Description
The 460-100-SP is used on 95–120 V ac, 50*/60 Hz single-phase motors and the 460-200-SP is used on 190–240 V ac, 50*/60 Hz single-phase motors to protect them from damaging high and low voltage conditions. An adjustment knob allows the user to set a 1–500 second restart delay. The variable restart delay is also a power-up delay and can be utilized to stagger-start motors on the same system.

A unique microcontroller-based, voltage-sensing circuit constantly monitors the voltage to detect harmful power line conditions. When a harmful condition is detected, the MotorSaver’s output relay is deactivated after a specified trip delay. The output relay reactivates after power line conditions return to an acceptable level and a specified amount of time has elapsed (restart delay). The trip delay prevents nuisance tripping due to rapidly fluctuating power line conditions.

Features & Benefits

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary microcontroller based circuitry</td>
<td>Constant monitoring of voltage to detect harmful power line conditions, even before a motor starts</td>
</tr>
<tr>
<td>Fixed trip delay 4 s</td>
<td>Prevents nuisance tripping due to rapidly fluctuating power line conditions</td>
</tr>
<tr>
<td>Adjustable restart delay (1–500s)</td>
<td>Allows staggered start up of multiple motors on the same system to prevent a low voltage condition</td>
</tr>
<tr>
<td>Advanced LED indication</td>
<td>Provides diagnostics which can be used for troubleshooting and to determine relay status</td>
</tr>
<tr>
<td>DIN rail or surface mountable</td>
<td>Allows flexibility for panel assembly</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>MODEL</th>
<th>LINE VOLTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>460-100-SP</td>
<td>95–120 V ac</td>
</tr>
<tr>
<td>460-200-SP</td>
<td>190–240 V ac</td>
</tr>
</tbody>
</table>
Specifications

Input Characteristics
Line Voltage
460-100-SP  95–120 V ac
460-200-SP  190–240 V ac
Frequency  50°/60 Hz

Functional Characteristics
Low Voltage (% of setpoint):
Trip  90 % ±1 %
Reset  93 % ±1 %
High Voltage (% of setpoint):
Trip  110 % ±1 %
Reset  107 % ±1 %
Trip Delay Time 4 seconds fixed
Low or High Voltage
Restart Delay Time
After a Fault 1–500 seconds adjustable
After a Complete Power Loss 1–500 seconds adjustable

Output Characteristics
Output Contact Rating (1 Form C)
Pilot Duty  480 VA @ 240 V ac, B300
General Purpose  10 A @ 240 V ac

General Characteristics
Ambient Temperature Range
Operating  -40° to 70°C (-40° to 158°F)
Storage  -40° to 80°C (-40° to 176°F)
Maximum Input Power  6 W
Class of Protection  IP20, NEMA 1 (finger safe)
Relative Humidity  10–95%, non-condensing per IEC 68-2-3
Terminal Torque  4.5 in.-lbs.
Wire Type  Stranded or solid 12–20 AWG, one per terminal

Standards Passed
Electrostatic Discharge (ESD)  IEC 61000-4-2, Level 3, 6 kV contact, 8 kV air
Radio Frequency Immunity, Radiated  150 MHz, 10 V/m
Fast Transient Burst  IEC 61000-4-4, Level 3, 3.5 kV input power and controls
Surge
IEC  IEC 61000-4-5, Level 3, 4 kV line-to-line; Level 4, 4 kV line-to-ground
ANSI/IEEE C62.41 Surge and Ring Wave Compliance to a level of 6 kV line-to-line
Meets UL 508 (2 x rated V +1000 V for 1 min)
Hi-potential Test  UL 508 (File #E68520)
Safety Marks  Polycarbonate
UL  H 88.9 mm (3.5”); W 52.93 mm (2.084”);
Dimensions D 59.69 mm (2.35”)
Weight  0.9 lb. (14.4 oz., 408.23 g)
Mounting Method  35 mm DIN rail or Surface Mount (#6 or #8 screws)

*Note: 50 Hz will increase all delay timers by 20 %