

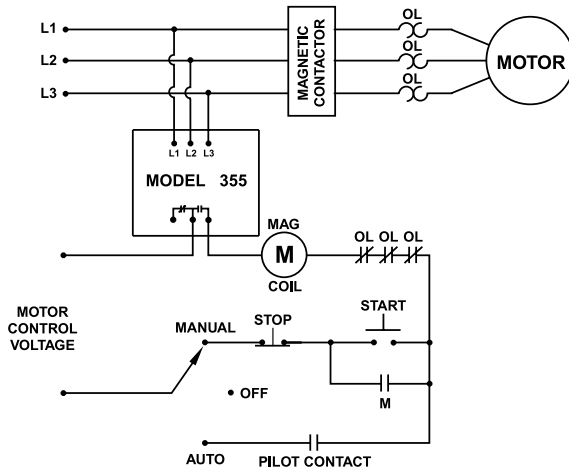
## 355 SERIES

### 3-phase voltage/phase monitor

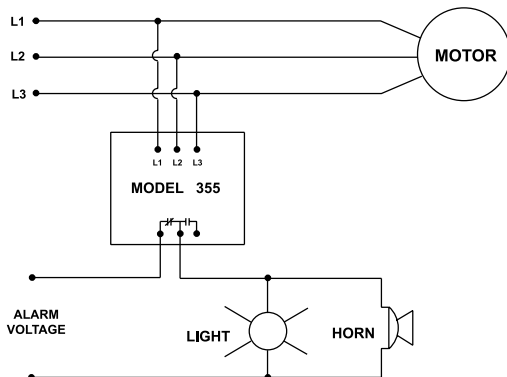


### Wiring Diagram

TYPICAL WIRING DIAGRAM FOR MODEL 355 WITH MOTOR CONTROL



TYPICAL WIRING DIAGRAM FOR MODEL 355 WITH ALARM CONTROL



### Description

The 355 Series is a 3-phase voltage monitor with adjustable trip and restart delay, adjustable voltage unbalance and multiple diagnostic lights. It is perfect for heavy-duty applications that need both protection and simple user-friendly diagnostics. Applications include pump panels, commercial HVAC, oil rigs and others.

The 355 Series uses microcontroller technology to monitor incoming voltage and de-energize its output relay if power problems exist. The 355 Series can protect motors from damage caused by single-phasing, high and low voltage, phase reversal and voltage unbalance. It has four diagnostic LEDs that clearly show overvoltage, undervoltage, voltage unbalance, reverse-phase and normal conditions.

The 355200 is equipped with a heavy-duty 10A general purpose SPDT relay. The 355400 and 355600 are equipped with a 470VA @ 600VAC pilot duty SPDT relay. A high voltage (600V) DPDT relay output option is available with the 400V model.

### Features & Benefits

| FEATURES                                                  | BENEFITS                                                                                                                                                                       |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proprietary microcontroller based circuitry</b>        | Constantly monitors 3 phase voltage to protect against harmful line conditions, even before the motor is started                                                               |
| <b>Advanced LED indication</b>                            | Provides diagnostics which can be used for troubleshooting and to determine relay status                                                                                       |
| <b>Adjustable trip and restart delay settings</b>         | Prevent nuisance tripping due to rapidly fluctuating power line conditions and allows staggered start up of multiple motors, after a fault, to prevent a low voltage condition |
| <b>Combines protection and diagnostics</b>                | Perfect for heavy duty applications: pump panels, commercial HVAC, and oil rigs                                                                                                |
| <b>600V rated relay contacts available on some models</b> | Eliminates the need for a control transformer to step voltage down to 120 - 240V for a control circuit                                                                         |

### Ordering Information

| MODEL   | LINE VOTAGE | DESCRIPTION |
|---------|-------------|-------------|
| 355200  | 190-240VAC  | SPDT        |
| 355400  | 380-480VAC  | SPDT        |
| 3554005 | 380-480VAC  | DPDT        |
| 355600  | 475-600VAC  | SPDT        |

## 355 SERIES

### Specifications

#### Input Characteristics

##### Line Voltage

|               |            |
|---------------|------------|
| <b>355200</b> | 190-240VAC |
| <b>355400</b> | 380-480VAC |
| <b>355600</b> | 475-600VAC |

##### (Specify voltage range)

|                  |          |
|------------------|----------|
| <b>Frequency</b> | 50*/60Hz |
|------------------|----------|

#### Functional Characteristics

##### Low Voltage (% of setpoint)

|              |         |
|--------------|---------|
| <b>Trip</b>  | 90% ±1% |
| <b>Reset</b> | 93% ±1% |

##### High Voltage (% of setpoint)

|              |          |
|--------------|----------|
| <b>Trip</b>  | 110% ±1% |
| <b>Reset</b> | 107% ±1% |

##### Voltage Unbalance (NEMA)

|              |                       |
|--------------|-----------------------|
| <b>Trip</b>  | 2-8% adjustable       |
| <b>Reset</b> | Trip setting minus 1% |

##### Trip Delay Time:

##### Low & High Voltage and Unbalance

2-30 seconds adjustable

##### Single-phasing Faults

|                     |           |
|---------------------|-----------|
| <b>(&gt;25% UB)</b> | 2 seconds |
|---------------------|-----------|

##### Restart Delay Time

|                                    |                            |
|------------------------------------|----------------------------|
| <b>After a Fault or Power Loss</b> | Manual, 2-300 seconds adj. |
|------------------------------------|----------------------------|

#### Output Characteristics

##### Output Contact Rating

##### SPDT (355200)

|                        |                 |
|------------------------|-----------------|
| <b>Pilot Duty</b>      | 480VA at 240VAC |
| <b>General Purpose</b> | 10A             |

##### SPDT (355400, 355600)

|                         |                |
|-------------------------|----------------|
| <b>Pilot Duty</b>       | 470VA @ 600VAC |
| <b>DPDT (-5 Option)</b> |                |
| <b>Pilot Duty</b>       | 470VA @ 600VAC |

#### 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

12-18AWG

##### Transient Protection

##### (Internal)

2500V for 10 ms

##### Safety Marks

##### UL

UL508 (File #E68520)

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