

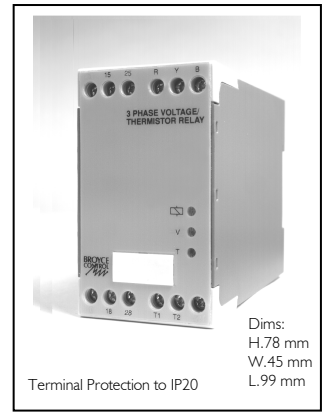
Type: 45PTR

Three Phase Voltage and Thermistor Relay

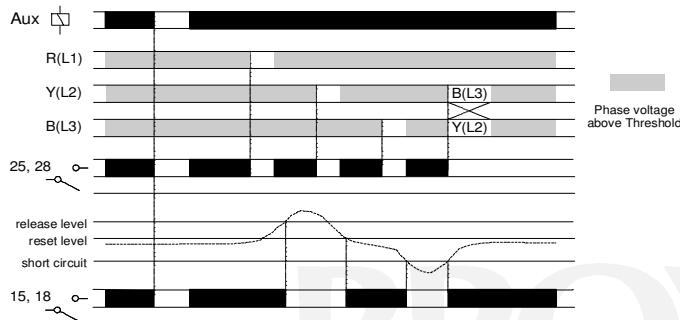
The unit is designed to monitor a three phase supply for phase loss, undervoltage, incorrect phase sequence and/or PTC thermistor (to DIN 44081) for over temperature or short circuit. When power is applied, the green 'supply on' LED illuminates.

Three Phase Monitoring: The relay energises when all phases are present, above the fixed threshold value and the sequence is correct. If one or more phases fall below 60% of the nominal three phase supply, or the phase sequence becomes reversed, the relay will de-energise.

Thermistor Monitoring: The relay energises when the resistance of the thermistor is below the release level and above the short circuit (s/c) level. If resistance rises above the release level or goes s/c, the relay will de-energise.



TIMING DIAGRAM

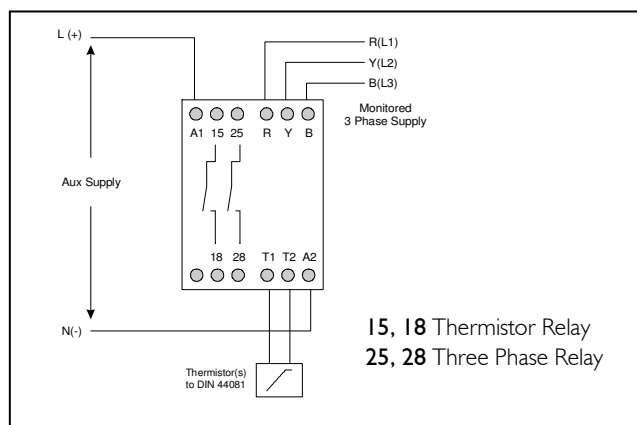


INSTALLATION AND SETTING

BEFORE INSTALLATION, ISOLATE THE SUPPLY. Connect the auxiliary supply, three phase supply and thermistor as shown in the diagram below. Apply power and the green 'supply on' LED should illuminate. The three phase relay should energise and red LED 'V' illuminate. The thermistor relay should also energise and red LED 'T' illuminate. If the thermistor LED 'T' remains extinguished, then check the thermistor connections. If the green LED illuminates but the red LED 'V' does not, isolate both supplies and reverse any two of the phase inputs.

Note: If the unit is required to detect a short circuit condition, ensure that the actual resistance of the wires connected to the thermistor(s) is less than 10 Ω. This can be usually prevented by keeping the wires as short as possible.

CONNECTION DIAGRAM



TECHNICAL SPECIFICATION

Auxiliary Supply Un: 24, 110, 230, 400V AC 48 - 63Hz
(Galvanic isolation by transformer)

Supply Variation: 85 - 115% of Un

Isolation: Overvoltage cat. III (IEC 664)

Power

Consumption: ≈ 3VA (@ 115% of Un)

Monitored

Voltage: 3 x 400V, Three Phase (3-wire)

Threshold

Voltage: 60% of Un

Release Value: 3100 Ω ±10%
(in accordance with DIN 44081)

Reset Value: 1650 Ω ±10%

Short Circuit

Detection: 0 to 10 Ω

Response Time: ≈ 15ms

Reset Time: ≈ 50ms

Ambient

Temperature: -20 to +60°C

Relative Humidity: +95%

Contact Rating: 2 x SPNO

AC 1 250V AC 10A (2500VA)

AC 15 250V AC 6A

DC 1 25V DC 10A (250W)

Electrical Life: Minimum 150,000 ops at rated load

Housing: Orange flame retardant UL94 VO

Weight: 268g approx.

Mounting Option: Onto 35mm symmetric DIN rail

to BS5584:1978

(EN50 002, DIN 46277-3)

Terminal

Conductor Size: Max 2 x 1.5mm² stranded (terminated)

Max 2 x 2.5mm² solid

Approvals:

Conforms to: UL, CUL, CSA, IEC.

CE Compliant

MOUNTING DETAILS

