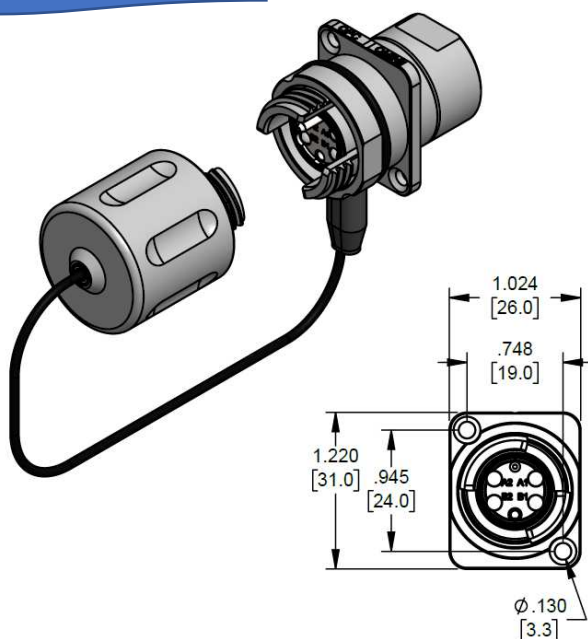
QMini Receptacle, Flange Mount, Rx, Composite Dustcover:

QMINI-RXHX-XXXX-S0X



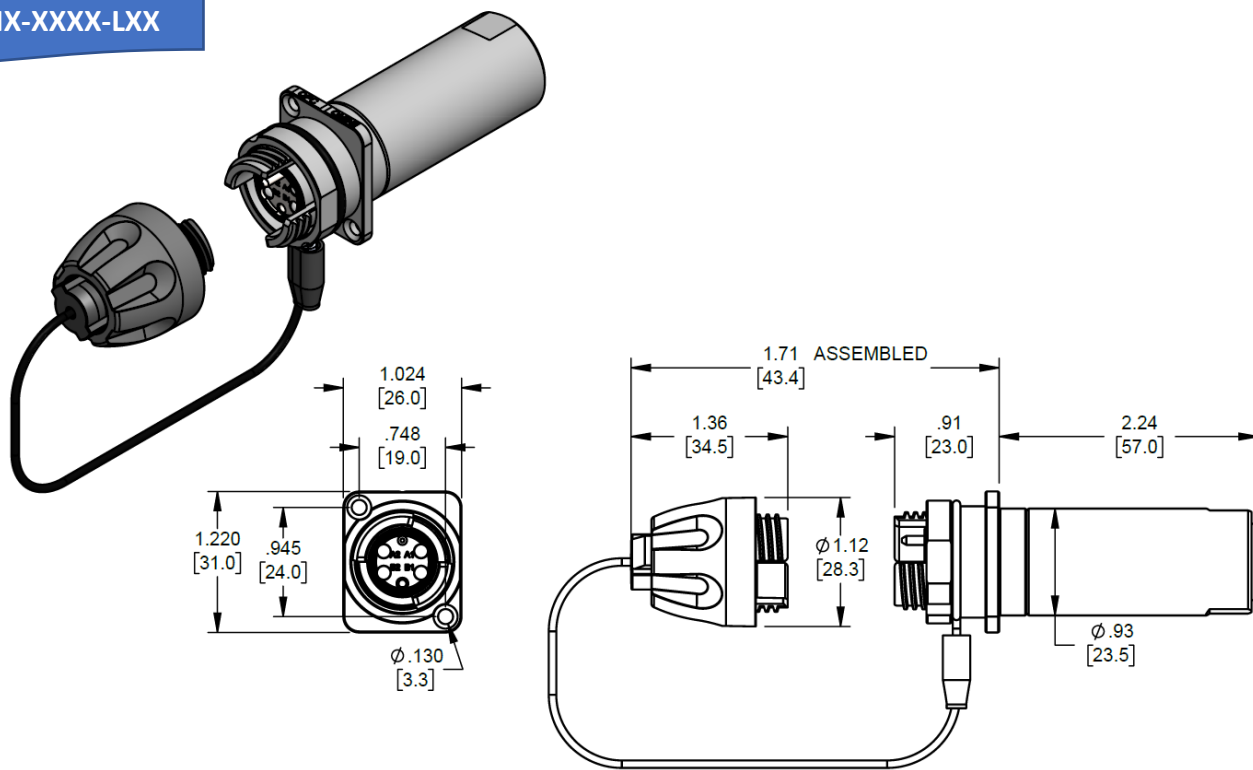
QMini Receptacle, Flange Mount, Rx, Metal Dustcover:

QMINI-RXEX-XXXX-S0X



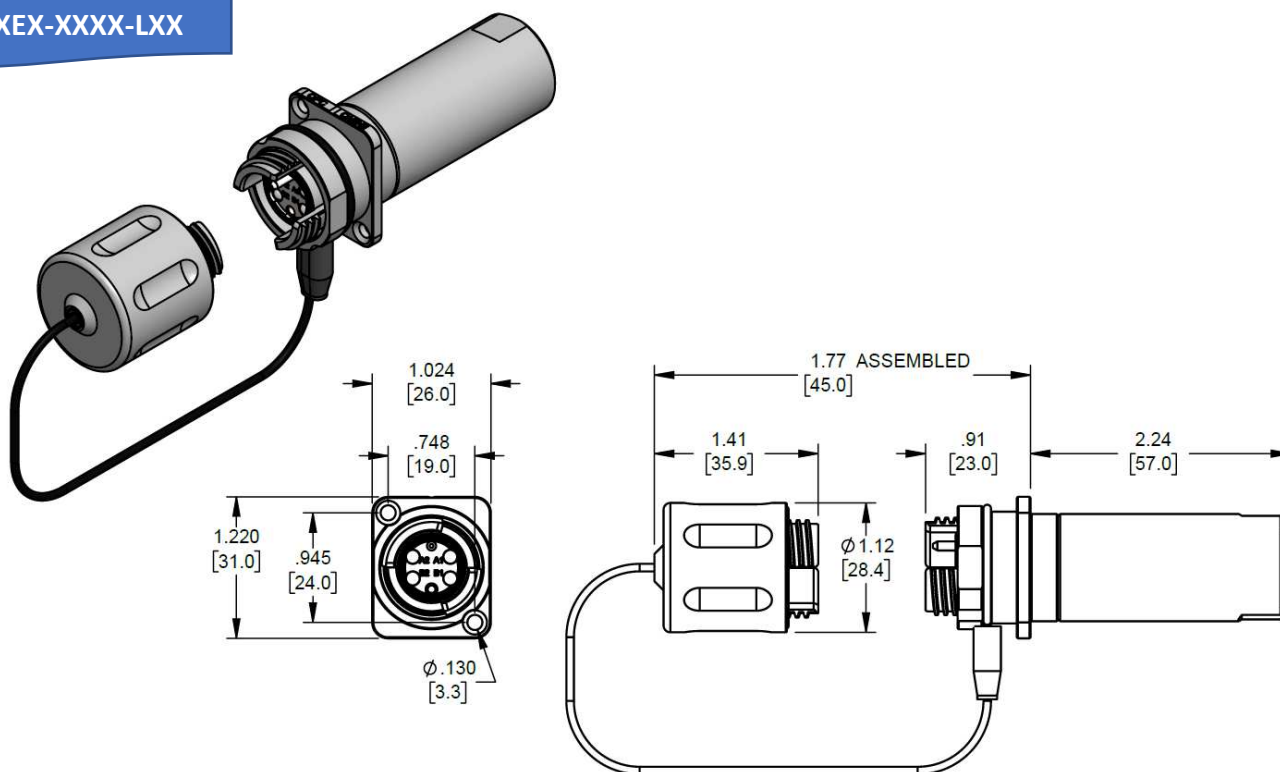
QMini Receptacle, Flange Mount, Rx, Low Profile Backshell, Composite Dustcover:

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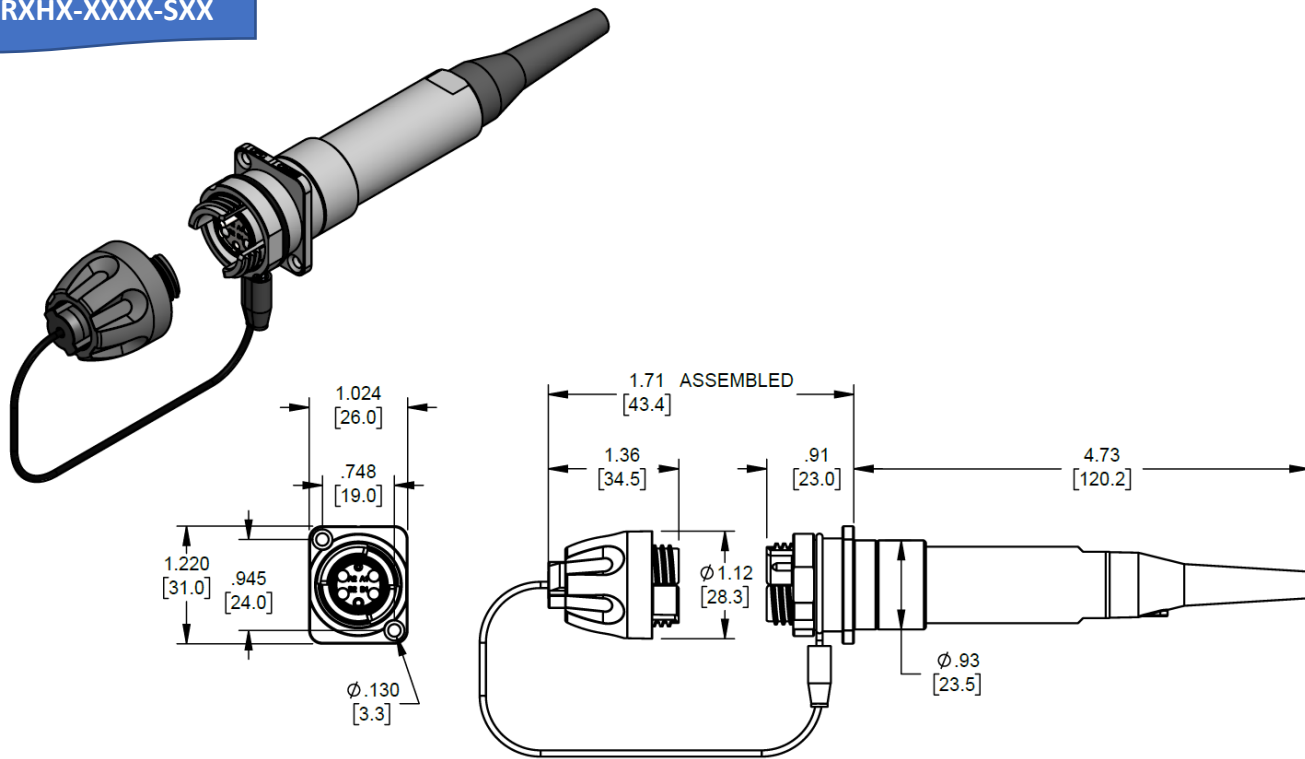
QMini Receptacle, Flange Mount, Rx, Low Profile Backshell, Metal Dustcover:

QMINI-RXEX-XXXX-LXX



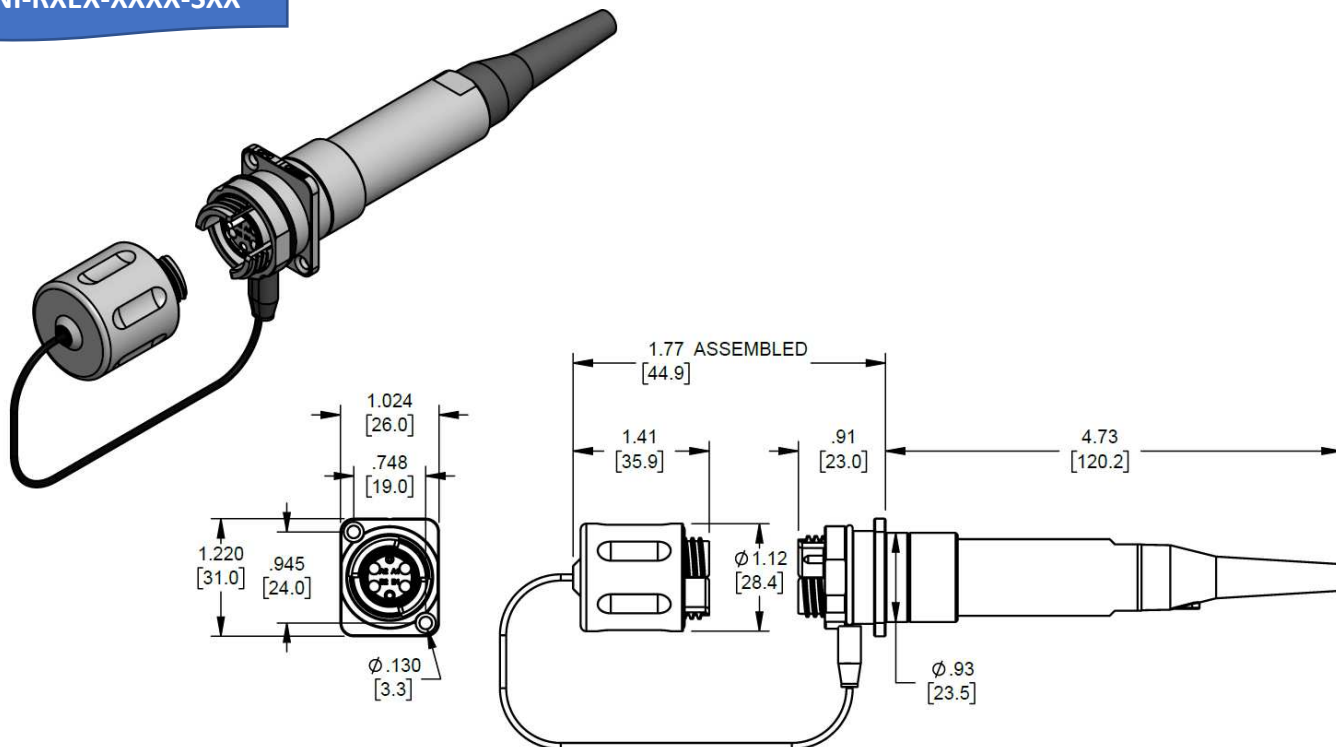
QMini Receptacle, Flange Mount, Rx, Backshell, Composite Dustcover:

QMINI-RXHX-XXXX-SXX



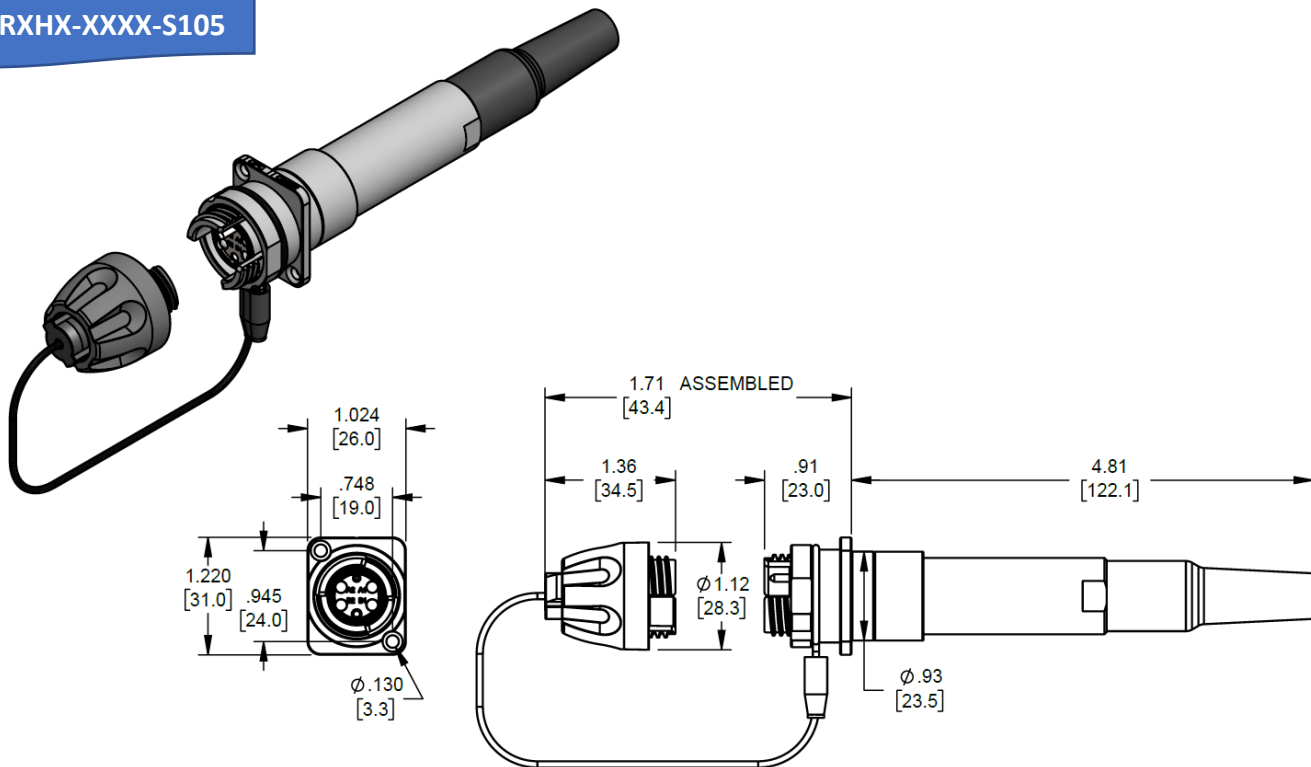
QMini Receptacle, Flange Mount, Rx, Backshell, Metal Dustcover:

QMINI-RXEX-XXXX-SXX



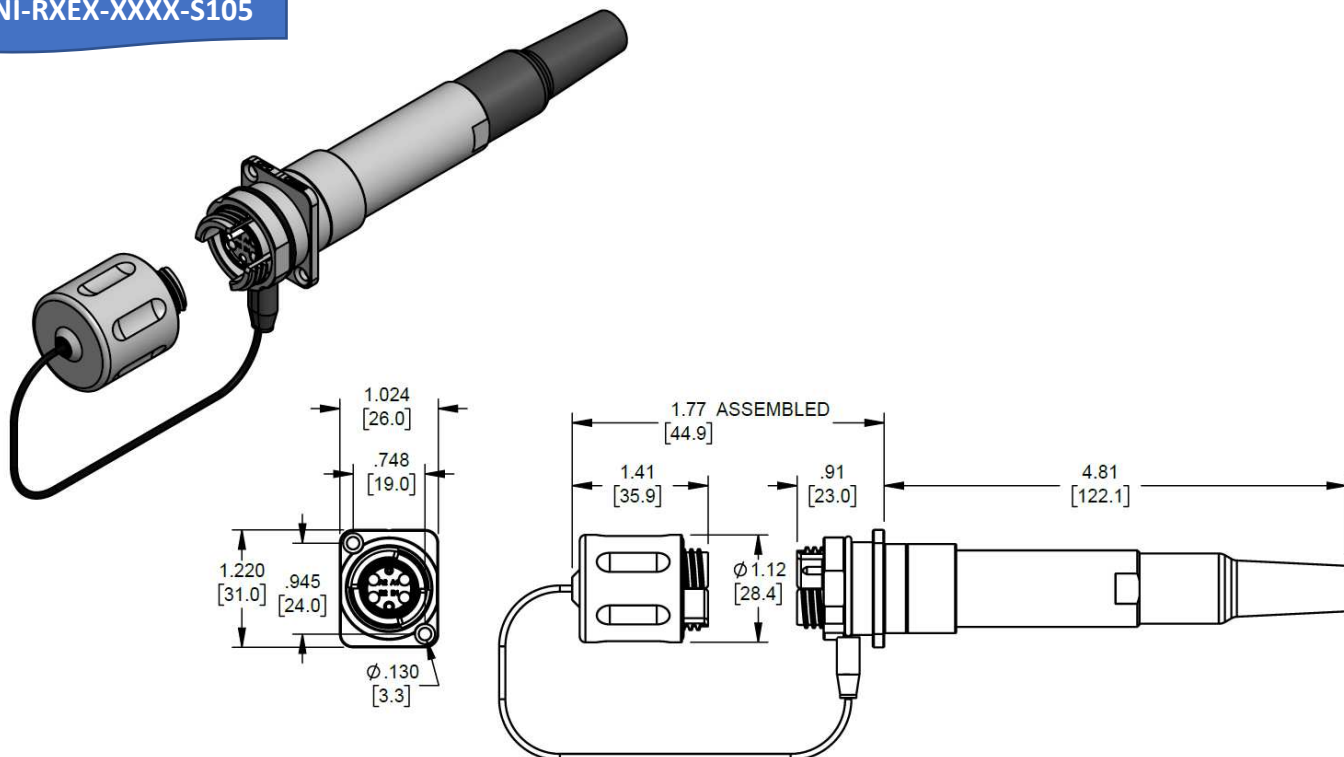
QMini Receptacle, Flange Mount, Rx, 10.5mm Heat Shrink Strain Relief, Composite Dustcover:

QMINI-RXHX-XXXX-S105



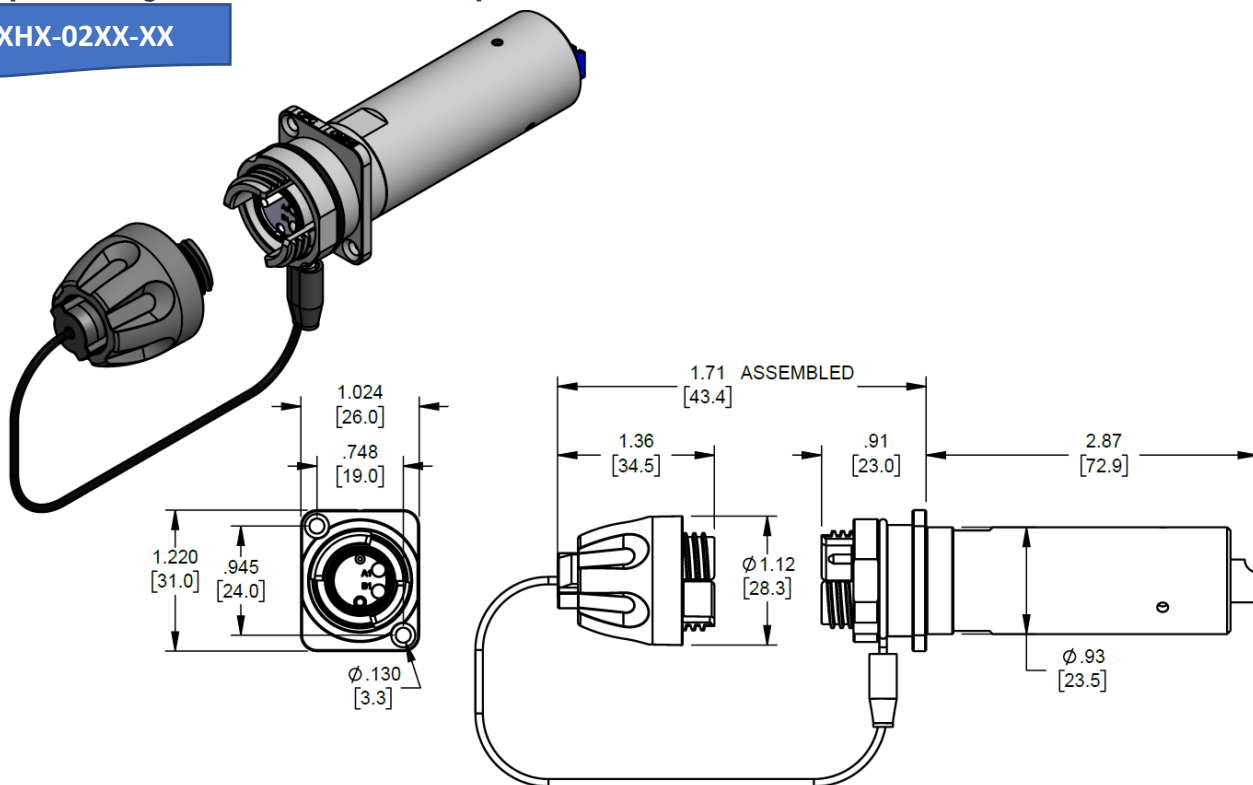
QMini Receptacle, Flange Mount, Rx, 10.5mm Heat Shrink Strain Relief, Metal Dustcover:

QMINI-RXEX-XXXX-S105



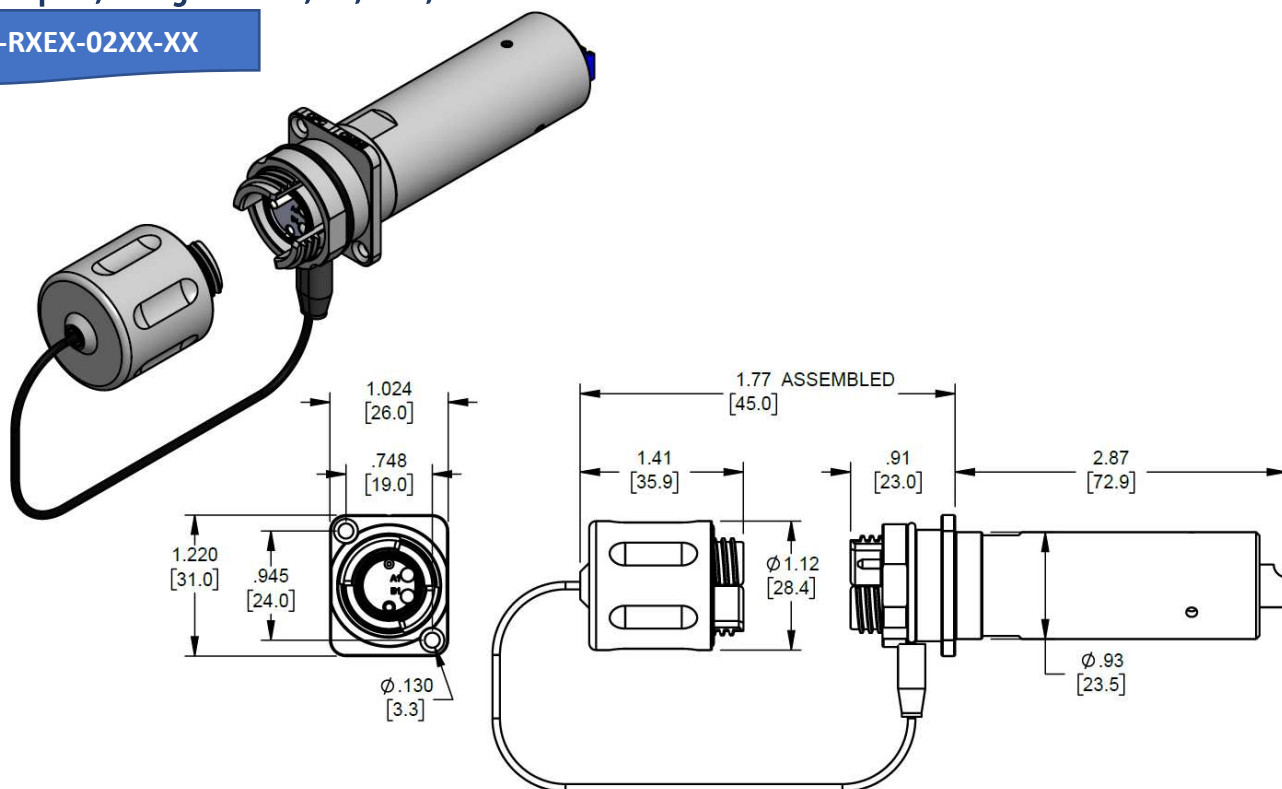
QMini LC Adapter, Flange Mount, Rx, 2CH, Composite Dustcover:

QMINILC-RXHX-02XX-XX

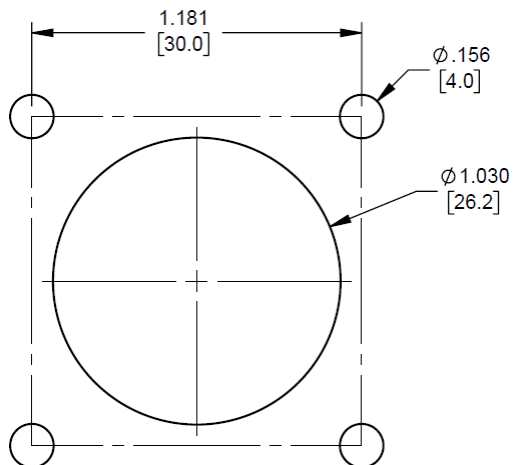


QMini LC Adapter, Flange Mount, Rx, 2CH, Metal Dustcover:

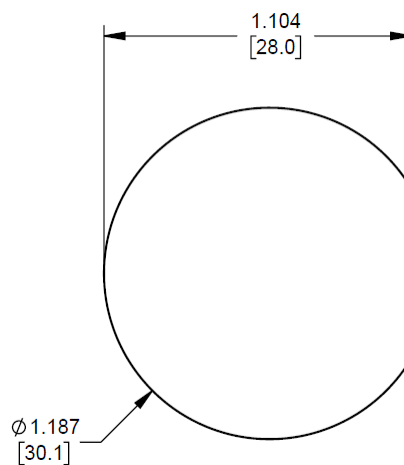
QMINILC-RXEX-02XX-XX



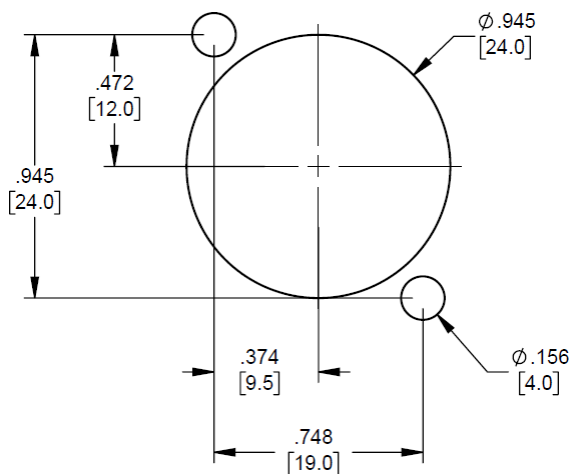
QMini Receptacle & QMini LC Adapter Panel Cutouts:



Flange Mount (RF)

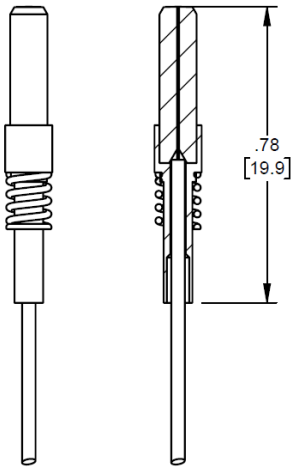


Jam Nut (RJ)

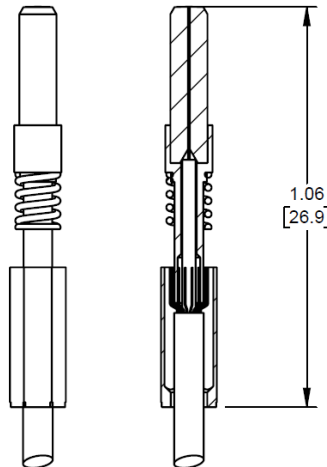


Flange Mount, XLR Compatible (RX)

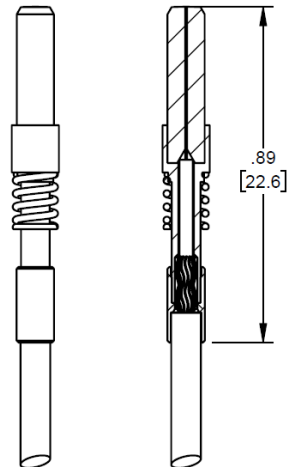
QMini Termini:



QM-TRM
(No Crimp, 900µm Fiber)



QM-TRM & QMINI-CMP-2MM
(With Crimp, 2mm Cable)



QM-TRM-E2
(Epoxy Cup, 2mm Cable)

PART NUMBER	DESCRIPTION
QM-TRM	Terminus Assembly; QMini; 2.5mm Ferrule OD; 126µm Singlemode/Multimode
QM-TRM-E2	Terminus Assembly; QMini; 2.5mm Ferrule OD; 126µm Singlemode/Multimode; Epoxy Cup for 2mm Cable OD
QMINI-CMP-2MM	Crimp Sleeve, 2.0mm, Stainless Steel

* To retain a 2mm jacketed cable or subunit, the QMini Insert can accept Termini with traditional crimps or the E2 Style Epoxy Cup Termini.

QMini Inserts:

PART NUMBER	DESCRIPTION
QMINI-INS-02SM	QMini Insert; 2 Channel; Singlemode (1310/1550nm); Includes Termini Retainer Plate and Screw
QMINI-INS-02MM	QMini Insert; 2 Channel; Multimode (850/1300nm); Includes Termini Retainer Plate and Screw
QMINI-INS-04SM	QMini Insert; 4 Channel; Singlemode (1310/1550nm); Includes Termini Retainer Plate and Screw
QMINI-INS-04MM	QMini Insert; 4 Channel; Multimode (850/1300nm); Includes Termini Retainer Plate and Screw

QMini Dustcovers:

PART NUMBER	DESCRIPTION
QMINI-DCHPP	Dust Cap; QMini; Plug; Composite; Black
QMINI-DCHPN	Dust Cap; QMini; Plug; Alloy; Hard Anodize; Black
QMINI-DCHPS	Dust Cap; QMini; Plug; Alloy; Stainless Steel; Passivated
QMINI-DCHPK	Dust Cap; QMini; Plug; Alloy; Zinc over Nickel; Black
QMINI-DCHPZ	Dust Cap; QMini; Plug; Alloy; Zinc over Nickel; Olive Drab
QMINI-DCHRP	Dust Cap; QMini; Receptacle; Composite; Black
QMINI-DCHRN	Dust Cap; QMini; Receptacle; Alloy; Hard Anodize; Black
QMINI-DCHRS	Dust Cap; QMini; Receptacle; Alloy; Stainless Steel; Passivated
QMINI-DCHRK	Dust Cap; QMini; Receptacle; Alloy; Zinc over Nickel; Black
QMINI-DCHRZ	Dust Cap; QMini; Receptacle; Alloy; Zinc over Nickel; Olive Drab
QMINI90-DCHPP	Dust Cap; QMini; 90° Plug; Composite; Black
QMINI90-DCHPN	Dust Cap; QMini; 90° Plug; Alloy; Hard Anodize; Black
QMINI90-DCHPS	Dust Cap; QMini; 90° Plug; Alloy; Stainless Steel; Passivated
QMINI90-DCHPK	Dust Cap; QMini; 90° Plug; Alloy; Zinc over Nickel; Black
QMINI90-DCHPZ	Dust Cap; QMini; 90° Plug; Alloy; Zinc over Nickel; Olive Drab

QMini Cable Interface Kits:

PART NUMBER	DESCRIPTION
QMINI-SRK-45	Cable Interface Kit; QMini; Includes: Crimp, Crimp Support, Cable Seal, & Bend Limiter Boot; for Cable OD (3.6mm - 4.5mm)
QMINI-SRK-55	Cable Interface Kit; QMini; Includes: Crimp, Crimp Support, Cable Seal, & Bend Limiter Boot; for Cable OD (4.6mm - 5.5mm)
QMINI-SRK-65	Cable Interface Kit; QMini; Includes: Crimp, Crimp Support, Cable Seal, & Bend Limiter Boot; for Cable OD (5.6mm - 6.5mm)
QMINI-SRK-75	Cable Interface Kit; QMini; Includes: Crimp, Crimp Support, Cable Seal, & Bend Limiter Boot; for Cable OD (6.6mm - 7.5mm)
QMINI-SRK-105	Cable Interface Kit; QMini; Includes: Crimp, Crimp Support, Cable Seal, & Heat Shrink Boot; for Cable OD (7.6mm - 10.5mm)

QMini Cable Crimps:

PART NUMBER	DESCRIPTION
CP-030-C	Crimp; Strain Relief; .38 Inch Form Factor; Brass
CS-002-C	Crimp Support; 4 x 2.0mm; .38 Inch Form Factor; Brass
CS-045-C	Crimp Support; 3.6mm-4.5mm Cable OD; .38 Inch Form Factor; Brass
CS-055-C	Crimp Support; 4.6mm-5.5mm Cable OD; .38 Inch Form Factor; Brass
CS-065-C	Crimp Support; 5.6mm-6.5mm Cable OD; .38 Inch Form Factor; Brass

QMini Tools:

PART NUMBER	DESCRIPTION
TK-046	QMini Tool Kit (Includes all items below)
PT-388	QMini / QMicro Torque Fixture Stand
PT-618	QMini Torque Fixture
PT-540	Hydraulic Hand Crimping Tool
PT-541	Die Set, 0.314 Hex for Hydraulic Hand Crimper
PT-005	Fiber Optic Termini Crimp Tool, 2mm & 3mm (Hex Sizes .100 / .125 / .147)



Military Aerospace Shipboard Industrial Mining Transportation Oil & Gas Broadcast Manufacturing Marine Energy Medical

