

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 中国 如 П Supply Supply A1, A2 Voltage . Ì Over Voltage Mo ф[] ф[] Supply A1, A2 Supply A1, A2 # П П • ٩N * П П <u>ال</u>: 4

• INSTALLATION AND SETTING

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

Setting the unit.

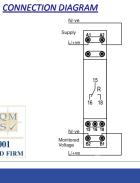
- Set the "Hyst. / Mode" selector to the required position depending whether under or over monitoring is required. Select either a suitable hysteresis setting of 2% or 10% or choose Latch if required.
- Set the "Range" to the required position (depending on monitored input voltage to be monitored).
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

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	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% / °	С				
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 voltag	ge:	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					
		AC1		250V 8A	(2000)///		
Output rating:		AC15			(no), 3A (nc)		
		DC1		25V 8A (2			
Electrical life:			ops at rated load		.00**/		
Dielectric voltage:		2kV AC (rms) IEC 60947-1					
Rated impulse withstand voltage	ηρ·	4kV (1.2/50μS) IEC 60664					
Housing:	,			04			
Housing: Weight:		Orange flame retardant UL94					
Mounting option:		63g On to 35mm symmetric DIN rail to BS EN 60715					
Wounting 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			n ² solid or stran		o. the unit		
Approvals:		CE and RoHS Compliant. EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m					
		80MHz - 2.7GHz)					

ISO 9001 REGISTERED FIRM



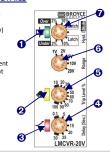
• <u>SETTING DETAILS</u>

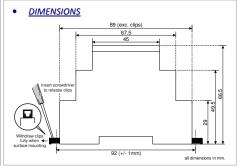
out by qualified personnel.

Power supply status (Green) LED
 Alarm status (Yellow) LED
 Relay output status

(Red) LED
4. Time delay adjustment
5. Trip level adjustment
6. Monitoring range

selector
7. Hysteresis / Mode selector





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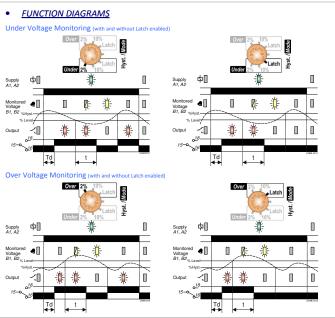


Type: LMCVR-500V

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



INSTALLATION AND SETTING

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

- Set the "Hyst. / Mode" selector 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" 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

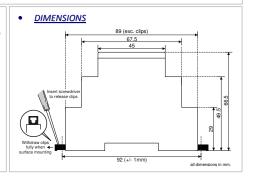
- Apply power and the green LED 1 will illuminate
- Relay energises / red LED 3 illuminate if the voltage is above the set "Trip Level". If the voltage falls below the "Trip Level", yellow LED ② flashes for the set "Delay" then remains lit. Red LED extinguishes / relay de-energises.

 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

Frequency range: Supply variation: Overvoltage category: Rated impulse withstand voltage: Power consumption (max.): AC: DC: Monitoring mode: Hysteresis: Latch: Monitoring ranges:	+15%/ - 109 III (IEC 6066 4kV (1.2/50 24V 0.84 VA 0.6 W Under or O		115V 1.1 VA			
Overvoltage category: Rated impulse withstand voltage: Power consumption (max.): AC: DC: Monitoring mode: Hysteresis: Latch:	III (IEC 6066 4kV (1.2/50 24V 0.84 VA 0.6 W Under or O	54) 0μS) IEC 60664 48V 0.82 VA				
Rated impulse withstand voltage: Power consumption (max.): AC: DC: Monitoring mode: Hysteresis: Latch:	4kV (1.2/50 24V 0.84 VA 0.6 W Under or O	0μS) IEC 60664 48V 0.82 VA				
Power consumption (max.): AC: DC: Monitoring mode: Hysteresis: Latch:	24V 0.84 VA 0.6 W Under or O	48V 0.82 VA				
AC: DC: Monitoring mode: Hysteresis: Latch:	0.84 VA 0.6 W Under or O	0.82 VA				
DC: Monitoring mode: Hysteresis: Latch:	0.6 W Under or O		1 1 1//	230V		
Monitoring mode: Hysteresis: Latch:	Under or O	0.47 W	T.T VA	1.4 VA		
Hysteresis: Latch:			0.46 W	0.53 W		
Hysteresis: Latch:		Under or Over voltage (selectable)				
Latch:	2 or 10% (s	2 or 10% (selectable)				
	Enabled using Mode selector switch					
	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					
· ·	0.2 to 500V AC/DC					
Monitoring input (B1, B2): Frequency:	0.2 to 500V AC/DC DC, 48 – 500Hz					
Maximum input rating:	1.2 x 500V					
Overload:	1.2 x 500v					
Overvoltage category:		:4)				
Rated impulse withstand voltage:	III (IEC 60664) 4kV (1.2/50μS) IEC 60664					
,		μ3) IEC 00004				
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)					
Output ruting.	AC15			(no), 3A (nc)		
	DC1		25V 8A (2			
Electrical life:	≥ 150,000 c	ps at rated loa		,		
Dielectric voltage:	2kV AC (rms) IEC 60947-1					
Rated impulse withstand voltage:	4kV (1.2/50μS) IEC 60664					
Housing:	Orange flame retardant UL94					
Weight:						
Mounting option:	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 2.5mm² solid or stranded					
			ucu			
Approvals:	CE and RoHS Compliant. EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m					

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 ISO 9001



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out by qualified personnel.