Blackburn® Compression
Featuring the Color-Keyed® System

INSTALLATION INSTRUCTIONS
for Pin Adapter (Type PA)

GENERAL INFORMATION:

The Pin Adapter is designed to provide reliable termination of stranded aluminum conductors with insulation rated not more than 90° C (194° F) in mechanical connectors listed for Al-Cu use and connectors suitable for stranded copper conductor installed in accordance with the National Electrical Code. Reliability is obtained by terminating the aluminum conductor in one end of a compression aluminum sleeve, the other end of which has a factory installed copper pig-tail. The copper end is then installed in the mechanical connector.

The following installation instructions are provided as a means of assuring the electrical equipment and its mechanical connectors, into which Pin Adapter is to be installed, are physically compatible with the dimensions of the Pin Adapter. They should be read carefully before installing the Pin Adapter in electrical equipment.

⚠ WARNING ⚠

RISK OF SHOCK, DISCONNECT POWER BEFORE INSTALLATION.

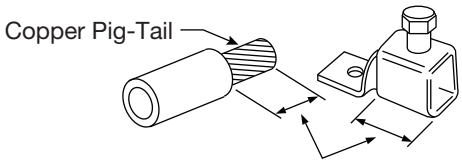
⚠ CAUTION ⚠

This adaptor is to be used only in accordance with the limitations of clearance and bending radii as specified in the following instruction. It is recognized that there is equipment within which this adaptor cannot be use in accordance with these instructions.

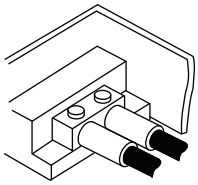
INSTALLATION A:

Pin Adapter for use with listed connector, marked Al-Cu and for use with connectors in electrical equipment marked to indicate its suitability FOR USE WITH ALUMINUM WIRE.

1. Select the Pin Adapter marked for the aluminum wire size to be terminated.
2. Check the copper pig-tail length against the equipment connector to be sure sufficient contact is made with the pressure plate or set screw in the mechanical equipment connector. Do this with the mated insulating cover (600V 90° C) supplied, in place over the Pin Adapter.

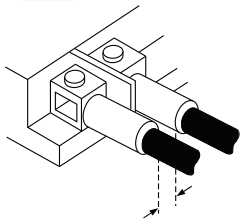


3. Check diameter of mated insulating cover to assure that there is no interference in any direction when it is installed

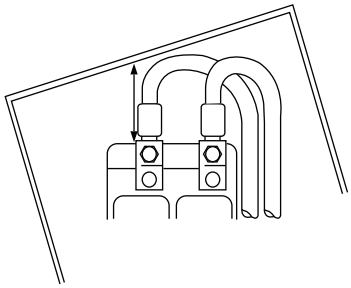


⚠ CAUTION ⚠

DO NOT INSTALL the Pin Adapter in opposite holes if mated insulating covers are closer together than shown. Spacing must be more than 1/4" for 300V or less and more than 1/2" for 301-600V.



4. Check wiring room leading to the mechanical equipment lug to be sure use of the Pin Adapter will not reduce the minimum wire bending space required by Table 312.6(A) of the National Electrical Code**. (Measured without cover installed as shown in Step 5). **Registered trademark of the National Fire Protection Association.
5. Bend cable to fit in equipment before installing the Pin Adapter. (Check wire bending space from Adapter rear to inside face of housing or nearest obstruction.Measurement is perpendicular to the rear of Adapter).



6. Strip insulation to length of compression barrel as shown in table in column "A" to permit full insertion of wire. Scratch brush the aluminum conductor before installation. Select appropriate tool and dies as shown in the table, and make the required number of crimps.
7. After installing the Pin Adapter on the conductor, slip the insulating cover completely over the compression barrel. Use of the insulating cover assures that minimum electrical spacing will not be violated.
8. Insert pig-tail fully into connector body and tighten set screw to equipment manufacturer's recommended torque (if no torque recommendation is provided, tighten to recommended values given in table).

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INSTALLATION B:

Pin Adapter for use with listed connectors and with connectors in UL listed equipment, SUITABLE FOR COPPER WIRE ONLY.

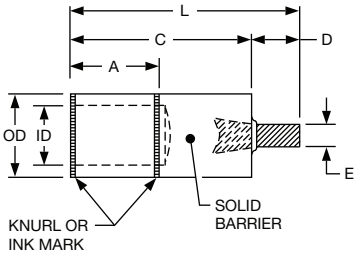
(**NOTE:** UL listed connectors and electrical equipment suitable for copper wire only do not bear marking to indicate such use.)

1a. Determine equipment, rating(ampacity) and/or ampacity service required for the specific connector.

1b. Based on (a), determine copper wire gauge size that normally would be selected.

1c. Select appropriate Pin Adapter and the associated catalog number for insulation by locating the required COPPER wire size and the table titled "Catalog and Specification Information."

2a. Continue with steps 2 through 8 as above.
NOTE: Referring to step 5 — installer is cautioned to assure that the use of Pin Adapter in UL listed equipment will provide a full minimum wire bending space.



WARRANTY: Thomas & Betts sells this product with the understanding that the user will perform all necessary tests to determine the suitability of this product for the user's intended application. Thomas & Betts warrants that this product will be free from defects in materials or workmanship for a period of two (2) years following the date of purchase. Upon prompt notification of any warranted defect, Thomas & Betts will, at its option, repair or replace the defective product. Misuse, misapplication or modification of Thomas & Betts Products immediately voids all warranties.

Limitations and Exclusions: **THE ABOVE WARRANTY IS THE SOLE WARRANTY CONCERNING THIS PRODUCT, AND IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE SPECIFICALLY DISCLAIMED. LIABILITY FOR BREACH OF THE ABOVE WARRANTY IS LIMITED TO COST OF REPAIR OR REPLACEMENT OF THE PRODUCT, AND UNDER NO CIRCUMSTANCES WILL THOMAS & BETTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Thomas & Betts Corporation
Memphis, Tennessee
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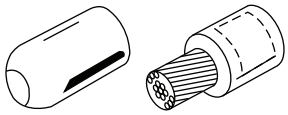
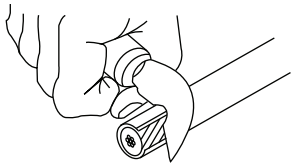
HOW TO MAKE A GOOD ALUMINUM CONNECTION:

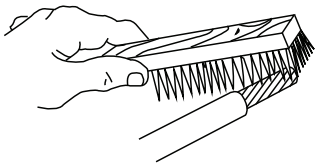
1. Select Pin Adapter marked for the wire size to be used.



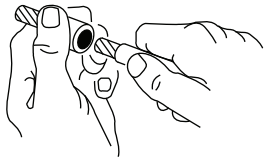
2. Do not nick or ring the conductor strands when stripping the wire insulation.



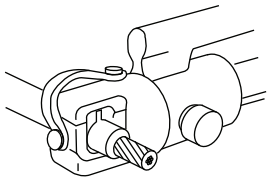
3. Remove oxide film with wire brush from the stripped portion of the conductor.



4. Insert the conductor all the way into the barrel and using the proper die (see chart) crimp the connector. **NOTE:** Overlap crimps are to be made between knurl or ink marks. Multiple crimps are to be made adjacent to each other between knurl or ink marks. Make sure that the connector is used with a die that matches the die index, code number or color marked on the connector.



5. Use circumferential or hex dies. Compress from base of socket toward cable. Remove flash. Remove excess inhibitor before slipping the insulating sleeve into place.



CATALOG AND SPECIFICATION INFORMATION

CAT NO.	ALUM. WIRE SIZE	COPPER WIRE SIZE	A	C	D	L	OD	ID	RECOMMENDED TIGHTENING TORQUE (INCH - LBS.)		DIE COLOR CODE	COMPRESSION DIES			
												T&B		BURNDY	
									SCREW DRIVER	WRENCH		DIE	COMP.	INDEX	COMP.
PA06	#6	#8	1	1.344	0.875	2.219	0.640	0.191	35	100	ORANGE	50	2	BG/243	3
PA04	#4	#6	1	1.344	0.875	2.219	0.640	0.247	35	100	ORANGE	50	2	BG/243	3
PA02	#2	#4	1	1.344	0.875	2.219	0.640	0.310	50	125	ORANGE	50	2	BG/243	3
PA01	#1	#3	1	1.344	1.000	2.344	0.640	0.360	50	125	ORANGE	50	2	BG/243	3
PA11	1/0	#2	1.250	1.594	1.250	2.844	0.906	0.393	50	150	RED	76	2	324	2
PA21	2/0	#1	1.250	1.594	1.250	2.844	0.906	0.440	50	150	RED	76	2	324	2
PA31	3/0	1/0	1.250	1.875	1.375	3.250	0.906	0.494	—	200	RED	76	2	324	2
PA41	4/0	2/0	1.250	1.875	1.375	3.250	0.906	0.549	—	200	RED	76	2	324	2
PA25	250 MCM	3/0	1.375	2.062	1.500	3.562	1.155	0.595	—	250	BROWN	87H	2	299	2†
PA30	300 MCM	4/0	1.375	2.062	1.625	3.687	1.155	0.650	—	250	BROWN	87H	2	299	2†
PA35	350 MCM	4/0	1.375	2.062	1.625	3.687	1.155	0.705	—	250	BROWN	87H	2	299	2†
PA40	400 MCM	250	1.375	2.087	1.875	3.962	1.375	0.762	—	250	BLACK	106H	2	300	3
PA50-BB	500 MCM	350	1.375	2.087	1.875	3.962	1.375	0.848	—	300	BLACK	106H	2	300	3
PA60	600 MCM	350	1.875	2.750	1.875	4.625	1.500	0.924	—	300	YELLOW	115H	3	936	3
PA75BB	750 MCM	500	1.875	2.750	2.000	4.750	1.500	1.015	—	300	YELLOW	115H	3	936	3

†Overlap Compressions

T&B DIES

ALUM. WIRE SIZE	DIE CODE	UT3	UT5	TBM5	TBM6	TBM8	TBM12PCR-LI 13642 12 TON	TBM15CR-LI TBM15 TBM15I UT15	21920 20 TON
#6 - #1	50	5/8	TU	Orange	—	—	—	15529	—
1/0 - 4/0	76 or 76H	—	TX	—	13472 Red 13476 Red	13467	11744	15512	11170
250 MCM - 350 MCM	87H	—	TH	—	—	13468	11746	15506	11176
400 MCM - 500 MCM	106H	—	—	—	—	—	11749	15515	11140
600 MCM - 750 MCM	115H	—	—	—	—	—	11753	15504	11157

BURNDY DIES

ALUM. WIRE SIZE	DIE INDEX	Y34A	MD6	MD6	Y35 & Y35L	Y46*	Y48B	Y486RB	Y39
#6 - #1	BG/243	A243	MD5 - 3	BG perm. Gr. with BG insert	U-BG	U243	C243	—	U243
1/0 - 4/0	324	A29AR	—	—	U29ART	U29ART	C29AR	F29AR	U29ART
250 MCM - 350 MCM	299	—	—	—	U31ART	U31ART	C31AR	F31AR	U31ART
400 MCM - 500 MCM	300	—	—	—	U34ART	U34ART	C34AR	F34AR	U34ART
600 MCM - 750 MCM	936	—	—	—	—	U39ART-2	C39ART-2	F39ART-2	U39ART-2

*Use with Burndy adapter Cat. No. P-UADP

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