

**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. The 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](http://www.molex.com/link/extremeguardian.html)

**FEATURES AND BENEFITS**

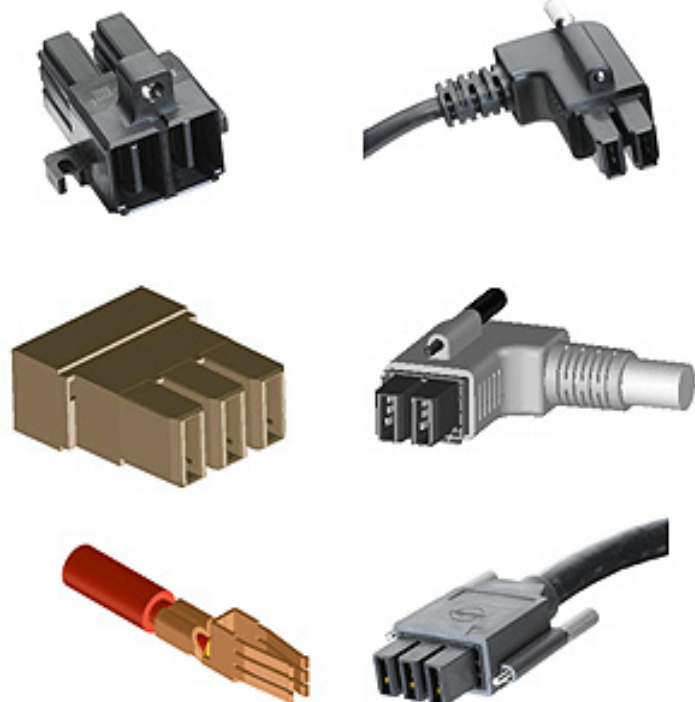
- High-current density per inch supports up to 80.0A per blade (180.0A per inch)
- Redundant contact design handles up to 600V and supports AC or DC high-voltage applications with the lowest feasible voltage drop and I<sup>2</sup>R (irreversible dissipative power) losses
- Small centerline spacing of 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



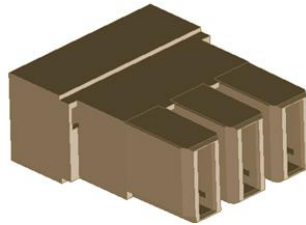
PCB Header, Single-Flange, 2 Circuits  
(Series 46817)



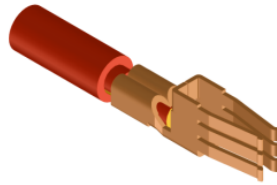
PCB Header, Dual-Flange, 3 Circuits  
(Series 46817)



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



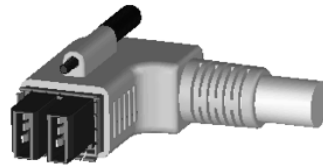
Power Harness Connector, 3 Circuits  
(Series 46818)



Power Terminal  
(Series 46819)



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

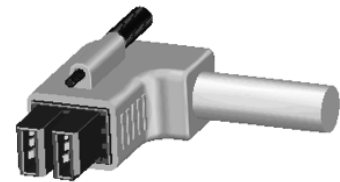


Power Cable Assembly, Right-Angle,  
Shielded, Left-Entry, 2 Circuits  
(Series 68790)

## 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



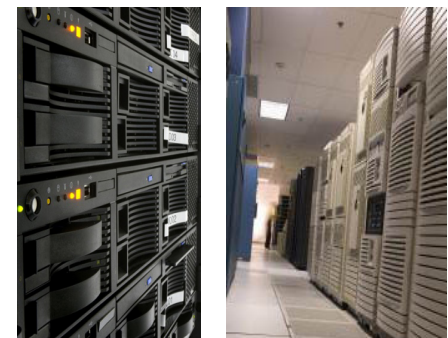
Uninterrupted Power Supplies



Medical



Solar-powered Cellular Base Station

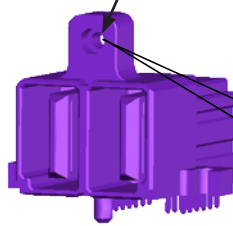


High End Servers

**Headers**

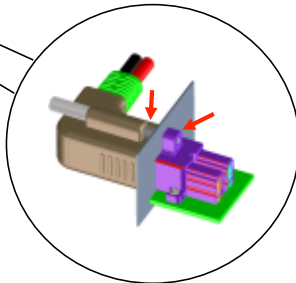
**EXTreme Guardian™  
Power Connector System  
11.00mm Pitch with  
80.A Per Blade**

Overmold M3 Threaded Nut



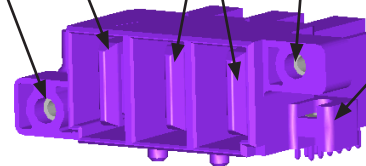
*Integral screw-thread housing flange of (panel-mounted) 2-circuit header (Series 46817) enables easy and secure mating by tightening the jackscrew above the cable plug*

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

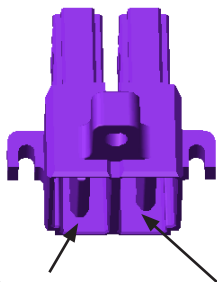


Flange

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

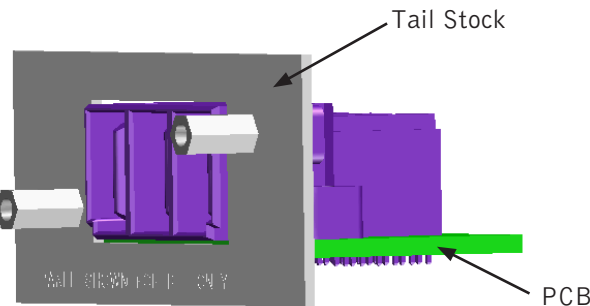


*The insert-molded, 3-circuit header (Series 46817) with flanged horizontal and (optional) vertical mounting ensures accurate positioning and secured placement of the connector to both Tail Stock and PCB respectively*



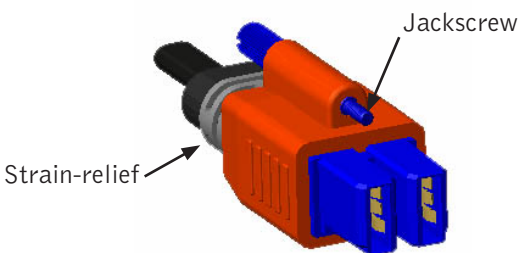
Circuit 1 First-Mate-Last-Break  
Recessed Pin

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

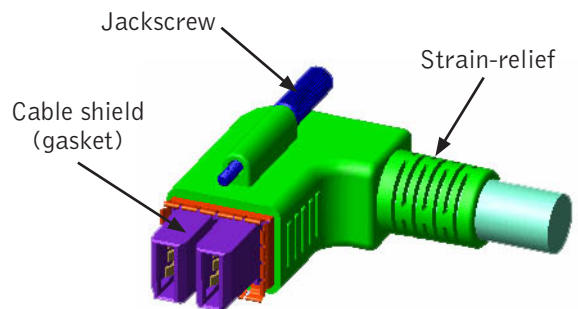


*Illustration showing the mounted PCB Header Assembly complete with Tail Stock*

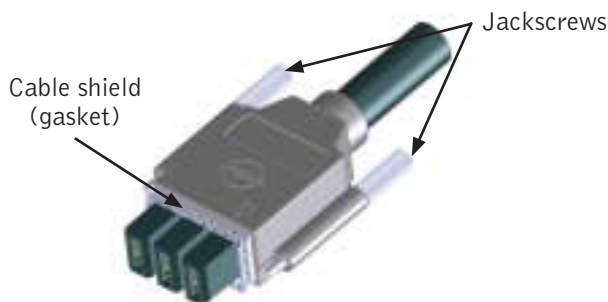
**Cable Assemblies**



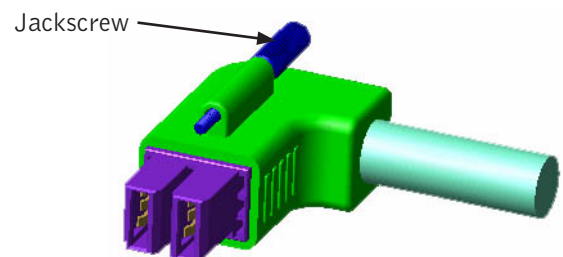
*2-circuit, Straight, Unshielded Cable Assembly, showing cable overmold with jackscrew feature (Series 68790)*



*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				



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.