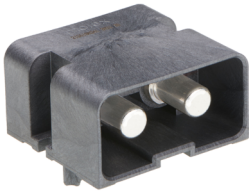


PowerWize BMI (Blind-Mate Interface) High-Current Panel-to-Board/Busbar Interconnects >

PowerWize BMI blind-mating panel-to-board connectors incorporate Molex's COEUR socket technology, which helps ensure low contact resistance at the mating interface to minimize heat generation and enable high current-carrying capacity. It is available in three sizes: 3.40mm (75.0A), 6.00mm (110.0A) and 8.00mm (175.0A). The blind-mating design helps ensure accurate mating in hard-to-reach and visually obscured spaces.



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

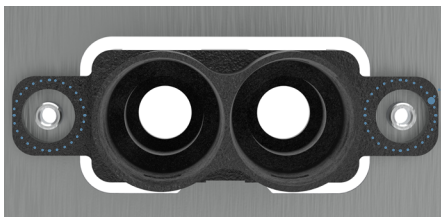
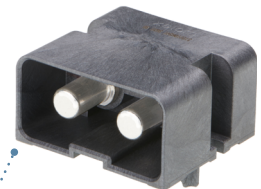
Field installable battery-powered applicators

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

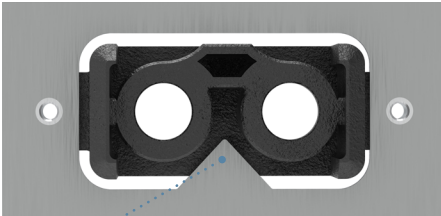


Bolt



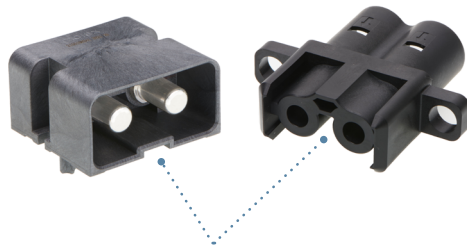
Force-Fit Standoff

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



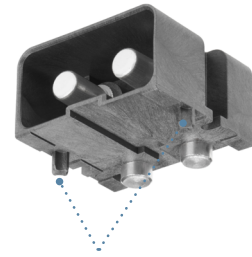
Mechanical keying with unique geometry at the front of the panel-mount receptacle and matching geometry on the panel cutout

Helps ensure the receptacle is installed in the proper orientation



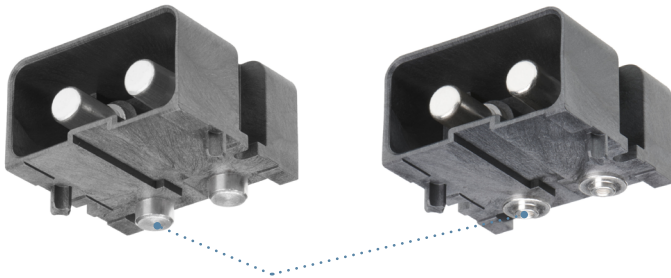
Mechanical keying with unique geometry at the front of the panel-mount receptacle and matching geometry on the header shroud

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



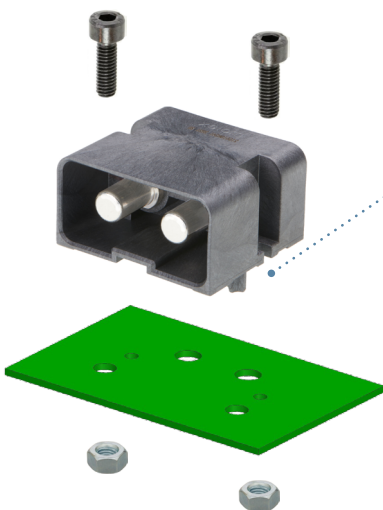
Screw-mount pins attached to both printed circuit boards and busbars; solder tail pins attached to printed circuit boards

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

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



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



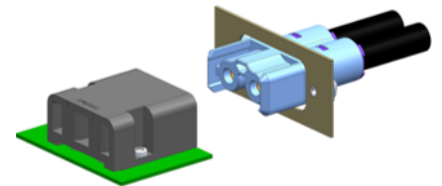
TPA Retainer



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

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

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