Description

The 355 series is a three-phase voltage monitor with adjustable trip and restart delay, adjustable voltage unbalance, and multiple diagnostic lights. It is ideal for heavy-duty applications that need both protection and simple user-friendly diagnostics. Suitable applications include pump panels, commercial HVAC, oil rigs, and many more. The 355 series uses microcontroller technology to monitor incoming voltage and de-energize its output relay if power problems exist. It can protect motors from damage caused by single-phasing, high- and low-voltage, phase reversal, and voltage unbalance. These relays have four diagnostic LEDs that clearly show overvoltage, undervoltage, voltage unbalance, reverse-phase, and normal conditions. The adjustable trip and restart settings prevent nuisance tripping due to rapidly fluctuating power line conditions and allow staggered start-up of multiple motors after a fault to prevent a low-voltage condition.

Series 355 models include the 355-200, which is equipped with a heavy-duty 10 A general purpose SPDT relay. The 355-400 and 355-600 models are equipped with a 470 VA @ 600 V ac pilot duty SPDT relay. A high-voltage (600 V) DPDT relay output option is available with the 400 V model.

Features & Benefits

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary microcontroller-based circuitry</td>
<td>Constantly monitors three-phase voltage to protect against harmful line conditions even before the motor is started</td>
</tr>
<tr>
<td>Advanced LED indication</td>
<td>Provides diagnostics that can be used for troubleshooting and to determine relay status</td>
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<tr>
<td>Adjustable trip and restart delay settings</td>
<td>Prevents nuisance tripping and allows staggered start-up of multiple motors after a fault to prevent a low-voltage condition</td>
</tr>
<tr>
<td>600 V rated relay contacts available on some models</td>
<td>Eliminates the need for a control transformer to step voltage down to 120–240 V for a control circuit</td>
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</tbody>
</table>

Applications

- Pump panels
- Commercial HVAC
- Oil rigs
- Heavy-duty applications that need both protection and simple user-friendly diagnostics
Specifications

Input Characteristics
Line Voltage (Specify voltage range)
- 355200: 190–240 V ac
- 355400: 380–480 V ac
- 355600: 475–600 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%
Voltage Unbalance (NEMA)
- Trip: 2–8% adjustable
- Reset: Trip setting minus 1%
Trip Delay Time
- Low & High Voltage and Unbalance: 2–30 seconds adjustable
- Single-phasing Faults (>25% UB): 2 seconds
Restart Delay Time
- After a Fault or Power Loss: Manual, 2–300 seconds adjustable

Output Characteristics
Output Contact Rating
- SPDT (355200): 480 VA at 240 V ac
- General Purpose: 10 A
- SPDT (355400, 355600): 470 VA @ 600 V ac
- DPDT (-5 Option): 470 VA @ 600 V ac

General Characteristics
Temperature Range
- Operating: -40° to 70 °C (-40° to 158 °F)
- Storage: -40° to 80 °C (-40° to 176 °F)
Repeat Accuracy
- Fixed Conditions: ±0.1%
- Maximum Input Power: 6 W
Terminal Torque
- 7 in.-lbs.
Wire Size
- 12–18 AWG
Transient Protection (Internal)
- 2500 V for 10 ms
Dimensions
- H: 74.42 mm (2.93”); W: 133.86 mm (5.27”); D: 74.93 mm (2.95”)
Weight
- 0.94 lb. (15.04 oz., 426.38 g)
Mounting Method
- #8 screws
Special Options
- Option 5 - DPDT Relay

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

Certification & Compliance

UL | UL 508 (File #E68520)
Voltage Monitoring Relays
355 Series

Ordering Information

<table>
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<tr>
<th>MODEL</th>
<th>LINE VOLTAGE</th>
<th>DESCRIPTION</th>
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<tr>
<td>355200</td>
<td>190–240 V ac</td>
<td>SPDT</td>
</tr>
<tr>
<td>355400</td>
<td>380–480 V ac</td>
<td>SPDT</td>
</tr>
<tr>
<td>3554005</td>
<td>380–480 V ac</td>
<td>DPDT</td>
</tr>
<tr>
<td>355600</td>
<td>475–600 V ac</td>
<td>SPDT</td>
</tr>
</tbody>
</table>

Dimensions Inches (mm)

![Dimensions Diagram]

Wiring Diagram

**TYPICAL WIRING DIAGRAM FOR MODEL 355 WITH MOTOR CONTROL**

**TYPICAL WIRING DIAGRAM FOR MODEL 355 WITH ALARM CONTROL**

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