

# Special Function – Phase Monitoring

## R68 Series



## Phase Monitoring, SPDT, 10 Amp, AC Relay.

### Features

- Universal Voltage – Works on Any 208–480V System
- Protects Against:
  - ⇒ Phase Loss
  - ⇒ Phase Reversal
  - ⇒ Phase Unbalance (Adjustable 2–10%)
  - ⇒ Undervoltage (Adjustable 80–95%)
  - ⇒ Overvoltage (Fixed at 110%)
- User–Selectable Phase Unbalance and Undervoltage Settings
- User–Adjustable Time Delay Drop–Out on Undervoltage
- LED Indicates both Normal and Fault Conditions
- Compatible with most Wye or Delta Systems
- Compact 8–Pin Octal Plug–In Case



LED Status Table \*

LED Status	Indicator
Green Steady	Normal/Relay ON
Green Flashing	Power Up/Restart Delay
Red Steady	Unbalance
Red Flashing	Undervoltage/Overvoltage
Amber Steady	Reversal
Amber Flashing	Loss
Green/Red Alternating	Undervoltage/Overvoltage Trip Pending
Red/Amber Alternating	Nominal Voltage Set Error

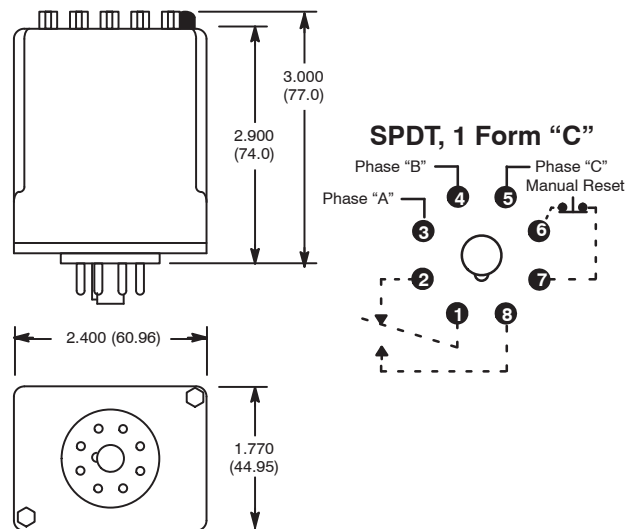
\* This table is on the side of all units for easy reference.

### OPERATION

Phase Monitoring Relays will protect against premature equipment failure caused by voltage faults on three–phase systems. These devices protect against unbalanced voltages or single phasing regardless of any regenerative voltages. The relay is energized when the phase sequence and all voltages are correct. Any one of four fault conditions will de–energize the relay. Re–energization is automatic upon correction of the fault. An LED indicates normal and tripped conditions.

AC OPERATED						
NTE Type No.	Nom. Voltage	Contact Arr.	Adjustable Under Voltage Drop–out	Input Cur. Nom.	Max. Contact Cur. @ 30VDC or 240VAC	Diag No.
R68–5A10–480	208–480VAC	SPDT	80–95% nom. vltg.	50mA Max.	10A	D62

### D62



## Electrical Specifications

### Contact

**Rating:** 10 Amps resistive at 240VAC/30VDC, 1/2 HP at 120/240VAC

**Life:** 100,000 operations at full load

**Mechanical Life:** 10,000,000 operations at no load

### Input

**Nominal Input voltage:** See Chart

**Steady state input current:** See Chart

### Operational Characteristics

**Response Times:** . . . **Power Up:** 2 sec. fixed

**Restart After Fault:** 1–300 sec. adjustable

**Drop–Out Due Fault:**

**Phase Loss & Reversal:** 100ms fixed

**Phase Unbalanced:** 2 sec. fixed

**Undervoltage:** 0.1 – 20 sec. adjustable

**Overvoltage:** Fixed Time Based on Inverse Time Curve

**Hysteresis:** 2 – 3%

**Load (Burden):** Less than 3VA

### Protection

**Indicator LED:** See LED Status table

**Reset:** Automatic upon correction of fault. When a N.C. switch is wired across the manual reset terminals (Pin5 & Pin6), the unit switches to manual reset mode and remote manual reset is available.

### Environmental Characteristics

**Operating:** –28°C to +65°C

ACCESSORIES		
MOUNTING STYLES	DESCRIPTION	NTE TYPE NO.
SURFACE MOUNT	8–PIN OCTAL	R95–101
PANEL MOUNT	8–PIN OCTAL	R95–118
DIN RAIL MOUNT	8–PIN OCTAL	R95–113