

# MP8000

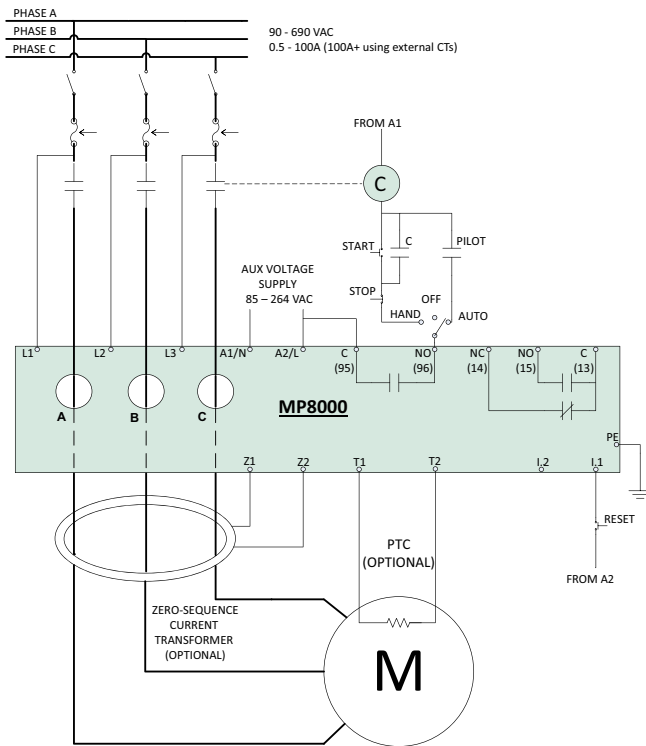
## Bluetooth Overload Relay



Patent Pending

### Wiring Diagram

TYPICAL WIRING DIAGRAM FOR 3-PHASE



### Description

The MP8000 is an advanced motor protection electronic overload relay that is fully programmable via Bluetooth\* using the Littelfuse app on an Android\* or iPhone\* mobile device. 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.

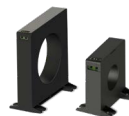
The MP8000 protects any motor drawing 0.5-1,000 full load Amps (external CTs are required above 100 amperes). It is designed for single or 3-phase systems with operating voltages of 90-690 VAC (use of external potential transformers can extend upper voltage range above 690 VAC). Common applications include 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 or Ethernet/IP. 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 and Ethernet/IP

### Accessories



#### ZSCT Series Current Transformer

Used with Littelfuse relays to detect low levels of earth-leakage current.

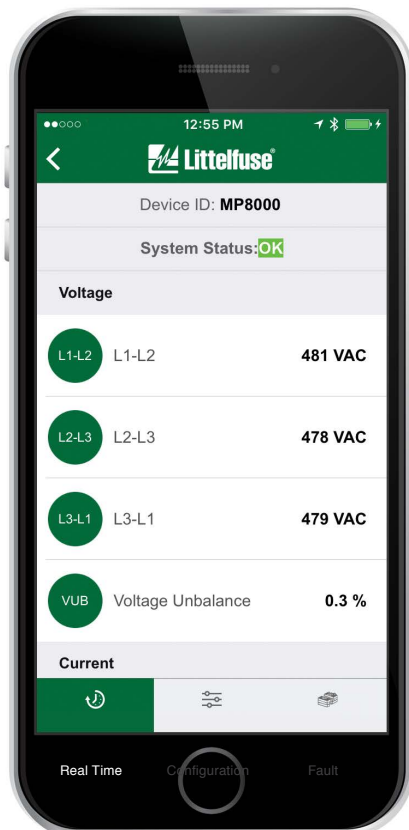
### Ordering Information

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 or Ethernet/IP

# MP8000

## Advanced Features

- Overload/Overpower (49)
- Underload/Underpower (37P)
- Overcurrent (51)/Jam
- Undercurrent (37)
- Current Unbalance/Phase Loss (46)
- Phase Reversal (47)
- Overvoltage (59)
- Undervoltage (27)
- Voltage Unbalance (47)
- Rapid Cycling/Jog
- Contactor Failure
- Zero-Sequence Ground Fault (50Ns)
- PTC Motor Overtemperature (49)



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** -40° to 85°C (-40° to 185°F)

#### Accuracy

**Voltage** ±1% of reading ±0.5 V  
**Current** ±2% (2 to 100 amperes direct)  
**Timing** +/-0.5% of setting +/- 1second  
**GF Current** ±5%

#### Repeatability

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

#### Power Consumption

**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  
Part 15.107 for emissions,  
Part 15.247 for intentional radiators

#### FCC Rating

#### Short Circuit Withstand Rating

100kA symmetrical at 690VAC  
Meets UL508 (2 x rated V +1000V for 1 minute)

#### Hi-Potential Test

#### 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

**Disclaimer Notice** – Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at [www.littelfuse.com/product-disclaimer](http://www.littelfuse.com/product-disclaimer).