

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

PowerWize BMI Connectors incorporate Molex's COEUR socket technology, transmitting high current-carrying capacity through right-angle and vertical headers. Available in three sizes—3.40mm (75.0A), 6.00mm (110.0A) and 8.00mm (185.0A)—the blind-mating design helps ensure proper connections in hard-to-reach and visually obscured spaces.



*Blind-Mating
Right-Angle Header*



*Blind-Mating
Vertical Header*



*Blind-Mating
Panel-Mount Receptacle Crimp*



Crimp Contact

ADVANTAGES AND FEATURES

Allows the option for mating vertical headers to panel-mount receptacle when required

Vertical headers are available in 8.00mm connectors.

Allows the panel-mount receptacle +/- 2.00mm of radial float to mitigate tolerance stack-up issues

Self-aligning panel-mount receptacle flanges accepts 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).

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

Mechanical keying with crush/locating pegs are on the headers.

Provides terminal backout assurance

Two (opposed) positive locks hold the TPA retainer securely to the blind-mate receptacle housing silo with six beams robustly holding the crimp contact inside the TPA retainer.

Current	185.0A
Voltage	1,000V
Durability (min.)	200 mating cycles
Operating Temperatures	-40 to +125°C

Helps to ensure low contact resistance, low voltage drop and minimal heat generation at the contact interface

PowerWize Interconnects have multiple contact beams for optimal current-carrying capacity.

Helps ensure the receptacle is installed in the proper orientation

There is mechanical keying with unique geometry at the front of the panel-mount receptacle and matching geometry on the panel cutout.

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

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

Enable the inner wall of the header shrouds to align the connectors during mating in drawer-style applications with obscured connectors

Blind-mating guideposts facilitating trouble-free mating.

Helps prevent mismatching between the receptacle and header

These connectors offer mechanical keying with unique geometry at the front of the panel-mount receptacle and matching geometry on the header shroud.

Provides design and manufacturing flexibility

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

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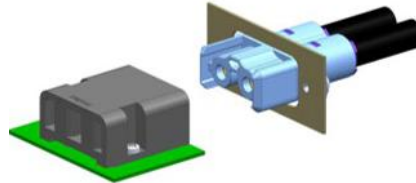
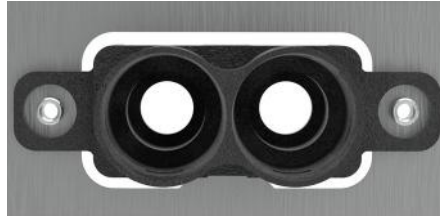
ADVANTAGES AND FEATURES

Achieves additional board retention (if desired)

Secondary substrate attachment includes the attachment of the right-angle header to the substrate using M3 bolts, nuts and the two mounting flanges molded into the body of the header.

Helps ensure minimal contact resistance at the interface between the wire and the crimp barrel

Reliable crimp geometry eight-sided crimp profile contributes to the system's minimal heat generation and higher current-carrying capacity compared to other designs.



MARKETS AND APPLICATIONS

Telecommunications/Networking

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

Data Centers

Power for Data Center
Servers
Data storage units
Power shelves
Power distribution units (PDUs)
Uninterruptible power supplies
Environmental control equipment

Charging Infrastructure

Electric vehicle (EV) charging stations



Uninterruptible Power Supply



Data Center Servers



EV Charging Stations

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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

3.40mm Size Electrical

Voltage (max.): 400V
 Current (max.): 75.0A
 Contact Resistance (max.): 0.25 milliohms
 Operating Temperatures: -40 to +125°C

Mechanical

Whole connector Mating Force (max.): 45N
 Whole connector Unmating Force (min.): 10N
 Durability (min.): 200 mating cycles

Physical

Panel Mount Receptacle Housing: PBT (Black)
 TPA Retainer: PBT (Black)
 Header Housing: LCP (Black)
 Contact: High-performance copper alloy
 Plating:
 Socket Contact Area - gold
 Header Pin - silver
 PCB Thickness (min.): 1.60mm
 Busbar Thickness (min.): 1.50mm
 Operating Temperatures: -40 to +125°C

6.00mm Size Electrical

Voltage (max.): 600V
 Current (max.): 110.0A
 Contact Resistance (max.): 0.1 milliohms

Mechanical

Whole connector Mating Force (max.): 60N
 Whole connector Unmating Force (min.): 12N
 Durability (min.): 200 mating cycles

8.00mm Size Electrical

Voltage (max.): 1,000V
 Current (max.): 185.0A
 Contact Resistance (max.): 0.1 milliohms

Mechanical

Whole connector Mating Force (max.): 70N
 Whole connector Unmating Force (min.): 20N
 Durability (min.): 200 mating cycles