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MICRO POWER RECEIVER CONTACT ASSEMBLY

PART # 610 142 101

TOOLS REQUIRED
Crimp Tool, Part # 910 101 102
Locator, Part # 910 104 145

CRIMP TOOL SETUP
1. Set up the Crimp Tool, Part # 910 101 102 (Figure A), by loosening the contact retainer latch assembly using the locking screw (turn counter-clockwise to loosen). Remove any previously used locator.
2. Insert the open end of the Locator, Part # 910 104 145 (Figure B), into the contact retainer assembly.
3. Slide the crimp tool retaining latch to the locator until the locator is securely held in place and tighten the latch locking screw.

CRIMP TOOL ADJUSTMENT AND WIRE PREPARATION
1. Using Table 1, determine the appropriate crimp tool setting and wire strip length according to the wire gauge being used.
2. Pull and turn the microcrimp adjusting knob (clockwise to increase, counter-clockwise to decrease settings) to adjust the crimp tool until the appropriate setting is achieved (Table 1). Verify with gauge pin. For more information about gauge pins, visit vpc.com/gaugepins. See calibration instructions for Part # 910 101 102/103 for gauge pin verification instructions.
3. Strip wire to the appropriate length (Table 1).

CONTACT SETUP AND CRIMPING
1. Insert the contact into the crimp tool.
   NOTE: Contact will drop completely into the crimp tool.
2. Once the contact is properly inserted into the crimp tool, insert the stripped wire fully into the contact and squeeze the crimp tool handle fully until reaching a positive stop.
   NOTE: Crimp tool will automatically release and return to open position when crimp is complete.
3. Remove the crimped contact (Figure C).

Table 1.

<table>
<thead>
<tr>
<th>WIRE GAUGE</th>
<th>STRIP LENGTH (IN [MM])</th>
<th>CRIMP SETTING (IN [MM])</th>
<th>PULLOUT FORCE (LB [N])</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAX</td>
<td>MIN</td>
<td></td>
</tr>
<tr>
<td>12 (Stranded)</td>
<td>0.20</td>
<td>0.080</td>
<td>0.078</td>
</tr>
<tr>
<td>14 (Stranded)</td>
<td>0.20</td>
<td>0.070</td>
<td>0.068</td>
</tr>
</tbody>
</table>

NOTE: 12 and 14 AWG wire can be crimped or soldered. Smaller wire should be soldered only.

![Figure A. Crimp Tool, Part # 910 101 102.](image)

![Figure B. Locator, Part # 910 104 145.](image)

![Figure C. Correctly assembled contact.](image)
MICRO POWER ITA CONTACT ASSEMBLY

PART # 610 143 101

TOOLS REQUIRED
Crimp Tool, Part # 910 101 102
Locator, Part # 910 104 144

CRIMP TOOL SETUP
1. Set up the Crimp Tool, Part # 910 101 102 (Figure A), by loosening the contact retainer latch assembly using the locking screw (turn counter-clockwise to loosen). Remove any previously used locator.
2. Insert the open end of the Locator, Part # 910 104 144 (Figure B), into the contact retainer assembly.
3. Slide the crimp tool retaining latch to the locator until the locator is securely held in place and tighten the latch locking screw.

CRIMP TOOL ADJUSTMENT AND WIRE PREPARATION
1. Using Table 1, determine the appropriate crimp tool setting and wire strip length according to the wire gauge being used.
2. Pull and turn the microcrimp adjusting knob (clockwise to increase, counter-clockwise to decrease settings) to adjust the crimp tool until the appropriate setting is achieved (Table 1). Verify with pin gauge. For more information about gauge pins, visit vpc.com/gaugepins. See calibration instructions for Part # 910 101 102/103 for pin gauge verification instructions.
3. Strip wire to the appropriate length (Table 1).

CONTACT SETUP AND CRIMPING
1. Insert the contact into the crimp tool.
   NOTE: Contact will drop completely into the crimp tool.
2. Once the contact is properly inserted into the crimp tool, insert the stripped wire fully into the contact and squeeze the crimp tool handle fully until reaching a positive stop.
   NOTE: Crimp tool will automatically release and return to open position when crimp is complete.
3. Remove the crimped contact (Figure C).

OBSERVE PRECISION RATCHET ACTION BY OPENING AND CLOSING CRIMP TOOL FULLY SEVERAL TIMES. NOTE THAT TOOL CANNOT BE OPENED WITHOUT COMPLETING A CYCLE. NEVER ATTEMPT TO DISASSEMBLE TOOL. NEVER TIGHTEN OR LOosen STOP NUTS ON BACK OF TOOL.

Table 1.

<table>
<thead>
<tr>
<th>WIRE GAUGE</th>
<th>STRIP LENGTH (IN [MM])</th>
<th>CRIMP SETTING (IN [MM])</th>
<th>PULLOUT FORCE (LB [N])</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAX</td>
<td>MIN</td>
<td></td>
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<tr>
<td>12 (Stranded)</td>
<td>0.20 [5.08]</td>
<td>0.080 [2.03]</td>
<td>0.078 [1.98]</td>
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<tr>
<td>14 (Stranded)</td>
<td>0.20 [5.08]</td>
<td>0.070 [1.78]</td>
<td>0.068 [1.73]</td>
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</table>

NOTE: 12 and 14 AWG wire can be crimped or soldered. Smaller wire should be soldered only.
TOOLS REQUIRED
Phillips Head Screw Driver
Micro Coax/Power Receiver/ITA Extraction Tool, Part # 910 112 123

CONTACT INSTALLATION INSTRUCTIONS
1. Assemble the contact to the respective wire.

NOTE: For more information concerning the contact assembly process, see contact assembly instructions in Section 1 of this User’s Manual.

2. Insert the terminated contact into the back of the assembled module. The contact can only go into one side. 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 4 of this User’s Manual.

2. Use a Phillips Head screw driver to remove the two 2-56 screws located at the top and bottom of the module. (Phillips head screwdriver for iCon modules.)

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

4. Place the Micro Power Receiver/ITA Extraction Tool [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.

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


6. Replace the module top half using both hands to push the separated halves together. Replace and tighten the module flat head screws to a maximum torque of 1.5 in-lbs [0.169 Nm].

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.
MICRO POWER RECEIVER CONTACT INSTALLATION AND REMOVAL
PART # 610 142 101 / 610 142 102
510 104 270

TOOLS REQUIRED
3/64 Allen Wrench
Phillips Head Screwdriver (for iCon modules)
Micro Coax/Power Receiver/ITA Extraction Tool, Part # 910 112 123

CONTACT INSTALLATION INSTRUCTIONS
1. Assemble the contact to the respective wire.

   NOTE: For more information concerning the contact assembly process please see contact assembly instructions in Section 1 of this User’s Manual.

2. Insert the terminated contact into the back (wiring side) of the assembled module. The contact can only go into one side. 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 4 of this User’s Manual.

2. Use a 3/64 Allen wrench to remove the 0-80 screws (Figure A).

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.

4. Place the Micro Coax/Power Receiver/ITA Extraction Tool, part # 910 112 123 (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 bent.

5. Once the extraction tool is seated and the retaining tabs on the retaining ring are compressed, push the plunger. The contact will be pushed out of the rear of the module.


6. 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 .875 in-lbs [0.10 Nm].

   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.
MCPRO POWER CONTACTS AND MODULES USER MANUAL: SECTION 3

MCPRO POWER ITA CONTACT INSTALLATION AND REMOVAL

PART # 610 143 101

TOOLS REQUIRED
Micro Coax/Power Receiver/ITA Extraction Tool, Part # 910 112 123

CONTACT INSTALLATION INSTRUCTIONS
1. Assemble the contact to the respective wire.

NOTE: For more information concerning the contact assembly process please see contact assembly instructions in Section 2 of this User’s Manual.

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 receiver frame, see module installation and removal instructions in Section 5 of this User’s Manual.

2. Place the Micro Coax/Power Receiver/ITA Extraction Tool, part # 910 112 123 (Figure A), over the contact to be removed/ replaced. Use care to keep the tool perpendicular to the surface of the module as not to bend the tool or the contact to be removed. 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 tabs on the retaining ring are compressed (Figure B), push the plunger. The contact will be pushed out of the rear of the module.


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.
MICRO POWER 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 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 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.
MICRO POWER 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.
## CROSS REFERENCE TABLES

<table>
<thead>
<tr>
<th>RECEIVER CONTACTS</th>
<th>STANDARD/90 SERIES RECEIVER MODULES</th>
<th>ICON RECEIVER MODULES</th>
<th>CRIMP TOOL</th>
<th>LOCATOR</th>
<th>EXTRACTION</th>
</tr>
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<tbody>
<tr>
<td>610 142 101</td>
<td>510 104 267</td>
<td>510 106 106</td>
<td>510 160 111</td>
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<th>CRIMP TOOL</th>
<th>LOCATOR</th>
<th>EXTRACTION</th>
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<td>510 161 106</td>
<td>510 161 111</td>
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<td>910 104 144</td>
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MICRO POWER CONTACT ELECTRICAL SPECIFICATIONS
PART # 610 142 101 / 610 143 101

Electrical Specifications

<table>
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<tr>
<th>Description</th>
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<tr>
<td>CURRENT RATING</td>
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<tr>
<td>DIELECTRIC WITHSTANDING VOLTAGE</td>
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<td>(DWV)</td>
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<tr>
<td>CONTACT RESISTANCE</td>
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</tbody>
</table>

Mechanical Characteristics

<table>
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<tr>
<td>CYCLE LIFE</td>
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<tr>
<td>MATING FORCE</td>
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Material

<table>
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</thead>
<tbody>
<tr>
<td>CONTACT BODY</td>
<td>Brass per ASTM - B-16 / .000015 Min. &quot; Au over .000100&quot; Ni</td>
</tr>
<tr>
<td>RETAINING RING</td>
<td>BeCu per ASTM - B-196 / .000100&quot; Ni</td>
</tr>
</tbody>
</table>