

EXTreme EnergetiC High-Current Connector System

molex

Delivering up to 100.0A per blade, the EXTreme EnergetiC High-Current Connector System is ideal for next-generation computing applications

Features and Advantages

Low-power-loss interface design

Ensures optimized power savings while preserving the power-loss budget

Non-modular and modular power blades rated up to 100.0A per blade bay at a 30°C T-rise

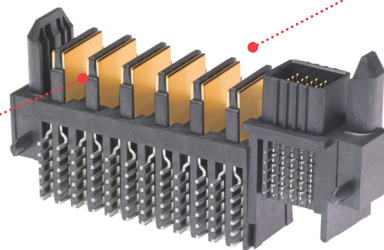
Provides 185.0A per linear inch (60% more than the competition), ensuring maximum current-to-length ratio

2.00 by 1.65mm pitch signal spacing

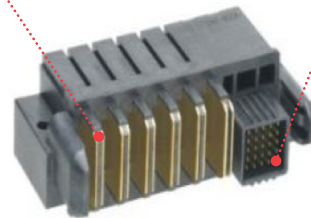
Frees up real estate for space-constrained applications

Modular split blades rated up to 63V, AC or DC; bay-to-bay rated up to 320V, AC or DC

Meets voltage requirements for power supply designs



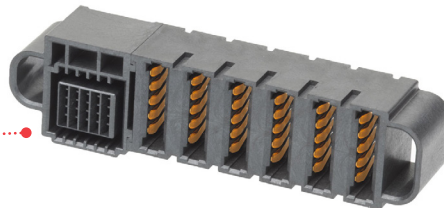
EnergetiC Modular Connector



Non modular Vertical Press-Fit Receptacle

Multiple mating levels available on power and signal contacts

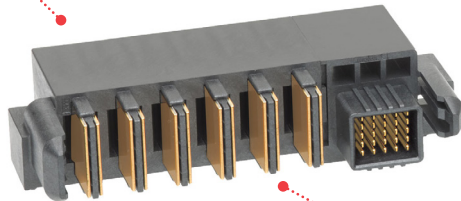
Provides grounding safety first-mate-last-break (FMLB) pin configuration



Modular Hybrid Power and Signal Right-Angle Plug and Vertical Receptacle

Modular, dovetail construction

Allows parts to be arranged in virtually any signal and/or power configuration; enables fast-to-market, cost-effective production; no special tooling is required



Modular Right-Angle Plug Components with Dovetail Construction

Modular version offers isolated contacts with dielectric LCP plastic (each power split-blade terminal carries a 50.0A current rating at 30°C T-rise)

- Shortens the distance between energized power contacts, resulting in faster response times, lower overall impedance and more capacitance benefits
- Increases power contact granularity if the customer does not need the non-modular, full 100.0A current rating for all power contacts

Available with 1- and 6-power bay blades and end-mount guidance; modular design offers 10- to 60-circuit signal bays

Provides design flexibility to fit industry-standard mechanical form factors

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Markets and Applications

Data/Computing

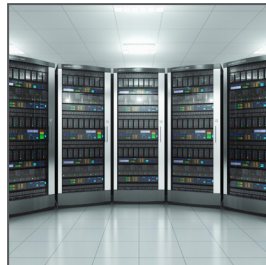
- 1U / 2U servers
- Power distribution circuit boards
- Storage
- High-end computers

Industrial

- Power supplies
- UPS/battery storage

Telecommunications/Networking

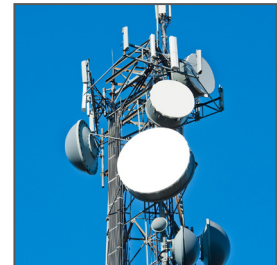
- Servers
- Storage
- Routers



Servers



High-end Equipment



Telecommunication

Specifications

REFERENCE INFORMATION

- Packaging: Tray
- UL File No.: E29179
- Modular version mating:
 - Right-Angle Plug (Series: 172185) mates With Vertical Receptacle (Series:172186)
 - Right-Angle Receptacles (Series: 204900)
- Non modular version mating:
 - Right-Angle Plug (Series: 171097) mates With Vertical Receptacle (Series:171098)
- Designed In: Millimeters
- RoHS: Yes
- Halogen Free: Yes
- Glow Wire Compliant: No

ELECTRICAL

- Voltage (max.): 600V AC or DC
- Current (max.): 100.0A per circuit
- Contact Resistance:
- Power: 0.35 milliohms initial (including bulk)
- Signal: 20 milliohms initial

MECHANICAL

- Insertion Force to Compliant Pin:
 - Power: 8.5kg per pin
 - Signal: 3.9kg per pin
- Mating Force (max. per circuit):
 - Power: 900g
 - Signal: 55g
- Unmating Force (min. per circuit):
 - Power: 325g
 - Signal: 10g
- Durability (max.): 200 cycles

PHYSICAL

- Housing: LCP UL 94V-0
- Contact: High-Conductivity Copper Alloy
- Plating:
 - Contact Area —30μ" selective Gold at contact area
 - Solder Tail Area —100μ" Tin on PCB tails
- Underplating — 50μ" Nickel
- Overall PCB Thickness (min.): 1.58mm
- Operating Temperature: -40 to +105°C

Ordering Information

Application-specific customization available with EXTreme EnergetiC Custom Design Configurator

Series No.	Component	Style	Pitch (Power Bay)	Orientation	Mounting Style
172185	Plug	Modular	7.65mm	Right-angle	Press-fit and through hole
172186	Receptacle			Vertical	
204900				Right-angle	
171097	Plug	Non modular	6.50mm	Right-angle	Press-fit
171098	Receptacle			Vertical	

www.molex.com/link/energetic.html

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