

# 3-Phase Voltage Monitor

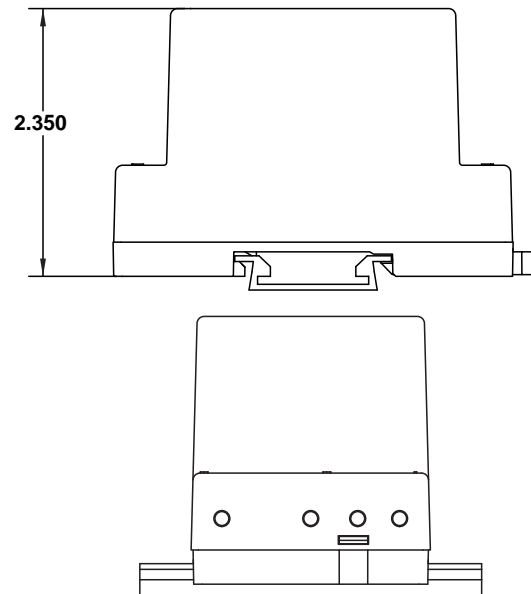
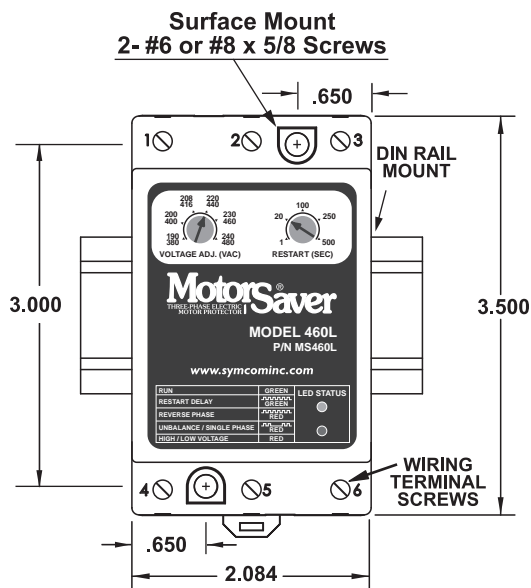
## Model 460L



The Model 460L is designed to protect 3-phase loads from damaging power conditions. The 460L's wide operating range combined with UL and CE compliance enables quick access to domestic and global markets.

A unique microcontroller-based voltage and phase sensing circuit constantly monitors the 3-phase voltages to detect harmful power line conditions. When a harmful condition is detected, the MotorSaver's output relay is deactivated after a 4 second trip delay. The output relay reactivates after line power conditions return to an acceptable level for a specified amount of time (Restart Delay). The trip and restart delays prevent nuisance tripping due to rapidly fluctuating line power conditions.

The Model 460L automatically senses whether it is connected to a 190-240VAC 60Hz system, a 440-480VAC 60Hz system or a 380-416VAC 50Hz system. An adjustment is provided to set the nominal line voltage from 190-240VAC or 380-480VAC. Other adjustments include a 1-500 second restart delay.



## Specifications

<b>Functional Specifications</b>	
Low Voltage (% of setpoint)	
Trip	90% +1%
Reset	93% +1%
High Voltage (% of setpoint)	
Trip	110% +1%
Reset	107% +1%
Voltage Unbalance (NEMA)	
Trip	6% fixed
Reset	4.5%
Trip Delay Time	
Low, High and Unbalanced Voltage	4 seconds
Single-phasing faults (> 25% unbalance)	1 second
Restart Delay Time	
After a Fault	1-500 seconds adjustable
After a Complete Power Loss	1-500 seconds adjustable
<b>Input Characteristics</b>	
Supply Voltage	190-480VAC
Frequency	50/60Hz (Note: 50 Hz will increase all delay timers by 20%)
<b>Output Characteristics</b>	
Output Contact Rating-1 Form C	10A General Purpose @240VAC Pilot Duty 480VA@240VAC, B300
<b>General Characteristics</b>	
Operating Temperature	
Ambient	-20° to 70° C (-4° to 158° F)
Storage	-40° to 80° C (-40° to 176° F)
Power Consumption	6 Watts (max.)
Wire Gauge	Solid or Stranded 12 - 20AWG, one per terminal
Terminal Torque	6 in.-lbs.
Class of Protection	IP20, NEMA 1 (finger-safe)
Relative Humidity	10-95%, non-condensing per IEC 68-2-3
Standards Passed	
Electrostatic Discharge (ESD)	IEC 1000-4-2, Level 3, 6kV contact, 8kV air
Radio Frequency Immunity, Radiated	150 MHz, 10V/m
Fast Transient Burst	IEC 1000-4-4, Level 3, 3.5kV input power & controls
Surge	
IEC	IEC 1000-4-5, Level 3, 4kV line-to-line Level 4, 4kV line-to-ground
ANSI/IEEE	C62.41 Surge and Ring Wave Compliance to a level of 6kV line-to-line
Hi-potential Test	Meets UL508 (2 x rated V + 1000V for 1 minute)
Safety Marks	
UL	UL508
CE	IEC 60947-6-2
Dimensions	2.08" W x 3.5" H x 2.35" D
Weight	14 oz.
Mounting Methods	DIN Rail or Surface Mount (with #8 screws)

## How to order:

Part Number: 460L