

Exceed high-current and reliability demands in top-end server and high-power applications with Molex's compact, EXTreme Guardian™ header and cable system assembly

EXTreme Guardian™ header and cable assemblies, previously named EXTreme Power™ Interconnect (EPIC), features small package sizes with a centerline pitch of 11.00mm. They system supports up to 80.0A per contact, provides good shielding characteristics in EMI-sensitive environments, features hot-plugging capabilities and UL safety features.

Headers are available in 2-circuit, single-flanged and 3-circuit, dual-flanged versions. Cable assemblies are available in 3-circuit, straight, shielded and unshielded versions for high-voltage applications and are UL touch-safe. Additionally, the 2-circuit cabled solutions include a straight, unshielded cable assembly; a right-angled, right-entry and left-entry unshielded version, as well as a left-entry shielded variant for space-saving connections to servers installed in confined spaces.

For additional information visit: www.molex.com/link/extremeguardian.html

FEATURES AND BENEFITS

- High-current density per inch supports up to 80.0A per blade (180.0A per inch)
- Redundant contact design handles up to 600V and supports AC or DC high-voltage applications with the lowest feasible voltage drop and I²R (irreversible dissipative power) losses
- Small centerline spacing of 11.00mm reduces PCB footprint compared to legacy power products
- Recessed terminals, First-Mate-Last-Break (FMLB) allow hot-swapping of power units and reduce network downtime
- Gold or tin contact plating provides flexibility to suit customer applications; gold plating provides low interface resistance
- UL and CSA certifications meet all accredited agency safety requirement and approvals

PCB Headers

- Locating pegs enable accurate through-hole positioning of connector on PCB
- Through-hole solder retention design provides flexible manufacturing options
- Insert-molded threaded nut provides secure panel attachment

Cable Assemblies

- Crimp terminal accepts 10, 8 and 12/12 or 6 AWG wires; supports heavier gauge wire with no terminal back-out issues
- EMI shielding options (for shielded versions) minimize cross-talk and improve immunity to external noise
- Terminal Position Assurance (TPA) option available secures cable from accidental cable disconnection
- Mounting jackscrews improve cable retention after mating to PCB header
- Standard overmold provides strain relief and wire management in rugged environments



EXTreme Guardian™ Power Connector System

46817 PCB Headers, Single and Dual Flange, 2 and 3 Circuits

46818 Power Harness Connector

46819 High Power Terminal

68790 Power Cable Assemblies, Straight, Unshielded, 2 Circuits

68790 Power Cable Assemblies, Right-Angle, Shielded or Unshielded, Left- or Right-Entry, 2 Circuits

111119 Power Cable Assemblies, Straight, Shielded or Unshielded, Low Profile, 3 Circuits

PRODUCT FAMILY



PCB Header, Single-Flange, 2 Circuits
(Series 46817)



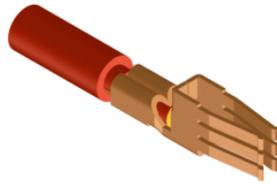
PCB Header, Dual-Flange, 3 Circuits
(Series 46817)



Power Cable Assembly, Straight,
Unshielded, 2 Circuits
(Series 68790)



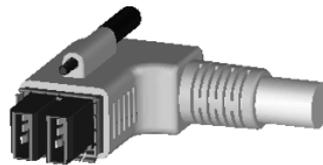
Power Harness Connector, 3 Circuits
(Series 46818)



Power Terminal
(Series 46819)



Power Cable Assembly, Straight,
Shielded, Low-Profile, 3-Circuits
(Series 111119)

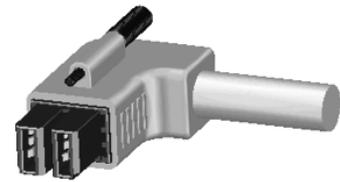


Power Cable Assembly, Right-Angle,
Shielded, Left-Entry, 2 Circuits
(Series 68790)

EXTreme Guardian™ Power Connector System 11.00mm Pitch with 80.A Per Blade



Power Cable Assembly, Straight,
Unshielded, Low Profile, 3-Circuits
(Series 111119)



Power Cable Assembly, Right-Angle,
Unshielded, Left-Entry, 2 Circuits
(Series 68790)



Power Cable Assembly, Right-Angle,
Unshielded, Right-Entry, 2 Circuits
(Series 68790)

APPLICATIONS

- Data Communication Equipment
 - High-end servers
- Telecommunication Equipment Manufacturers
 - Cellular base stations
 - Hubs
 - Servers
 - Routers
 - Switches
- Power Supplies
 - UPS (Uninterruptable Power Supply)
- Other Markets
 - Solar
 - Medical
 - Electric vehicles
 - Commercial applications that require small form factor interconnects delivering up to 200.0A



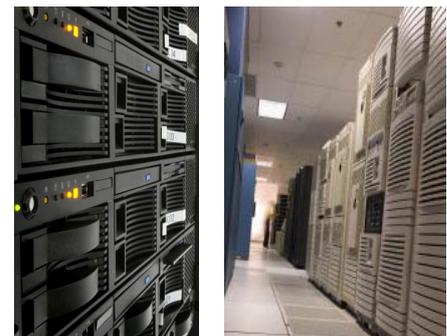
Uninterrupted Power Supplies



Medical



Solar-powered Cellular Base Station

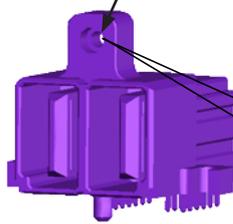


High End Servers

Headers

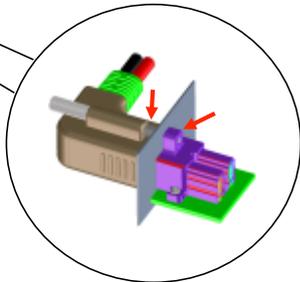
**EXTreme Guardian™
Power Connector System
11.00mm Pitch with
80.A Per Blade**

Overmold M3 Threaded Nut



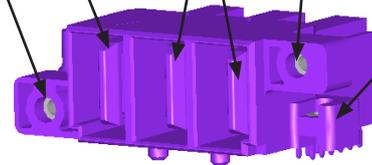
Integral screw-thread housing flange of (panel-mounted) 2-circuit header (Series 46817) enables easy and secure mating by tightening the jackscrew above the cable plug

Circuit 1 (Blade-type Grounding Pin) First-Mate-Last-Break

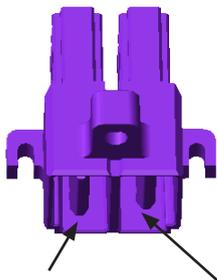


Flange

Round Nut
Recessed Pins
M3 Nut allows (optional) vertical screw-mounting to PCB



The insert-molded, 3-circuit header (Series 46817) with flanged horizontal and (optional) vertical mounting ensures accurate positioning and secured placement of the connector to both Tail Stock and PCB respectively



Circuit 1 First-Mate-Last-Break
Recessed Pin

Top view of 2-Circuit, Through-hole, Right-Angle Header showing position of First-Mate-Last-Break circuit for hot-swapping functions

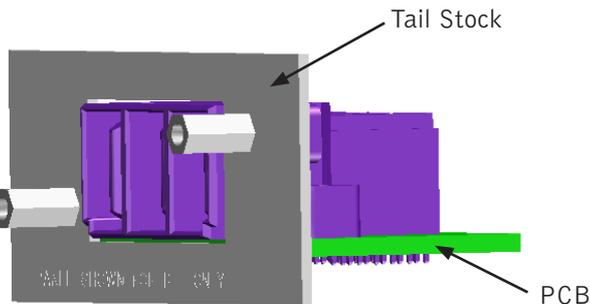
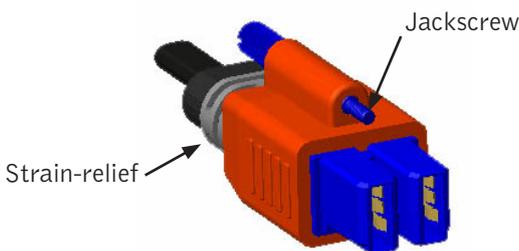
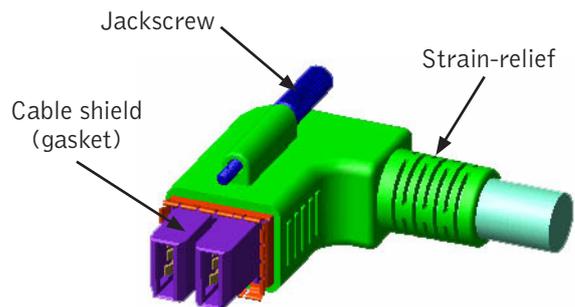


Illustration showing the mounted PCB Header Assembly complete with Tail Stock

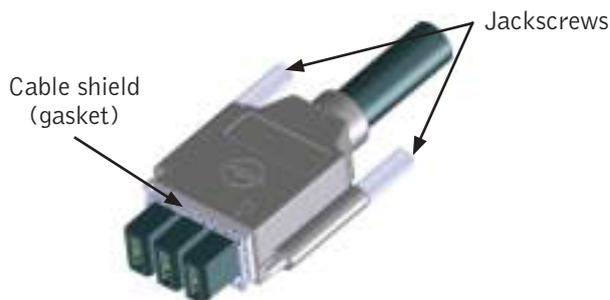
Cable Assemblies



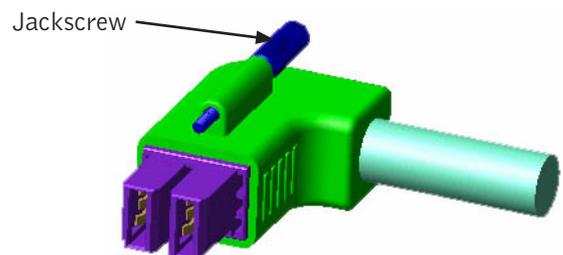
2-circuit, Straight, Unshielded Cable Assembly, showing cable overmold with jackscrew feature (Series 68790)



2-circuit, Left-Entry, Right-Angle, Shielded Cable Assembly showing cable shield (gasket) and jackscrew feature



3-circuit, Straight, Dual-ended Power Cable Assembly with reduced cable cross-talk shielding (Series 111119)



2-circuit, Left-Entry, Right-Angle, Unshielded Cable Assembly showing jackscrew feature on cable overmold

SPECIFICATIONS

Reference Information

Packaging: Tray
 UL File No.: E29179
 CSA File No.: LR19980 (1779070)
 Mates With:
 PCB Headers (Series 46817) mate with Cable Assemblies (Series 68790 or 111119)
 Use With:
 Power Harness 46818 uses with 46819 Terminals
 Designed In: Millimeters
 RoHS: Yes
 Halogen Free: Yes
 Glow Wire Compliant: No

Mechanical

Contact Retention to Housing: 26.61N average
 Mating Force: 36.60N max.
 Unmating Force: 34.39N max.
 Durability (min.): 25 cycles

Physical

Housing: Polyester, 94V-0
 Contact: Copper (Cu) Alloy
 Plating:
 Contact Area — Gold (Au)
 Solder Tail Area — Tin (Sn)
 Underplating — Nickel (Ni)
 PCB Thickness: 1.40mm min.
 Operating Temperature: -40 to +105°C

EXTreme Guardian™ Power Connector System 11.00mm Pitch with 80.A Per Blade

Electrical

Voltage (max.): 600V AC/DC max.
 Current (max.): 80.0A
 Dielectric Withstanding Voltage: 1,700V AC

ORDERING INFORMATION

PCB Headers

Order No.	Product Description	PCB Thickness	Tail Length	Circuits
46817-1000	Power Plug Assembly	2.36mm	3.86mm	3
46817-1001		3.18 or 3.60mm	4.69mm	
46817-1002		2.36mm	3.86mm	2
46817-1003		3.18 or 3.60mm	4.69mm	

Power Harness Connector

Order No.	Product Description	Circuits	Terminal Lock
46818-0001	Crimp Housing	3	No
46818-0030	Crimp Housing Kit (includes crimp housing and terminal lock TPA)		Yes

Power Terminals

Order No.	Product Description	Current	Wire Gauge	Plating
46819-0001	High Power Crimp Terminal	60.0A	10 AWG	Tin (Sn)
46819-0002			8 AWG	
46819-0003			6 AWG	
46819-0011			10 AWG	Gold (Au) 0.76µm
46819-0012			8 AWG	
46819-0013			6 AWG	

Cable Assemblies

Order No.	Product Description	AWG	Single or Double Ended	Cable Length
68790-0005	EXTreme Guardian Cable Assemblies	8	Double	2.0m
68790-0007				1.20m
68790-0008		1.50m		
68790-0009		6	Single	3.0m
68790-0010				15.0m
111119-1000		10/8	Double	1.0m
111119-2000				



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