

# MP8000 SERIES

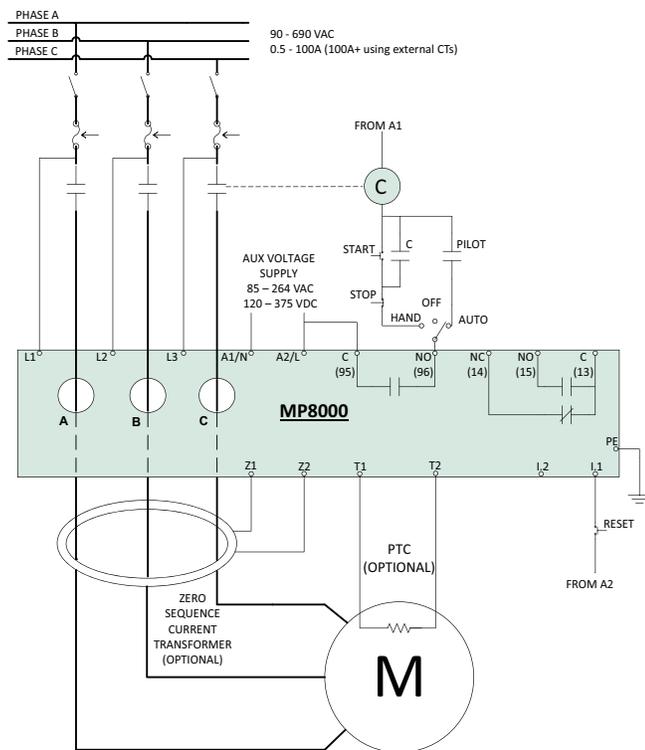
## Bluetooth® Overload Relay



Patent Pending

### Wiring Diagram

TYPICAL WIRING DIAGRAM FOR 3-PHASE



### Description

The MP8000/MP8100 are advanced motor protection electronic overload relays, fully programmable via Bluetooth® using an iPhone® or Android™ smartphone or tablet with the Littelfuse App. It is easy to use and arc-flash safety is increased because the app allows settings to be modified and real-time operational information viewed. Viewing operational information and faults on the app does not require the user to open the control panel.

The MP8000 protects any motor drawing 0.5-1,000 full load Amps (external CTs are required above 100 Amps). It is designed for single or 3-phase systems with operating voltages of 90-690 VAC (use of external potential transformers can extend upper voltage range above 690 VAC). Common applications include conveyor systems, HVAC equipment, saws and grinders, fan motors, and almost any pumping application.

Protection is unsurpassed by combining overload, voltage, phase loss and reversal, voltage and current unbalance, power monitoring, and underload in one package. For standalone applications, the Bluetooth® interface can be used when paired with a smartphone or tablet. The units also feature an Ethernet communications port that can be used to form an Ethernet Modbus TCP/IP network. Units can be remotely monitored and controlled from a PC, or SCADA system, and data logging through a PC with the optional Solutions software or other software program using the MP8000 memory map. This capability allows for a simple cost-effective way to further enhance arc-flash safety.

### Features & Benefits

FEATURES	BENEFITS
<b>Bluetooth® interface</b>	Visual indication for programming, viewing real-time voltage or current, and last fault information (date and time stamped)
<b>Programmable voltage and current settings</b>	Allows usage on wide range of systems
<b>3 selectable restart options</b>	Choose from automatic, semi-automatic, or manual to best meet individual application needs
<b>4 programmable delay timers</b>	Program separate delay times for power up, rapid cycle protection, motor cool down, and underload restarting
<b>Flexible reset</b>	Reset can be done through pushbutton on panel, remotely via the network
<b>Network communications capability</b>	Compatible with Ethernet Modbus TCP/IP

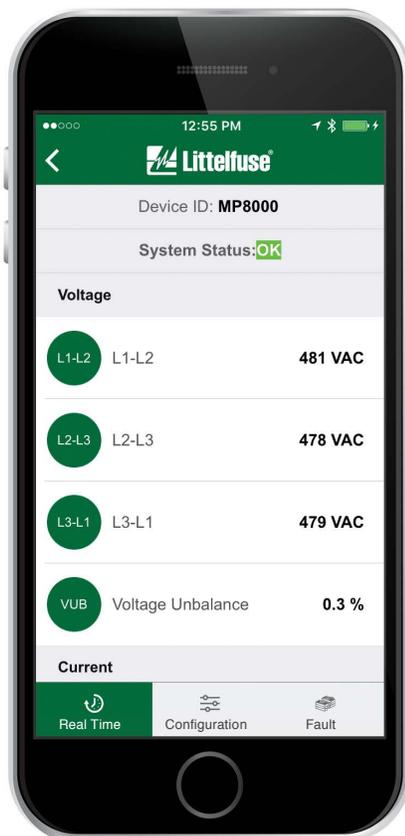
### Ordering Information

MODEL	LINE VOLTAGE	MOTOR FULL AMP RANGE	DESCRIPTION
MP8000	90-690VAC (use of external potential transformers can extend upper voltage range above 690VAC)	0.5-1,000A+ (external CTs required above 100A)	Provides remote wired communication via Ethernet Modbus TCP/IP
MP8100	90-690VAC (use of external potential transformers can extend upper voltage range above 690VAC)	0.5-1,000A+ (external CTs required above 100A)	Provides remote wired communication via Ethernet Modbus TCP/IP, RS485, and CAN bus

## MP8000 SERIES

### Advanced Features

- Overload (Overpower)
- Underload (Underpower)
- Overcurrent/Jam
- Undercurrent
- Current Unbalance
- Phase Loss
- Phase Reversal
- Overvoltage
- Undervoltage
- Voltage Unbalance
- Rapid Cycling/Jog
- Contactor Failure
- Zero-Sequence Ground Fault
- PTC Motor Overtemperature



**MP8000**  
Littelfuse App icon



### Specifications

#### Functional Characteristics

**Frequency** 50/60Hz  
**TC- Overcurrent Trip Class** Trip class 02-60 or linear

#### Output Characteristics

##### Output Contact Rating

**Control relay** SPST - Form A  
**Auxiliary relay** SPDT - Form C  
**Pilot Duty Rating** B300  
**General Purpose** 5A @ 240VAC

#### General Characteristics

##### Ambient Temperature Range

**Operating** -40° to 70°C (-40° to 158°F)  
**Storage** -55° to 80°C (-67° to 176°F)

##### Accuracy

**Voltage** ±1%  
**Current** ±2% (2 to 100 amps direct)  
**Timing** 2% ±0.5 seconds

##### GF Current

±5%

##### Repeatability

**Voltage** ±0.5%  
**Current** ±1% (2 to 100 amps direct)

##### Maximum Input Power

5 W

##### Pollution Degree

3 (conformal coating standard)

##### Class of Protection

IP20

##### Relative Humidity

10-95%, non-condensing per IEC 68-2-3

##### Terminal Torque (depluggable terminal blocks)

5.5 in.-lbs.

##### Terminal Torque (Earth Ground)

7.9 in.-lbs.

#### Standards Passed

**Electrostatic Discharge (ESD)** IEC 61000-4-2, Level 3, 6kV contact, 8kV air

##### Radio Frequency Immunity (RFI), Conducted

IEC 61000-4-6, Level 3 10V/m

##### Radio Frequency Immunity (RFI), Radiated

IEC 61000-4-3, Level 3 10V/m

##### Fast Transient Burst Surge

IEC 61000-4-4, Level 3, 3.5kV input power  
IEC 61000-4-5, Level 3, 2kV line-to-line;

Level 4, 4kV line-to-ground

##### FCC Rating

Part 15.107 for emissions,  
Part 15.247 for intentional radiators

##### Short Circuit Withstand Rating

100kA symmetrical at 690VAC

##### Hi-Potential Test

Meets UL508 (2 x rated V +1000V for 1 minute)

#### Safety Marks

##### cULus

UL60947, UL1053, C22.2 (File #E68520)

##### CE

IEC 60947 Edition 5.2, IEC 60947-8

##### Maximum Conductor Size (with insulation)

0.63"

#### Dimensions

**H** 74.42 mm (2.93"); **W** 103.63 mm (4.08");

**D** 121.67 mm (4.79")

#### Weight

0.85 lbs (13.6 oz, 385.6 g)

#### Mounting Method

Surface mount (4 - #8 screws)  
or DIN-rail mount