



ASSEMBLY, INSTALLATION, AND REMOVAL OF CONTACTS AND MODULES

FOR 18 GHZ COAXIAL CONTACTS AND MODULES

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RECEIVER CONTACT INSTALLATION AND REMOVAL

PART # 610 102 108

TOOLS/PARTS REQUIRED

2.92 mm, 3.5 mm, or SMA connector
 18 GHz Contact Extraction Tool, Part # 910 112 115
 $\frac{5}{16}$ Wrench

CONTACT INSTALLATION INSTRUCTIONS

1. Attach the cable to the rear of the contact via a 2.92 mm, 3.5 mm, or SMA connector and torque per the manufacturer's recommendations with a $\frac{5}{16}$ wrench.
2. Insert the receiver contact into the module cavity (**Figure A**). Be sure to push the contact forward until the retaining ring locks into place.

CONTACT REMOVAL INSTRUCTIONS

1. Remove the module from the receiver frame.
NOTE: For more information concerning the process of removing the module from the receiver frame, see module installation and removal instructions in this User Manual.
2. Use the 18 GHz Contact Extraction Tool, Part # 910 112 115, and insert firmly over the contact by applying pressure with the shaft. Do not apply pressure with the handle area.
3. Apply pressure with the handle area only when the tool has slipped over and collapsed the retaining ring (**Figure B**). (Twisting the lower portion of the tool will ensure that the retaining ring has collapsed.)
4. On the opposite side of the module from the extraction tool, grasp the contact with your fingers and hold it while removing the extraction tool. (This will avoid pulling the contact back into the locked position.)

DO NOT DEPRESS THE PLUNGER ON THE BACK OF THE EXTRACTION TOOL UNTIL THE TIP OF THE EXTRACTION TOOL HAS FULLY SEATED INTO THE MODULE AND COMPRESSED THE RETAINING RING TABS ON THE CONTACT.

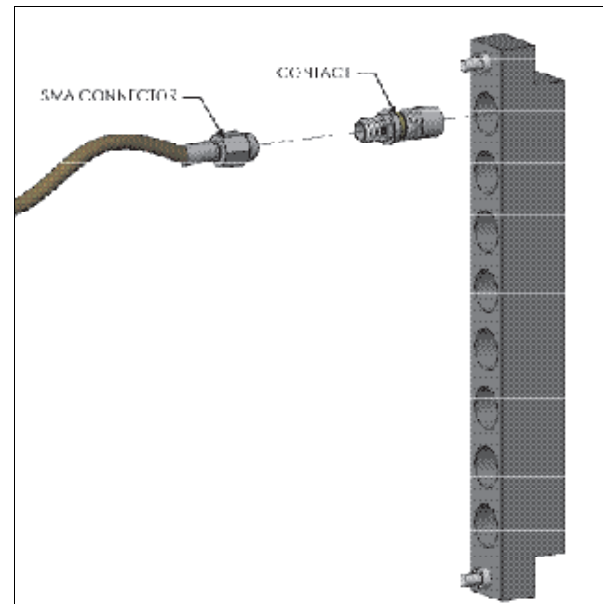


Figure A. Contact installation.

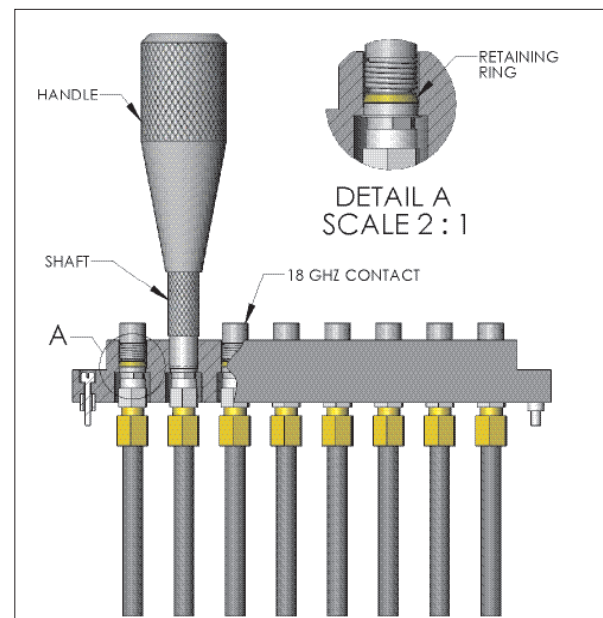


Figure B. Contact removal.

ITA CONTACT INSTALLATION AND REMOVAL

PART # 610 102 107

TOOLS/PARTS REQUIRED

2.92 mm, 3.5 mm, or SMA connector
 18 GHz Wrench, Part # 910 121 165, or $\frac{5}{16}$ " Nut Driver
 $\frac{5}{16}$ " Wrench

CONTACT INSTALLATION INSTRUCTIONS

1. Attach the cable to the rear of the contact via a 2.92 mm, 3.5 mm, or SMA connector and torque per the manufacturer's recommendations with a $\frac{5}{16}$ wrench.
2. Insert contact into the back (wiring side) of the module (**Figure A**).
3. Add lock washer.
4. Tighten nut with a $\frac{5}{16}$ " nut driver, Part # 910 121 165.
5. Place o-ring into groove of contact (**Figure B**).

CONTACT REMOVAL INSTRUCTIONS

1. Remove the module from the ITA frame.
NOTE: For more information concerning the process of removing the module from the ITA frame, see module installation and removal instructions in this User Manual.
2. Loosen the nut using the 18 GHz wrench, Part # 910 121 165, and remove contact from module (**Figure C**).

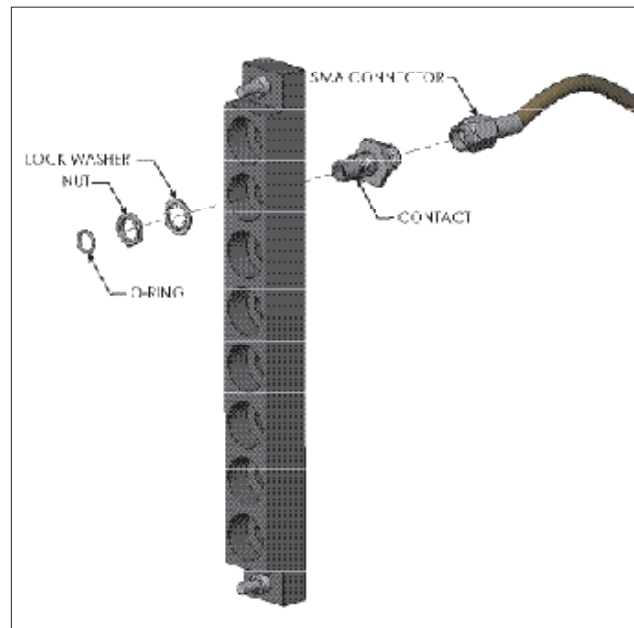


Figure A. Contact installation.

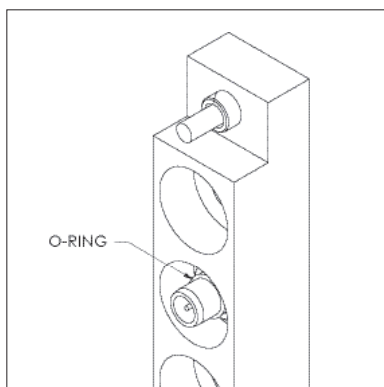


Figure B. The o-ring provides a bulkhead seal during receiver and ITA engagement.

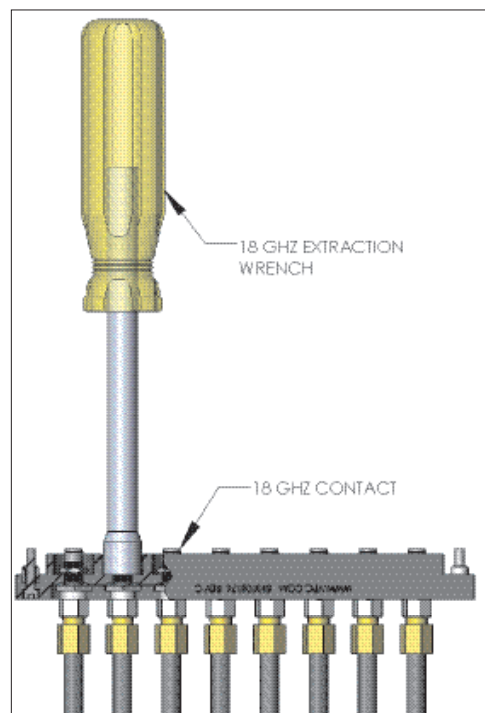


Figure C. Contact removal.

90 SERIES MODULE INSTALLATION AND REMOVAL

TOOLS REQUIRED

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

INSTALLATION INSTRUCTIONS

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 Position 1 is located at the top for systems in which the modules are oriented vertically or to the left for systems in which the modules are oriented horizontally.
2. Using a $\frac{3}{32}$ Allen wrench, tighten the top screw 1 to 2 full revolutions, while pushing lightly against the face of the module.
3. Maintain this pressure while tightening the bottom screw 1 to 2 full revolutions.
4. Repeat this sequence until the module is seated. Torque the screw to 4 in-lbs [0.45 Nm].

REMOVAL INSTRUCTIONS

1. To remove, loosen the top screw 1 to 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 contact load evenly throughout the module.

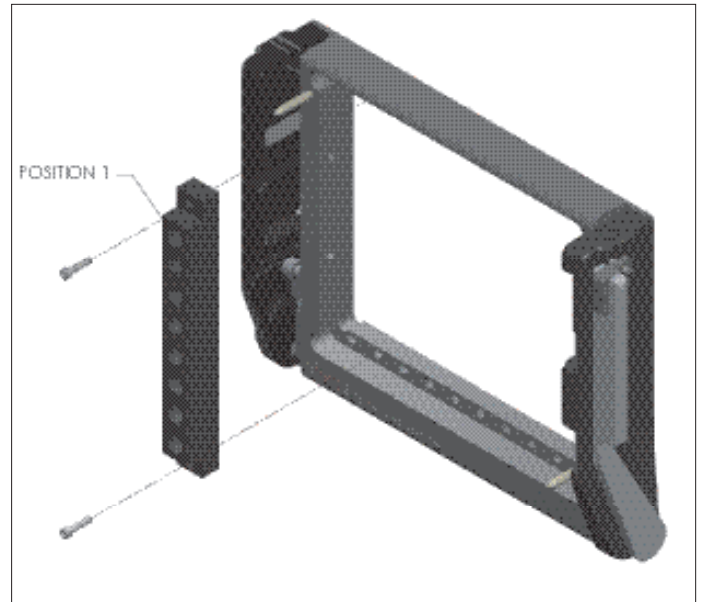


Figure A. Receiver Module.

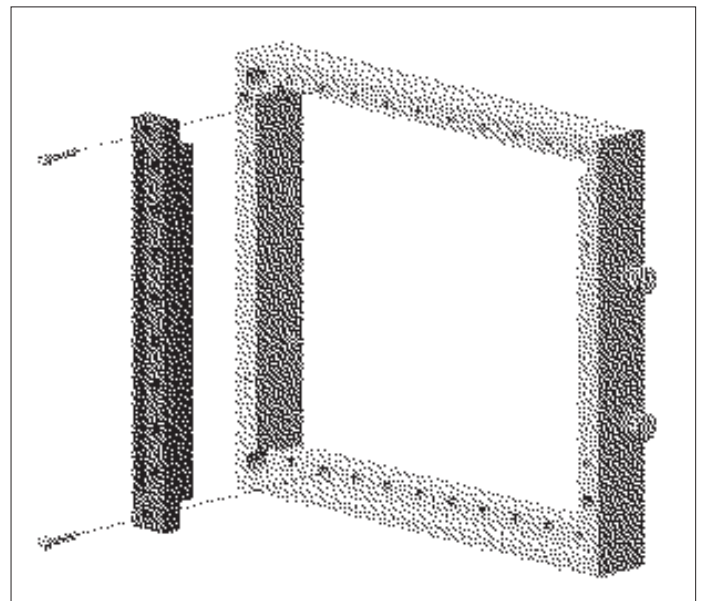


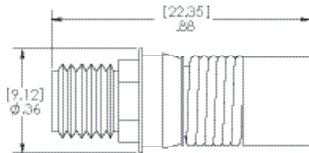
Figure B. ITA Module.

CROSS REFERENCE TABLES

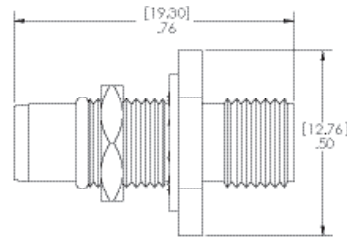
	STANDARD/ 90 SERIES RECEIVER MODULE	EXTRACTION TOOL
RECEIVER CONTACT	510 104 203	910 112 115
610 102 108	X	X

	STANDARD/ 90 SERIES ITA MODULE	EXTRACTION TOOL
ITA CONTACT	510 108 176	910 121 165
610 102 107	X	X

CONTACT PERFORMANCE SPECIFICATIONS



Receiver Contact
Part # 610 102 108



ITA Contact
Part # 610 102 107

Dimensions shown: [millimeters]
inches

Electrical Specifications

CHARACTERISTIC IMPEDANCE	50 Ohms
FREQUENCY RANGE	DC to 18 GHz
CONTACT RESISTANCE	2 Milliohms max. on outer shield; 4 Milliohms max. on center conductor
DIELECTRIC WITHSTANDING VOLTAGE (DWV)	1000 V RMS min
MAXIMUM VSWR	1.05 + 0.005f(GHz) - up to 18 GHz
INSERTION LOSS	- 0.06x \sqrt{f} (GHz) db
RF LEAKAGE	-60 dB min. @ 2-3 GHz
RECOMMENDED TERMINATION	2.92 mm, 3.5 mm, or SMA Plug

Mechanical Characteristics

CYCLE LIFE	20,000
MATING FORCE	Insertion - 3 lbs max. [1.36 Kg] Extraction - 1.5 lbs max. [0.68 Kg]

Material

OUTER SHIELD (ITA)	Stainless Steel, Class 303 Passivated per ASTM-A380
OUTER SHIELD (RCVR)	Stainless Steel, Class 303 Passivated per ASTM-A380
CENTER CONDUCTOR (ITA)	BeCu per ASTM - B196 or ASTM - B197 Au per MIL-G-45204
CENTER CONDUCTOR (RCVR)	BeCu per ASTM - B196 Au per MIL-G-45204 over Cu per MIL-C-14550
SPRING	Stainless Steel
RETAINING RING (RCVR)	BeCu per ASTM - B194 Au per MIL - C- 45204
CONTACT RING	BeCu per ASTM - B194 Au per MIL - C- 45204 over Cu per MIL-C-14550
DIELECTRIC	TFE Fluorocarbon