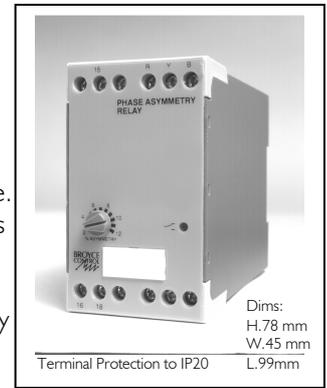


Type: 45095

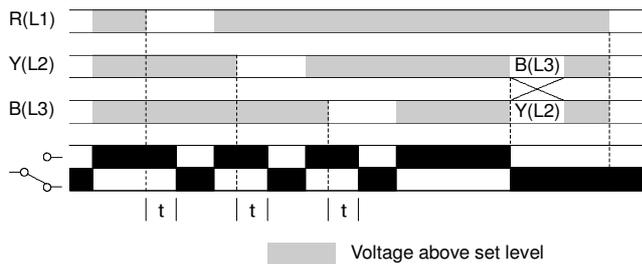
Phase Asymmetry/Failure Relay

The unit is designed to monitor a three phase, 3-wire supply for presence, correct sequence and angle. When power is applied, the relay energises and the red "relay" LED illuminates as long as all the phases are present and of correct sequence and the phase angle difference is smaller than indicated by the setting of the "% asymmetry" adjustment on the front of the unit. If the phase difference is greater than the percentage asymmetry, the relay will de-energise and the red LED will extinguish. This is frequently referred to as a single phasing preventor relay.



TIMING DIAGRAM

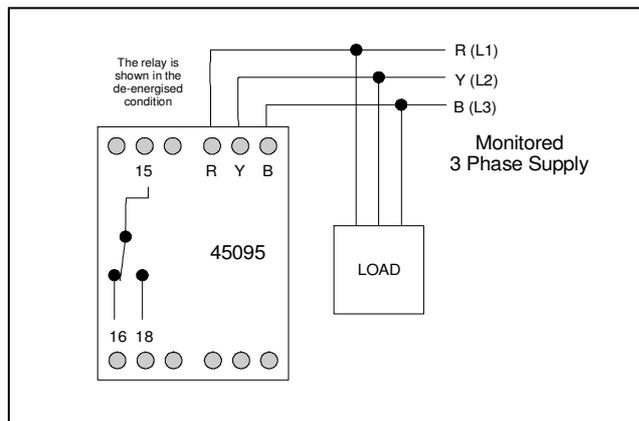
Example of under voltage, phase loss, phase asymmetry or phase sequence



INSTALLATION AND SETTING

BEFORE INSTALLATION, ISOLATE THE SUPPLY. Connect the supply as shown in the diagram below. Set the '**% asymmetry**' adjustment to '**12%**'. Apply power, the red '**relay**' LED should illuminate and the relay should energise. If this does not occur, disconnect the supply and reverse any two of the phase inputs. Reconnect the supply and the relay should energise. If this still does not occur, then check the individual voltage levels on all three phases. Set the '**% asymmetry**' adjustment as required. For accurate settings, with the unit powered, rotate the '**% asymmetry**' adjustment anti-clockwise until the relay de-energises, then slowly rotate the knob clockwise until the relay energises. At values of approximately 5% or less asymmetry, ensure that possible power supply variations do not cause unwanted tripping

CONNECTION DIAGRAM



TECHNICAL SPECIFICATION

Supply/Monitored Voltage Un:	400V AC 50 Hz
(phase to phase)	(Galvanic isolation by transformer)
Supply Variation:	85 - 115% of Un
Isolation:	Overvoltage cat. III (IEC 664)
Power Consumption:	3VA @ Un (red and blue phases) 0.15VA @ Un (yellow phase only)
Trip Level:	2% ($\pm 1.7\%$) to 12% (+4.5%, -0.5%) of phase to phase amplitude
Hysteresis:	<2% of set level
Reaction Time (t): Ambient	$\tau = 200\text{mS}$, worst case = $5 \times \tau$
Temperature:	-20 to +60°C
Relative Humidity:	+95%
Contact Rating:	SPDT
	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:	285g approx.
Mounting Option:	Onto 35mm symmetric DIN rail to BS5584:1978 (EN50 002, DIN 46277-3)
Terminal Conductor Size:	Max 2 x 1.5mm ² stranded (terminated) Max 2 x 2.5mm ² solid
Approvals:	Conforms to: UL, CUL, CSA, IEC. CE Compliant

MOUNTING DETAILS

