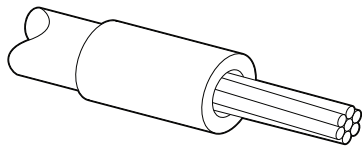

 INSTRUCTION SHEET

Connectors, Bi-Pin with insulating cover

Aluminum to copper cable transitions

Color-Keyed[®]



Important

Read and understand all instructions and safety information before use. Be aware of proper usage and potential hazards.



CAUTION:

- Product should be installed by a qualified electrician in accordance with national and local electrical codes.
- The Bi-Pin Connector is to be used only in accordance with the limitations of clearance and bending radii as specified in the following instructions. It is recognized that there is equipment within which this adapter cannot be used in accordance with these instructions.

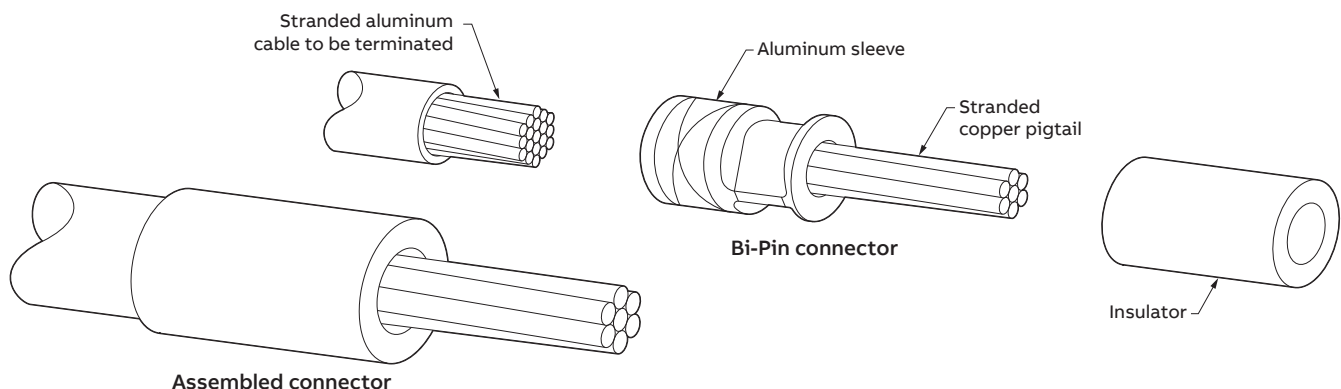


WARNING:

- Risk of shock, disconnect power before installation.

General information:

- The Bi-Pin connector provides a means of terminating standard aluminum cable conductors in mechanical connectors listed for Al-Cu use, and in connectors suitable for stranded copper conductors installed in accordance with National Electrical Code.
- The Bi-Pin connector is made from a high conductivity aluminum sleeve, electro-tin plated, and factory installed to a stranded copper pigtail.
- The wire barrel contains a measured amount of ABB oxide inhibiting compound for minimum connection resistance.
- UL listed and CSA certified for coded stranded aluminum cable with insulation rated not more than 90°C.
- Custom fit insulator rated for 600 volts and 90°C
- The Color-Keyed connector has die number permanently embossed to help prevent mismatching of installing dies and connector.



Connector selection:

Conduct the following checks before beginning installation.

1. Bi-Pin connectors for use with connectors marked for aluminum wire.
 - a. Select the Bi-Pin connector marked for the aluminum wire size to be terminated.
 - b. Check the copper pigtail length (with insulator installed) against the equipment connector wire barrel to be sure sufficient contact will be made (Figure 1).

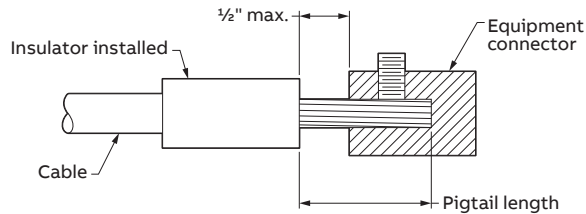


Figure 1

- c. Check spacing between adjacent connectors (with insulators installed) and distance to side wall in electrical equipment to confirm freedom from interference (Figure 2).

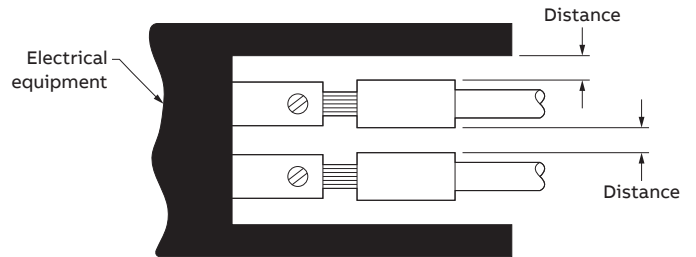


Figure 2

- d. Check wire bending space from connector to inside surface of equipment or nearest obstruction (Figure 3). The Bi-Pin connector, with mating insulating cover, must not reduce the minimum wire bending space.

Note: Refer to the NEC for spacing requirements.

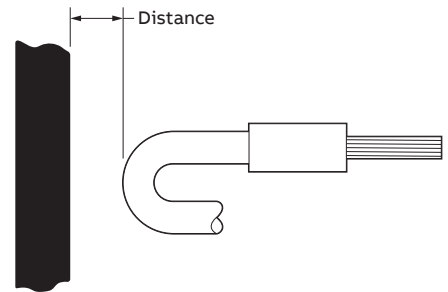


Figure 3

**CAUTION:**

- **DO NOT INSTALL** the Bi-Pin connector in opposite poles if insulation covers are too close to each other. Spacing must be more than $\frac{1}{4}$ " up to 300V; $\frac{1}{2}$ " from 301V to 600V.

2. Bi-Pin Connectors for use with listed connectors and with connectors in UL Listed equipment.

Suitable for copper wire only.

- a. Determine equipment rating (ampacity) and/or ampacity service required for the specific connector in which the Bi-Pin connector is to be installed.
 - Based on Step (2a), determine the copper wire gauge size for the installation.
 - Refer to the Die Selection Table on page 4 to select the appropriate Bi-Pin connector by locating the copper cable size for the installation.
- b. Refer to Step 1, section d. **Note:** Refer to the NEC for spacing requirements.

Installation Instructions:



CAUTION:

- Follow instructions. Failure to comply may result in an unsafe connection.
- Install only the aluminum cable size marked on the connector body.
- Using improper installing dies may result in malfunctioning connection.



WARNING:

- Do not remove compound from the splice barrel. Insufficient compound can result in an unsafe connection. This compound contains petroleum distillates and small metal particles. Avoid prolonged skin contact (Wash with soap and water). Consult a physician if swallowed or contact with eyes.
- Wear appropriate chemical resistant gloves, clothing and safety glasses with side shields or goggles.



- Slip the wide opening of the insulator over the copper wire end and pull the insulator over the connector body and the aluminum cable insulation. The entire length of the insulator should be supported by the connector body and aluminum cable (Figure 6).

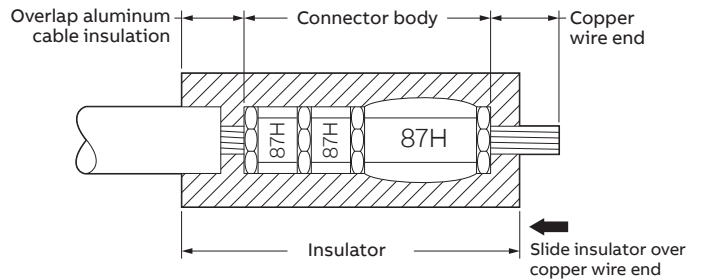


Figure 6

- Strip cable (Figure 4) to length found in tool die selection Table 2, page 4.
- Clean cable with wire brush or emery cloth, and insert fully into the connector barrel.

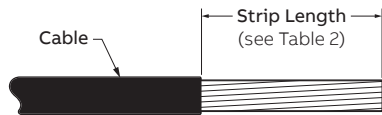


Figure 4

- Insert copper pigtail fully into mechanical connector body and tighten set screw to equipment manufacturer's recommended torque (Figure 7).

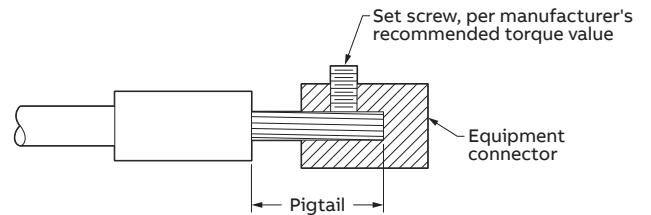


Figure 7

- Choose the proper color coded installing dies as specified in the tool die selection Table 2, page 4 and complete the required crimp(s) between markings on the connector body.
- After crimping, confirm that the number embossed on the Bi-Pin Connector matches the number embossed by the crimp dies. The numbers must match for a proper installation (Figure 5).

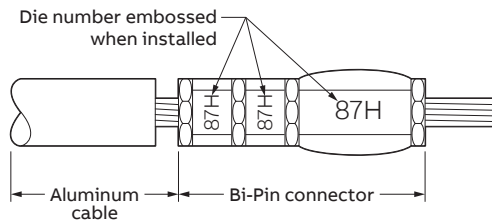


Figure 5

Note: If no torque recommendation is provided, tighten to recommended values in Table 1.

Table 1:
Recommended tightening torque for mechanical connectors.

Product selection	
Copper pigtail wire range	Torque inch-pounds
10-8	20
6	35
4	100
3-1	125
1/0 - 2/0	150
3/0 - 350	250
400 - 500	400

Table 2:
Tool die selection

Product selection - dimensions (inches)																				
Part no:	Alum. cable size	Alum. cable strip length	Copper cable size	Die no. and color code	*Hydraulic tools and part nos.								Hand tools and part nos.							
					12 Ton head 13642		15 & 14 Ton 13100A, TBM14M & TBM15		TBM20S		TBM5		TBM6		TBM8					
					Die	No. of crimps	Die	No. of crimps	Die	No. of crimps	Die Color	No. of crimps	Die Upper	Die Lower	No. of crimps	Die	No. of crimps			
61905A	8 AWG	17/32	10 AWG	24 Blue	11733	1	15522	1	—	2	13454 Blue	1	13475 Blue	13477	2	13461 Blue	2			
61910A	6 AWG	8 AWG	61915A		4 AWG	17/32	6 AWG	40	11738	1	15526	1	—	—	13457 Gold	2	13474 Gold	13477	2	13464
61920A	2 AWG	5/8	4 AWG	50 Orange	11739	1	15530	1	—	—	13455 Orange	2	13474 Orange	13477	2	13462 Orange	2			
61925A	1 AWG		3 AWG															61930A	1/0 AWG	2 AWG
61935	2/0 AWG		1 AWG																	
61940	3/0 AWG	7/8	1/0 AWG	60	11741	1	15532	1	—	—	13457 Ruby	2	13473 Ruby	13476	2	13464 Ruby	2			
61945	4/0 AWG	7/8	2/0 AWG	66	11742	2	15534	2	—	—	13458 White	2	13473 White	13476	2	13465 White	2			
61950	250 MCM		3/0 AWG	White																
61955	300 MCM	31/32	4/0 MCM	71H	11743	2	15514	2	—	—	—	—	—	—	—	—	—			
61960	350 MCM	250 MCM	Red																	
61963	400 MCM	1 1/4	250 MCM	87H	11746	2	15506	2	—	—	—	—	—	—	—	—	—			
61965	500 MCM		350 MCM	Brown																
61970	600 MCM	1 1/4	400 MCM	107H	11750	2	15608	2	—	—	—	—	—	—	—	—	—			
61975	700 MCM through 750 MCM		500 MCM	Orange																

Note: Product must be installed in accordance with applicable national and local electrical codes.

* TBM8-750 } #8 through 750 MCM (no die changes)
TBM8-750 M1 }

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