ASSEMBLY, INSTALLATION, AND REMOVAL OF CONTACTS AND MODULES

FOR HIGH POWER CONTACTS AND MODULES

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RECEIVER CONTACT ASSEMBLY

PART # 610 149 101 / 910 102 116

TOOLS REQUIRED
Wire Cutter
Jacket Stripper
Point Micrometer
Heat Gun with Reflector

CRIMP TOOL SETUP

1. Disconnect airline.
2. Install locator into locator cavity (**Figure B**).
3. Install die set into pneumatic crimper (**Figure B**).
4. Ensure front plate is installed on crimper (**Figure A**).
5. Re-connect airline.

ASSEMBLY INSTRUCTIONS

1. Cut wire to length.
2. Strip wire 0.75" (19.05 mm).
3. Carefully insert wire into the wire end of the contact.
   NOTE: Be careful not to disturb the natural lay of the individual wire strands, this could make it difficult to insert the strands into the contact.
4. Place the contact into the crimper cavity until it completely bottoms out against the end of the locator.
5. Depress button to crimp and then remove the crimped wire and contact from the crimp cavity (**Figure C**).
6. Inspect the location of crimp indentions. Indentions should be located between the wire end of the crimp barrel and the wire inspection hole. The wire should be visible in the inspection hole (**Figure C**).
7. Use a point micrometer to measure the crimp height across the crimp indentions. Measure across the crimp indentions, rotate the contact 90° and measure across remaining crimp indentions. The measurement should be 0.279" ± 0.005" [7.087 ± 0.127 mm] (**Figure D**).
8. Slide a 2" piece of Ø0.5" shrink tubing over the contact up to the first shoulder from the wire end of the contact covering the inspection hole and shrink in place with Heat Gun. (**Figure E**).

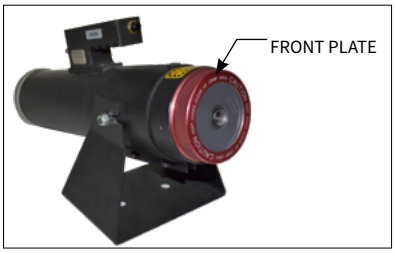


Figure A. Pneumatic crimper.

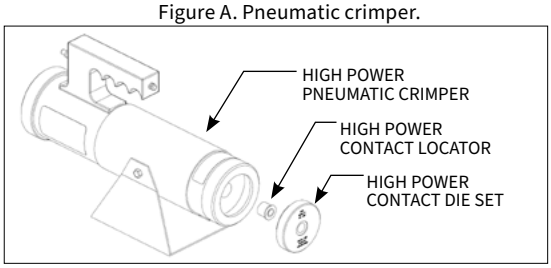


Figure B. Exploded view of pneumatic crimper.

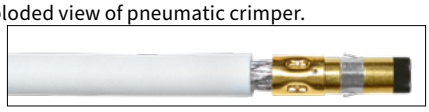
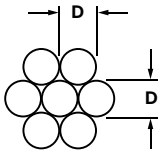


Figure C. 610 149 101 contact.

Figure D. Measuring crimp.

Figure E. Applied shrink tubing.

Stranded Wire AWG



Metric Dimensions
CMA = D² x N x 1550.003

CMA = Circular Mil Area
D = Diameter of Single Strand in millimeters
N = Number of Strands

U.S. Customary Dimensions
CMA = D² x N

CMA = Circular Mil Area
D = Diameter of Single Strand in mils
N = Number of Strands

Figure F. Calculate circular mil area.

NOTE: Contact tested and designed for specific use with Cooner Wire CW6044-14(UL Rated), AS 105-14(Non-UL), or equivalent. If using a wire other than prescribed, reference "5.3.5 Machined Contacts - CMA buildup" of the IPC/WHMA-A-620A standard.

*NOTE: Recommended CMA range for this contact falls between 63,206 and 66,499 with a max conductor Ø of .340" [8.636 mm] and a min conductor Ø of .315" [8.001 mm]. To calculate CMA please reference **Figure F**.*

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90 SERIES RECEIVER CONTACT INSTALLATION AND REMOVAL

PART # 510 104 307 / 910 112 129

TOOLS REQUIRED
Phillips Head Screwdriver
In/Lbs Torque Driver

CONTACT INSTALLATION INSTRUCTIONS

1. Assemble the contact to the respective wire.
   NOTE: Contact tested and designed for specific use with 2 AWG Cooner Wire CW6044-14(UL Rated), AS 105-14(Non-UL), or equivalent.
   NOTE: For more information concerning the contact assembly process, please see contact assembly instructions in this User Manual.

2. Insert the assembled contact into the back (wiring side) of the assembled module. Once in place, pull the wire slightly to ensure that the contact is fully seated.

3. Install strain relief plate and secure wires to strain relief.
   NOTE: In all High Power contact applications, VPC highly recommends the use of a strain relief plate.

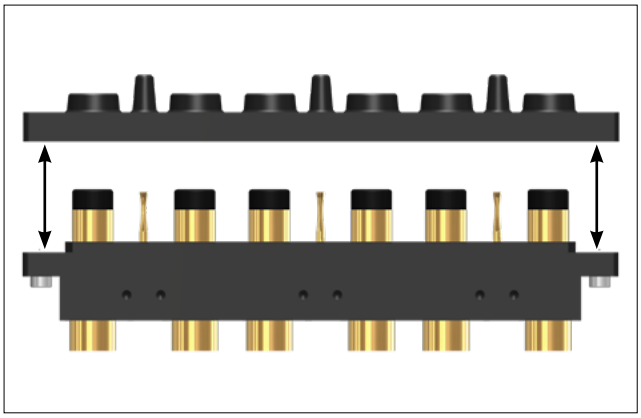

Figure A. Separating the module.

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 a Phillips head screwdriver to remove the screws located at the top and bottom of the module.

3. Grasp the module halves and apply force in opposite directions, rocking the ends of the module while slightly pulling the top of the module away from the mating bottom section, until separated (**Figure A**).

4. Place the High Power Receiver/ITA Contact Extraction Tool, Part # 910 112 129 (**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. Rotate the tool slightly while pushing it into the counter bore on the mating side of the module.

5. Once the extraction tool is seated and the retaining tabs on the retaining ring are compressed (**Figure B**), push the tool into the module. The contact will be pushed out of the rear of the module.

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.

6. If necessary, replace the module cap using both hands to push the separated halves together. Replace and tighten the module retaining screws to a maximum torque of 1.5 in-lbs [0.17 Nm].

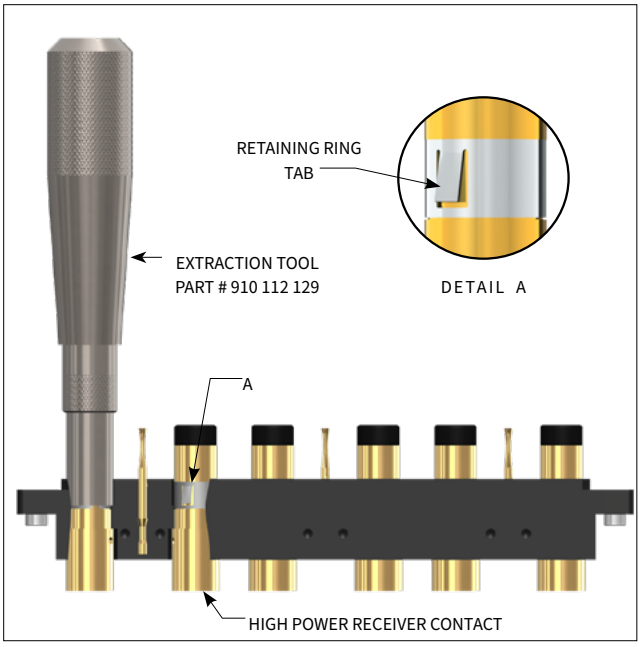

Figure B. Fully seat extraction tool before depressing.

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iCON/i1 RECEIVER CONTACT INSTALLATION AND REMOVAL

PART # 510 160 124 / 510 109 572 / 910 112 129

TOOLS REQUIRED
Flat Head Screwdriver
Phillips Head Screwdriver
In/Lbs Torque Driver

CONTACT INSTALLATION/LOADING INSTRUCTIONS

1. Assemble the contact to the respective wire.
   NOTE: Contact tested and designed for specific use with 2 AWG Cooner Wire CW6044-14(UL Rated), AS 105-14(Non-UL), or equivalent.
   NOTE: For more information concerning the contact assembly process, please see contact assembly instructions in this User Manual.
2. Ensure empty modules are secure in receiver frame. Insert the assembled contact into the back (wiring side) of the assembled module. Once in place, pull the wire slightly to ensure that the contact is fully seated.
   NOTE: For more information concerning the module installation process, please see iCon module installation and removal instructions in this User Manual.
3. If loading an iCon frame, repeat steps 1 and 2 for module "A", loading High Power contacts in positions 3 and 4 only (All TriPaddle positions may be used).
4. Install strain relief plate and secure wires to strain relief.
   NOTE: In all High Power contact applications, VPC highly recommends the use of a strain relief plate.

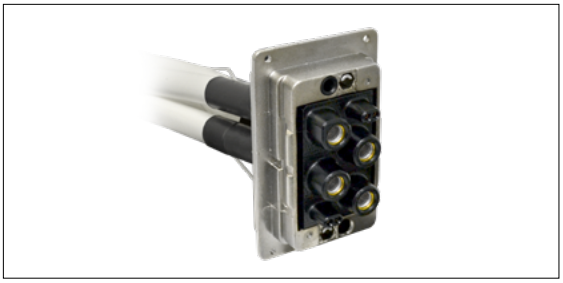

Figure A. Correctly loaded receiver contacts in i1.

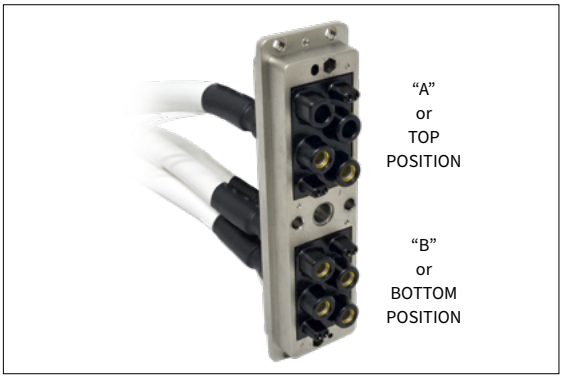

Figure B. Correctly loaded receiver contacts in iCon.

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 a Phillips head screwdriver to remove the screws located at the top and bottom of the module.
3. Grasp the module halves and apply force in opposite directions, rocking the ends of the module while slightly pulling the top of the module away from the mating bottom section, until separated. You may pry at the machined slot on the module using a flat head screwdriver to assist in opening the module. Be sure to open both sides of the module simultaneously or contacts could be damaged.
4. Place the High Power Receiver/ITA Contact Extraction Tool, Part # 910 112 129 (**Figure C**), 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.
5. Once the extraction tool is seated and the retaining tabs on the retaining ring are compressed (**Figure C**), push the tool into the module. The contact will be pushed out of the rear of the module.

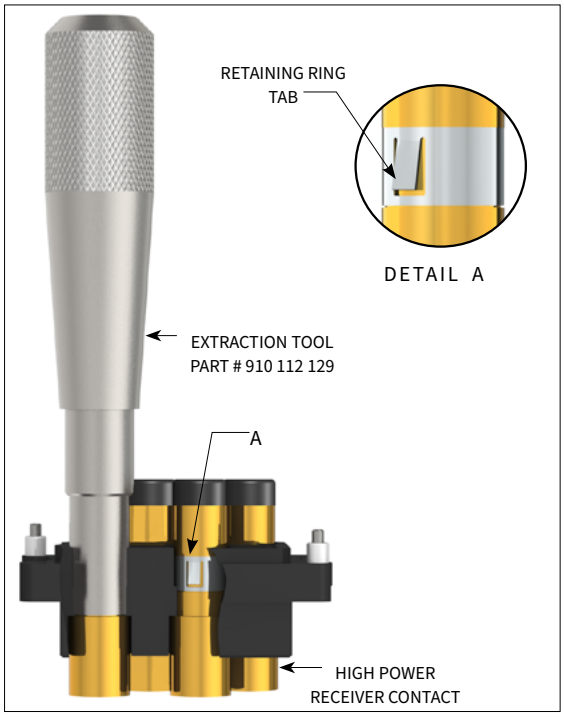

Figure C. Fully seat extraction tool before depressing.

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.

6. If necessary, replace the module cap using both hands to push the separated halves together. Replace and tighten the module retaining screws to a maximum torque of 1.5 in-lbs [0.17 Nm].

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ITA CONTACT ASSEMBLY

PART # 610 150 101 / 910 102 116

TOOLS REQUIRED
Wire Cutter
Jacket Stripper
Point Micrometer
Heat Gun with Reflector

CRIMP TOOL SETUP

1. Disconnect airline.
2. Install locator into locator cavity (**Figure B**).
3. Install die set into pneumatic crimper (**Figure B**).
4. Ensure front plate is installed on crimper (**Figure A**).
5. Re-connect airline.

ASSEMBLY INSTRUCTIONS

1. Cut wire to length.
2. Strip wire 0.75" (19.05 mm).
3. Carefully insert wire into the wire end of the contact.
   NOTE: Be careful not to disturb the natural lay of the individual wire strands, this could make it difficult to insert the strands into the contact.
4. Place the contact into the crimper cavity until it completely bottoms out against the end of the locator.
5. Depress button to crimp and then remove the crimped wire and contact from the crimp cavity (**Figure C**).
6. Inspect the location of crimp indentions. Indentions should be located between the wire end of the crimp barrel and the wire inspection hole. The wire should be visible in the inspection hole (**Figure C**).
7. Use a point micrometer to measure the crimp height across the crimp indentions. Measure across the crimp indentions, rotate the contact 90° and measure across remaining crimp indentions. The measurement should be 0.279" ± 0.005" [7.087 ± 0.127 mm] (**Figure D**).
8. Slide a 2" piece of Ø0.5" shrink tubing over the contact up to the first shoulder from the wire end of the contact covering the inspection hole and shrink in place with Heat Gun (**Figure E**).

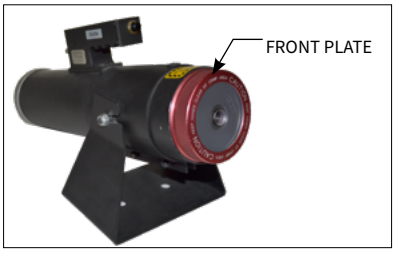


Figure A. Pneumatic crimper.

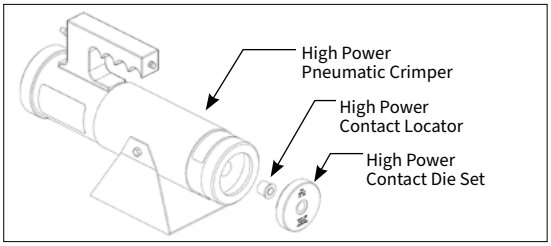


Figure B. Exploded view of pneumatic crimper.

Figure C. Crimped contact.

Figure D. Measuring crimp.

Figure E. Applied shrink tube.

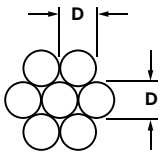
Stranded Wire AWG
 Number of Strands
Metric Dimensions **CMA = D² x N x 1550.003** CMA = Circular Mil Area D = Diameter of Single Strand in millimeters N = Number of Strands
U.S. Customary Dimensions **CMA = D² x N** CMA = Circular Mil Area D = Diameter of Single Strand in mils N = Number of Strands

Figure F. Calculate circular mil area.

NOTE: Contact tested and designed for specific use with Cooner Wire CW6044-14(UL Rated), AS 105-14(Non-UL), or equivalent. If using a wire other than prescribed, reference "5.3.5 Machined Contacts - CMA buildup" of the IPC/WHMA-A-620A standard.

*NOTE: Recommended CMA range for this contact falls between 63,206 and 66,499 with a max conductor Ø of .340" [8.636 mm] and a min conductor Ø of .315" [8.001 mm]. To calculate CMA please reference **Figure F**.*

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90 SERIES ITA CONTACT INSTALLATION AND REMOVAL

PART # 510 108 281 / 910 112 129

TOOLS REQUIRED
Phillips Head Screwdriver
In/Lbs Torque Driver

CONTACT INSTALLATION INSTRUCTIONS

1. Assemble the contact to the respective wire.
   NOTE: Contact tested and designed for specific use with 2 AWG Cooner Wire CW6044-14(UL Rated), AS 105-14(Non-UL), or equivalent.
   NOTE: For more information concerning the contact assembly process, please see contact assembly instructions in this User Manual.

2. Insert the assembled contact into the back (wiring side) of the assembled module. Once in place, pull the wire slightly to ensure that the contact is fully seated.

3. Install strain relief plate and secure wires to strain relief.
   NOTE: In all High Power contact applications, VPC highly recommends the use of a strain relief plate.

CONTACT REMOVAL INSTRUCTIONS

1. Remove the module from the ITA frame.
   NOTE: Prior to extracting contacts, wire must be untied from the strain relief.
   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. Use a Phillips head screwdriver to remove the screws located at the top and bottom of the module.

3. Grasp the module halves and apply force in opposite directions, rocking the ends of the module while slightly pulling the top of the module away from the mating bottom section, until separated. Be sure to open both sides of the module simultaneously or contacts could be damaged (**Figure A**).

4. Place the High Power Receiver/ITA Contact Extraction Tool, Part # 910 112 129 (**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. Rotate the tool slightly while pushing it into the counter bore on the mating side of the module.

5. Once the extraction tool is seated and the retaining tabs on the retaining ring are compressed (**Figure B**), push the tool into the module. The contact will be pushed out of the rear of the module.

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.

6. If necessary, replace the module cap using both hands to push the separated halves together. Replace and tighten the module retaining screws to a maximum torque of 1.5 in-lbs [0.17 Nm].

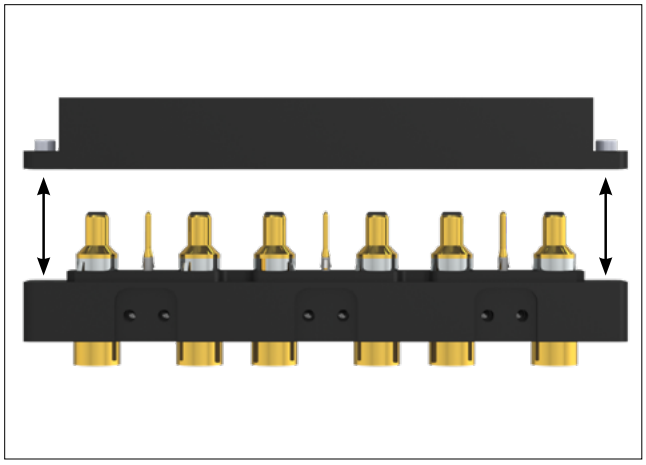

Figure A. Separating the module.

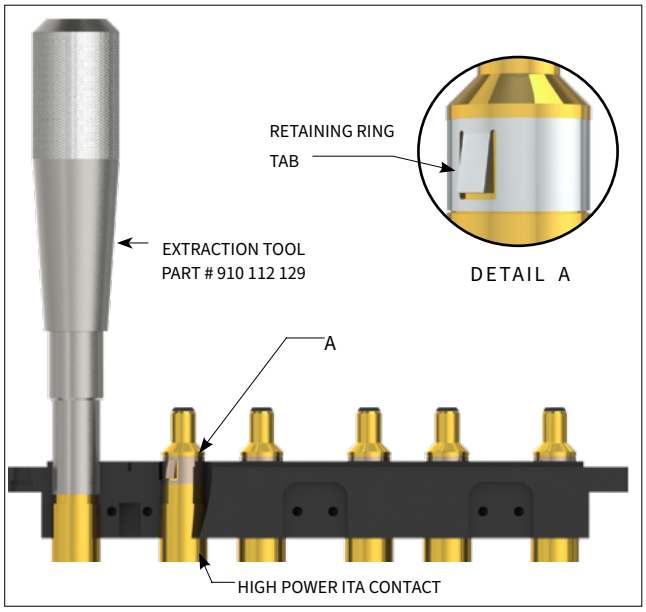

Figure B. Fully seat extraction tool before depressing.

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iCON/i1 ITA CONTACT INSTALLATION AND REMOVAL

PART # 510 161 124 / 910 112 129

TOOLS REQUIRED
Flat Head Screwdriver
Phillips Head Screwdriver
In/Lbs Torque Driver

CONTACT INSTALLATION/LOADING INSTRUCTIONS

1. Assemble the contact to the respective wire.
   NOTE: Contact tested and designed for specific use with 2 AWG Cooner Wire CW6044-14(UL Rated), AS 105-14(Non-UL), or equivalent.
   NOTE: For more information concerning the contact assembly process, please see contact assembly instructions in this User Manual.

2. Ensure empty modules are secure in ITA frame. Insert the assembled contact into the back (wiring side) of the assembled module. Once in place, pull the wire slightly to ensure that the contact is fully seated.
   NOTE: For more information concerning the module installation process, please see iCon/i1 module installation and removal instructions in this User Manual.

3. If loading an iCon frame, repeat steps 1 and 2 for module "A", loading High Power contacts in positions 3 and 4 only (All TriPaddle positions may be used).

Figure A. Correctly loaded ITA contacts in i1.

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. Use a Phillips head screwdriver to remove the screws located at the top and bottom of the module.

3. Grasp the module halves and apply force in opposite directions, rocking the ends of the module while slightly pulling the top of the module away from the mating bottom section, until separated. You may pry at the machined slot on the module using a flat head screwdriver to assist in opening the module. Be sure to open both sides of the module simultaneously or contacts could be damaged.

4. Place the High Power Receiver/ITA Contact Extraction Tool, Part # 910 112 129 (**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.

5. Once the extraction tool is seated and the retaining tabs on the retaining ring are compressed, push the tool into the module (**Figure B**). The contact will be pushed out of the rear of the module.

Figure B. Correctly loaded ITA contacts in iCon.

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.

6. If necessary, replace the module cap using both hands to push the separated halves together. Replace and tighten the module retaining screws to a maximum torque of 1.5 in-lbs [0.17 Nm].

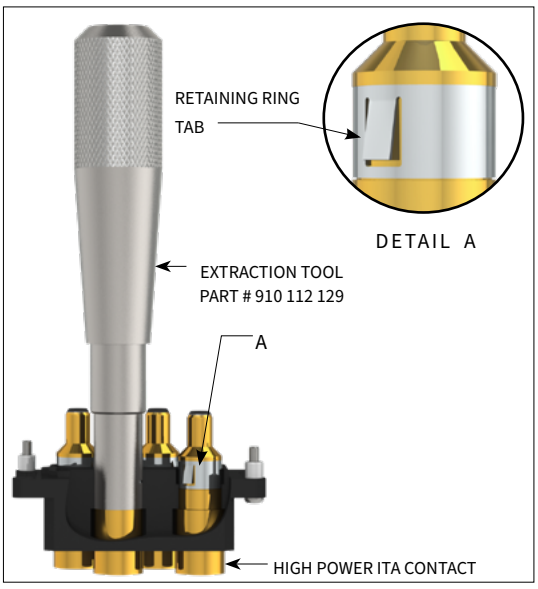

Figure B. Fully seat extraction tool before depressing.

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90 SERIES MODULE INSTALLATION AND REMOVAL

PART # 510 108 281/ 510 104 307

TOOLS REQUIRED

$^{3}/_{32}$ Allen Wrench
In-lbs Torque Driver

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 $^{3}/_{32}$ Allen wrench, tighten the top screw (4-40 x $^{5}/_{8}$ captive screw for the receiver module and 4-40 x $^{9}/_{16}$ captive screw for ITA module)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. Tighten screws to a maximum torque of 4 in-lbs [0.45 Nm].

REMOVAL INSTRUCTIONS

1. To remove, loosen the top screw (4-40 x $^{5}/_{8}$ captive screw for the receiver module and 4-40 x $^{9}/_{16}$ captive screw for ITA module)
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.

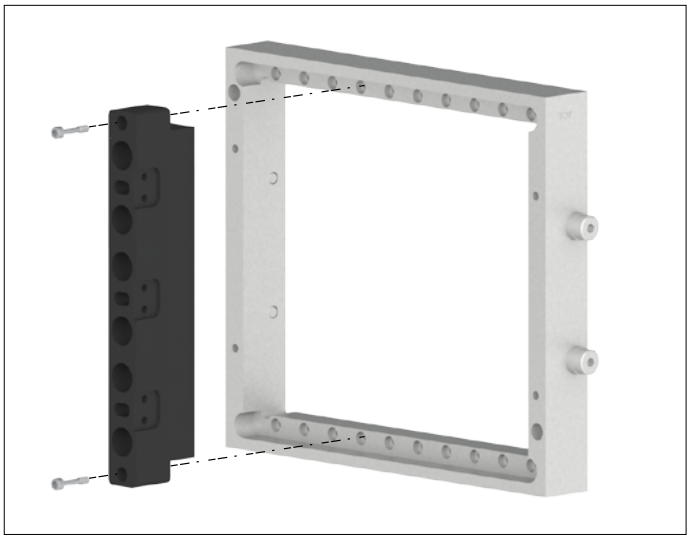

Figure B. ITA Module.

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i1/iCON MODULE INSTALLATION AND REMOVAL

PART # 510 161 124/ 510 160 124

TOOLS REQUIRED
Phillips Head Screwdriver
In-lbs Torque Driver

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 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. Tighten screws to a maximum torque of 1.5 in-lbs [0.17 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.

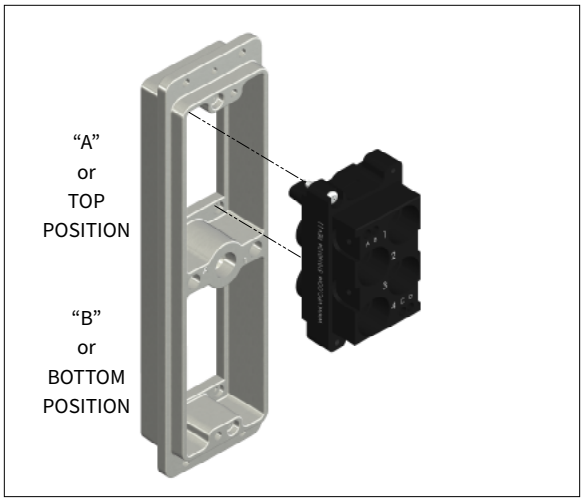

Figure A. Receiver Module.

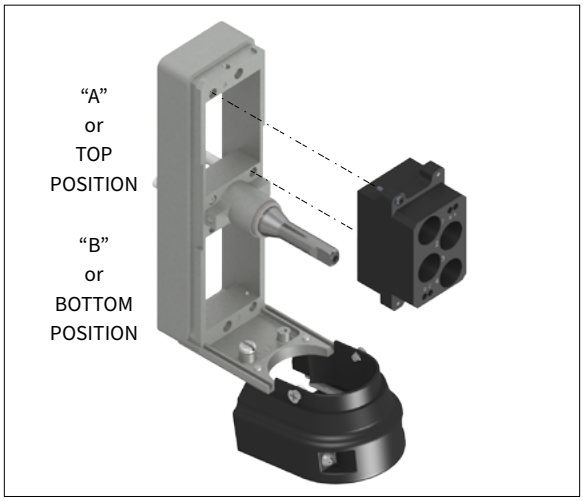

Figure B. ITA Module.

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DIS-ASSEMBLY OF THE OVERSIZED ICON ITA CABLE ASSEMBLY

PART # 410 123 106 / 410 123 116 / 410 123 122 / 910 112 129

TOOLS REQUIRED
Flat Head Screwdriver
Phillips Head Screwdriver
Heat Gun with Reflector
In-lbs Torque Driver

BACK SHELL REMOVAL INSTRUCTIONS

1. Turn engagement knob in counterclockwise rotation to remove the protective cover on the front of the ITA
2. Remove engagement knob and screw **[Figure A]**.
3. Remove 4 flat head screws from the positions shown **[Figure B]**.
4. Remove the flat head screw from the position shown and slide off the back shell assembly **[Figure C]**.
5. Remove 2 flat head screws from the positions shown **[Figure D]**.
6. Slide off the U-shaped cable clamp assemnly **[Figure E]**.
7. Uncrew the 2 phillips head screws attached to the strain relief clamp to remove the clamp **[Figure F]**.

NOTE: The cable clamp exit diameter for p/n 410 123 106 and 410 123 116 is 1.55". The cable clamp exit diameter for p/n 410 123 122 is 1.80" Completed wire bundles should not exceed these dimensions.

Figure A.

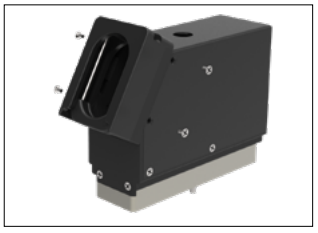

Figure B.

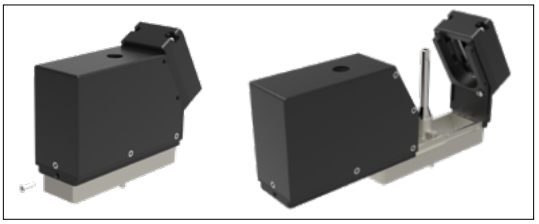

Figure C.

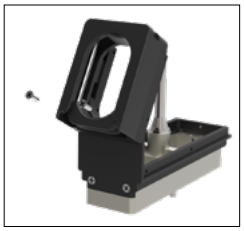

Figure D.

Figure E.

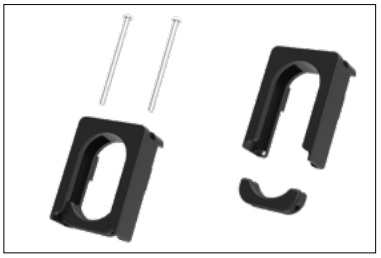

Figure F.

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ASSEMBLY OF THE OVERSIZED ICON ITA CABLE ASSEMBLY

PART # 410123106 / 410123116 / 410 123 122 / 910 112 129

TOOLS REQUIRED

Flat Head Screwdriver
Phillips Head Screwdriver
$^{3}/_{32}$ Allen Wrench
In-lbs Torque Driver

CONTACT INSTALLATION INSTRUCTIONS

NOTE: The ITA backshell must be removed prior to installing an iCon module. Please refer to the iCon User Manual for instructions on how to perform this step.

1. Assemble the contact to the respective wire.
   NOTE: Contact tested and designed for specific use with 2 AWG Cooner Wire CW6044-14(UL Rated), AS 105-14(Non-UL), or equivalent.
   NOTE: For more information concerning the contact assembly process, please see contact assembly instructions in this User Manual.
2. Ensure empty modules are secure in ITA frame.
3. Insert the assembled contacts into the back (wiring side) of module “A”, in positions 3 and 4 only for 410123106 and 410123116; once in place, pull the wire slightly to ensure that the contact is fully seated. For 410123122 all High Power positions may be used.
   NOTE: For more information concerning the module installation process please see module installation and removal instructions in this User Manual.
4. Insert TriPaddle contacts into the back (wiring side) of module “A”; once in place, pull the wire slightly to ensure that the contact is fully seated.
5. Repeat steps 3 and 4 for module “B” contact loading, except that module “B” can be loaded in all four positions of the module (**Figure A**).
6. Route wires down both sides of engagement post (**Figure B**).

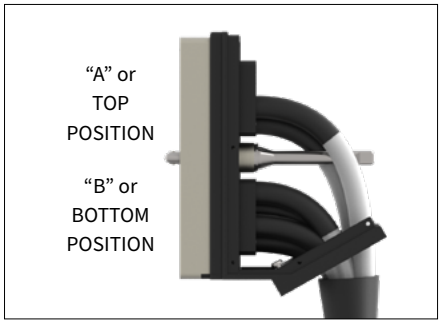

Figure A. Fully loaded ITA.

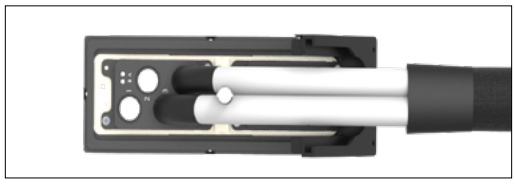

Figure B. Route wires around engagement post.

NOTE: Consult VPC for more information on the use of wire other than recommended.

NOTE: The cable clamp exit diameter for p/n 410 123 106 and 410 123 116 is 1.55”. The cable clamp exit diameter for p/n 410 123 122 is 1.80” Completed wire bundles should not exceed these dimensions.

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ASSEMBLY OF THE OVERSIZED ICON ITA CABLE ASSEMBLY

PART # 410 123 122 / 910 112 129

TOOLS REQUIRED

Flat Head Screwdriver
Phillips Head Screwdriver
$^{3}/_{32}$ Allen Wrench
Heat Gun with Reflector
In-lbs Torque Driver (optional)

CONTACT INSTALLATION INSTRUCTIONS

NOTE: The ITA backshell must be removed prior to installing an iCon module. Please refer to the iCon User Manual for instructions on how to perform this step.

7. If applicable, install protective sleeving at this time. Apply protective sleeving approximately 1" down from bottom of ITA frame. (**Figure D**).
8. Slide 4" shrink tubing up into cable clamp area as far as possible, covering lacing. Shrink into place with Heat Gun (**Figure E**).
9. Place U-shaped cable clamp over wire bundle and screw into rear of ITA frame using a $^{3}/_{32}$ Allen wrench, taking care not to pinch wires in cable clamp (**Figure F**).
10. Install cable clamp strain relief using Phillips-head screwdriver.
11. Slide cover onto ITA frame. Secure top captive screw first, then tighten the remaining four side screws into place using a Phillips-head screwdriver. Tighten screws to a maximum torque of 1.5 in-lbs [0.17 Nm] (**Figure G**).
12. Re-install engagement handle assembly, noting orientation of handle to ensure correct engagement clocking using a Phillips-head screwdriver. Tighten screw to a maximum torque of 2.5 in-lbs [0.28 Nm] (**Figure H**).

NOTE: Consult VPC for more information on the use of wire other than recommended.

NOTE: The cable clamp exit diameter for p/n 410 123 106 and 410 123 116 is 1.55". The cable clamp exit diameter for p/n 410 123 122 is 1.80" Completed wire bundles should not exceed these dimensions.

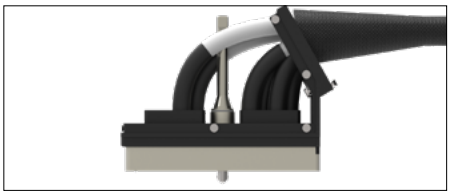

Figure D. Applied protective sleeving.

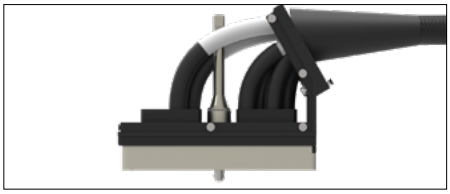

Figure E. Applied shrink tube.

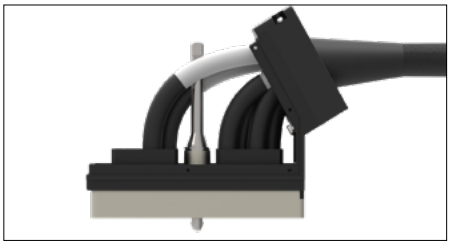

Figure F. Attached U-shaped cable clamp.

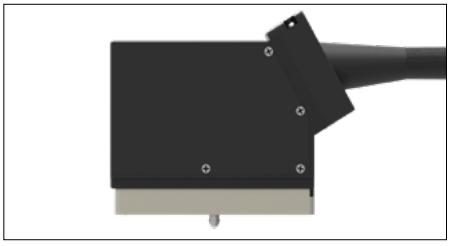

Figure G. Slide cover on ITA frame

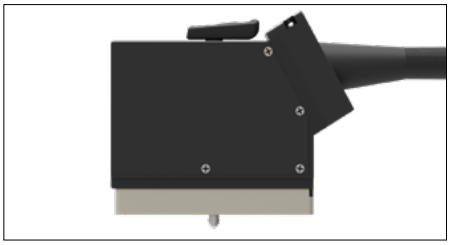

Figure H. Re-install engagement handle.

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i1 ITA CABLE ASSEMBLY CONTACT INSTALLATION

PART # 410 128 103 / 910 112 129

TOOLS REQUIRED
Phillips Head Screwdriver
Heat Gun with Reflector
In-lbs Torque Driver

CONTACT INSTALLATION INSTRUCTIONS

NOTE: The ITA backshell must be removed prior to installing an iCon module. Please refer to the i1 User Manual for instructions on how to perform this step.

1. Assemble the contact to the respective wire.
   NOTE: Contact tested and designed for specific use with 2 AWG Cooner Wire CW6044-14(UL Rated), AS 105-14(Non-UL), or equivalent.
   NOTE: For more information concerning the contact assembly process, please see contact assembly instructions in this User Manual.

2. Ensure empty module is secure in ITA frame. Feed wire through cable clamp housing (uninstalled). Insert the assembled High Power and TriPaddle contacts into the back (wiring side) of module; once in place, pull the wire slightly to ensure that the contact is fully seated (**Figure A**).
   NOTE: For more information concerning the module installation process please see module installation and removal instructions in this User Manual.

3. If applicable, install protective sleeving at this time. Apply protective sleeving approximately 1" below exit of cable clamp when in installed position. Slide 4" shrink tubing up into cable clamp area as far as possible, covering lacing. Shrink into place with Heat Gun (**Figure B**).

4. Slide cable clamp housing up length of wire and secure to bottom of ITA using Phillips head captive screws (**Figure C**).

5. Install and tighten cable clamp strain relief in place until wires/bundle is secure (**Figure D**).

6. Slide engagement housing over ITA frame/housing and secure in place by tightening the 4 Phillips head captive screws at the corners of the housing to a maximum torque of 1.5 in-lbs [0.17 Nm] (**Figure E**).

NOTE: Consult VPC for more information on the use of wire other than recommended.

NOTE: The cable clamp exit diameter is 1.26". Completed wire bundle should not exceed this dimension.

Figure A. Route wire through cable clamp housing.

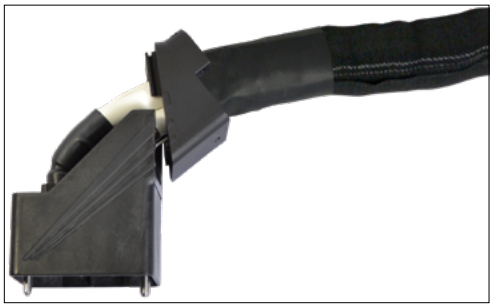

Figure B. Apply sleeving and shrink tubing.

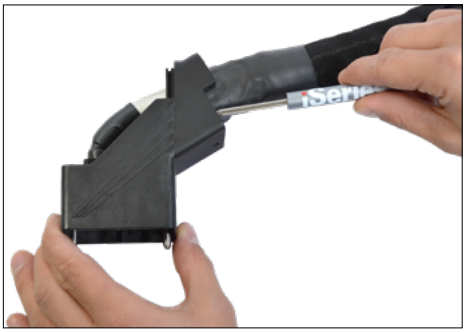

Figure C. Attach cable clamp housing.

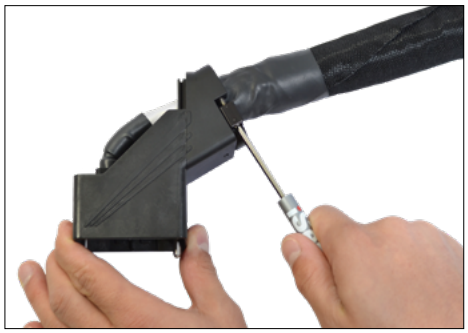

Figure D. Attach strain relief cable clamp.

Figure E. Attach engagement housing.

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90 SERIES/ICON/I1 STRAIN RELIEF ASSEMBLY

PART # 510 109 549 / 510 109 572

TOOLS REQUIRED
Phillips Head Screwdriver

ASSEMBLY INSTRUCTIONS 90 SERIES

1. Use a Phillips-head screwdriver to fasten the strain relief to the 90 Series receiver module on the side of the receiver module as shown in (**Figure A**).

2. Wires should be restrained with slots in strain relief and be in line with the axis of its contact cavity. Twelve wire ties are included with the strain relief.

ASSEMBLY INSTRUCTIONS ICON/I1

1. Use a Phillips-head screwdriver to fasten the strain relief to the iCon/i1 receiver module on the sides of the receiver module as shown in (**Figure B**).

2. Wires should be restrained with slots in strain relief and be inline with the axis of its contact cavity. Eight wire ties are included with the strain relief.

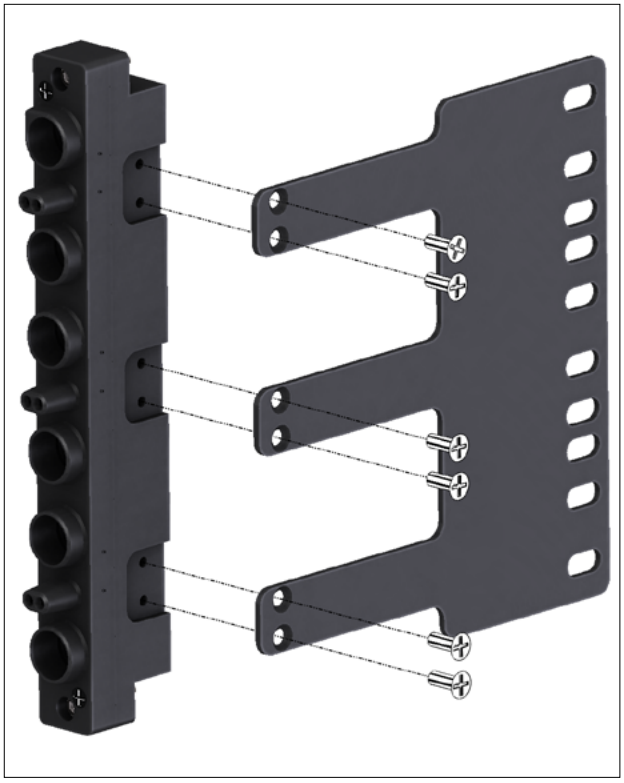

Figure A. 90 Series Strain Relief Installation.

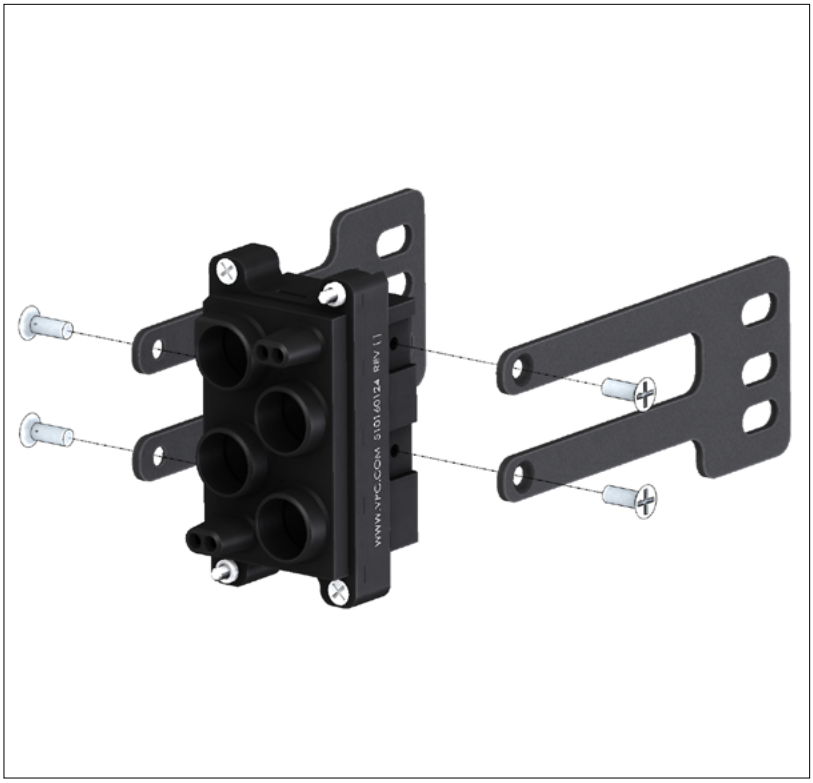

Figure B. iCon/i1 Strain Relief Installation.

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CROSS REFERENCE TABLES

RECEIVER CONTACTS	90 SERIES RCV MODULE	iCON MODULE	EXTRACTION TOOL	CRIMP TOOL KIT	LOCATOR/ DIE SET KIT	LOADED iCON RCV W/ FLYING LEADS	LOADED i1 RCV W/ FLYING LEADS
	510 104 307	510 160 124	910 112 129	910 102 116	910 102 117	310 123 508	310 128 480
610 149 101	X	X	X	X	X	X	X

ITA CONTACTS	90 SERIES ITA MODULE	iCON MODULE	EXTRACTION TOOL	CRIMP TOOL KIT	LOCATOR/DIE SET KIT	ICON HIGH POWER ITA	i1 HIGH POWER ITA	LOADED iCON ITA FLYING LEADS	LOADED i1 ITA W/ FLYING LEADS
	510 108 281	510 161 124	910 112 129	910 102 116	910 102 117	410 123 106	410 128 103	410 123 700	410 128 565
610 150 101	X	X	X	X	X	X	X	X	X

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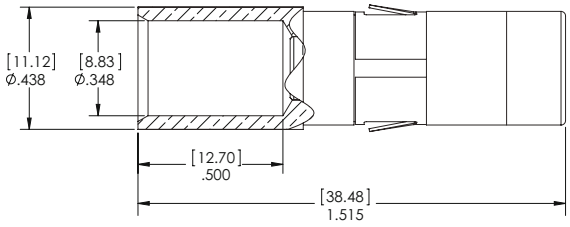
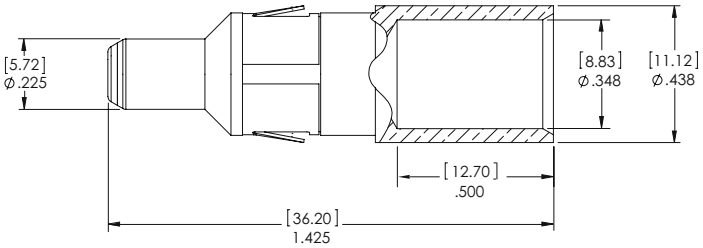
HIGH POWER CONTACT SPECIFICATIONS



Receiver Contact
Part # 610 149 101



ITA Contact
Part # 610 150 101

Dimensions shown: [millimeters]
inches

Electrical Specifications

Operating Current	150 Amp Continuous using 2 AWG wire
Operating Voltage	600VDC or Peak AC
Contact Resistance	0.35 mOhms
Dielectric Withstanding Voltage	1500VDC Minimum
Insulation Resistance	1000 Mohms Minimum
Temperature Rise	+40°C at 150 Amps +30°C at 125 Amps

Mechanical Characteristics

Mating Force	1.39 lb Max [0.63 Kg]
Cycle Life	10,000 cycles

Material

Contact Body Material	Cu Alloy
Receiver Contact Body Plating	10µ" Au over 100µ" Ni
ITA Contact Body Plating	30µ" Au over 100µ" Ni
Operating Temperature	-40°C to 125°C

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