Powertek

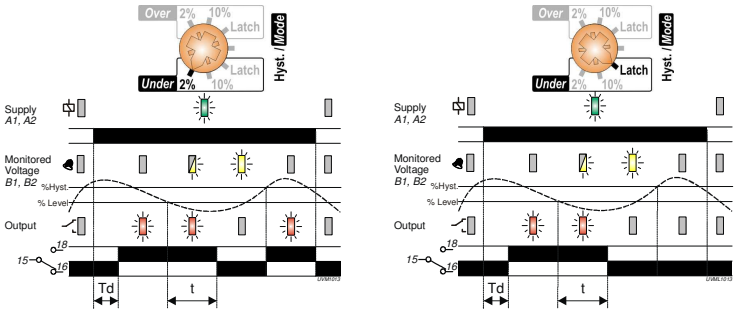
Type: LMCVR-20V

Multifunction, Combined Voltage Relay

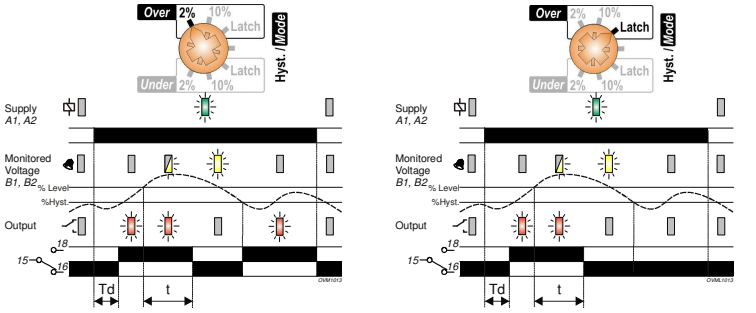
- ❑ ***NEW*** **17.5mm DIN rail housing**
- ❑ **Microprocessor based**
- ❑ **True R.M.S. monitoring**
- ❑ **7 Selectable monitoring ranges (0.1 – 20V AC/DC)**
- ❑ **Selectable Under or Over Voltage monitoring**
- ❑ **Selectable hysteresis or latch option**
- ❑ **Adjustable trip level and time delay**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

Installation work must be carried out by qualified personnel.

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

Setting the unit.

- Set the "Hyst. / Mode" selector ❼ 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" ❻ to the required position (depending on monitored input voltage to be monitored).
- Set the "Trip Level %" ❺ and "Delay" ❹ to suit the selected monitoring range and delay to tripping period.

Applying power.

- Apply power and the green LED ❶ will illuminate.

If Under voltage mode is selected:

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

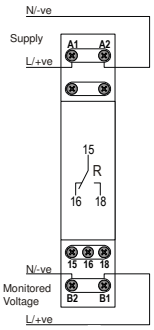
If Over voltage mode is selected:

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

TECHNICAL SPECIFICATION

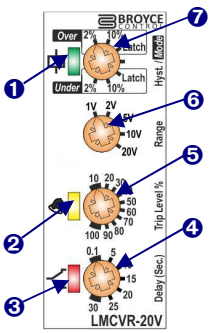
Auxiliary supply voltage U **(A1, A2)**:	24 – 230V AC/DC [1](12 – 60V AC/ DC also available)			
Frequency range:	48 - 63Hz (AC supplies)			
Supply variation:	+15%/ - 10%			
Overvoltage category:	III (IEC 60664)			
Rated impulse withstand voltage:	4kV (1.2/50µS) IEC 60664			
Power consumption (max.):	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 2.5mm² 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

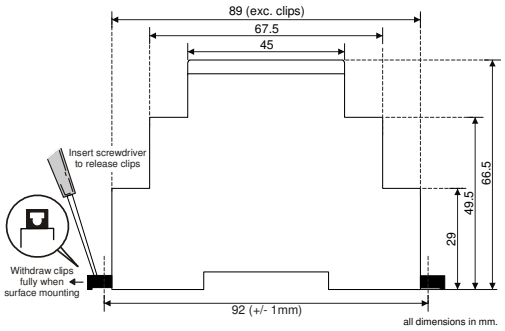


SETTING DETAILS

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



Powertek UK Limited
Unit 13B, Southview Park, Marsack Street,
Reading, Berkshire, RG4 5AF, United Kingdom
Tel: +44 (0)118 370 2004 Email: info@powertekuk.com

Powertek US Inc
7, 3rd Street, Holbrook,
NY, 11741, USA.
Tel: +1 631 824 4666 Email: info@powertekus.com

ISO 9001 REGISTERED FIRM