MP8000 SERIES

Bluetooth® Overload Relay

SWITCHES Unlimited

c(UL)us CE

Patent Pending

Wiring Diagram

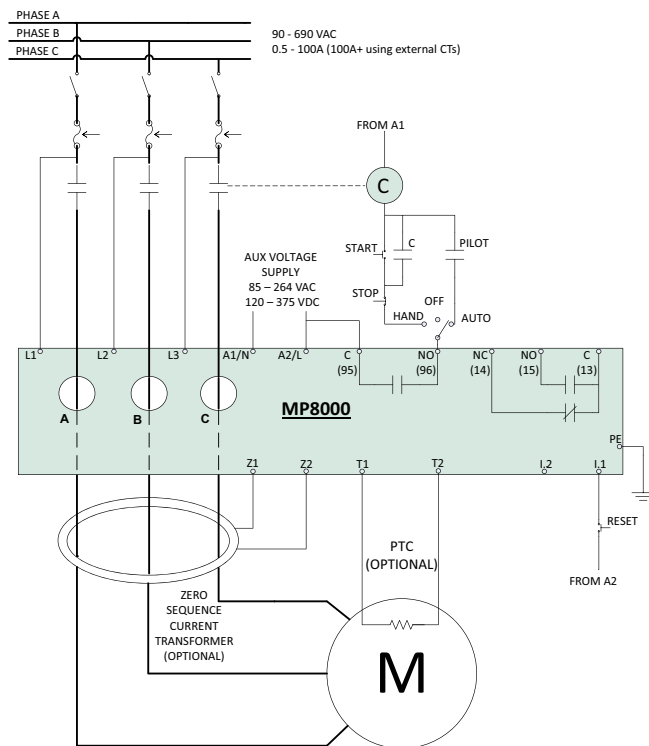TYPICAL WIRING DIAGRAM FOR 3-PHASE

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

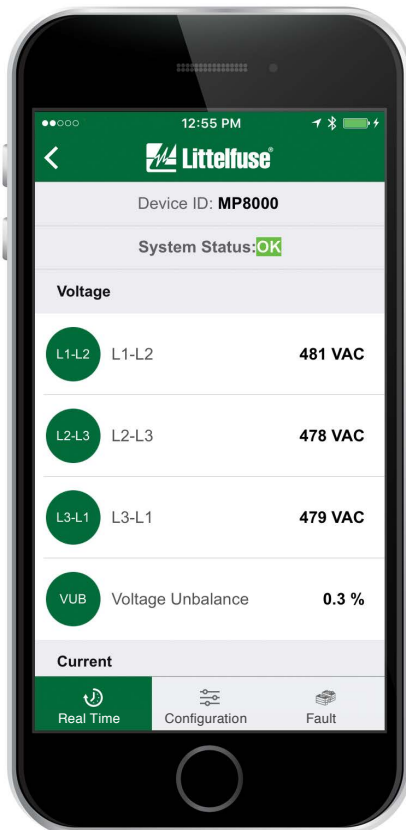| FEATURES	BENEFITS
Bluetooth® interface	Visual indication for programming, viewing real-time voltage or current, and last fault information (date and time stamped)
Programmable voltage and current settings	Allows usage on wide range of systems
3 selectable restart options	Choose from automatic, semi-automatic, 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

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

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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

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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	IEC 61000-4-4, Level 3, 3.5kV input power
Surge	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

MP8000 Littelfuse App icon

Available on the App Store

GET IT ON Google Play

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