

# CON/PSU/007

Mating connector for PSU (6-way)

**CURTISS-  
WRIGHT**



## FEATURES

- Lightweight, space saving design
- Contact protection - 100% scoop-proof LJT (Long Junior Tri-Lock) design prevents bent pins and short circuits during mating
- Quick positive coupling - 3-point bayonet lock system

## APPLICATIONS

- Standard power connector for all Acra products that use the 6-way bayonet receptacle

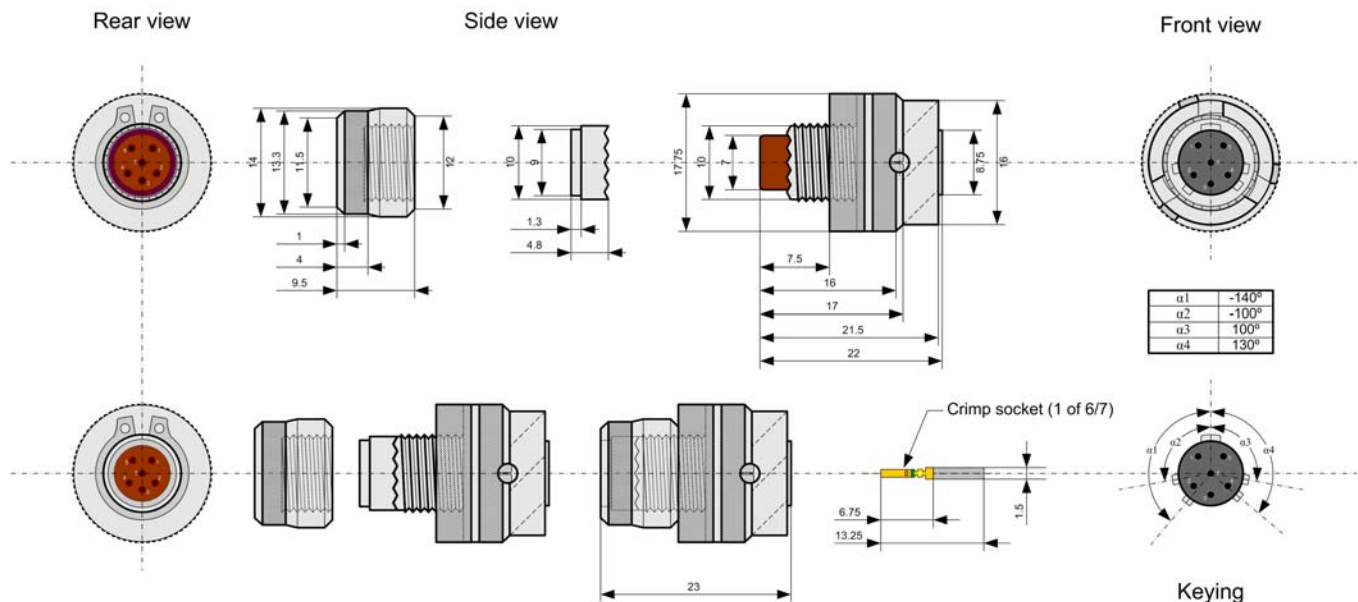
## DESCRIPTION

The CON/PSU/007 is a 6-way nickel-plated bayonet connector that mates with the power inlet on most Acra products using the appropriate receptacle.

The 3-point bayonet lock system allows the CON/PSU/007 to stay mated even when under high vibration.

The 100% scoop-proof LJT design prevents bent pins and short circuits during mating.

The connector is supplied with seven (one spare) crimp contact sockets, a standard backshell without strain relief, a mating face dust cup, and a plastic contact insertion/removal tool.



CON/PSU/007 mechanical drawing

## Ordering Information

Part Number	Description
<b>CON/PSU/007</b>	Mating connector for PSU (6-way)

The corresponding backshell, BAC/PSU/007, must be ordered separately.

## Revision History

Revision	Differences	Status
<b>CON/PSU/007</b>	First release	Recommended for new programs

## Related Products

Module	Details
<b>BAC/PSU/007</b>	Backshell for CON/PSU/007

## Related Documentation

Document	Details
<b>DOC/DBK/001</b>	Acra KAM-500 Databook
<b>DOC/HBK/002</b>	Environmental Qualification Handbook
<b>DOC/MAN/018</b>	KSM-500 Databook

## Specifications

### Mechanical specifications

Parameter	Min.	Typ.	Max.	Units	Condition/Details
<b>Mass</b>					Design metric is grams.
connector without backshell	–	6	–	g	
connector without backshell	–	0.21	–	oz	
connector with backshell	–	8	–	g	
connector with backshell	–	0.28	–	oz	
<b>Dimensions</b>					Design metric is millimeters.
connector diameter	–	17.75	–	mm	
connector diameter	–	0.69	–	in.	
connector length	–	23	–	mm	With supplied backshell populated.
connector length	–	0.91	–	in.	With supplied backshell populated.
contact socket diameter	–	1.5	–	mm	
contact socket diameter	–	0.06	–	in.	
contact socket length	–	13.25	–	mm	Length of threaded insert.
contact socket length	–	0.52	–	in.	
<b>Chassis clearance</b>					Design metric is millimeters.
connector height	–	23	–	mm	With supplied backshell populated.
connector height	–	0.91	–	in.	With supplied backshell populated.
bend radius height	–	20	–	mm	5mm bundle, AWG 26, 20mm bend radius.
bend radius height	–	0.8	–	in.	0.2in bundle, AWG 26, 0.8in bend radius.
<b>Finish</b>					
connector shell	–	–	–	–	Electroless nickel-plated aluminium.
insert	–	–	–	–	Rigid dielectric.
seals	–	–	–	–	Fluorinated silicone rubber, brown.
contact socket	–	–	–	–	Copper alloy with 1.2µm gold plating.

## Getting the most from the CON/PSU/007

To prevent mechanical stress to wires and pins, always use a BAC/PSU/007 backshell with CON/PSU/007 connectors.

### Connector assembly

The crimping tool Daniels AFM8 is recommended to use for crimping the contact sockets onto the wires. Substitutions of crimping equipment may result in connector failure at the assembly operation.

The proper insertion tool (supplied with the connector) must be used to assure seating of the contact in the insulator in the proper position. This tool has been designed for use with this product. Do not use ACC/TOL/027 or ACC/TOL/028 tools (that are included in ACC/KIT/005) for inserting the crimped sockets into the CON/PSU/007 connector. These tools have been designed for the micro-miniature, circular connectors and are not compatible with the CON/PSU/007.

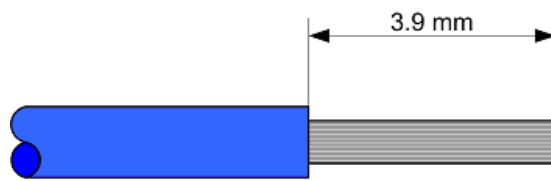
Any substitution of proper insertion tools may result in over or under insertion of the contact, which damages the retention system of the insulator.

The CON/PSU/007 mating connector has been designed with a controlled float to allow for ease of mating. To avoid reducing this float or causing a splaying of the contacts, any unnecessary strain by clamping too close to the rear of the connector should be avoided.

Use of recommended tools and proper assembly techniques pays dividends in reliability and reduced costs.

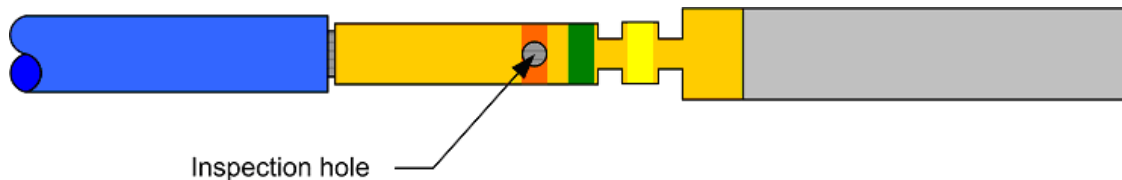
### Wire stripping

Cut the wires to the length required and strip 0.153in. (3.9mm) of insulation from the end to be crimped. Check for cut or broken wires and frayed insulation.

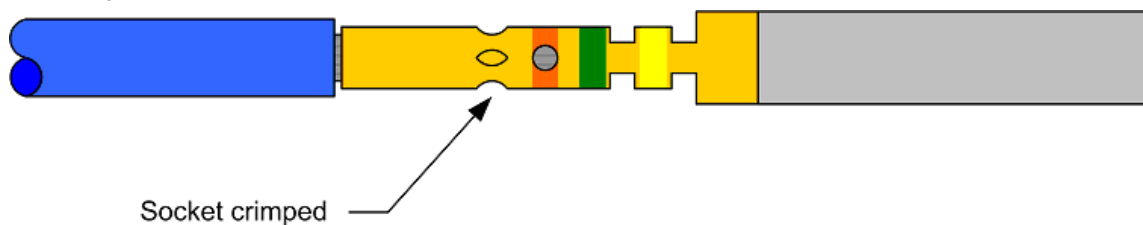


### Contact crimping

1. Insert the wire into the contact until the wire is visible in the inspection hole.

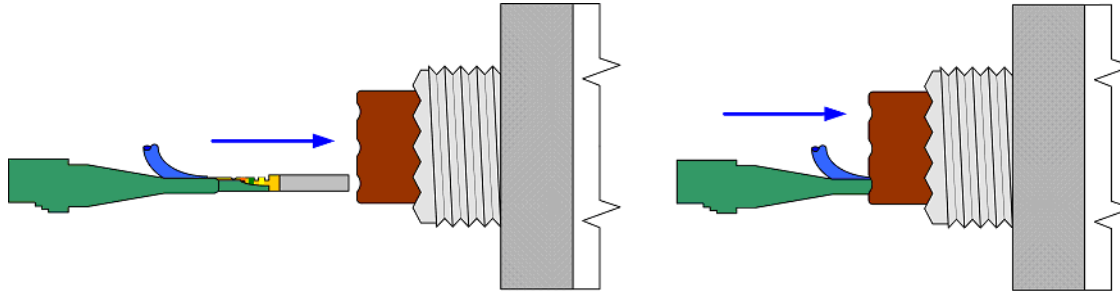


2. Insert the wire into the crimp tool (Daniels AFM8) and turn the adjustment wheel to the appropriate setting for the wire size.
3. Crimp the contact to the wire by squeezing the crimp tool handles firmly to ensure a proper crimp (the tool does not release if crimping is incomplete).



### Contact insertion

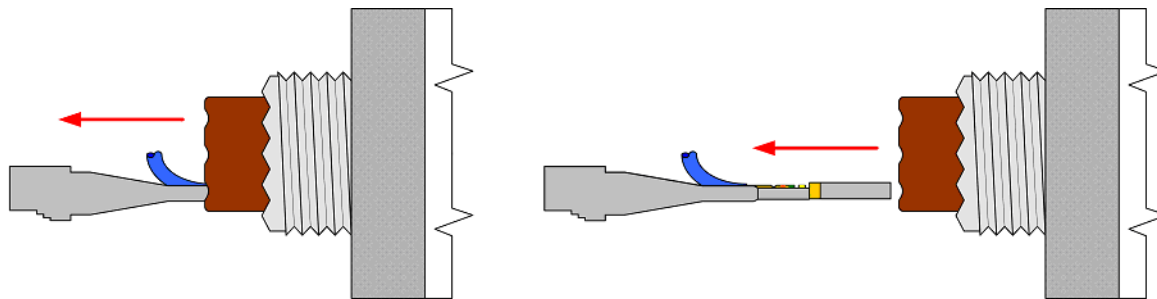
1. Using the green (insertion) side of the tool provided with the connector put the tip over the wire as shown. The tool tip butts against the crimp pot. The connector must be firmly supported during insertion operations.



2. Using a firm, steady pressure, push the contact into the cavity until the contact locks into place.
3. Repeat steps 1 and 2 for the other wires to be populated.

### Contact extraction

1. Ensuring the wire is in the groove of the white (removal) side of the tool provided with the connector, insert the extraction tip into the contact cavity.



2. Pinch the wire between your finger and the white plastic grip and slide the tool and contact out of the connector.
3. Repeat steps 1 and 2 for the other wires to be removed.

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