

MP8000

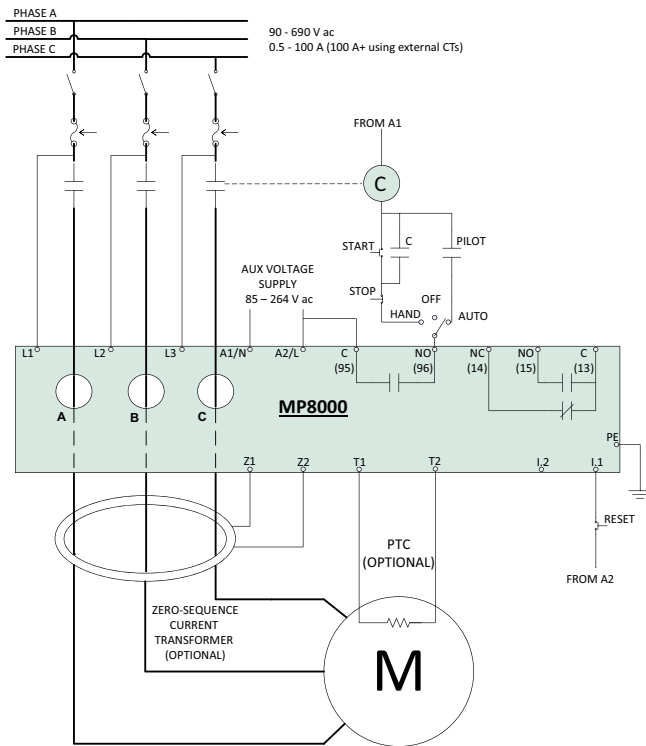
Bluetooth Overload Relay



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.

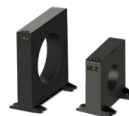
The MP8000 protects any motor drawing 0.5-1,000 full load amperes (external CTs are required above 100 amperes). It is designed for single or 3-phase systems with operating voltages of 90-690 V ac (use of external potential transformers can extend upper voltage range above 690 V ac). Common applications 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 MP8000 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
Bluetooth interface	Visual indication for programming, viewing real-time voltage or current, and last fault information (date and time stamped)
Programmable voltage and current settings	Allows usage on wide range of systems
3 selectable restart options	Choose from automatic, semi-automatic, or manual to best meet individual application needs
4 programmable delay timers	Program separate delay times for power up, rapid cycle protection, motor cool down, and underload restarting
Flexible reset	Reset can be done through pushbutton on panel, remotely via the network
Network communications capability	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.

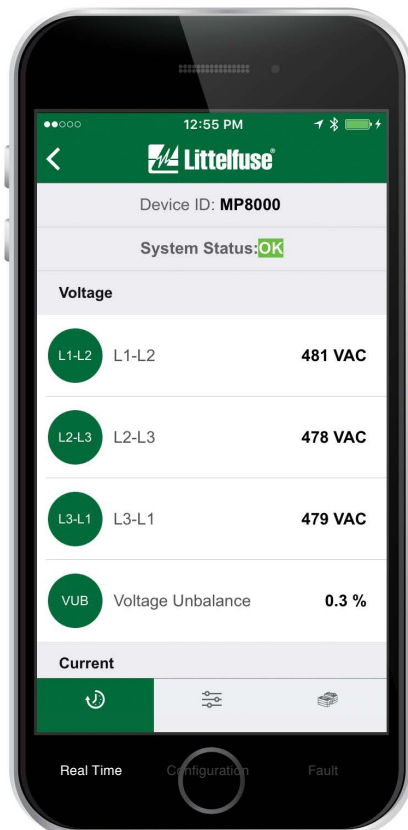
Ordering Information

MODEL	LINE VOLTAGE	MOTOR FULL AMP RANGE	DESCRIPTION
MP8000	90-690 V ac (use of external potential transformers can extend upper voltage range above 690 V ac)	0.5-1,000 A+ (external CTs required above 100 A)	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 50/60 Hz
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 5 A @ 240 V ac

General Characteristics

Ambient Temperature Range

Operating -40 °C to 70 °C (-40 °F to 158 °F)
Storage -40 °C to 85 °C (-40 °F 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

<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, 6 kV contact, 8 kV air
Radio Frequency Immunity (RFI), Conducted IEC 61000-4-6, Level 3 10 V/m

Radio Frequency Immunity (RFI), Radiated

IEC 61000-4-3, Level 3 10 V/m
Fast Transient Burst Surge IEC 61000-4-4, Level 3, 3.5 kV input power
IEC 61000-4-5, Level 3, 2 kV line-to-line;
Level 4, 4 kV line-to-ground

FCC Rating

Part 15.107 for emissions,
Part 15.247 for intentional radiators

Short Circuit Withstand

Rating 100 kA symmetrical at 690 V ac
Hi-Potential Test Meets UL 508 (2 x rated V +1000 V for 1 minute)

Safety Marks

cULus UL 60947, UL 1053, 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