

Power Distribution Solutions

POWER RAIL™ 1000A

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 1000A 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

ALU 1000*

Material and Plating

PowerRail

Conductor: 6063 Aluminum

Insulation: Functional epoxy coating

Plating: Silver per QQ-S-365 over Nickel per QQ-N-290 (Standard)**; after preparation per ASTM B253

Torsion Contact: C17200 Beryllium Copper

Blade Connector - Cable Assembly

Conductor: C14500 Aluminum

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

Glass filled nylon

Reinforcement brackets: Cold rolled steel, Zinc plated

Polarizer

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

Nylon, 94 V-0 rated

Voltage

PowerRail System: 600 Volts

Current

PowerRail: 1000A

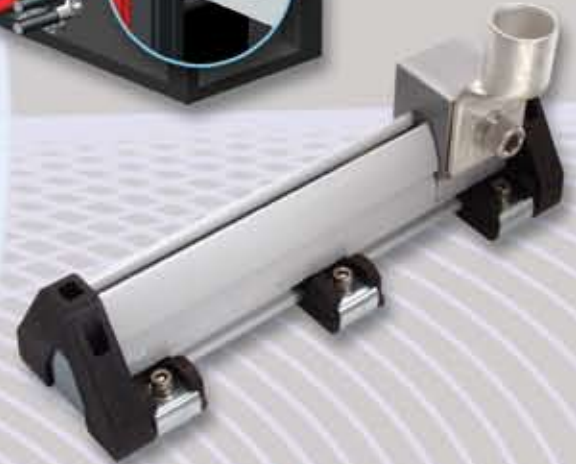
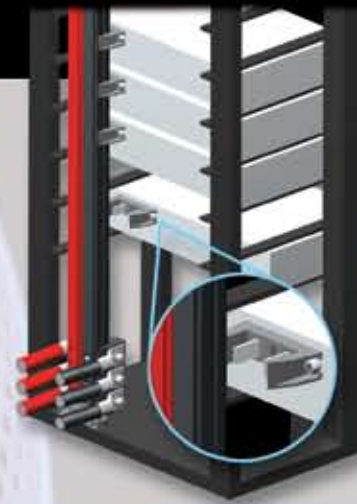
Power Contact: 200A/linear inch

Temperature:

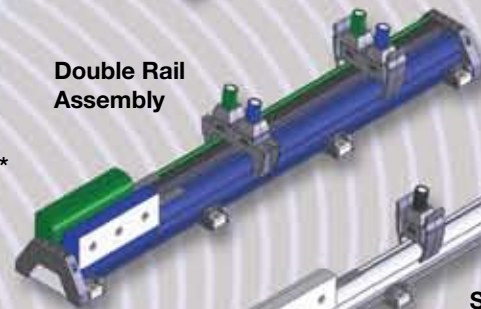
-40°C to +125°C

Length:

Variable up to 72"



Double Rail Assembly

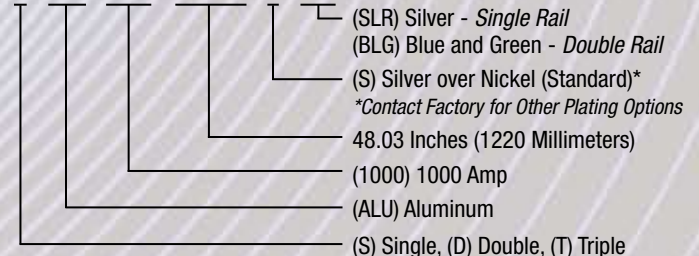


Single Rail Assembly

Rail Part Numbering System

Example:

S - ALU - 1000 - 48.03IN - S - SLR



*200 Amp, 750 Amp, and 2000 Amp models also available, please contact Methode for more information.

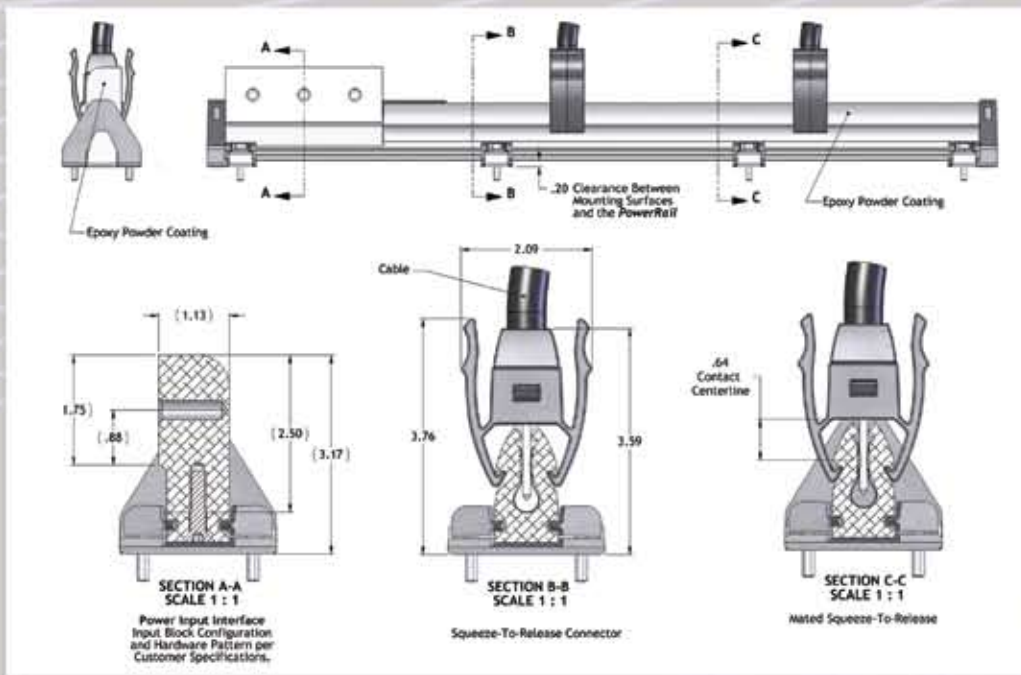
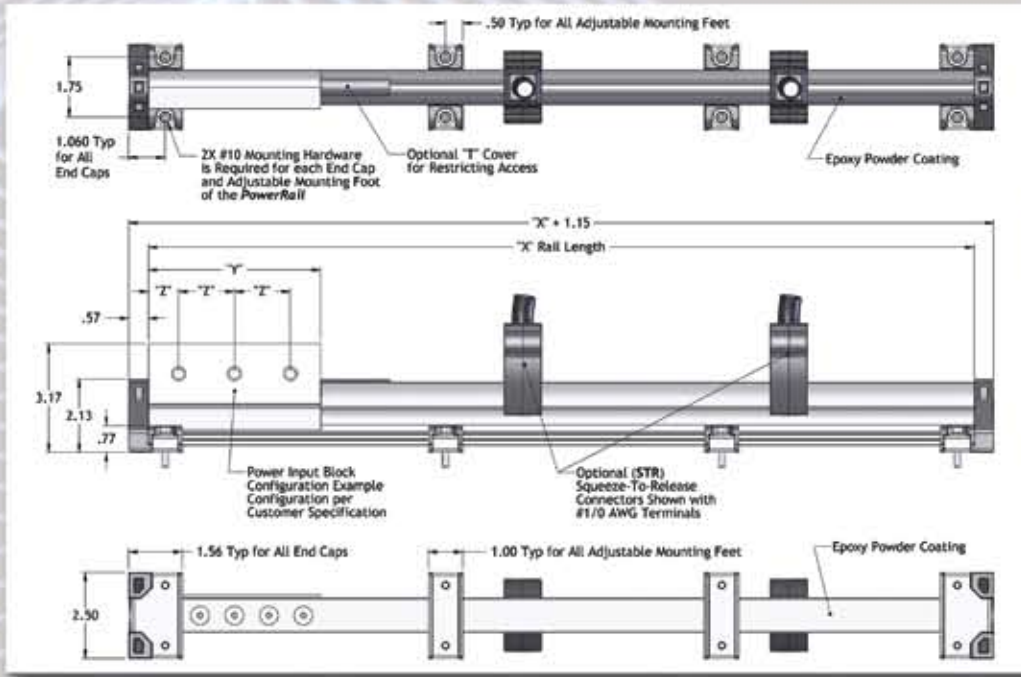
✓ RoHS Compliant

 **METHODE ELECTRONICS, INC.**
Technology Leadership

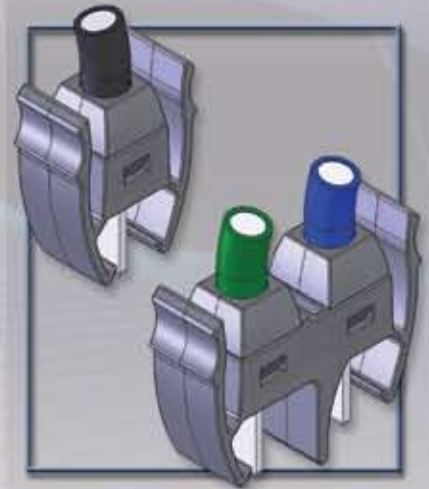
www.methode.com

Power Distribution Solutions

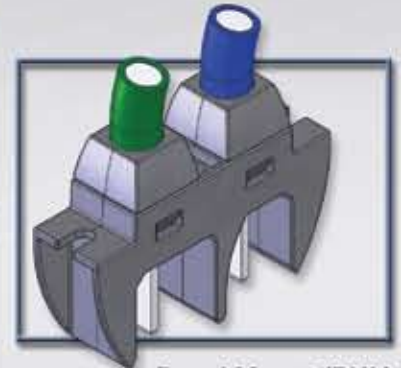
PowerRail 1000A Single Rail



PowerRail 1000A 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

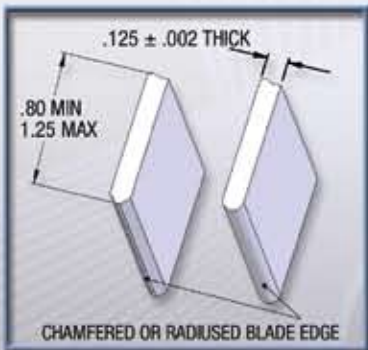
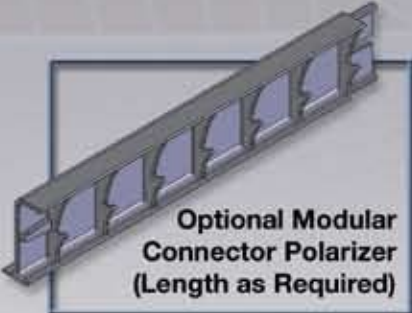
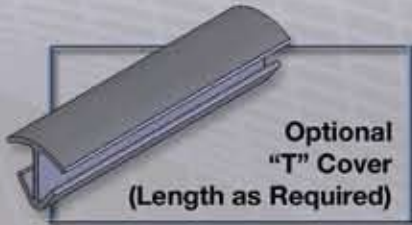
Example:

S-TAB-1000-STR-8-S

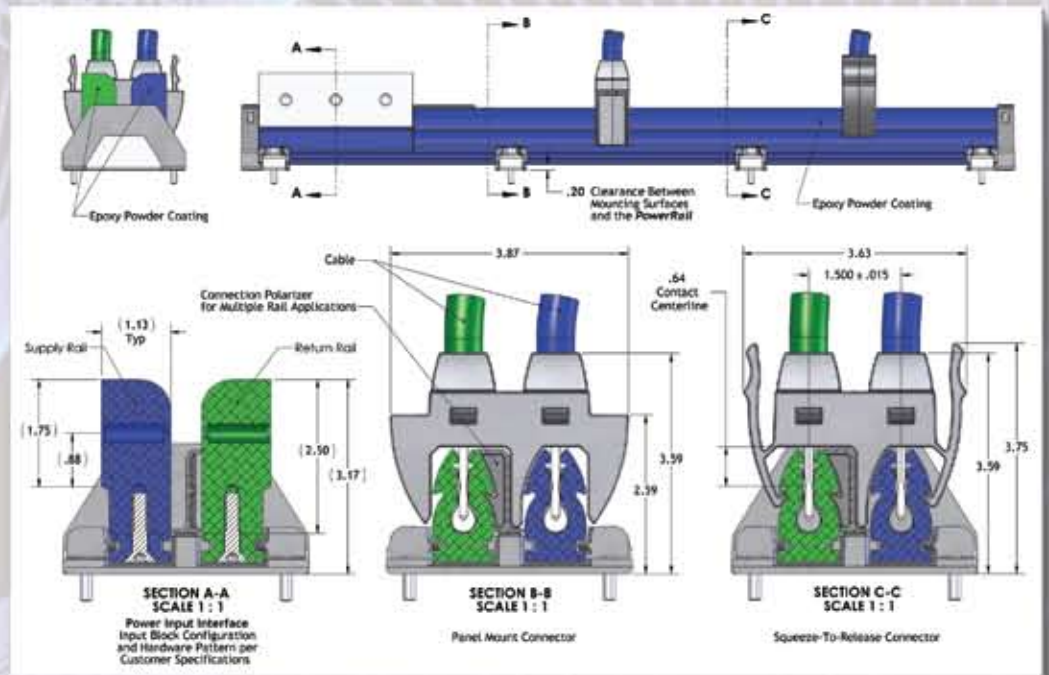
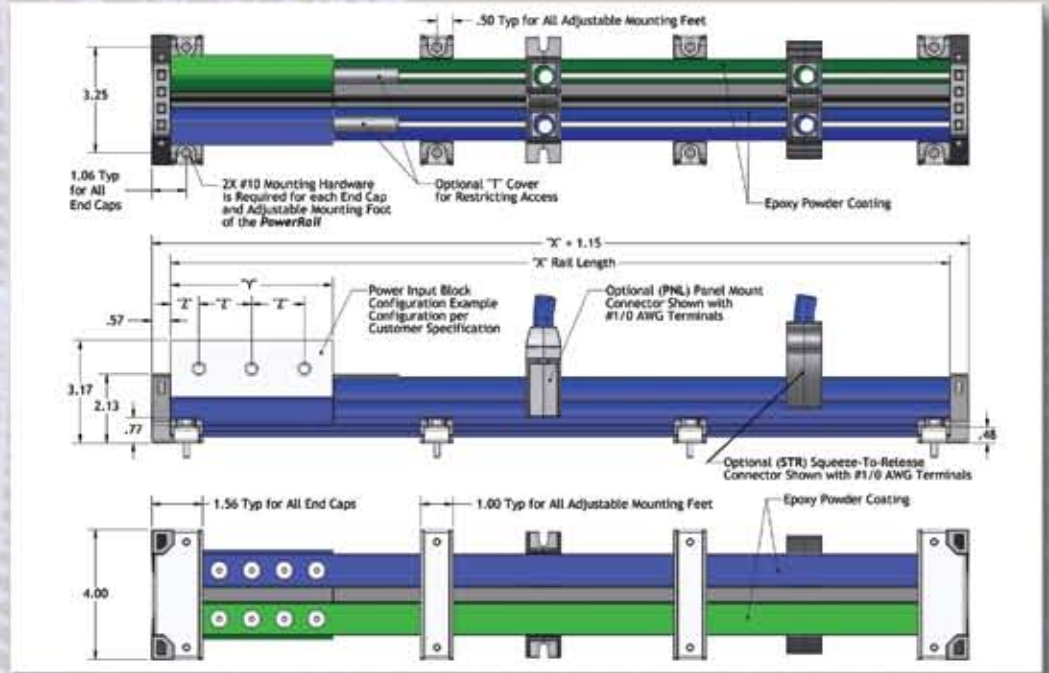
- (S) Silver over Nickel (Standard)*
- *Contact Factory for Other Plating Options
- (8) AWG
- (STR) Squeeze-to-Release, (PNL) Panel Mount
- (1000) 1000 Amp
- (TAB) Tab Blade Connector
- (S) Single, (D) Double

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

PowerRail 1000A Double Rail



Suggested Mating Blade and
Bus Bar Tab Dimensions



PowerRail 1000A

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 – 5.21 milliohms 250 cycles – 2.42 milliohms
Forces	.50 inch wide contact.	5 lb max
Blade Retention		1 lb 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.	Contact resistance before humidity test was .13 and .09 milliohms after test.
Thermal Shock (EIA-364-TP-32)	Mate connectors with rail, expose to 5 cycles from -40° to 125°C per EIA-364-TP-32.	Contact resistance before thermal shock test was .12 and .10 milliohms after test.
Temperature Life (EIA-364-17)	Mate connectors with rail, expose to 240 hours at 105°.	Contact resistance before temperature life test was .10 and .09 milliohms after test.

✓ RoHS Compliant

www.thepowerrail.com

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