DATASHEET

Sentrality High-Current Pin and Socket Interconnect System ›

Molex's Sentrality Pin and Socket Interconnect System offers high-current board-to-board, busbar-to-board and busbar-to-busbar connectors and provides a +/- 1.00mm radial self-alignment to overcome tolerance stack-up issues

FEATURES AND ADVANTAGES

Low contact resistance
Provides multiple contact beams to minimize heat generation at the contact interface, resulting in optimized electrical performance

Compact conical socket design
Allows for tighter board-to-board stack heights with shorter socket assemblies than most market equivalents using hyperbolic sockets

Sentrality 8.00mm socket assembly using COEUR conical socket to achieve 10.00mm overall height

Competitor 8.00mm socket assembly using hyperbolic socket to achieve 24.00mm overall height

Self-aligning sockets float between wave springs
Allow the socket to freely move radially +/- 1.00mm within the socket assembly during mating, to help ensure no contact beam deformation

Socket in nominal position, centered relative to socket assembly outer housing

Socket position after self-aligning to the left 1.00mm relative to socket assembly outer housing

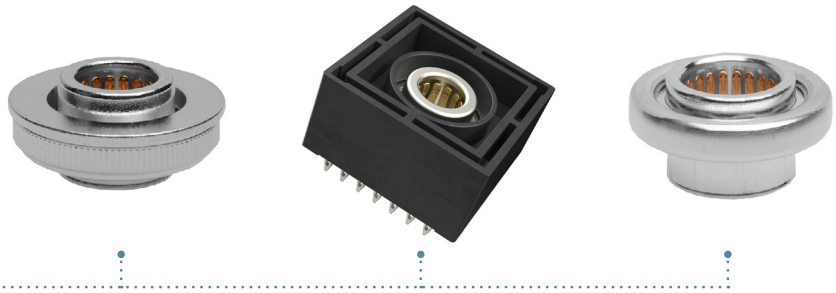
The screw-mount pins attach to both printed circuit boards and busbars; the surface-mount pins attach to printed circuit boards; the knurled press-fit pins attach to busbars
Offer design flexibility for attaching pins to various substrates

DATASHEET

Sentrality High-Current Pin and Socket Interconnect System ›

FEATURES AND ADVANTAGES

The eye-of-needle sockets and the surface-mount sockets attach to printed circuit boards; the knurled press-fit sockets attach to busbars
Offer design flexibility for attaching sockets to different substrates the contact interface, resulting in optimized electrical performance



Top-entry socket assemblies and bottom-entry socket assemblies
Offer design flexibility, allowing designers to stack substrates top-of-board to top-of-board configurations or top-of-board to bottom-of-board configurations, based on application-specific requirements

Sentrality Top-Entry Socket Assembly

Sentrality Bottom-Entry Socket Assembly

Example of top-of-board to top-of-board stacking using top-entry socket assembly

Example of top-of-board to bottom-of-board stacking using bottom-entry socket assembly

Surface-mount pins with pick-and-place caps placed in trays
Allow for manufacturing flexibility with high-speed automated placement

Knurled press-fit pins and screw-mount pins packed in trays
Allow for manufacturing flexibility with manual placement options

DATASHEET

Sentrality High-Current Pin and Socket Interconnect System ›

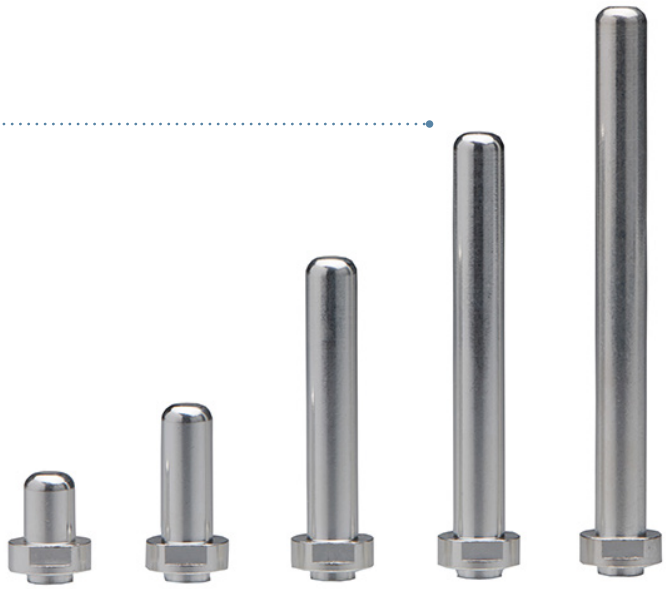
FEATURES AND ADVANTAGES

Surface-mount sockets with pick-and-place caps are packed in tape-and-reel arrangements
Allow for manufacturing flexibility with high-speed automated placement

Knurled press-fit and eye-of-needle sockets are packed in trays
Allow for manufacturing flexibility with manual placement

Socket assembly's flange can be positioned anywhere along the side of the part
Allows for easy customization in achieving the optimum application specific protrusion above and/or below the substrates

Pin length can be set
Allows for easy customization in achieving the optimum application-specific desired board-to-board or busbar-to-board stack height



DATASHEET

Sentrality High-Current Pin and Socket Interconnect System ›

MARKETS AND APPLICATIONS

Telecommunication/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

Industrial Automation
Battery charging stations
DC-to-AC inverters
AC-to-DC rectifiers
Robotics

Uninterruptable Power Supply

Data Center Servers

DC-to-AC Inverters

SPECIFICATIONS

REFERENCE INFORMATION
Packaging: Tape and reel, tray or bag depending on part number; see packaging specifications for details
UL File No.: E29179
CSA File No.: 70184994
Use With: Printed circuit boards and busbars
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

ELECTRICAL (3.40MM SIZE)
Voltage (max.): 600V
Current (max.): 75.0A
Contact Resistance (max.): 0.25 milliohms

MECHANICAL (3.40MM SIZE)
Mating Force (max.): 20.0N
Unmating Force (min.): 6.0N
OmniGlide Alignment Force (max.): 10.0N
Durability (min.): 200 mating cycles

ELECTRICAL (8.00MM SIZE)
Voltage (max.): 600V
Current (max.): 200.0A
Contact Resistance (max.): 0.20 milliohms

MECHANICAL (8.00MM SIZE)
Mating Force (max.): 40.0N
Unmating Force (min.): 10.0N
OmniGlide Alignment Force (max.): 15.0N
Durability (min.): 200 mating cycles

PHYSICAL
Eye-of-Needle Socket Housing: LCP (black)
Contact: High–performance Copper (Cu) Alloy
Plating:
Socket Contact Area—Gold (Au)
Eye-of-Needle Socket Compliant Tail—Silver (Ag)
Pin - Silver (Ag)
PCB Thickness (min.): 1.58mm
Busbar Thickness (min.): 1.50mm
Operating Temperatures: -40 to +125°C

ELECTRICAL (6.00MM SIZE)
Voltage (max.): 600V
Current (max.): 120.0A
Contact Resistance (max.): 0.20 milliohms

MECHANICAL (6.00MM SIZE)
Mating Force (max.): 30.0N
Unmating Force (min.): 7.0N
OmniGlide Alignment Force (max.): 10.0N
Durability (min.): 200 mating cycles

ELECTRICAL (11.00MM SIZE)
Voltage (max.): 600V
Current (max.): 350.0A
Contact Resistance (max.): 0.40 milliohms

MECHANICAL (11.00MM SIZE)
Mating Force (max.): 55.0N
Unmating Force (min.): 10.0N
OmniGlide Alignment Force (max.): 70.0N
Durability (min.): 200 mating cycles

www.molex.com/link/Sentrality.html

Order No. 987652-4531 USA/0k/GF/2021.11