$\Box$ 

# Type: LMCVR-500V

**Multifunction, Combined Voltage Relay** 



- \*NEW\* 17.5mm DIN rail housing
- $\Box$ Microprocessor based
  - True R.M.S. monitoring
- 7 Selectable monitoring ranges (20 - 500V AC/DC)
  - Selectable Under or Over Voltage monitoring
- Selectable hysteresis or latch option
- Adjustable trip level and time delay
- Isolated Auxiliary Supply (24 230V AC/DC) 1
- 1 x SPDT relay output 8A
- Green LED indication for supply status
- Yellow LED indication for alarm status  $\Box$ 
  - Red LED indication for relay status

### **FUNCTION DIAGRAMS** Under Voltage Monitoring (with and without Latch enabled 中[] 中 Supply A1, A2 4∭ <u>\_</u> \* 1 \* 1 1 Over Voltage Monitoring (with and w Over 2% 中 中 <u>.</u> 1 П П

### **INSTALLATION AND SETTING**

### BEFORE INSTALLATION, ISOLATE THE SUPPLY. Connect the Auxiliary and Monitored Inputs as required.

Installation work must be carried out by qualified personnel.

### Setting the unit.

- Set the "Hyst. / Mode" selector **1** to the required position depending whether under or over monitoring is required. Select either a suitable hysteresis setting of 2% or 10% or choose Latch if required.
- Set the "Range" 6 to the required position (depending on monitored input voltage to be monitored).
- Set the "Trip Level %" and "Delay" to suit the selected monitoring range and delay to tripping period.

Apply power and the green LED 1 will illuminate.

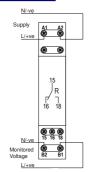
### If Under voltage mode is selected

Relay energises / red LED 3 illuminate if the voltage is above the set "Trip Level". If the voltage falls below the "Trip Level", yellow LED 🕹 flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.

Relay energises / red LED 3 illuminate if the voltage is below the set "Trip Level". If the voltage rises above the "Trip Level", yellow LED 2 flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.

### **TECHNICAL SPECIFICATION** Auxiliary supply voltage U (A1, A2): 24 - 230V AC/DC 1(12 - 60V AC/ DC also available) Frequency range: 48 - 63Hz (AC supplies) +15%/ - 10% Supply variation: III (IEC 60664) Overvoltage category: Rated impulse withstand voltage 4kV (1.2/50uS) IEC 60664 Power consumption (max.): 48V Ω 8.4 V.Δ 0.82 VA 1.4 VA 0.53 W 0.6 W 0.47 W 0.46 W Monitoring mode Under or Over voltage (selectable) Hysteresis: 2 or 10% (selectable) Enabled using Mode selector switch Latch: Monitoring ranges 2 – 20V, 5 – 50V, 10 – 100V, 20 – 200V, 50 – 500V Trip level: 10 - 100% of selected monitoring range Time delay (t): 0.1 - 30S (from fault occurring to relay de-energising) Power up delay (Td): 1 second (fixed) Reset time: 100mS Accuracy: ± 1% of maximum full scale Adjustment accuracy: < 5% of maximum full scale Repeat accuracy: ±0.5% at constant conditions Drift with temperature ±0.05% / °C Drift with voltage: ±0.2%/V Monitoring input (B1, B2): 0.2 to 500V AC/DC DC, 48 - 500Hz Frequency: Maximum input rating: 1.2 x 500V 1kV for 1s Overload: Overvoltage category: III (IEC 60664) Rated impulse withstand voltage 4kV (1.2/50μS) IEC 60664 Power on indication Green LED Alarm status indication: Yellow LED Relay status indication: Red LED Ambient temp: -20 to +60°C Relative humidity: +95% Output (15, 16, 18): SPDT rela 250V 8A (2000VA) Output rating: AC1 AC15 250V 5A (no), 3A (nc) DC1 25V 8A (200W) Electrical life: ≥ 150,000 ops at rated load Rated impulse withstand voltag 4kV (1.2/50μS) IEC 60664 Orange flame retardant UL94 Housing Weight: 63g On to 35mm symmetric DIN rail to BS EN 60715 Mounting option: or direct surface mounting via 2 x M3.5 or 4BA screws using the black clips provided on the rear of the unit Terminal conductor size ≤ 2 x 2.5mm<sup>2</sup> solid or stranded CF and RoHS Compliant Approvals: EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m 80MHz - 2.7GHz)

### CONNECTION DIAGRAM



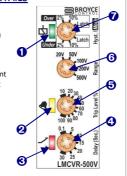
## **SETTING DETAILS**

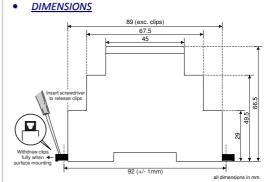
1. Power supply status (Green) LED 2. Alarm status (Yellow) LED 3. Relay output status

(Red) LED 4. Time delay adjustment

5. Trip level adjustment 6. Monitoring range

7. Hysteresis / Mode selector





Emissions: EN 61000-6-4

