



ASSEMBLY, INSTALLATION, AND REMOVAL OF CONTACTS AND MODULES

FOR FIBER OPTIC CONTACTS AND MODULES

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FIBER OPTIC RECEIVER CONTACT INSTALLATION AND REMOVAL

TOOLS REQUIRED

0.050" Allen Wrench
 Flat Head Screwdriver
 Phillips Screwdriver for iCon modules
 Mini Fiber Optic Extraction Tool, Part # 910 112 125

CONTACT INSTALLATION INSTRUCTIONS

1. Remove the dust cap from the VPC contact to be inserted.
2. Insert the assembled contact into the back (wiring side) of the assembled module. The contact can only go into one side. Ensure that the contact is squared up with the corresponding module location. Once in place, pull the wire slightly to ensure that the contact is seated.

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 Section 2 of this User's Manual.
2. Use the appropriate tool to remove the module cap screws located at the top and bottom of the module (**Figure A**).
3. Grasp the module halves and apply force in opposite directions, rocking the ends of the module while slightly pulling the module cap away from the mating bottom section. Be sure to open both sides of the module simultaneously or contacts could be damaged.
4. Place the Mini Fiber Optic Extraction Tool, part # 910 112 125 (**Figure B**), over the contact to be removed/replaced. Use care to keep the tool perpendicular to the surface of the module, otherwise the tool or contact could be damaged.
5. Once the extraction tool is seated and the retaining ring tabs on the contact are compressed, push the plunger. The contact will be pushed out of the rear of the module.
6. For 19 and 76 position modules, do not tighten screws. Insert an ITA contact in positions 2 and 18 or 2A and 18A (for 76 position modules) to properly align the module cap. With the ITA contacts in place, tighten the module cap screws. Do not over-tighten screws; screw torque limit is 13 +/- 1 in-oz. For all other modules, replace the module cap (**Figure C**) using both hands to push the separated halves together. Replace and tighten the module cap screws to a maximum torque of 2 in-lbs [0.23 Nm].



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

NOTE: The process shown here uses standard/90 series modules. The same process is used for modules from other series.

NOTE: If you are using a hybrid module, you may need to reference the User's Manual for the other contact type for extraction instructions.

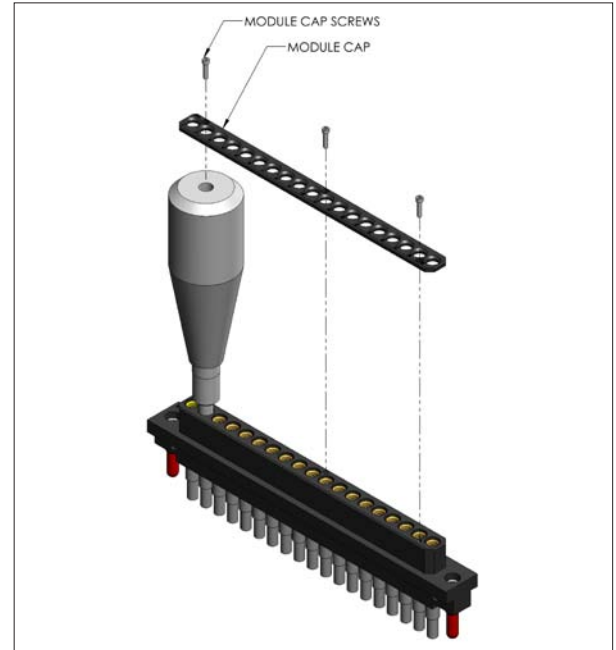


Figure A. Extraction Tool, Part # 910 112 125.

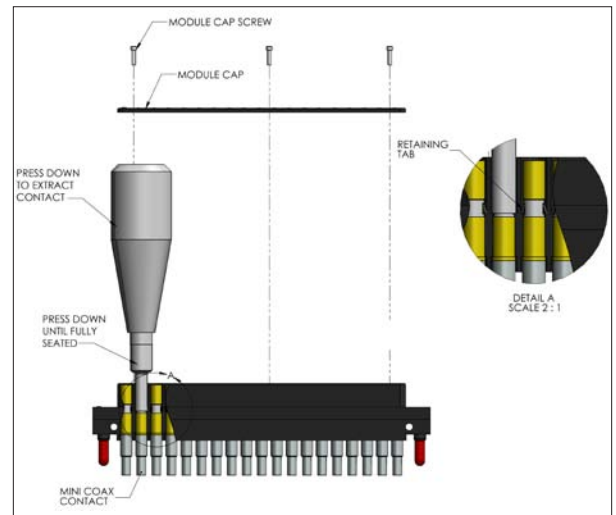


Figure B. Be sure to keep the tool perpendicular so as to avoid bent pins.

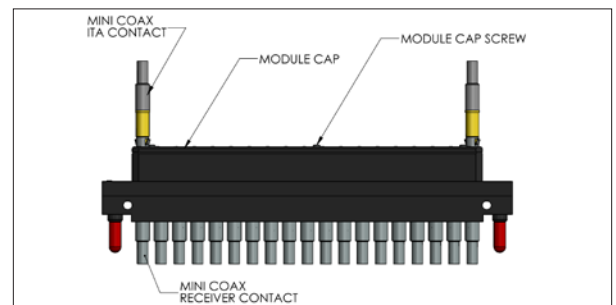


Figure C. Module Cap Alignment Diagram.

FIBER OPTIC ITA SIGNAL CONTACT INSTALLATION AND REMOVAL

TOOLS REQUIRED

Mini Fiber Optic Extraction Tool, Part # 910 112 125

CONTACT INSTALLATION INSTRUCTIONS

1. Remove the dust cap from the VPC contact to be inserted.
2. Insert the assembled contact into the back (wiring side) of the module.
Push the contact forward until the crimp is inside the module housing.
Once in place, pull the wire slightly to ensure the contact is seated.

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 Section 2 of this User's Manual.
2. Place the Mini Fiber Optic Extraction Tool, part # 910 112 125 (**Figure A**) over the contact to be removed/replaced. Use care to keep the tool perpendicular to the surface of the module, otherwise the tool or contact could be damaged. Rotate the tool slightly while pushing it into the counter bore on the mating side of the module.
3. Once the extraction tool is seated properly and the retaining ring tabs on the contact are compressed, push the tool into the module. The contact will be pushed out of the rear of the module (**Figure B**).



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

NOTE: The process shown here uses standard/90 series modules. The same process is used for modules from other series.

NOTE: If you are using a hybrid module, you may need to reference the User's Manual for the other contact type for extraction instructions.

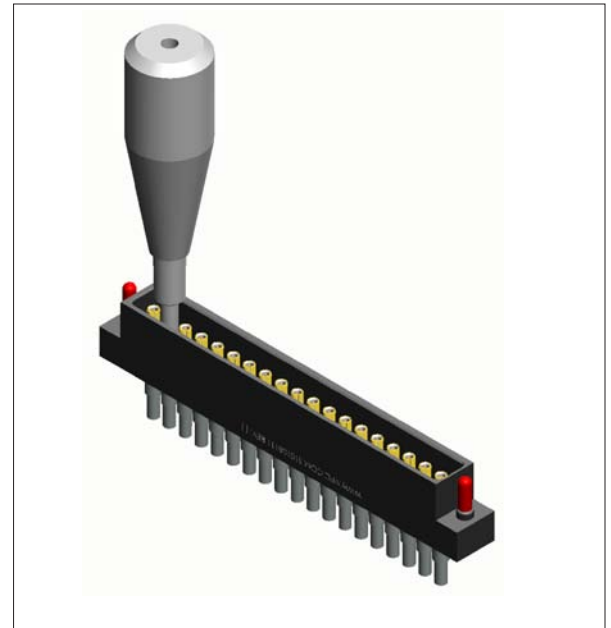


Figure A. Extraction Tool, Part # 910 112 125.

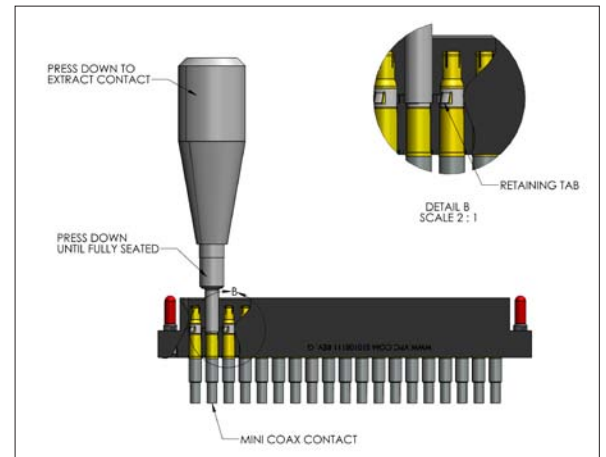


Figure B. Be sure to keep the tool perpendicular to avoid bent pins.

FIBER OPTIC STANDARD/90 SERIES MODULE INSTALLATION AND REMOVAL

TOOLS REQUIRED

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 Pin 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 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 [0.23 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.

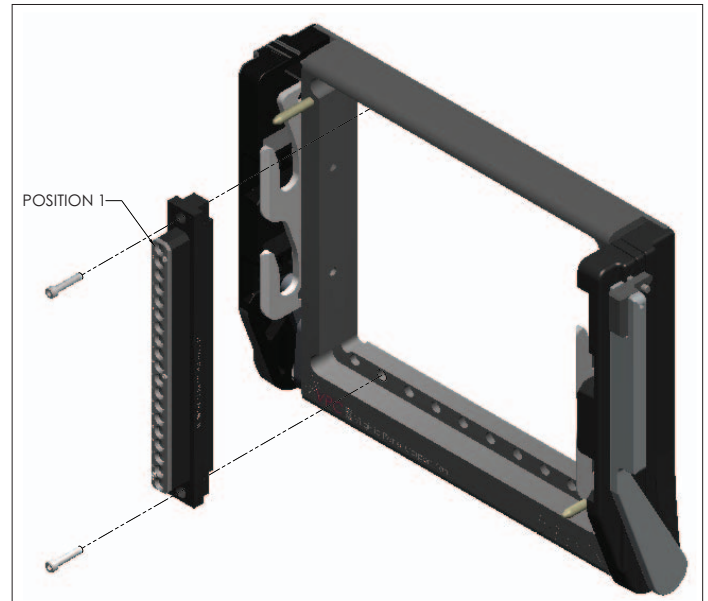


Figure A. Receiver Module.

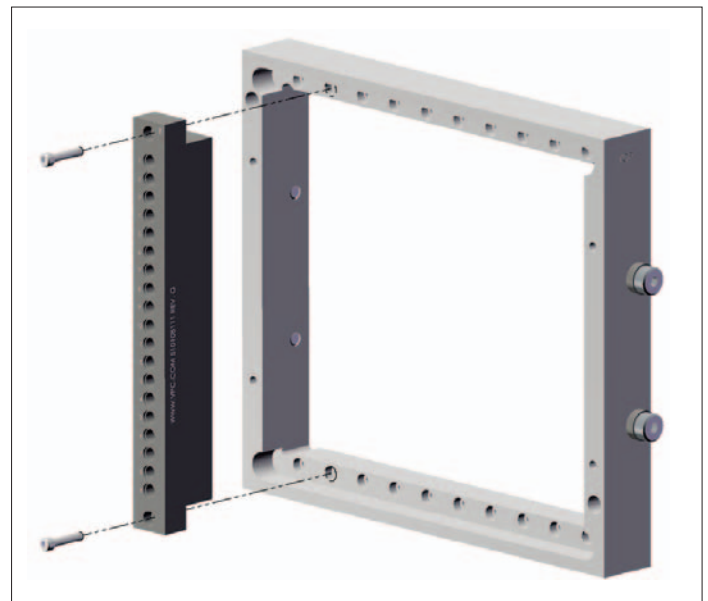


Figure B. ITA Module.

FIBER OPTIC ICON MODULE INSTALLATION AND REMOVAL

TOOLS REQUIRED

Phillips Head Screwdriver

INSTALLATION INSTRUCTIONS

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's Manual for instructions on how to perform these steps.

1. Place the module in the receiver or ITA until the upper and lower module screws touch the mating holes in the inner frame. Install modules such that Position 1 is located at the top of the ITA/ receiver frame.
2. Using a Phillips head screwdriver, 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 1.5 in-lbs [0.16 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.

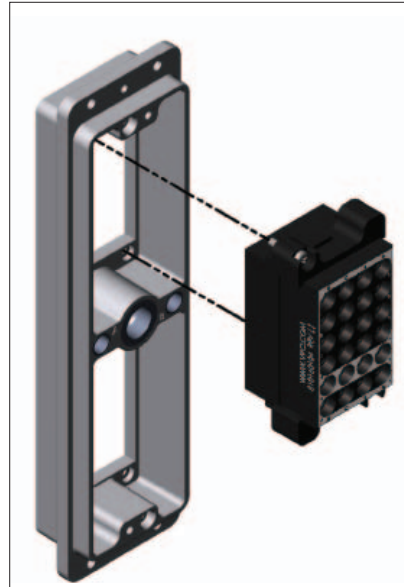


Figure A. Receiver Module.

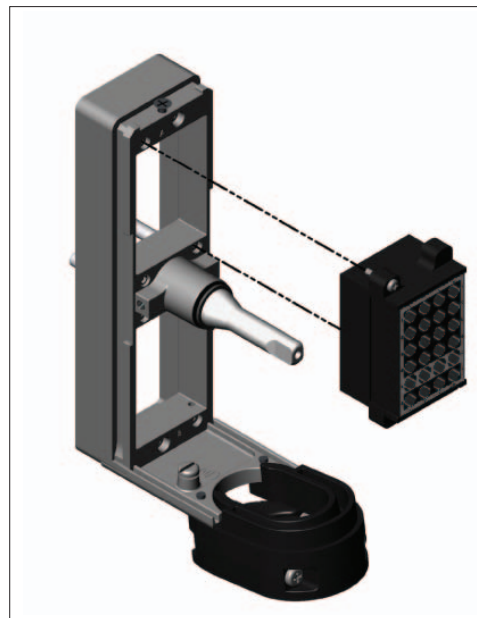


Figure B. ITA Module.

FIBER OPTIC MODULE CARE

The cleanliness of the Fiber Optic termini is extremely critical to maintain high performance and extended life. Modules should be cleaned before initial usage and then after any extended storage period. The dust cover should be in place at any time the ITA is not mated with the receiver. Also, the termini should be cleansed whenever questionable readings are encountered.



- **MAKE SURE ALL LASER LIGHT SOURCES ARE TURNED OFF BEFORE CLEANING. LASER LIGHT CAN PERMANENTLY DAMAGE YOUR EYES.**

- **FOLLOW MANUFACTURER'S DIRECTIONS ON PRESSURIZED CANS. DO NOT TIP OR SHAKE CAN DURING USAGE.**

- **WEAR SAFETY GLASSES AND GOGGLES WHEN CLEANING THE MODULES. PARTICLES AND/OR ALCOHOL COULD BE PROJECTED INTO YOUR EYES BY THE PRESSURIZED CLEANER.**

CLEANING INSTRUCTIONS FOR THE ITA FIBER OPTIC MODULE FOR INSTALLED TERMINI

Recommended Kit: VPC Part # 910 121 170

1. Remove the dust cover from the ITA module.
2. Use a can of optical grade pressurized duster to clean the module by thoroughly spraying the inside of the casing containing the termini.
3. Saturate a clean foam tip with optical grade alcohol and wipe the end of an individual terminus.
4. Immediately dry the terminus with a dry foam tip.
5. Repeat the alcohol cleansing process for all existing termini.
6. Clean the inside of the module cover with an alcohol wipe and allow it to dry.
7. Reinstall the dust cover on the ITA module.

CLEANING INSTRUCTIONS FOR THE RECEIVER FIBER OPTIC MODULE FOR INSTALLED TERMINI

Recommended Kit: VPC Part # 910 121 170

1. Remove the dust cover from the receiver module.
2. Use an alcohol wipe to clean the top and sides of the module.
3. Saturate a clean foam tip with optical grade alcohol and insert into an individual alignment sleeve, wipe the end of the termini.
4. Immediately dry the sleeve using a can of optical grade pressurized duster that has an extension tube ending with a small tip designed to fit inside the alignment sleeve.
5. Clean the inside of the module cover with an alcohol wipe and allow it to dry.
6. Reinstall the dust cover on the receiver module.

CROSS REFERENCE TABLES

RECEIVER CONTACT	STANDARD/ 90 SERIES RECEIVER MODULES			ICON RECEIVER MODULES			EXTRACTION	MISCELLANEOUS
	510 104 120	510 104 150	510 104 242	510 160 102	510 160 103	510 160 104		
610 113 170	X	X	X	X	X	X	X	X
610 113 172	X	X	X	X	X	X	X	X

ITA CONTACT	STANDARD/ 90 SERIES ITA MODULES			ICON ITA MODULES			EXTRACTION	MISCELLANEOUS
	510 108 111	510 108 132	510 108 210	510 161 102	510 161 103	510 161 104		
610 113 171	X	X	X	X	X	X	X	X
610 113 173	X	X	X	X	X	X	X	X

FIBER OPTIC CONTACT ELECTRICAL SPECIFICATIONS

Electrical Specifications

INSERTION LOSS	-2.0 db Max / Mated Pair
PLASTIC OPTICAL FIBER (POF)	980/1000 μ m
GLASS FIBER	Multimode 62.5/125

Mechanical Characteristics

CYCLE LIFE	2,000 Cycles
MATING FORCE	1.5 lbs [0.68 kg]

Material

CONTACT BODY (POF)	Nickel Silver
CONTACT BODY (MULTIMODE)	Ceramic and Nickel Silver