



ASSEMBLY, INSTALLATION, AND REMOVAL OF CONTACTS AND MODULES

TRIPADDLE

INDEX (CLICK TO NAVIGATE TO PAGE)

PAGE

RECEIVER CONTACTS

2 [CRIMP TOOL SETUP](#)

3 [TABLE 1](#)

4 [CRIMPING INSTRUCTIONS](#)

5 [CRIMP INSPECTION](#)

6 [INSTALLATION & REMOVAL](#)

ITA CONTACTS

7 [CRIMP TOOL SETUP](#)

8 [TABLE 2](#)

9 [TABLE 3](#)

10 [CRIMPING & CRIMP INSPECTION](#)

11 [INSTALLATION & REMOVAL](#)

12 [WIRE WRAP CONTACT ASSEMBLY](#)

MODULES & PCBS

13 [90 SERIES MODULE INSTALLATION & REMOVAL](#)

14 [ICON MODULE INSTALLATION & REMOVAL](#)

15 [RECEIVER PCB ADAPTER INSTALLATION & REMOVAL](#)

16 [ITA PCB ADAPTER INSTALLATION & REMOVAL](#)

17 [CROSS REFERENCE TABLES](#)

*Please note that any printed or downloaded User Manual may not reflect the most current revisions.
The information contained herein is subject to change.
For the most current information available, visit vpc.com.*

RECEIVER CONTACT CRIMP TOOL SETUP

PART # 910101102, 910101103

TOOL SELECTION

Receiver contacts are crimped using one of the following two tools. Set-up instructions are the same for both tools. Tool settings and locator are determined using **Table 1** on the following page.

CRIMP TOOL p/n 910101102

Contact p/n 610110128/ 177

CRIMP TOOL p/n 910101103

Contact p/n 610110101/ 125/ 167/ 171

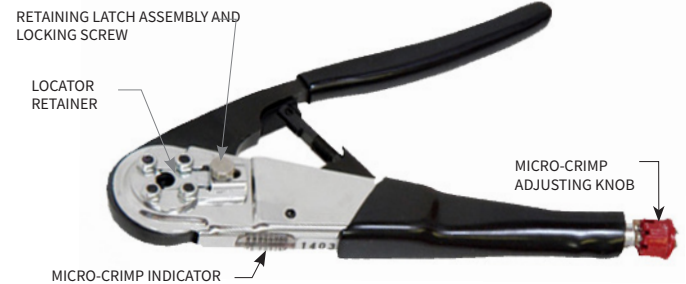


Figure A. Anatomy of both crimp tools

TOOL SETUP

(See Table 1 on next page for settings)

1. Loosen the latch-locking screw (**Figure A**) by turning counter-clockwise. Remove any previously used locator.
2. Insert the open end of the locator (**Figure B**) into the crimp tool locator retainer. Expect a tight tolerance fit.
3. Slide the retaining latch toward the locator until the locator is securely locked into place. Tighten the latch-locking screw.
4. Adjust the crimp tool for the desired setting on the micro-crimp indicator by pulling and turning the micro-crimp adjusting knob:
 - Clockwise to increase
 - Counter-clockwise to decrease
5. Verify with pin gauge. See calibration instructions for tool part number for pin gauge verification information. Calibration instructions are located at vpc.com in the User Manual section.

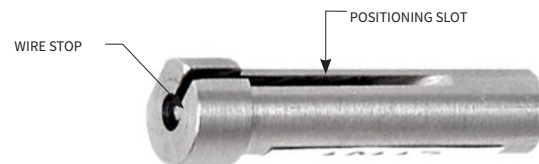


Figure B. Locator

[RETURN TO INDEX](#)

Table 1.

CONTACT	CRIMP TOOL	LOCATOR DIE	STRIP LENGTH (IN [MM])	WIRE GAUGE	CRIMP SETTING (IN [MM])		PULLOUT FORCE (LBS [N])		
					MAX	MIN			
610110101 & 610110125	910101103	910104127	Insulation Dia. <0.058" [1.47]. Strip Length = 0.20" [5.08] Insulation Dia. >0.058" [1.47], Strip Length = .28" [7.11]**	20	0.037 [0.94]	0.033 [0.84]	10 [44.5]		
				22	0.033 [0.84]	0.029 [0.74]			
				24	0.028 [0.71]	0.025 [0.64]	8 [35.6]		
			0.28" [7.11]**	2-24*	0.036 [0.91]	0.033 [0.84]	8* 35.6]*		
			0.28" [7.11]**	2-26*	0.034 [0.86]	0.032 [0.81]	4* [17.8]*		
				3-26*	0.037 [0.94]	0.035 [0.89]			
610110167 & 610110171			910101103	910104127	Insulation Dia. <0.037" [0.94]. Strip Length = 0.20" [5.08] Insulation Dia. >0.037" [.94], Strip Length = .28" [7.11]**	26	0.028 [0.71]	0.024 [0.61]	4 [17.8]
						28	0.024 [0.61]	0.021 [0.53]	2* [8.9]*
					0.28" [6.35]**	2-28*	0.028 [0.71]	0.026 [0.66]	
					Insulation Dia. <0.037" [0.94]. Strip Length = 0.20" [5.08] Insulation Dia. >0.037" [.94], Strip Length = .28" [7.11]**	30	0.022 [0.56]	0.020 [0.51]	1.0* [4.4]*
	2-30*	0.026 [0.66]				0.025 [0.63]			
	610110128 & 610110177	910101102			910104146	Insulation Dia. <0.072" [1.47], Strip Length = 0.26" [6.60] Insulation Dia. >0.072" [1.47], Strip Length = .30" [7.62]**	14	0.056	0.052
16							0.048	0.044	
18							0.042	0.040	
0.30" [7.62]**						2-20	0.044	0.040	
						2-22	0.035	0.031	

*Pullout force is per individual wires

**For strip lengths 0.28" [7.11] and 0.30" [7.62], shrink tubing is recommended for strain relief at the rear of the contact. Tubing should not cover the inspection hole at the rear of the contact.

[RETURN TO INDEX](#)

RECEIVER CONTACT CRIMPING

TOOL PART # 910101103/102

CONTACT PART # 610110101/ 125/ 128/ 167/ 171/ 177

1. Strip wire to length based on AWG (**Table 1 on previous page.**)
2. Hold the crimp tool parallel to the floor (**Figure A**). Drop contact into the crimp tool.
3. When inserting the contact into the locator the contact retaining tab must be aligned (**Figure C**) with the positioning slot on the locator (**Figure B**).
4. The contact will drop completely into the crimp tool if properly inserted.

If the contact does not drop completely into the crimp tool, remove the contact, ensure that the contact retaining tab is properly aligned with the contact crimp locator, and re-insert.

Do not force the contact into the crimp tool as contact damage will occur.

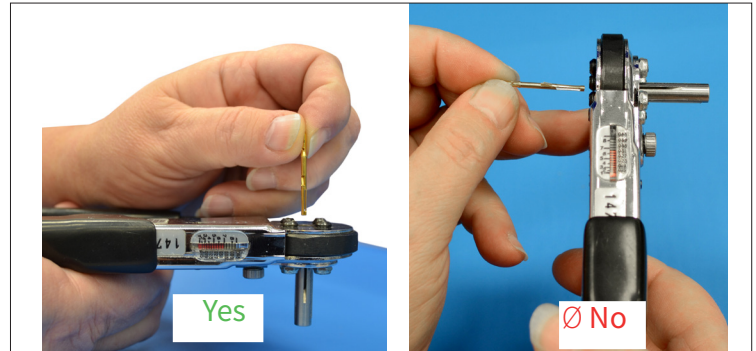


Figure A. Appropriate method for inserting contact into crimp tool.

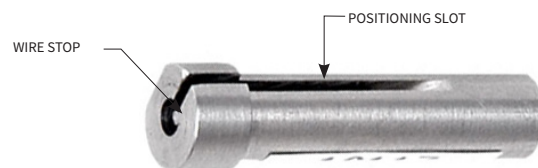


Figure B. Positioning slot and wire stop

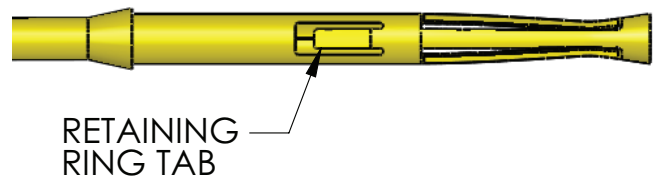


Figure C. Retaining tab must be aligned with locator positioning slot when inserting.



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

[RETURN TO INDEX](#)

RECEIVER CONTACT CRIMP INSPECTION

PART # 610110101/ 125/ 128/ 167/ 171/ 177

ACCEPTABLE CRIMP CRITERIA

1. The crimp must be between the inspection hole and the end of the contact.
2. The crimp indentations are distinctive and create a square appearance (**Figure A**).
3. No crimp indentations are connected to the inspection hole (**Figure B**). If the indentations make contact with or are above the inspection hole, the crimp is unacceptable.
4. No crimp indentations are connected to the end of the contact. If the indentations make are against the end of the contact, the crimp is unacceptable.

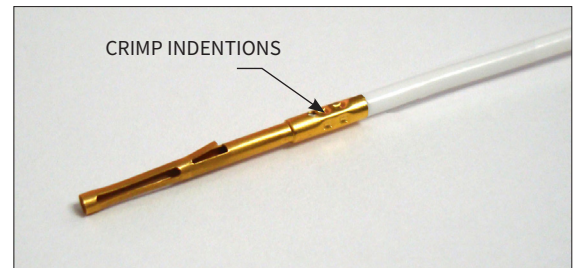


Figure A. Correct location of the crimp indentations.

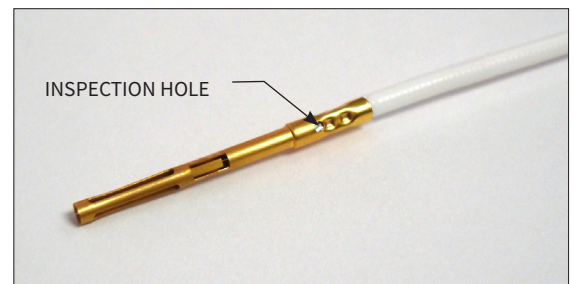


Figure B. The crimp region is between the inspection hole and the end.

[RETURN TO INDEX](#)

RECEIVER CONTACT INSTALLATION & REMOVAL

PART # 610110101/ 125/ 128/ 167/ 171/ 177

910110102

TOOLS REQUIRED

$\frac{5}{64}$ Allen Wrench or
Phillips Head Screwdriver

NOTE: These instructions refer to 90 Series modules, but also apply to iCon series modules.

INSTALLATION

1. Insert the patchcord into desired position from the back (wiring side) of the assembled module (**Figure A**). Installation is only possible on one side.
2. Push the contact forward.
3. Once in place, slightly pull the wire to ensure that the contact is fully seated.

REMOVAL

** All VPC receiver modules require two halves to be separated for contact extraction.*

1. With the module removed from the receiver frame, use a $\frac{5}{64}$ Allen wrench or Phillips head screwdriver to remove the two 2-56 screws from both sides of the top of the module (**Figure B**).
2. 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 bottom.
3. Be sure to open both sides of the module simultaneously or contacts could be damaged.
4. Place the extraction tool, p/n 910 110 102 over the contact to be removed. Use care to keep the tool perpendicular to the surface of the module, otherwise the tool or the contact could be bent (**Figure C**).



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

5. Once the extraction tool is seated and the retaining tabs on the contact are compressed, press the tool into the module. The contact will be pushed out of the rear of the module.
6. On the opposite side of the module from the extraction tool, grasp the contact and hold it while removing the extraction tool. This will prevent the contact from being pulled back into the module while the tool is being removed.
7. Replace the module top 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 [0.16 Nm].

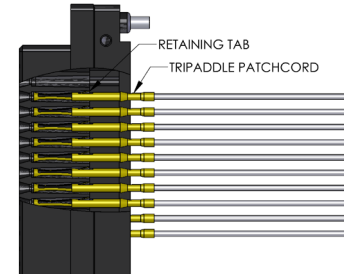


Figure A. Contacts inserted into the module.

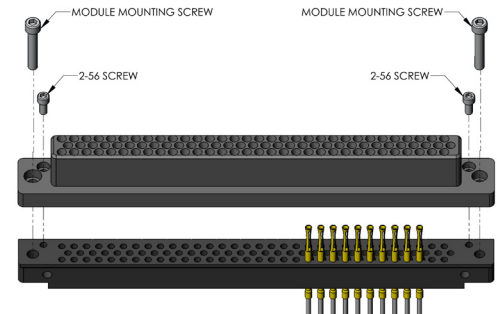


Figure B. Open both sides of the module simultaneously or pins could be damaged.

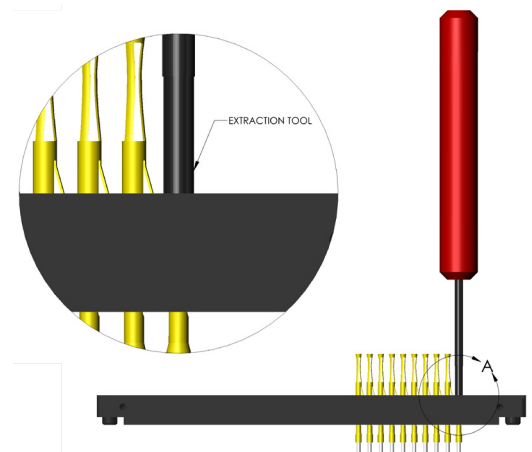


Figure C. Ensure that the tool is kept perpendicular to the module face to avoid damage to the contact or tool.

[RETURN TO INDEX](#)

ITA CONTACT CRIMP TOOL SETUP

PART # 910101102, 910101103

TOOL SELECTION

ITA contacts are crimped using one of the following two tools. Set-up instructions are the same for both tools. Tool settings and locator are determined using the tables specified on the following page.

CRIMP TOOL p/n 910101102

TABLE 2

Contact p/n 610110129/ 147/ 172/ 173

CRIMP TOOL p/n 910101103

TABLE 3

Contact p/n 610110108/ 146/ 169

TOOL SETUP

(Refer to Tables 2 & 3 for settings)

1. Loosen the latch-locking screw (**Figure A**) by turning counter-clockwise. Remove any previously used locator.
2. Insert the open end of the locator (**Figure B**) into the crimp tool locator retainer. Expect a tight tolerance fit.
3. Slide the retaining latch toward the locator until the locator is securely locked into place. Tighten the latch-locking screw.
4. Adjust the crimp tool for the desired setting on the micro-crimp indicator by pulling and turning the micro-crimp adjusting knob:
 - Clockwise to increase
 - Counter-clockwise to decrease
5. Verify with pin gauge. See calibration instructions for tool part number for pin gauge verification information. Calibration instructions are located at vpc.com in the User Manual section.

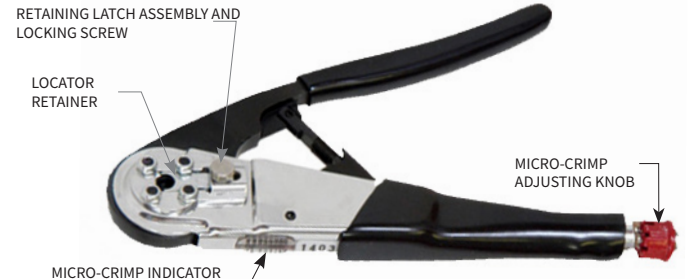


Figure A. Anatomy of both crimp tools



Figure B. Locator

[RETURN TO INDEX](#)

Table 2.

CONTACT	CRIMP TOOL	LOCATOR DIE	STRIP LENGTH (IN [MM])	WIRE	CRIMP SETTING (IN [MM])		PULLOUT FORCE (LBS [N])
					MAX	MIN	
610110129 & 610110147	910101102	910104118	Insulation Dia. <0.072” [1.47], Strip Length = 0.26” [6.60]. Insulation Dia. >0.072” [1.47], Strip Length = .30” [7.62]**	14	0.063” [1.60]	0.059” [1.50]	10 [44.5]*
				16	0.055” [1.39]	0.051” [1.29]	
				18	0.049” [1.24]	0.045” [1.14]	
			0.30” [7.62]	2-20*	0.048” [1.21]	0.044” [1.11]	
				2-22*	0.044” [1.11]	0.040” [1.01]	
			610110172 & 610110173	Insulation Dia. <0.072” [1.47], Strip Length = 0.26” [6.60]. Insulation Dia. >0.072” [1.47], Strip Length = .30” [7.62]**	14	0.063” [1.60]	
16					0.059” [1.49]	0.055” [1.39]	
18					0.055” [1.39]	0.051” [1.29]	
2-20*						0.050” [1.27]	
0.20” [5.08]					2-22*	0.044” [1.11]	

*Pullout force is per individual wire

**For strip lengths 0.28" [7.11] and 0.30" [7.62], shrink tubing is recommended for strain relief at the rear of the contact. Tubing should not cover the inspection hole at the rear of the contact.

[RETURN TO INDEX](#)

Table 3

CONTACT	CRIMP TOOL	LOCATOR DIE	STRIP LENGTH (IN [MM])	WIRE GAUGE	CRIMP SETTING (IN [MM])		PULLOUT FORCE (LBS [N])
					MAX	MIN	
610110108 & 610110146	910101103	910104107	Insulation Dia. <0.065" [1.65]. Strip Length = 0.20" [5.08] Insulation Dia. >0.065" [1.65], Strip Length = .28" [7.11]**	20	0.037 [0.94]	0.033 [0.84]	10 [44.5]
				22	0.033 [0.84]	0.029 [0.74]	
				24	0.029 [0.74]	0.025 [0.64]	8 [35.6]
			0.28" [7.11]**	2-24*	0.037 [0.94]	0.033 [0.84]	8* [35.6]*
				2-26*	0.033 [0.84]	0.029 [0.74]	4* [17.8]*
				3-26*	0.037 [0.94]	0.033 [0.84]	
				2-28*	0.026 [0.66]	0.024 [0.61]	2* [8.9]*
610110169			Insulation Dia. <0.037" [0.94]. Strip Length = 0.20" [5.08] Insulation Dia. >0.037" [0.94], Strip Length = .28" [7.11]**	26	0.028 [0.71]	0.026 [0.66]	4 [17.8]
				28	0.024 [0.61]	0.023 [0.58]	2* [8.9]*
				30	0.022 [0.56]	0.020 [0.51]	1.0* [4.4]*
			0.28" [6.35]**	2-30*	0.026 [0.66]	0.025 [0.63]	

*Pullout force is per individual wire

**For strip lengths 0.28" [7.11] and 0.30" [7.62], shrink tubing is recommended for strain relief at the rear of the contact. Tubing should not cover the inspection hole at the rear of the contact.

[RETURN TO INDEX](#)

ITA CONTACT CRIMPING & CRIMP INSPECTION

ITA PART # 610110108/ 129/ 146/ 147/ 169/ 172/ 173

CRIMPING

1. Strip wire to the length based on AWG (**consult Table 2 or 3 on previous pages**).
2. Insert stripped wire fully into the contact and squeeze the crimp tool handle until a positive stop is reached. The tool will release and return into a fully “open” position. Remove crimped contact and wire.
3. Ensure that the crimp minimum is measured with an approved gauge pin.



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



FIGURE A. Correct location of the crimp indentations.

ACCEPTABLE CRIMP CRITERIA

1. The crimp must be between the inspection hole and the end of the contact, to be acceptable.
2. The crimp indentations are distinctive and create a square appearance (**Figure A**).
3. No crimp indentations are connected to the inspection hole (**Figure B**). If the indentations make contact with or are above the inspection hole, the crimp is unacceptable.
4. Inspect the crimp to ensure none of the indentations are connected to the end of the contact. If the indentations are against the end of the contact, the crimp is unacceptable.



FIGURE B. The crimp region is between the inspection hole and the end.

NOTE: Images shown are crimped to 14 AWG wire.

[RETURN TO INDEX](#)

ITA CONTACT INSTALLATION & REMOVAL

PART # 610110108/ 113/ 129/ 145/ 146/ 147/ 169/ 172/ 173,
910 110 102

NOTE: These instructions refer to 90 Series modules, but also apply to iCon series modules.

INSTALLATION

1. Insert the patchcord into desired position from the back (wiring side) of the assembled module (**Figure A**). Installation is only possible on one side.
2. Push the contact forward.
3. Once in place, pull the wire slightly to ensure that the contact is seated.

REMOVAL

1. With the module removed from the ITA frame, place the extraction tool, p/n 910110102, over the contact to be removed/ replaced. Use care to keep the tool perpendicular to the surface of the module, otherwise the tool or the contact could be bent (**Figure B**).



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

2. Once the extraction tool is seated and the retaining tabs on the contact are compressed, press the tool into the module. The contact will be pushed out of the rear of the module.
3. On the opposite side of the module from the extraction tool, grasp the contact and hold it while removing the extraction tool. This will prevent the contact from being pulled back into the module while the tool is being removed.

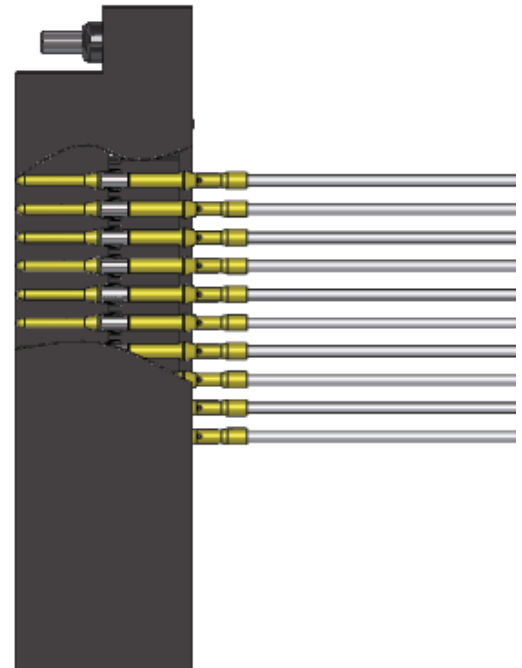


Figure A. Contacts inserted in the module.

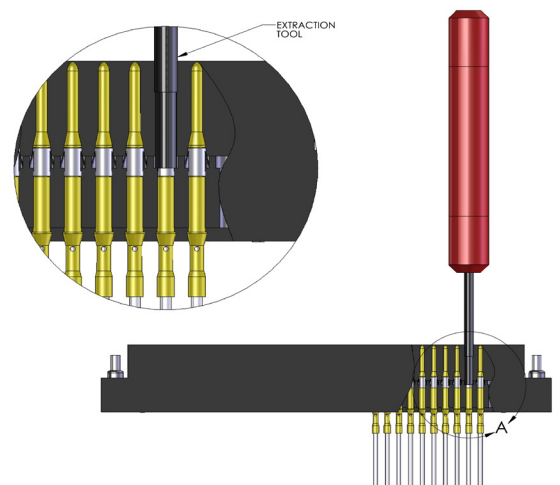


Figure B. Ensure that the extraction tool is kept perpendicular to the module face to avoid damage to the contact or tool.

[RETURN TO INDEX](#)

WIRE WRAP CONTACT ASSEMBLY

PART # 610 110 113/ 145

TOOLS REQUIRED

Wire Stripping Tool

Wire-Wrap Gun

Wire-Wrap Bit

NOTE: VPC performs wire-wrap terminations in accordance with IPC-A-620 standards.

NOTE: Wire-wraps must be performed with solid wire. Stranded wire will not work for wire wrapping. VPC recommends 26 - 30 AWG wire.

1. Cut and strip the wire. Depending on the style of wire-wrap gun and bit being used, the wire is either stripped during the wrapping process or needs to be stripped before the wrapping process. Refer to the wire-wrap gun instructions to determine the process to use.
2. Insert the wire into the wire slot on the wire-wrap gun. For modified and standard bits, insert the wire in the wire slot as deep as possible. For C.S.W. bits the wire has to be inserted all the way through the wire slot until it goes out of the cutting window. The simplified sleeve of the manual tool has no notch.
3. Hold the wire in place by hand (**Figure A**).
4. Position the terminal hole of the wire-wrap gun on the post to be wrapped. The wire-wrap gun should be parallel with the contact. The wire must continue to be held in place by hand.
5. Engage the wire-wrap gun to wrap the wire. During the wrapping operation, gently press the tool forward onto the wire-wrap post. The turns of the connection should be nicely wrapped against the other. **Do not** push too hard. **Do not** pull backwards.

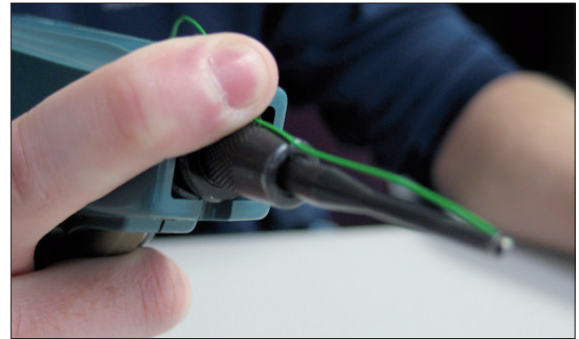


Figure A. Hold the wire in place by hand.

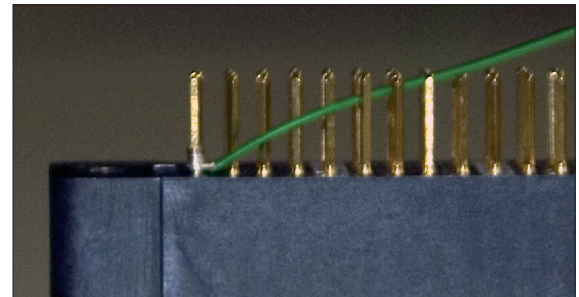


Figure B. Completed wrapped wire.

[RETURN TO INDEX](#)

90 SERIES MODULE INSTALLATION AND REMOVAL

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 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 turns, while pushing lightly against the face of the module.
3. Maintain this pressure while tightening the bottom screw 1 to 2 full turns.
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 turns, then loosen the bottom screw 1 to 2 full turns.
2. Repeat this sequence until the module is separated from the receiver or ITA.

NOTE: Push or pull the module evenly from the top and bottom to prevent damage to the module.

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



Figure A. Receiver module

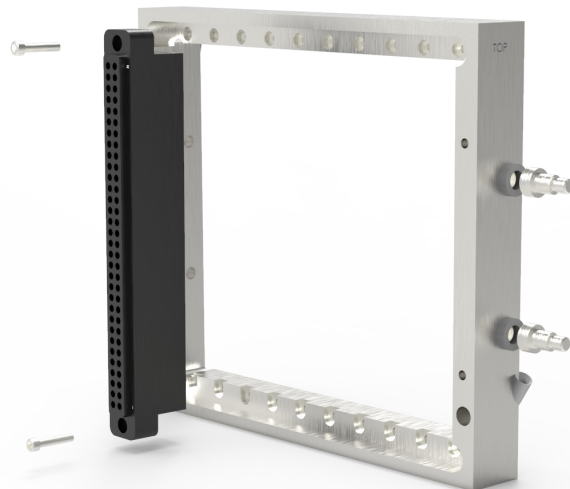


Figure B. ITA module

[RETURN TO INDEX](#)

ICON MODULE INSTALLATION AND REMOVAL

TOOLS REQUIRED

Phillips Head Screwdriver

INSTALLATION

NOTE: A receiver strain relief plate or ITA backshell 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 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 to 2 full turns, while pushing lightly against the face of the module.
3. Maintain this pressure while tightening the bottom screw 1 to 2 full turns.
4. Repeat this sequence until the module is seated. Torque the screw to 1.5 in-lbs [0.16 Nm].

REMOVAL

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

NOTE: Push or pull the module evenly from the top and bottom to prevent damage to the module.

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

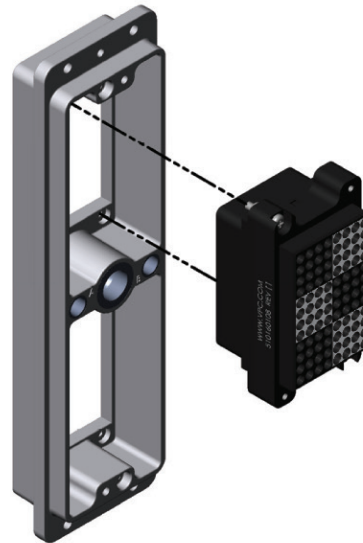


Figure A. Receiver module

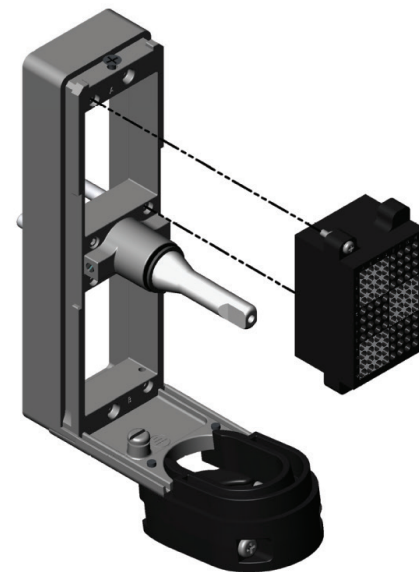


Figure B. ITA module

[RETURN TO INDEX](#)

RECEIVER PCB ADAPTER INSTALLATION AND REMOVAL

PART # 510 104 135/ 187

TOOLS REQUIRED

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

INSTALLATION

1. Solder the header to the PCB (IPC-A-610 standard recommended for PCB design).
The PCB must be manufactured with the header installation area complying with the recommended PCB layout (**Figure A** or **B**).
2. Place the module in the receiver 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.
3. Using a $\frac{3}{32}$ Allen wrench, tighten the top screw 1 to 2 full turns, while pushing lightly against the face of the module.
4. Maintain this pressure while tightening the bottom screw 1 to 2 full turns.
5. Repeat this sequence until the module is seated. Torque the screws to 4 in-lbs [0.45 Nm].



REMOVAL

1. To remove, loosen the top screw 1 to 2 full turns, then loosen bottom screw 1 to 2 full turns.
2. Repeat this sequence until the module is separated from the receiver.

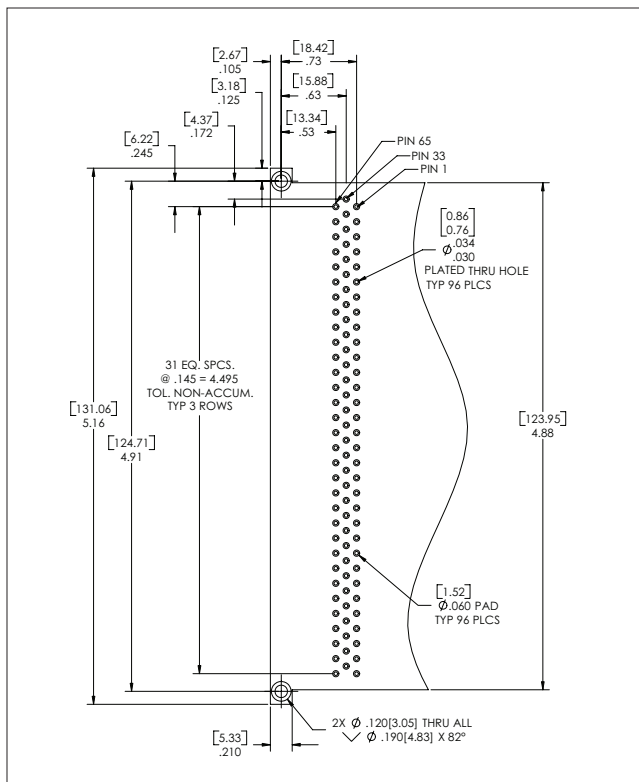


Figure A. p/n 510 104 135 recommended board layout. Solder side shown.

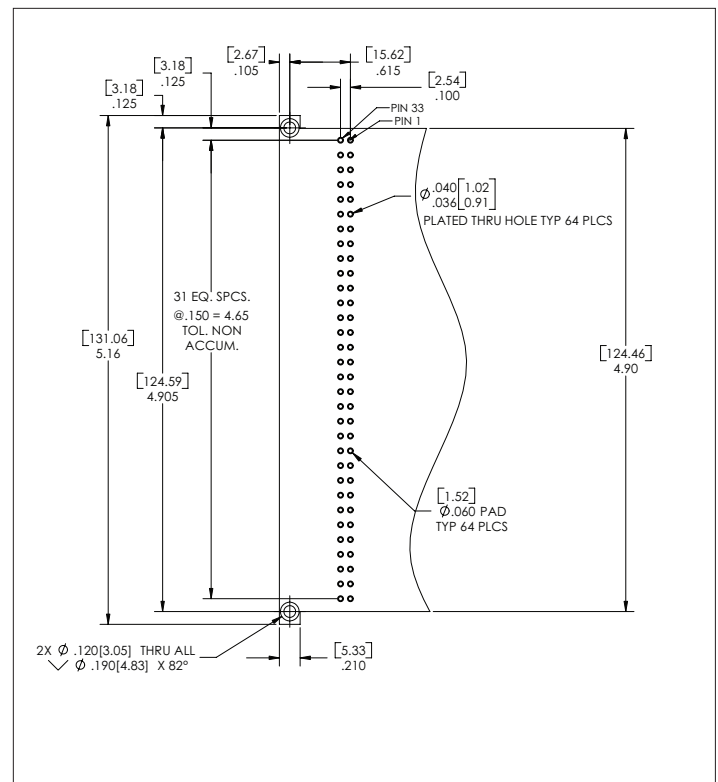


Figure B. p/n 510 104 187 recommended board layout. Solder side shown.

[RETURN TO INDEX](#)

ITA PCB ADAPTER INSTALLATION AND REMOVAL

PART # 510 108 112, 510 108 125

TOOLS REQUIRED

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

INSTALLATION

1. Solder the header to the PCB (IPC-A-610 standard recommended for PCB design). The PCB must be manufactured with header installation area complying with the recommended PCB layout (**Figure A or B**).
2. Place the module in the 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.
3. 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.
4. Maintain this pressure while tightening the bottom screw 1 to 2 full revolutions.
5. Repeat this sequence until the module is seated. Torque the screws to 4 in-lbs [0.45 Nm].



REMOVAL

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 ITA.

Dimensions shown: [millimeters]
inches

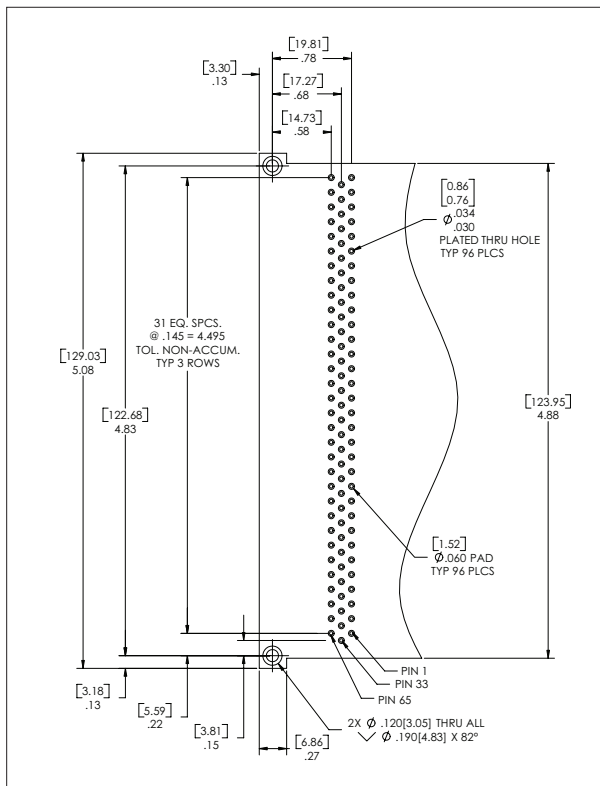


Figure A. p/n 510 108 125 recommended board layout. Solder side shown.

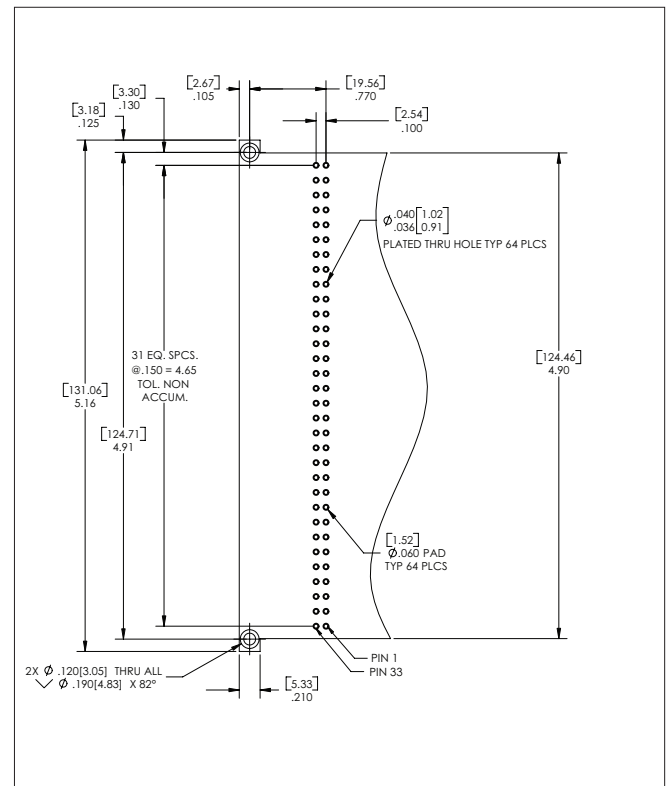


Figure B. p/n 510 108 112 recommended board layout. Solder side shown.

[RETURN TO INDEX](#)

CROSS REFERENCE TABLES

RECEIVER CONTACTS	STANDARD/ 90 SERIES MODULES						CASS/ 80 SERIES MODULES		ICON MODULES					CRIMP TOOLS		LOCATORS			EXTRACTION
	510 104 134	510 104 136	510 104 149	510 104 206	510 104 243	510 104 261	510 113 120	510 113 125	510 160 103	510 160 108	510 160 109	510 160 111	510 160 115	910 101 102	910 101 103	910 104 116	910 104 127	910 104 146	910 110 102
610 110 101	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X
610 110 104	X	X	X	X	X	X	X	X	X	X	X	X	X						X
610 110 125	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X
610 110 128	X	X	X	X	X	X			X	X	X	X	X	X				X	X
610 110 167	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X
610 110 171	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X
610 110 177	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X

ITA CONTACTS	STANDARD/ 90 SERIES MODULES						CASS/ 80 SERIES MODULES		ICON MODULES					CRIMP TOOLS		LOCATORS		EXTRACTION
	510 108 101	510 108 126	510 108 131	510 108 178	510 108 210	510 108 245	510 114 106	510 114 107	510 161 103	510 161 108	510 161 109	510 161 111	510 161 115	910 101 102	910 101 103	910 104 107	910 104 118	910 110 102
610 110 108	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X
610 110 113	X	X	X	X	X	X	X	X	X	X	X	X	X					X
610 110 129	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
610 110 145	X	X	X	X	X	X	X	X	X	X	X	X	X					X
610 110 146	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X
610 110 147	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
610 110 169	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X
610 110 172	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X
610 110 173	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

[RETURN TO INDEX](#)