

PMM

Power Management Module

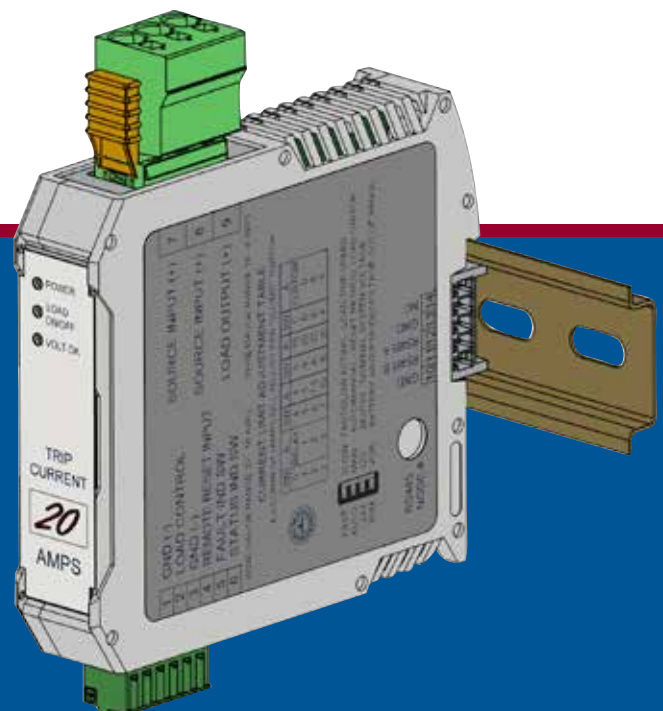
- Smart load protection device protects electrical circuits from damage caused by an overload condition or short circuit
- Detects fault conditions and interrupts current flow
- Can be manually, automatically or remotely reset to resume normal operation
- Solid-state high-side switch is protected in case of extreme overload, output shorts to ground, and thermal conditions
- Protected from reverse connection currents
- Configurable to trip at several breaker currents from 1 to 30 amps
- No moving parts; can be used as a solid-state relay (SSR) or as a battery saver
- CSA certified for Class I, Div 2, Groups C & D, Temp Code T3C hazardous locations

The Power Management Module (PMM) is a smart load protection device designed to protect an electrical circuit from damage caused by an overload condition or short circuit. Basically, it detects a fault condition and interrupts current flow. Unlike a one-time fuse, the PMM can be manually, automatically or remotely reset. It uses a solid-state high-side switch that is protected from extreme overload, output shorts to ground, thermal conditions, and reverse connection currents. The PMM can be configured to trip at several breaker currents from 1 to 30 amps, and for “fast” or “slow-acting” trip response times.

The PMM can also be used as a solid-state relay (SSR). It contains a solid-state high-side power switch that can be controlled by grounding or ungrounding a load control signal input. The high-side switch can switch currents up to 30 amps at voltages between 10 and 32 volts DC. Unlike a mechanical relay, the PMM has no moving parts to wear out and is not required to be hermetically sealed to be used in Div. 2 locations. When used as an SSR it can be configured to trip with no delay time or as a time delay relay. The PMM is limited to SPST switching.

The PMM can act as a battery saver to prevent the discharge of cranking batteries by automatically disconnecting the load at a preconfigured value. Its circuitry measures the source input voltage to the module. Load disconnect can occur upon recognition of a low voltage condition caused by the loss of the charging current, either from an alternator or a line powered charger. When it senses the loss of the charging current it disconnects the load, preventing further battery drain. The PMM can be configured for an immediate notification of the loss of charging current, with or without a time delay, for load disconnect. The user can be notified either by a remote output switch or Modbus communication. The PMM can be configured to auto-reclose when the voltage returns to an acceptable value or reclose through a manual or remote reset. This will allow for servicing of the condition without the load being immediately disconnected. The PMM can be configured to react to under- or over-voltage conditions as well.

The PMM contains diagnostic LED's, remote indication output switches, local and remote test and reset functions, as well as Modbus RTU serial communications for supervisory computer monitoring and control.



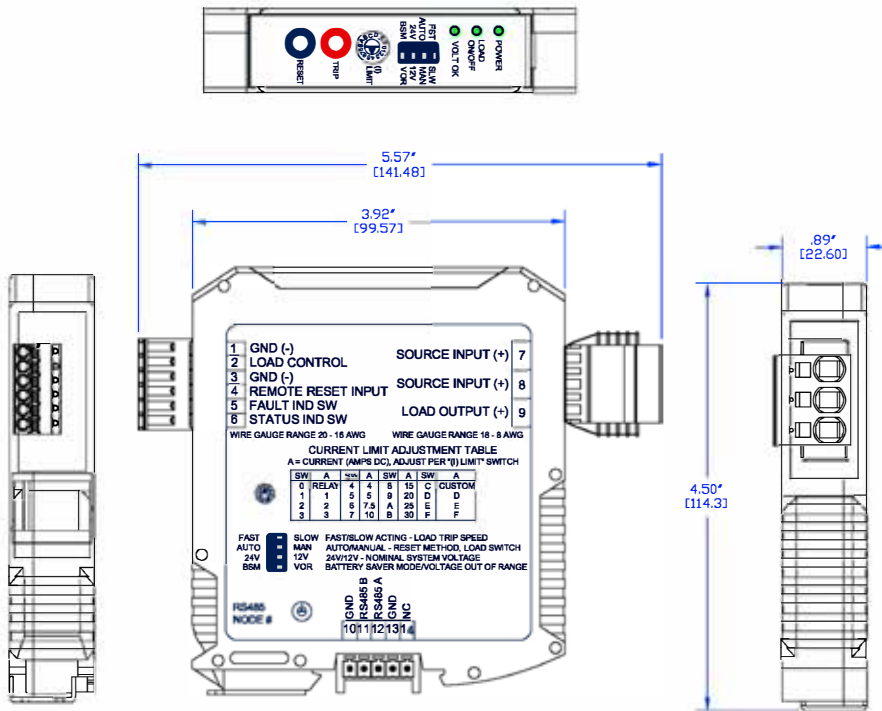
General Specifications

Operating Voltage	10-32 Vdc
Load Current	30 amps max
Operating Current	30mA max
Current Drain In Battery Saver Mode	10mA max
Current Measurement and Trip Accuracy	±(5%+0.1 amp)
Voltage Measurement and Trip Accuracy:	0.2 volts
Ambient Temperature Range.....	-40°C to 85°C (-40°F to 185°F)
Mounting	35mm DIN rails
Enclosure.....	ABS plastic
Terminal Blocks.....	Pluggable, with push-in spring-cage connections
Source/Load Terminal Block	41 amps, 18 to 8 AWG wire sizes, locking
Control Terminal Block	20 to 16 AWG wire sizes
Modbus Connections.....	DIN rail bus connector
RS485 Serial Communications	Modbus RTU, default (38400 8N1)
Load Control	Activated by pulling terminal low (configurable)
Remote Reset Input	Activated by momentarily pulling input low
Fault Indication Output Switch.....	Open drain Mosfet closes to GND (-) rated 32Vdc, 200mA
Status Indication Output Switch.....	Open drain Mosfet closes to GND (-) rated 32Vdc, 200mA

Hazardous Area Classification

Class I, Div. 2, Groups C & D for Direct Hookup, Temp Code T3C,
Maximum Ambient Temperature 85°C

Dimensions



NOTE: MOUNT TO A 35MM DIN RAIL IN A SUITABLE ENCLOSURE. STRIVE TO MOUNT WITH TERMINALS 7, 8, AND 9 UP TO ALLOW FOR BEST HEAT DISSIPATION OUT OF THE MODULE WITHOUT TRAVELING THROUGH IT.

To Order

PMM Power Management Module.....	691745-1
RS485 Bus Connector, 5-position	604425
RS485 Bus to PC/PLC Connector, 5-position	604427

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