



ASSEMBLY, INSTALLATION, AND REMOVAL

TWINAX CONTACTS AND MODULES

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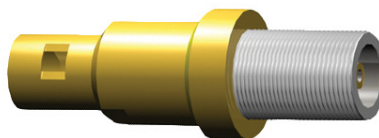
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Please note that any printed or downloaded user manual may not reflect the most current revisions. The information contained in these materials is subject to change. For the most current information available, visit vpc.com.



Dimensions shown: [millimeters]
inches

1. Install 0.25" [6.35 mm] diameter clear tubing 0.75" [19.05 mm] long on wire. Install backshell on wire (**Figure A**).
2. Strip wire (**Figure A**).
3. Install one piece of 0.062" [1.57 mm] diameter clear tubing 0.25" [3.17 mm] long onto each wire (**Figure B**).
4. Solder blue wire onto center conductor (**Figure C**). VPC solders per IPC's J-STD-001.
5. Solder white wire onto inner shield contact. Check for shorts (**Figure C**).
6. Clean terminals and push both pieces of shrink tubing over the solder joints and shrink.
7. Screw backshell onto connector until tight. Check dimension to make sure backshell is seated properly. Solder backshell to braid through hole on backshell and clean (**Figure D**).
8. Push clear tubing over backshell inspection hole and shrink (**Figure E**).

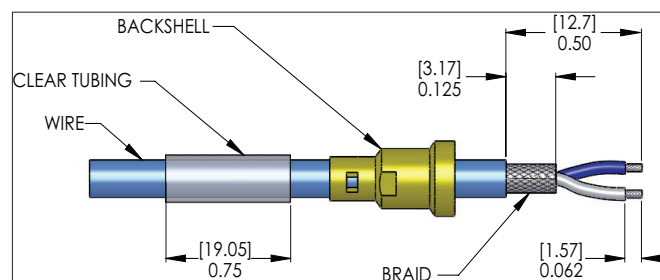


Figure A.

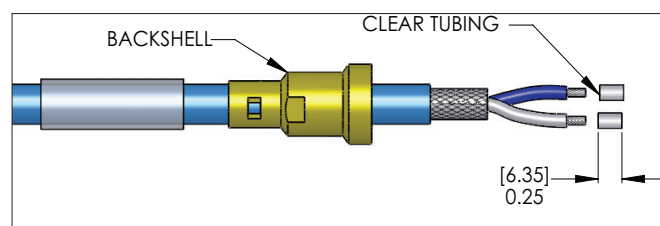


Figure B.

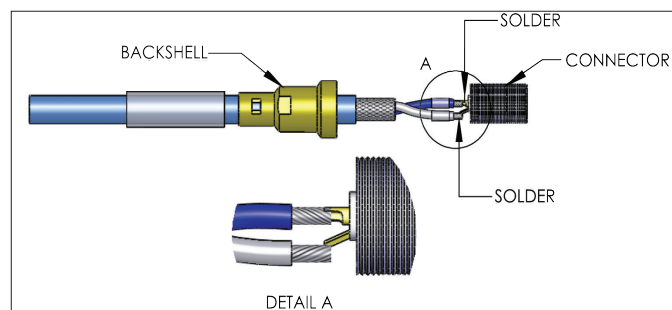


Figure C.

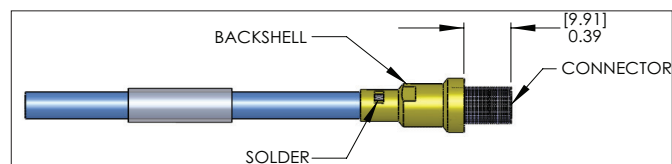


Figure D.

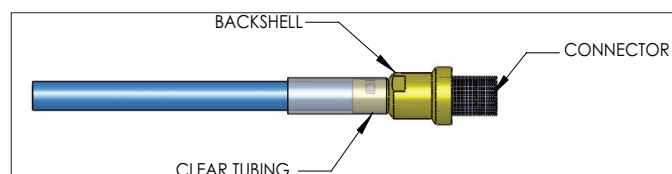


Figure E.



WARNING: IF CONDUCTING ANY TYPE OF TESTING ON COAX CONTACTS/ PATCHCORDS (MICRO, MINI, TWINAX, ETC.), DO NOT USE PROBES OR ANY INSTRUMENT THAT MAKES DIRECT CONTACT WITH THE CENTER CONDUCTOR. CONTACT WITH OR MANIPULATION OF THE CENTER CONDUCTOR MAY CAUSE PRODUCT DAMAGE THAT WILL IMPEDE PERFORMANCE AND VOID ANY PRODUCT WARRANTY.

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RECEIVER CONTACT INSTALLATION AND REMOVAL

PART # 610113144

TOOLS REQUIRED

 $\frac{3}{8}$ " Wrench

INSTALLATION

1. Install the contact into the module and insert lock washer (**Figure A**).
2. Use the $\frac{3}{8}$ " wrench to torque nut to 8 in-lbs [0.90 Nm] (**Figure B**).

REMOVAL

1. Loosen nut using $\frac{3}{8}$ " wrench.
2. Pull contact away from module.

NOTE: These instructions use illustrations of a 90 Series module. However, the processes remain the same for iSeries modules.

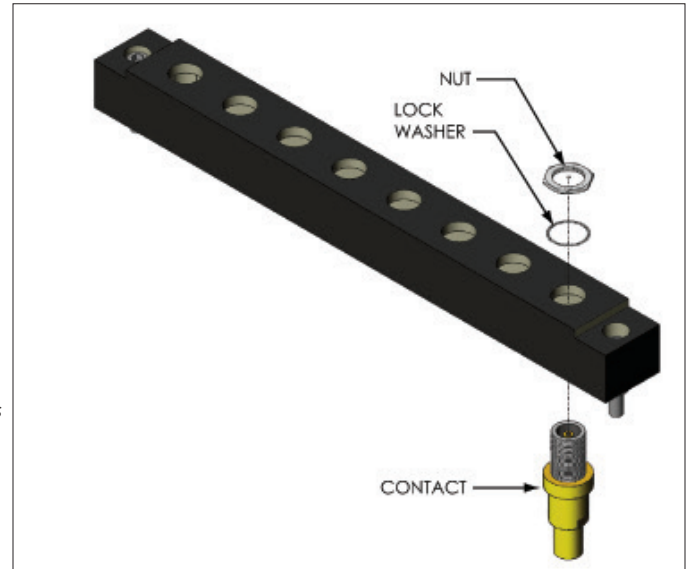


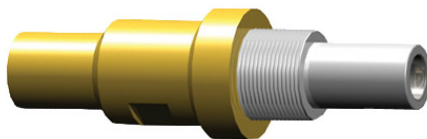
Figure A.



Figure B.

ITA CONTACT ASSEMBLY

PART # 610113145



Dimensions shown: [millimeters]
inches

1. Install 0.25" [6.35 mm] diameter clear tubing 0.75" [19.05 mm] long on wire.
2. Install backshell on wire (**Figure A**).
3. Strip wire (**Figure A**).
4. Install one piece of 0.062" [1.57 mm] diameter clear tubing 0.25" [6.35 mm] long onto each wire (**Figure B**).
5. Solder blue wire onto center conductor (**Figure C**). VPC solders per IPC's J-STD-001.
6. Solder white wire onto inner shield contact. Check for shorts (**Figure C**).
7. Clean terminals and push both pieces of shrink tubing over the solder joints and shrink.
8. Screw backshell onto connector until tight. Check dimension to make sure backshell is seated properly. Solder backshell to braid through hole on backshell and clean (**Figure D**).
9. Push clear tubing over backshell inspection hole and shrink (**Figure E**).

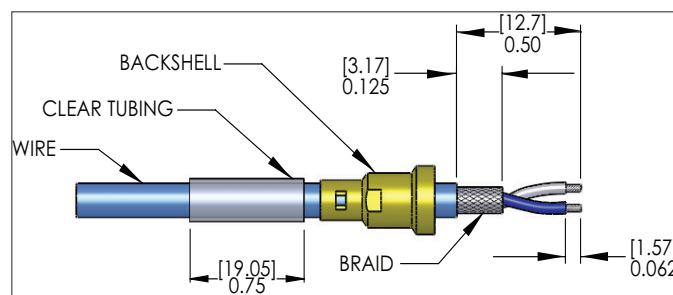


Figure A.

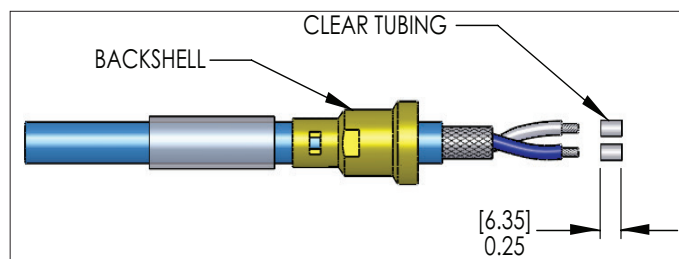


Figure B.

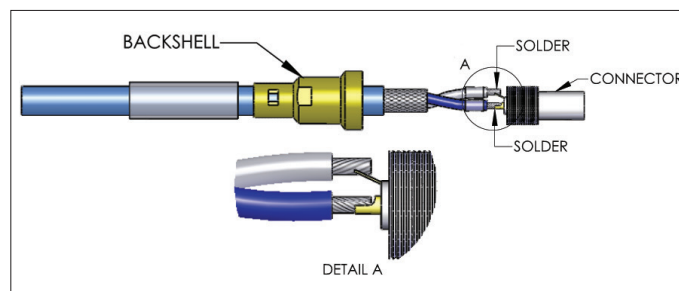


Figure C.

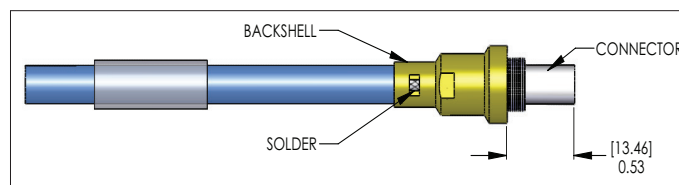


Figure D.

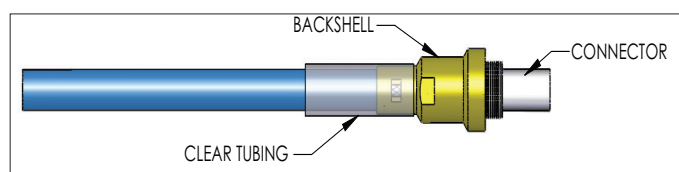


Figure E.



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ITA CONTACT INSTALLATION AND REMOVAL

PART # 610 113 145

TOOLS REQUIRED $\frac{3}{8}$ " Wrench**INSTALLATION**

1. Install the contact into the module and insert lock washer (**Figure A**).
2. Use the $\frac{3}{8}$ " wrench and torque nut to 8 in-lbs [0.90 Nm] (**Figure B**).

REMOVAL

1. Loosen nut using $\frac{3}{8}$ " wrench.
2. Pull contact away from module.

NOTE: These instructions use illustrations of a 90 Series module. However, the processes remain the same for iSeries modules.

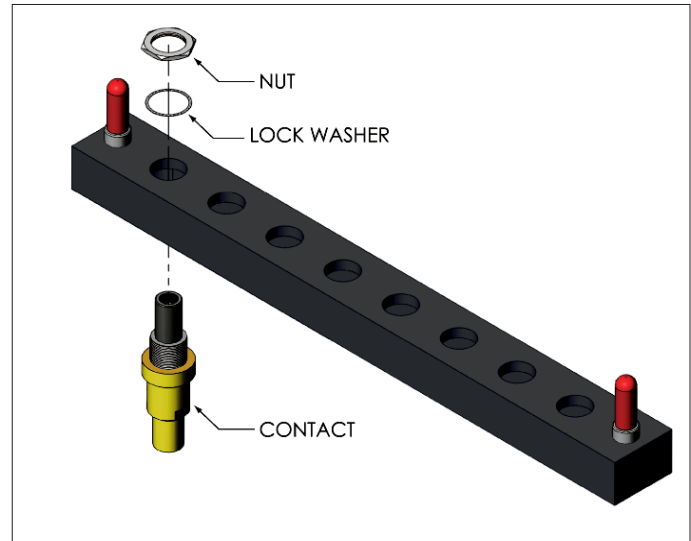


Figure A.

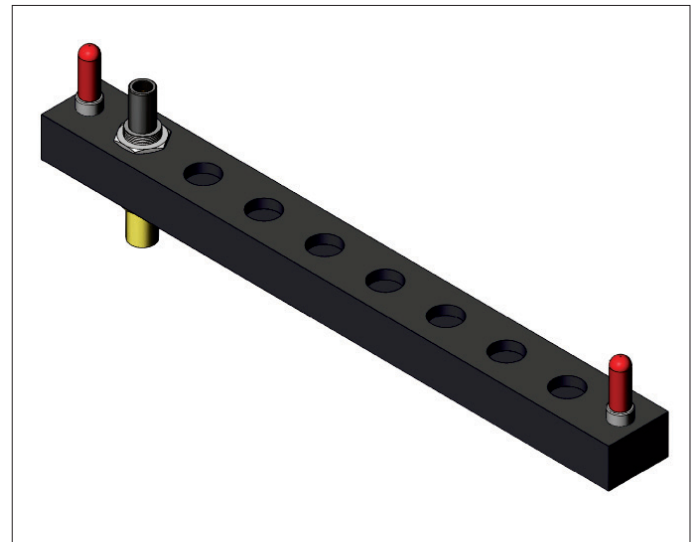


Figure B.

90 SERIES MODULE INSTALLATION AND REMOVAL

PART # 510104155, 510108138

TOOLS REQUIRED

$\frac{3}{32}$ Allen Wrench

INSTALLATION

1. Place the module in the receiver or ITA until the upper and lower module screws touch the mating holes in the inner frame. Ensure that module position 1 is located at the top for systems in vertically-oriented systems and to the left for horizontally-oriented systems.
2. Using a $\frac{3}{32}$ Allen wrench, tighten the top screw 1 - 2 full revolutions, while pushing lightly against the face of the module.
3. Maintain this pressure while tightening the bottom screw 1 - 2 full revolutions.
4. Repeat this sequence until the module is fully seated. Torque the screw to 4 in-lbs [0.45 Nm].

REMOVAL

1. To remove, loosen the top screw 1 - 2 full revolutions. Loosen bottom screw 1 - 2 full revolutions.
2. Repeat this sequence until the module is separated from the receiver or ITA.

NOTE: For optimum performance and system longevity, distribute the contact load evenly throughout the module.

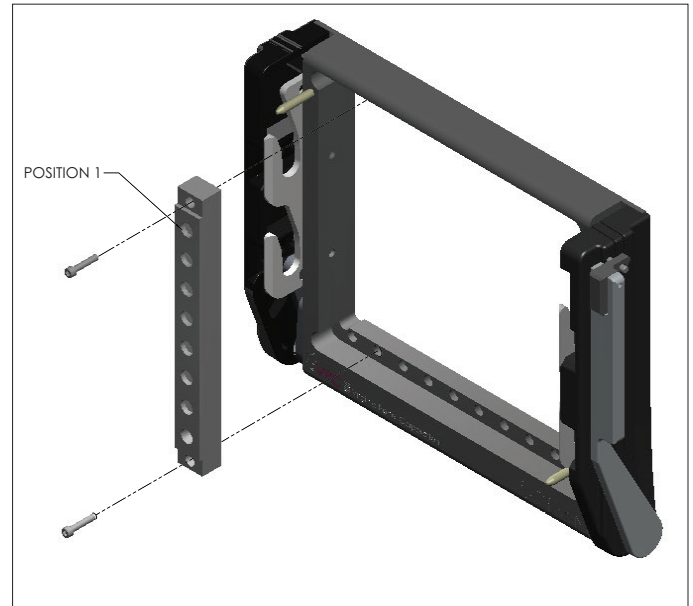


Figure A.

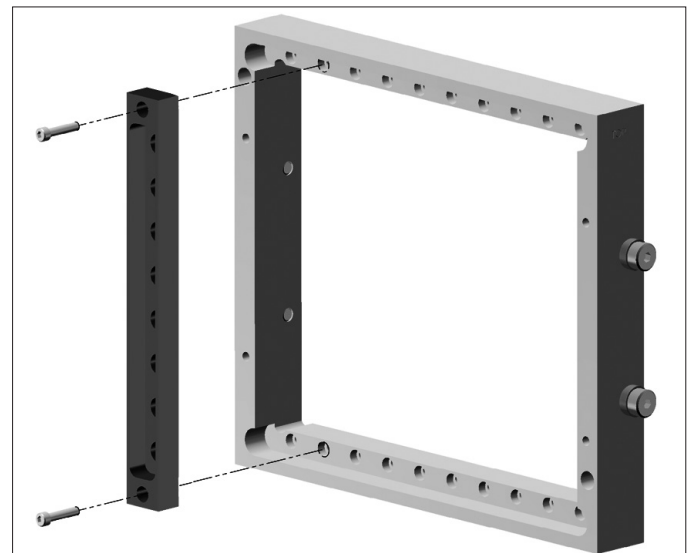


Figure B.

ICON MODULE INSTALLATION AND REMOVAL

PART # 510160109, 510161109

INSTALLATION

NOTE: The receiver strain relief plate or the ITA cover may need to be removed prior to installing or removing an iCon module. Please refer to the appropriate User Manual for instructions on how to perform these steps.

1. Place the module into the receiver or ITA until the upper and lower module screws touch the mating holes in the inner frame. Install the module so that position 1 is located at the top of the ITA/receiver frame.
2. Using a Phillips head screwdriver, tighten the top screw 1 - 2 full revolutions, while pushing lightly against the face of the module.
3. Maintain this pressure while tightening the bottom screw 1 - 2 full revolutions.
4. Repeat this sequence until the module is fully seated. Torque the screw to 1.5 in-lbs [0.16 Nm].

REMOVAL

1. To remove, loosen the top screw 1 - 2 full revolutions. Loosen bottom screw 1 to 2 full revolutions.
2. Repeat this sequence until the module is separated from the receiver or ITA.

NOTE: For optimum performance and system longevity, distribute the load evenly throughout the module.

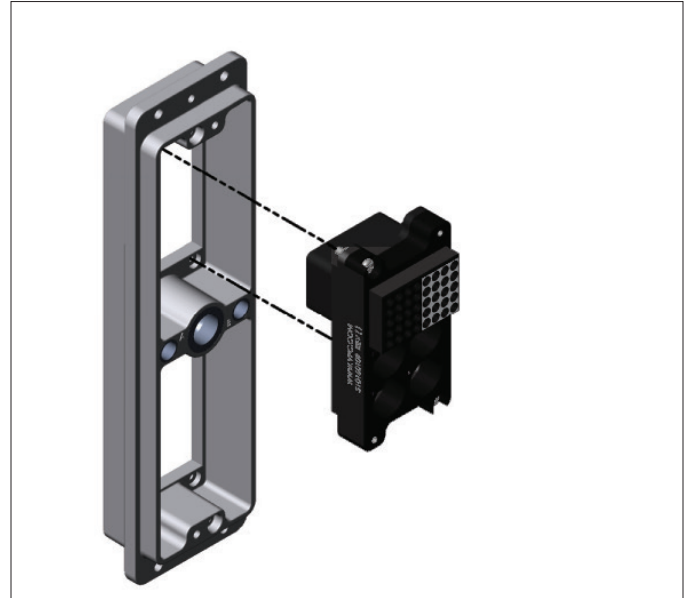


Figure A. Receiver Module.

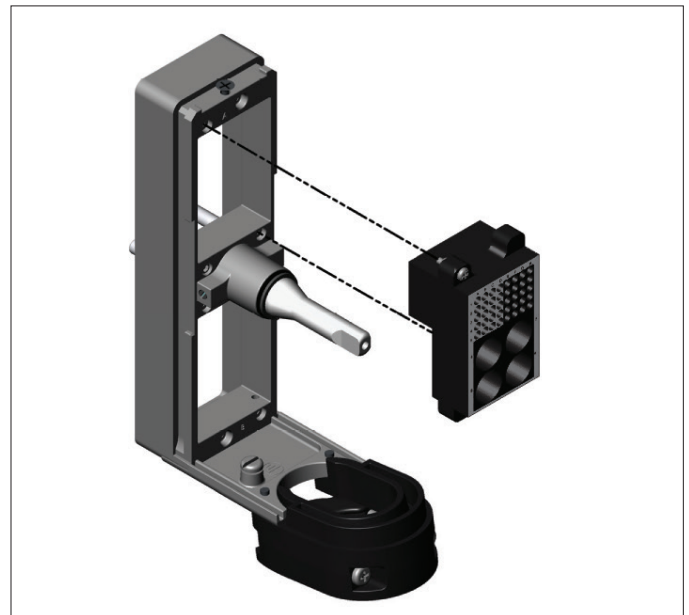


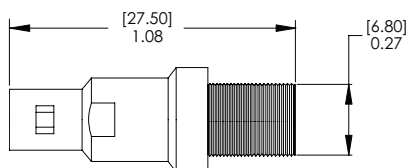
Figure B. ITA Module.

CROSS REFERENCE TABLES

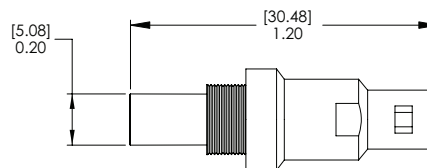
RECEIVER CONTACT	STANDARD/ 90 SERIES RECEIVER MODULE	ICON RECEIVER MODULE
	510 104 155	510 160 109
610 113 144	X	X

ITA CONTACT	STANDARD/ 90 SERIES ITA MODULE	ICON ITA MODULE
	510 108 138	510 161 109
610 113 145	X	X

CONTACT PERFORMANCE SPECIFICATIONS



Receiver Contact
Part # 610 113 144



ITA Contact
Part # 610 113 145

Dimensions shown:
millimeters]
inches

Electrical Specifications

IMPEDANCE	50 Ohms
FREQUENCY RANGE	0 - 2 GHz
CONTACT RESISTANCE	Center - less than 6.5 mOhms Intermediate - less than 3 mOhms Outer Contact - less than 3.5 mOhms
DIELECTRIC BREAKDOWN	600 V RMS
MAX VSWR	1.1 : 1 @ 100 MHz
CROSSTALK	Down less than 60 dB @ 500 MHz
INSERTION LOSS	0.044 dB @ 200 MHz

Mechanical Characteristics

CYCLE LIFE	20,000
MATING FORCE	3.5 lbs [1.59 kg]

Material

BACKSHELL ITA/RCVR	Brass (UNS C 385) 0.000020 Au over 0.0001 Ni MIL-G-45204C, Type I, Class 00
INSULATORS (RCVR)	Polyether Etherketone (PEEK) (MIL-P-46183)
CENTER CONDUCTOR (ITA)	Brass (UNS C 385) 0.000040 Au over 0.0001 Ni MIL-G-45204C, Type I, Class I
CENTER CONDUCTOR (RCVR)	Bronze (UNS C 544) 0.0000780 Au over 0.0001 Ni MIL-G-45204C, Type I, Class I
LOCKING WASHER	Bronze (UNS C 521) 0.0001 Ni FS-QQ-N-290A
CENTER SHIELD (RCVR)	Bronze (UNS C 544) 0.0001 Ni over 0.000060 AU FS-QQ-N-290A
CENTER SHIELD (ITA)	Bronze (UNS C 544) 0.0001 Ni over 0.000040 AU FS-QQ-N-290A
HEXAGONAL NUT	Brass (UNS C 385) 0.0001 Ni FS-QQ-N-290A
SHIELD (RCVR)	Brass (UNS C 385) 0.0001 Ni
SHIELD (ITA)	Brass (UNS C 385) 0.0001 Ni

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