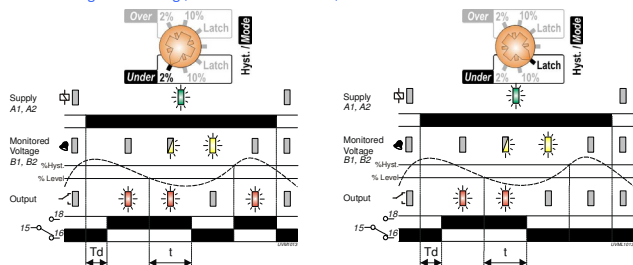




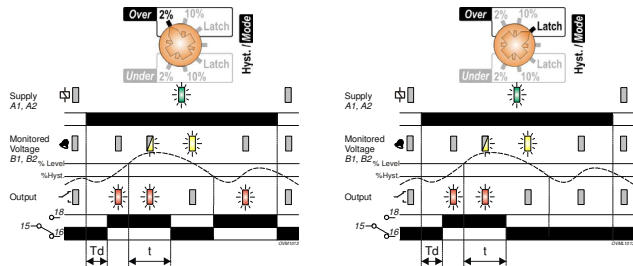
- ❑ ***NEW* 17.5mm DIN rail housing**
- ❑ **Microprocessor based**
- ❑ **True R.M.S. monitoring**
- ❑ **7 Selectable monitoring ranges (0.1 – 20V AC/DC)**
- ❑ **Selectable Under or Over Voltage monitoring**
- ❑ **Selectable hysteresis or latch option**
- ❑ **Adjustable trip level and time delay**
- ❑ **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**
- ❑ **Red LED indication for relay status**

FUNCTION DIAGRAMS

Under Voltage Monitoring (with and without Latch enabled)




Over Voltage Monitoring (with and without Latch enabled)



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 ⑦ 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 %" ⑤ and "Delay" ④ to suit the selected monitoring range and delay to tripping period.

Applying power.

- 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 ② flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.
- If Over voltage mode is selected:**
 - 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)
Supply variation:	+15% / - 10%
Overvoltage category:	III (IEC 60664)
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664
Power consumption (max.):	24V 48V 115V 230V
	AC: 0.84 VA 0.82 VA 1.1 VA 1.4 VA
	DC: 0.6 W 0.47 W 0.46 W 0.53 W

Monitoring mode:	Under or Over voltage (selectable)
Hysteresis:	2 or 10% (selectable)
Latch:	Enabled using Mode selector switch
Monitoring ranges:	0.1 – 1V, 0.2 – 2V, 0.5 – 5V, 1 – 10V, 2 – 20V
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):	0.1 to 20V AC/DC
Frequency:	DC, 48 – 500Hz
Maximum input rating:	1.2 x 20V
Overload:	TBC
Overvoltage category:	TBC
Rated impulse withstand voltage:	TBC

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 relay
Output rating:	AC1 250V 8A (2000VA) AC15 250V 5A (no), 3A (nc) DC1 25V 8A (200W)

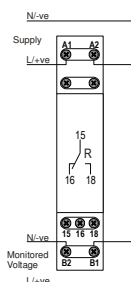
Electrical life:	≥ 150,000 ops at rated load
Dielectric voltage:	2kV AC (rms) IEC 60947-1
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664

Housing:	Orange flame retardant UL94
Weight:	63g
Mounting option:	On to 35mm symmetric DIN rail to BS EN 60715 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 ² solid or stranded
-------------------------	--

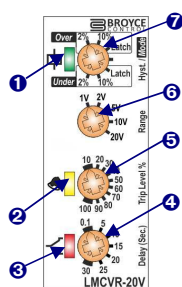
Approvals:	CE and RoHS Compliant. EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m 80MHz - 2.7GHz) Emissions: EN 61000-6-4
------------	--

CONNECTION DIAGRAM

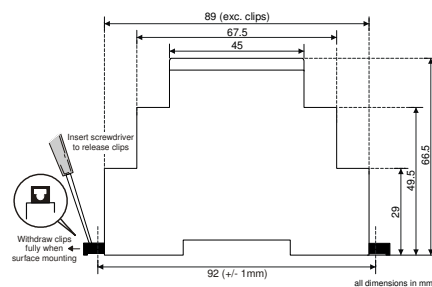


SETTING DETAILS

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 selector
7. Hysteresis / Mode selector



DIMENSIONS





Type: LMCVR-500V

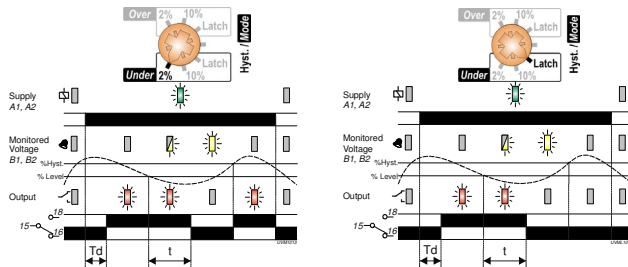
Multifunction, Combined Voltage Relay



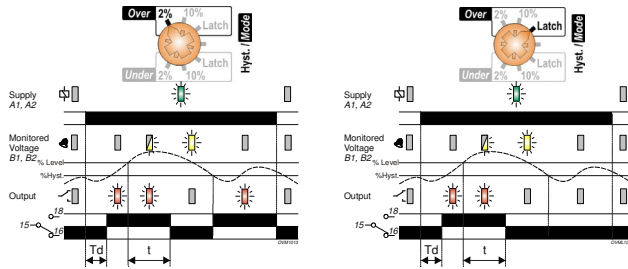
- ***NEW* 17.5mm DIN rail housing**
- **Microprocessor based**
- **True R.M.S. monitoring**
- **7 Selectable monitoring ranges (20 – 500V AC/DC)**
- **Selectable Under or Over Voltage monitoring**
- **Selectable hysteresis or latch option**
- **Adjustable trip level and time delay**
- **Isolated Auxiliary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

FUNCTION DIAGRAMS

Under Voltage Monitoring (with and without Latch enabled)



Over Voltage Monitoring (with and without Latch enabled)



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 ⑦ 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 %" ⑤ and "Delay" ④ to suit the selected monitoring range and delay to tripping period.

Applying power.

- Apply power and the green LED ① will illuminate.

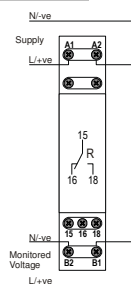
If Under voltage mode is selected:

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

If Over voltage mode is selected:

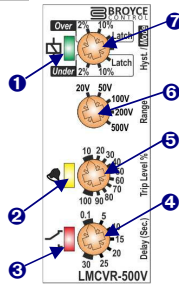
- Relay energises / red LED ② illuminate if the voltage is below the set "Trip Level". If the voltage rises above the "Trip Level", yellow LED ③ flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.

CONNECTION DIAGRAM

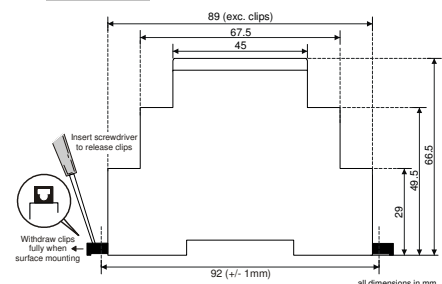


SETTING DETAILS

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 selector
7. Hysteresis / Mode selector



DIMENSIONS



TECHNICAL SPECIFICATION

Auxiliary supply voltage U (A1, A2): 24 – 230V AC/DC¹ (12 – 60V AC/DC also available)

Frequency range:	48 – 63Hz (AC supplies)			
Supply variation:	+15% / - 10%			
Overvoltage category:	III (IEC 60664)			
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664			
Power consumption (max.):	24V	48V	115V	230V
	AC: 0.84 VA	0.82 VA	1.1 VA	1.4 VA
	DC: 0.6 W	0.47 W	0.46 W	0.53 W

Monitoring mode:	Under or Over voltage (selectable)	
Hysteresis:	2 or 10% (selectable)	
Latch:	Enabled using Mode selector switch	
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	
Frequency:	DC, 48 – 500Hz	
Maximum input rating:	1.2 x 500V	
Overload:	1kV for 1s	
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 relay	
Output rating:	AC1	250V 8A (2000VA)
	AC15	250V 5A (no), 3A (nc)
	DC1	25V 8A (200W)

Electrical life:	≥ 150,000 ops at rated load
Dielectric voltage:	2kV AC (rms) IEC 60947-1
Rated impulse withstand voltage:	4kV (1.2/50µs) IEC 60664
Housing:	Orange flame retardant UL94
Weight:	63g
Mounting option:	On to 35mm symmetric DIN rail to BS EN 60715 or direct surface mounting via 2 x M3.5 or 4BA screws using the black clips provided on the rear of the unit ≤ 2 x 2.5mm ² solid or stranded
Terminal conductor size	CE and RoHS Compliant.
Approvals:	EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m 80MHz - 2.7GHz) Emissions: EN 61000-6-4