

MP8000 SERIES

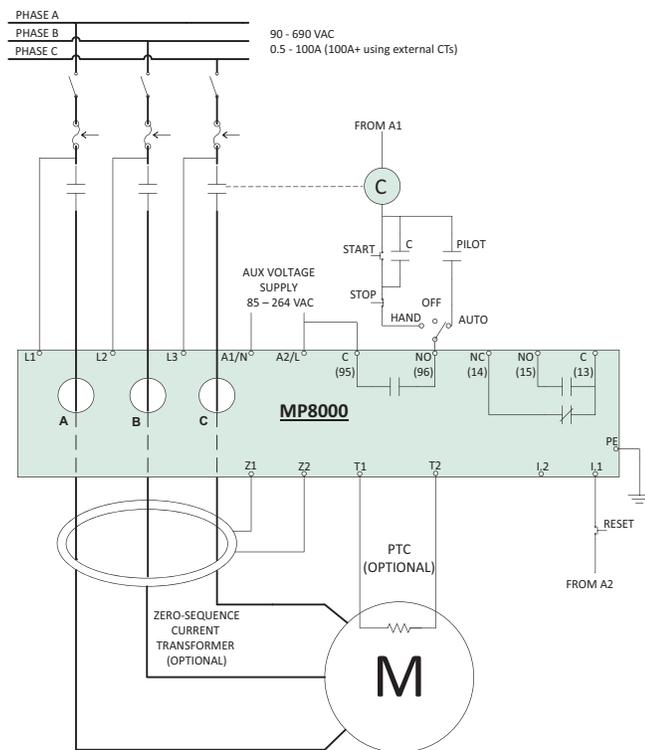
Bluetooth® Overload Relay



Patent Pending

Wiring Diagram

TYPICAL WIRING DIAGRAM FOR 3-PHASE



Description

The MP8000 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 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
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

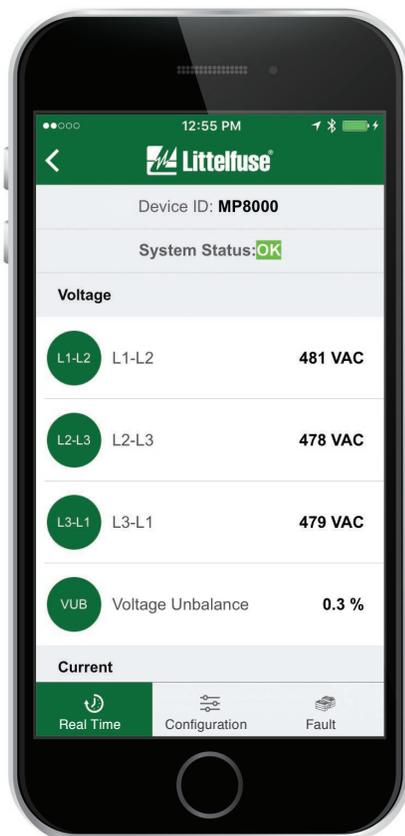
Ordering Information

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 SERIES

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 amps direct)
Timing +/-0.5% of setting +/- 1second
GF Current ±5%

Repeatability

Voltage ±0.5%
Current ±1% (2 to 100 amps 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, 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

FCC Rating

Level 4, 4kV line-to-ground
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

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