

Power Distribution Solutions

POWER RAIL™ 750A

Methode Electronics, Inc. power products divisions, Network Bus Products and Cableco Technologies have leveraged their expertise in bus bar and power cable systems to develop the next generation power distribution technology. The PowerRail 750A is an easy-to-install bus bar and cable interconnect system that is capable of rapid connect/disconnect, increasing equipment up-time. The PowerRail is available in one or two rail standard models of variable length from a few inches to six feet. Multiple rail systems are also available and can be customized for a wide range of voltage applications. A variety of interconnect options are available to meet customer specific application needs.

Product Series Number

CPR 750*

Material and Plating

PowerRail

Conductor: C11000 Copper

Insulation: Functional epoxy coating

Plating: Silver per QQ-S-365 over Nickel per QQ-N-290 (Standard)**

Contact: C17200 Beryllium Copper

Blade Connector - Cable Assembly

Conductor: C14500 Tellurium Copper

Housing: Nylon, 94 V-0 rated

Plating: Silver per QQ-S-365 over Nickel per QQ-N-290 (Standard)**

Cable: See Cableco PowerFlex™ product specification at www.cablecotech.com

***Contact Factory for Other Plating Options*

Endcaps and Mounting Legs

Housing: Glass filled nylon, 94 V-0 rated

Reinforcement brackets: Cold rolled steel, Zinc plated

Polarizer

(Plastic barrier that ensures the connector blades only engage with the correct polarity).

Housing: Nylon, 94 V-0 rated

Voltage

PowerRail System: 600 Volts

Current

PowerRail: 750A

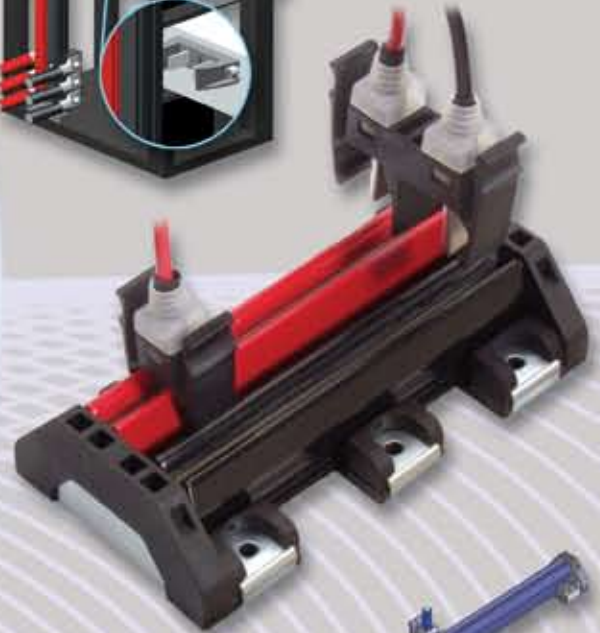
Power Contact: 200A/linear inch

Temperature:

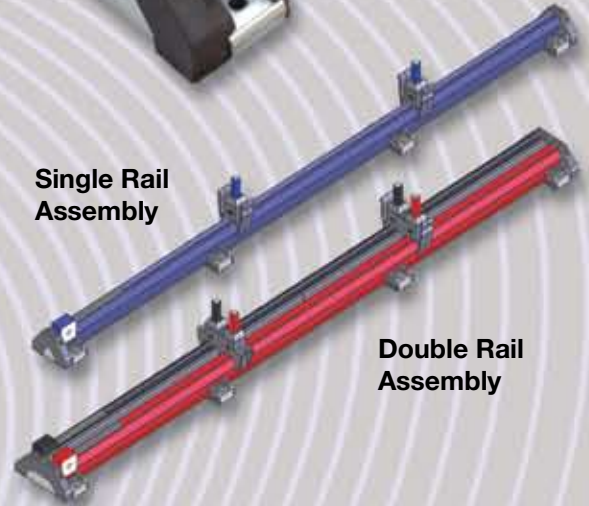
-40°C to +125°C

Length:

Variable up to 72"



Single Rail Assembly



Double Rail Assembly

Rail Part Numbering System

Example:

S - CPR - 750 - 48.03IN - S - BLU

- (BLU) Blue - Single Rail
- (B/R) Black and Red - Double Rail
- (S) Silver over Nickel (Standard)*
- *Contact Factory for Other Plating Options*
- 48.03 Inches (1220 Millimeters)
- (750) 750 Amp
- (CPR) Copper
- (S) Single, (D) Double, (T) Triple

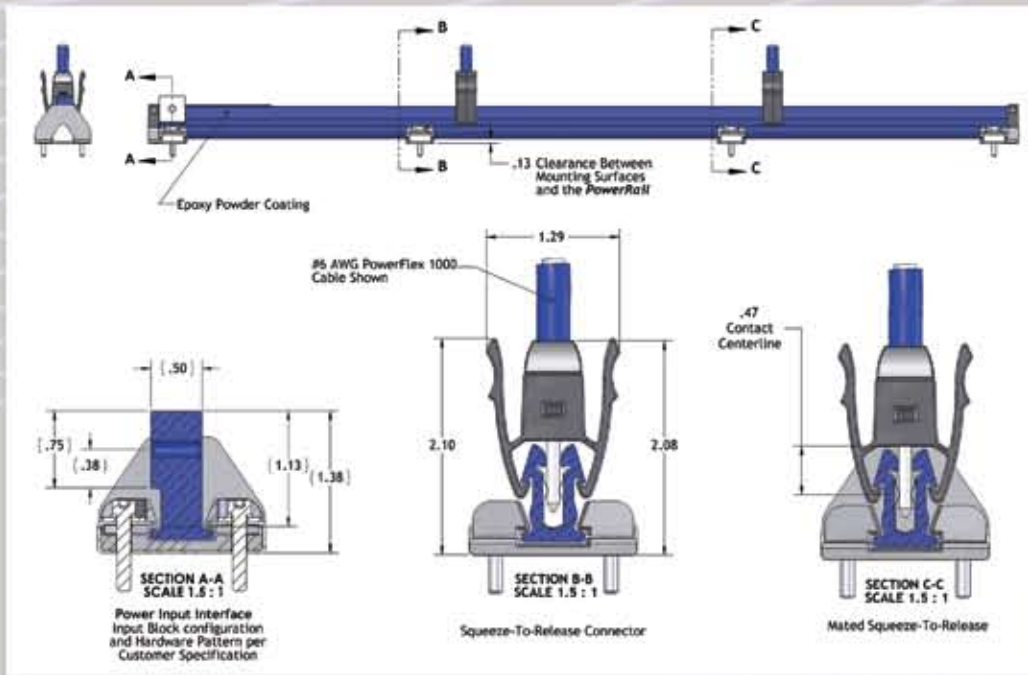
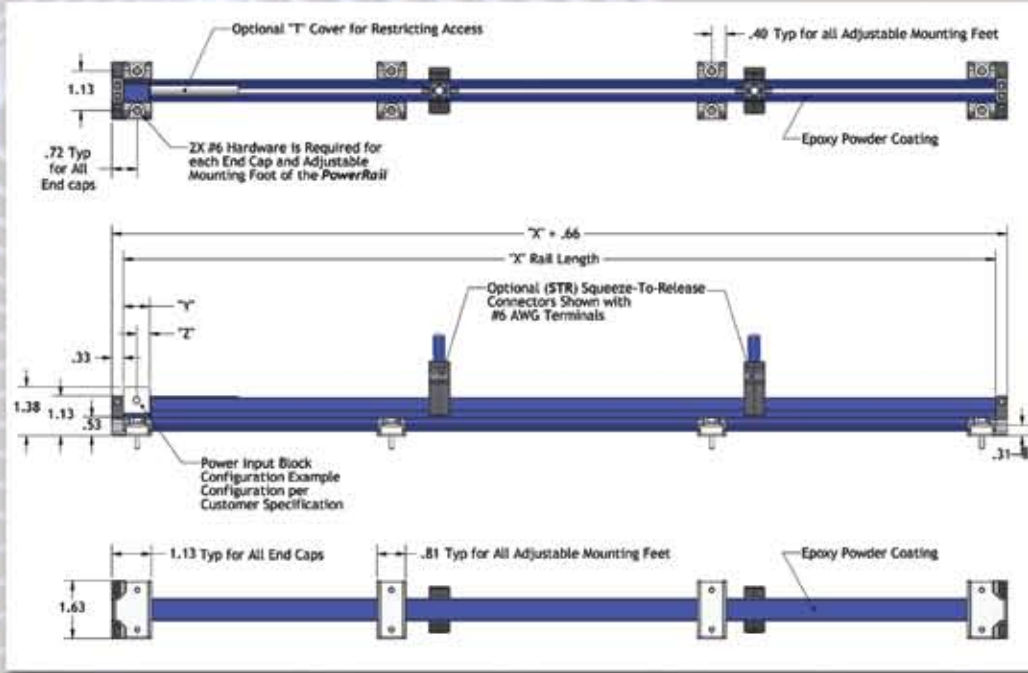
**200 Amp, 1000 Amp, and 2000 Amp models also available, please contact Methode for more information.*

✓ **RoHS Compliant**

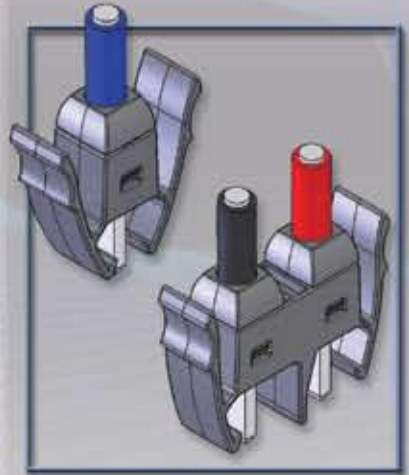
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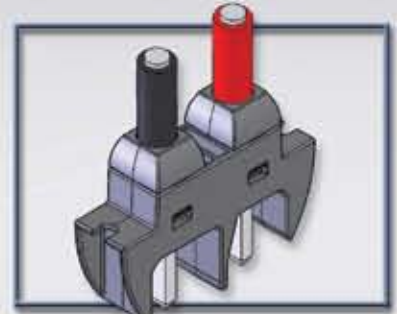
PowerRail 750A Single Rail



PowerRail 750A Interconnect Options



Squeeze-to-Release (STR) Single and Double Rail Connector with Crimp Style Floating Cable Terminals



Panel Mount (PNL) Connector with Crimp Style Floating Cable Terminals

Interconnect Part Numbering System

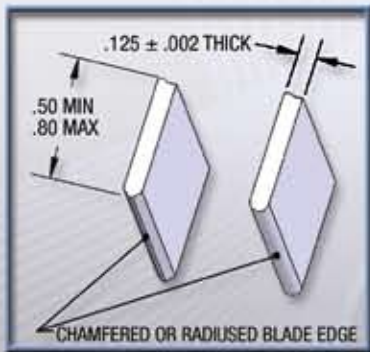
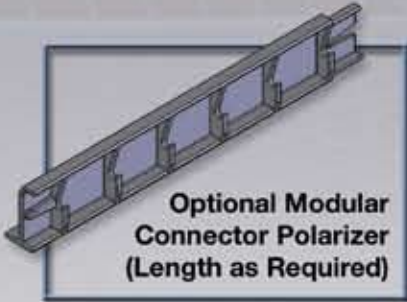
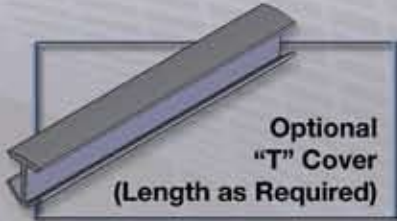
Example:

S-TAB-750-STR-8-S

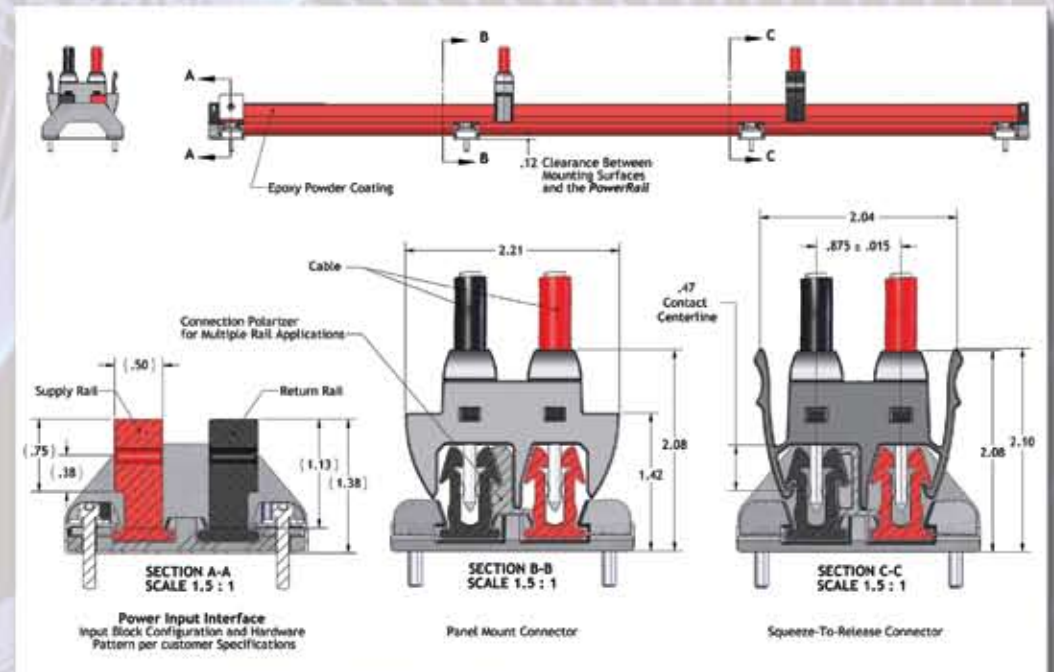
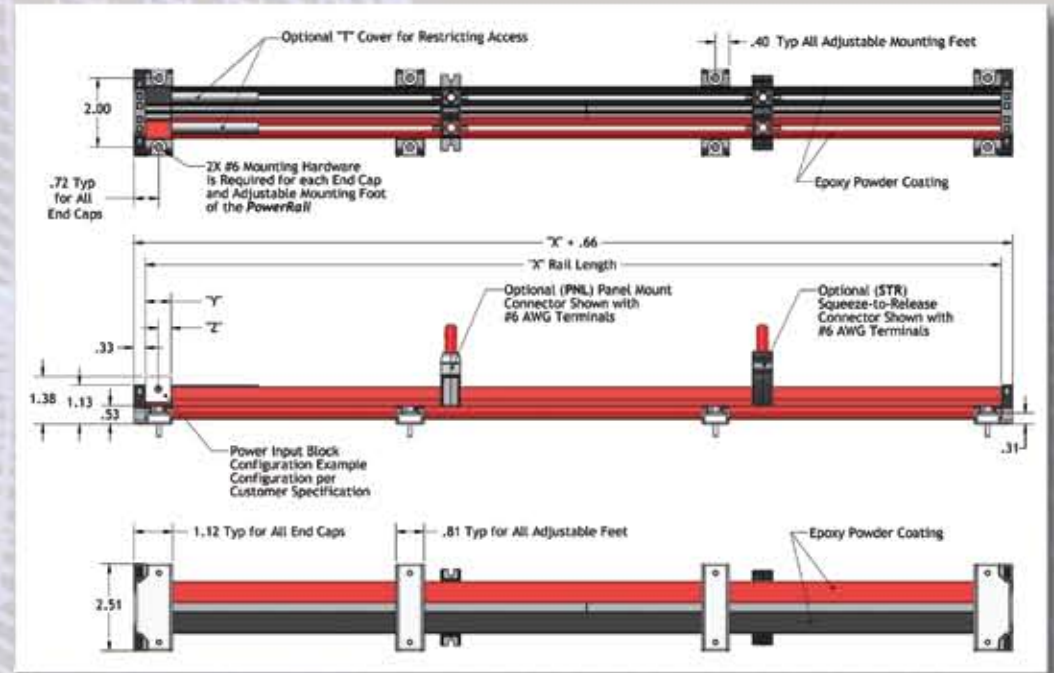
- (S) Silver over Nickel (Standard)*
- *Contact Factory for Other Plating Options
- (8) AWG
- (STR) Squeeze-to-Release, (PNL) Panel Mount
- (750) 750 Amp
- (TAB) Tab Blade Connector
- (S) Single, (D) Double

*Finish of the blade should be the same as the internal finish of the PowerRail.

PowerRail 750A Double Rail



Suggested Mating Blade and
Bus Bar Tab Dimensions



PowerRail 750A

Electrical Requirements

Description	Test Condition	Results
Insulation Resistance (EIA-364-21)	Apply 500 VDC between terminals and ground.	5,000 Megohms Minimum
Dielectric Strength (EIA-364-20)	Apply 1500 VDC for 1 minute between terminals and ground.	No Breakdown

Mechanical Requirements

Description	Test Condition	Results
Durability w/o Environment (EIA-364-09)	Mate connector with rail 250 cycles at a maximum rate of 10 cycles per minute.	Resistance: 0 cycles – TBD 250 cycles – TBD
Forces	.50 inch wide contact.	5 lb max
Blade Insertion		8 oz min
Locking Insulator to Rail		20 lb min

Environmental Requirements

Description	Test Condition	Results
Vibration (EIA-364-28)	Mate connectors with rail and vibrate per EIA-364-28, test condition VII, letter “D” 15 minutes each axis.	No damage to PowerRail after vibration in all three axes.
Shock (EIA-264-27)	Mate connector with rail and shock at 50g with 1/2 sine waveform (11 milliseconds) shocks in the X, Y, Z axes (18 shocks total).	No damage to PowerRail after being subjected to shock loads.
Humidity (EIA-264-31)	Mate connectors with rail, expose to 40+/-2°C with relative humidity of 90-95% for 96 hours.	TBD
Thermal Shock (EIA-364-TP-32)	Mate connectors with rail, expose to 5 cycles from -40° to 125°C per EIA-364-TP-32.	TBD
Temperature Life (EIA-364-17)	Mate connectors with rail, expose to 240 hours at 105°.	TBD

✓ RoHS Compliant

www.thepowerrail.com

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