

Type: 45085-4W

3-Phase, 4 Wire Under / Over Voltage Relay plus Time Delay

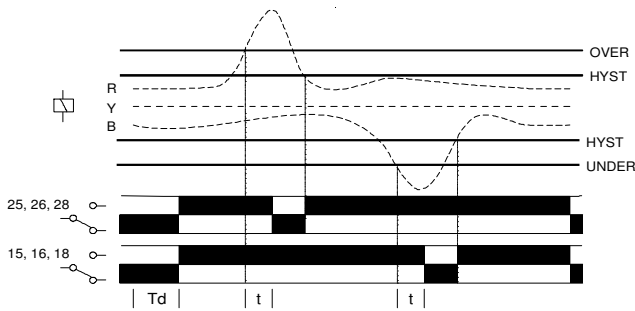
- ❑ Detects Under or Over voltage condition regardless of phase sequence
- ❑ Monitors phase to neutral voltage of own 3-phase, 4 wire supply
- ❑ Separate adjustment for upper level and lower level
- ❑ User selectable nominal voltage (380, 400 or 415V)*
- ❑ Time delay (from fault) for each level with adjustable setting
- ❑ 2 x SPDT relay output
- ❑ LED indication for supply and both relay statuses



Dims:
H. 78mm
W. 45mm
L. 99mm

Terminal Protection to IP20

• TIMING DIAGRAM



• INSTALLATION AND SETTING

- **BEFORE INSTALLATION, ISOLATE THE SUPPLY.**
- Connect the unit as shown in the diagram below.
- Select the correct nominal voltage using the rotary switch (400V unit only).
- Set the 'over volts' adjustment to maximum and the 'under volts' adjustment to minimum.
- Set the 'over delay' and 'under delay' adjustments to minimum.
- Apply power (green 'supply on', red 'under' and red 'over' LED's will illuminate, both relays will energise and contacts 15 / 18 and 25 / 28 will close).

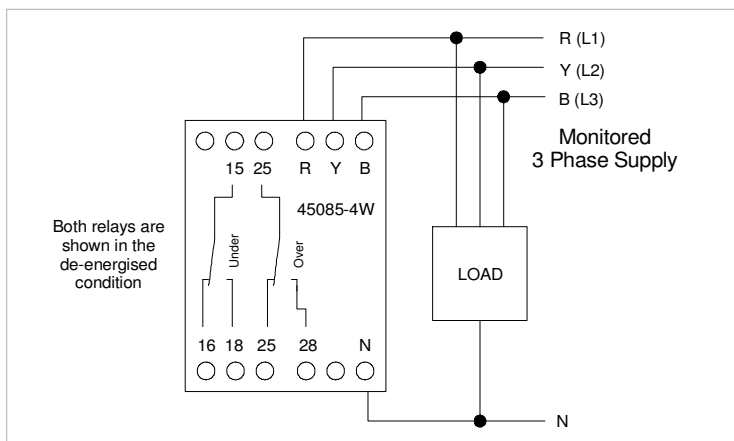
To set the unit:

- Set the 'over volts' and 'under volts' adjustment to give the required range.
- If large supply variations are anticipated, the adjustments should be set further away from the nominal.
- Set the 'over delay' and 'under delay' adjustments as required.
- **Note:** The unit incorporates a 'power on delay (Td)' which operates immediately the supply is applied. The delay prevents either relay from energising if the measured voltage is above of below the set levels.
If the blue phase or neutral is lost both relays will de-energise and all LED's will extinguish. There will be no delay (t).

Troubleshooting.

- If the unit fails to operate as described, check the wiring and voltages present on the supply terminals.

• CONNECTION DIAGRAM



• TECHNICAL SPECIFICATION

Supply/Monitored voltage Un: 127 / 220, 230 / 400 V* AC 45 - 65Hz
(phase to neutral)
Supply variation: 85 - 115% of Un
Isolation: Over voltage cat. III (IEC 664)
Rated impulse withstand voltage: 4kV (1.2/50μs)
Power consumption: ≈ 3.9 VA (blue phase to neutral)
(maximum) ≈ 0.2 VA (red and yellow phase)

Voltage setting: ±10% of Un
* Voltage selection: 380, 400, 415V selectable by rotary switch (only available on 230 / 400V unit)
Measuring ranges: Lower 90 - 98% Upper 102 - 110%
127 / 220V: 114 - 124V AC 130 - 140V AC
220 / 380V: 198 - 216V AC 224 - 242V AC
230 / 400V: 208 - 226V AC 236 - 254V AC
240 / 415V: 216 - 235V AC 245 - 264V AC
Accuracy: ± 2% of measuring range
Hysteresis : < 2%
Reaction time: τ < 200ms, worst case reaction may be up to 5 x τ
Adjustable time delay (t): 0.1 - 10S (-10/+30% on max setting) (N.B. t = set delay + reaction time)
On delay (Td): ≈ 5S, worst case delay may be Td / 2

Ambient temp: -20 to +60°C
Relative humidity: +95%

Contact rating: 2 x SPDT
AC I 250V AC 8A (2000VA)
AC 15 250V AC 6A
DC I 25V DC 8A (200W)

Electrical life: ≥ 150,000 ops at rated load

Housing: Orange flame retardant UL94 VO
Weight: ≈ 320g
Mounting option: On to 35mm symmetric DIN rail to BS5584:1978 (EN50 002, DIN 46277-3)

Approvals: Conforms to UL, CUL, CSA & IEC
CE Compliant

• MOUNTING DETAILS

