Type: B8PMC  Phase Monitor/Relay

Phase Failure, Phase Sequence, Under and Over Voltage plus Time Delay

- 8-Pin Plug-In housing
- Microprocessor controlled with internal monitoring (self-checking)
- Monitors own supply and detects if one or more phases exceed the set Under or Over Voltage trip levels
- Measures phase to phase voltage
- Detects incorrect phase sequence and phase loss
- Adjustments for under and over voltage trip level
- Adjustment for time delay (from under or over voltage condition)
- 1 x SPDT relay output 10A*
- Intelligent LED indication for supply and relay status

**FUNCTION DIAGRAM**

- **Monitoring 3 Supply Phases**
  - aA, aB, aC
  - bA, bB, bC
  - cA, cB, cC

- **Fixed Under trip (2) Voltage**
- **Output**
- **Time delay automatically cancelled as phase drops below 2nd trip level**

**INTEGRATION AND SETTING**

- Before installation, isolate the supply.
- Installation and setting
- Set the "time delay" as required. (Note that the delay is only effective should the supply increase above or drop below the set trip levels. However, if during an under voltage condition the supply drops below the 2nd under voltage trip level, any set time delay is automatically cancelled and the relay de-energises).
- Troubleshooting:
  - Supply fault
  - Green LED
  - Red LED
  - Relay
  - Phase missing
    - O
    - F
    - De-energised
  - Phases reversed (no delay)
    - Flashing
    - De-energised
  - Under or Over voltage condition (during timing)
    - O
    - F
    - De-energised
  - Under or over voltage condition after timing
    - O
    - F
    - De-energised
  - Phase below 70% of Un (fixed under trip level [2])
    - O
    - F
    - De-energised
  - Phase below 50% of Un
    - O
    - F
    - De-energised

**TECHNICAL SPECIFICATION**

- **Supply Monitoring**
  - 120, 208, 240, 460, 480V AC ±30%
  - To comply with UL1283, the maximum supply/monitoring voltage on the 480V version must not exceed 600V phase to phase

- **Frequency range**: 48 - 63Hz
- **Supply variation**: 70 - 130% of Un
- **Isolation**: 0 V over cat. II
- **Rated impulse**: 6kV (1.2 / 50 µS) IEC 60664
- **Power consumption (max.)**: 3.2W
- **Power supply (max.)**: 50.3 (4A): 125mA, Pin 4(5): 1mA, Pin 5 (6C): 125mA

- **Trip levels**:
  - Under (2): 70% of Un (fixed)
  - Under: 75 - 99% of Un
  - Over: 100 - 125% of Un

- **Measuring ranges**:
  - Under (2): 120V: 84V - 114V
  - 208V: 146V - 198V
  - 240V: 146V - 198V
  - 460V: 322V - 437V
  - 480V: 386V - 504V

- **Hysteresis**:
  - ± 2% of trip level (factory set)

- **Response time**:
  - 50 ms

- **Time delay (t):**
  - 0.2 - 10 sec (± 5%)
  - Note: actual delay (t) = adjustable delay + response time

- **Delay from phase loss (Tr):**
  - 100 ms (worst case = t x 2)

- **Ambient temp**: -20 to +60°C

- **Relative humidity**: +95%

- **Electrical Life**:
  - AC1: 250V 10A* (2500VA)
  - AC15: 250V 6A
  - DC1: 250V 10A* (2500VA)
  - DC15: 250V 6A

- **Rated impulse withstanding voltage**: 6kV (1.2 / 50 µS) IEC 60664

- **Housing**: Orange flame retardant UL94 V0

- **Weight**: 130g

**Approved**

- UL, cUL, IP20 pending.
- CE and Compliant

**ACCESSORIES**

1. DIN Rail mount, B-pin base type P8-F (suitable for up to 600V)

( ) Numbers above in brackets relate to pin numbers on plug base.

**MOUNTING DETAILS**