

# PowerWize BMI (Blind-Mate Interface) High-Current Panel-to-Board/Busbar Interconnects >

PowerWize BMI High-Current Panel-to-Board/Busbar Interconnects are available with crimp contacts using 3.40mm (75.0A), 6.00mm (110.0A) and 8.00mm (175.0A) COEUR sockets transmitting high current through right-angle headers that can be attached to printed circuit boards or busbars



*Blind-Mating  
Right-Angle Header*



*Blind-Mating  
Panel-Mount Receptacle Crimp*



*Crimp Contact*



*TPA Retainer*

## PRODUCT FEATURES AND ADVANTAGES



### Optimal current-carrying capacity with multiple contact beams

Provides low contact resistance, low voltage drop and minimal heat generation at the contact interface

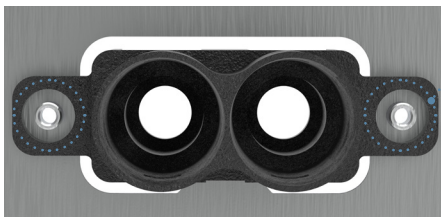
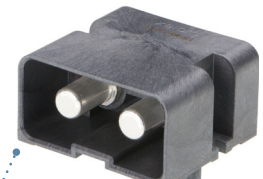
### Field installable battery-powered applicators

Enable on-site cable assembly fabrication for applications where cable assembly lengths are uncertain until installation is underway



### Blind-mating guideposts

Enable the inner wall of the header shrouds to align the connectors during mating, facilitating trouble-free mating in drawer-style applications where the connectors are obscured



### Self-aligning panel-mount receptacle flanges

Accept either force-fit standoffs paired with bolts (used when the assembler only has access to one side of the panel) or shoulder screws paired with nuts (often used when the assembler has access to both sides of the panel), allowing the panel mount receptacle +/- 2.00mm of radial float to mitigate tolerance stack-up issues



*Shoulder Screw*



*Nut*



*Bolt*



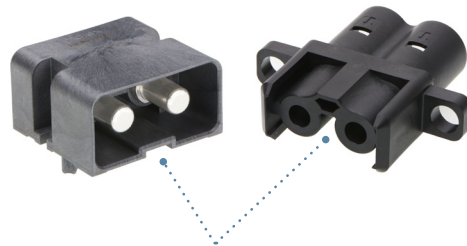
*Force-Fit Standoff*

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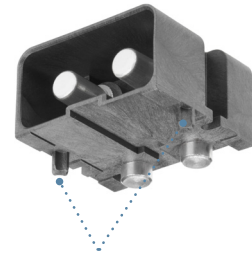
**Mechanical keying with unique geometry at the front of the panel-mount receptacle and matching geometry on the panel cutout**

Helps ensure the receptacle is installed in the proper orientation



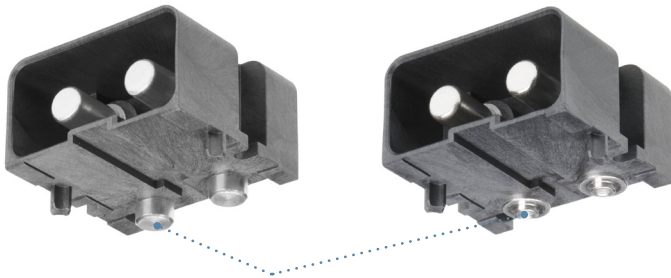
**Mechanical keying with unique geometry at the front of the panel-mount receptacle and matching geometry on the header shroud**

Helps prevent mismatching between the receptacle and header



**Mechanical keying with crush/locating pegs on headers**

Helps ensure right-angle headers are properly oriented on printed circuit board or busbar



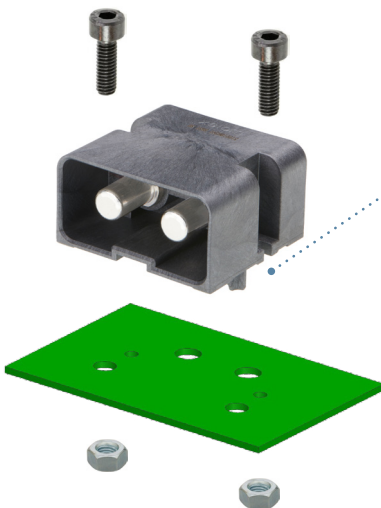
**Screw-mount pins attached to both printed circuit boards and busbars; solder tail pins attached to printed circuit boards**

Offers options to attach pins to different substrates for design and manufacturing flexibility



**Crimp contacts available to accept a wide range of wire gauges (10 AWG to 1/0 AWG)**

Provides design and manufacturing flexibility



**Secondary substrate attachment**

Achieves additional board retention (if desired) by attaching the right-angle header to the substrate using M3 bolts, nuts and the two mounting flanges molded into the body of the header



**Reliable crimp geometry eight-sided crimp profile**

Helps ensure minimal contact resistance at the interface between the wire and the crimp barrel, contributing to the system's minimal heat generation and higher current-carrying capacity compared to other designs

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## Terminal backout assurance

Provides two (opposed) positive locks that hold the TPA retainer securely to the blindmate receptacle housing silo

Helps prevent the crimp contact from backing out of the receptacle with six beams robustly holding the crimp contact inside the TPA retainer

## User-friendly cable assembly build

The contact is crimped to the stripped wire. The TPA retainer slips completely over the crimped contact and its beams are positioned against the rear of the contact flange.

The subassembly is then inserted into one of the panel mount housing silos with the TPA retainer locking into place and generating mechanical feedback and an audible click to help ensure the crimped lead contact is fully engaged and minimizes the opportunity for terminal backout.

Panel-Mount  
Receptacle Housing



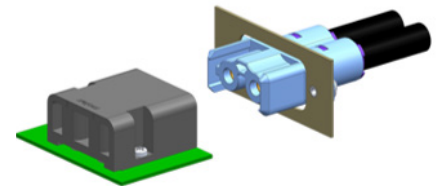
TPA Retainer



Crimp Contact



Stripped Wire



## MARKETS AND APPLICATIONS

### Telecommunications/Networking

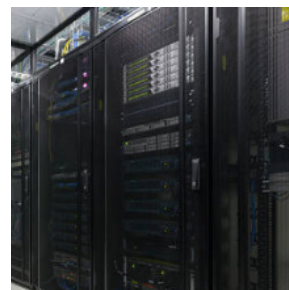
- Servers
- Data storage units
- Power distribution units (PDUs)
- Uninterruptible power supplies
- Digital cross-connect switches
- Network routers

### Data Centers

- Enterprise switches
- Servers
- Data storage units
- Power shelves
- Power distribution units (PDUs)
- Uninterruptible power supplies
- Environmental control equipment

### Electric Vehicle Charging Stations

- Inverters



Uninterruptible Power Supply



Data Center Servers

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## SPECIFICATIONS

### REFERENCE INFORMATION

Packaging: Headers and TPA Retainers – Tray  
 Panel Mount Receptacle Housing – Bag  
 Crimp Contacts – Vacuum Pack Bag  
 see Packaging Specification for more details  
 Use With: Printed Circuit Boards and Busbars  
 Designed In: Millimeters  
 RoHS: Yes

### PHYSICAL

Panel Mount Receptacle Housing: PBT (Black)  
 TPA Retainer: PBT (Black)  
 Header Housing: LCP (Black)  
 Contact: High-performance Copper (Cu) Alloy  
 Plating:  
     Socket Contact Area - Gold (Au)  
     Header Pin - Silver (Ag)  
 PCB Thickness (min.): 1.60mm  
 Busbar Thickness (min.): 1.50mm  
 Operating Temperatures: -40 to +125°C

### 3.40MM SIZE ELECTRICAL

Voltage (max.): 400.0V  
 Current (max.): 75.0A  
 Contact Resistance (max.): 0.25 milliohms

### MECHANICAL

Whole connector Mating Force (max.): 45.0N  
 Whole connector Unmating Force (min.): 10.0N  
 Durability (min.): 200 mating cycles

### 6.00MM SIZE ELECTRICAL

Voltage (max.): 600.0V  
 Current (max.): 110.0A  
 Contact Resistance (max.): 0.1 milliohms

### MECHANICAL

Whole connector Mating Force (max.): 60.0N  
 Whole connector Unmating Force (min.): 12.0N  
 Durability (min.): 200 mating cycles

### 8.00MM SIZE ELECTRICAL

Voltage (max.): 1,000.0V  
 Current (max.): 175.0A  
 Contact Resistance (max.): 0.1 milliohms

### MECHANICAL

Whole connector Mating Force (max.): 70.0N  
 Whole connector Unmating Force (min.): 20.0N  
 Durability (min.): 200 mating cycles

[www.molex.com/link/powerwizebmi.html](http://www.molex.com/link/powerwizebmi.html)