

Type: LMWVR **Multifunction, Window Voltage Relay**



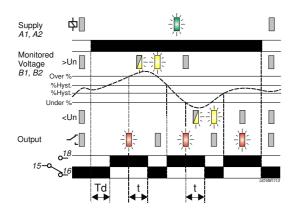
- *NEW* 17.5mm DIN rail housing
- **Microprocessor based**
- True R.M.S. monitoring
 - 7 Selectable Nominal voltage ranges (12 240V AC/DC)
- Window operation Under and Over voltage monitoring
- Adjustable Under and Over voltage trip levels
- - Isolated Auxiliary supply (24 230V AC/DC)¹
 - 1 x SPDT relay output 8A

Adjustable time delay

- Green LED indication for supply status
- Separate Yellow LED indication for Under or Over voltage condition

• FUNCTION DIAGRAM

Under and Over Voltage Monitoring



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 "Nominal voltage" selector 30 to the match that of the voltage being monitored on terminals B1 and B2.
- Set the "Under %" 😉 and "Over %" 🕑 trip levels as required. These are scaled as a % of the selected nominal voltage
- Set the "Delay" ⁶ as required.

Applying power

Apply power and the green LED 🜖 will illuminate. Both yellow LED's will remain extinguished and the relay will energise. The red LED 2 will also illuminate.

Under voltage condition:

If the monitored voltage falls below the "Under %" trip level the yellow "<Un" LED 6 will start flashing. The relay will de-energise and red LED extinguish after the delay period "t" has elapsed. The yellow LED will then remain illuminated to indicate an under voltage condition. The relay will re-energise/red LED illuminate (and yellow LED extinguish) when the voltage rises above the trip level plus the hysteresis.

Over voltage condition:

If the monitored voltage rises above the "Over %" trip level the yellow ">Un" LED @ will start flashing. The relay will de-energise and red LED extinguish after the delay period "t" has elapsed. The yellow LED will then remain illuminated to indicate an over voltage condition. The relay will re-energise/red LED illuminate (and yellow LED extinguish) when the voltage falls below the trip level minus the hysteresis.

Auxiliary supply voltage U (A1, A2):	24 – 230V	24 – 230V AC/DC ¹ (12 – 60V AC/ DC also available)			
Frequency range:	48 - 63Hz (48 - 63Hz (AC supplies)			
Supply variation:	+15%/ - 10	+15%/ - 10%			
Overvoltage category:	III (IEC 606	III (IEC 60664)			
Rated impulse withstand voltage:	4kV (1.2/5	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 and	Under and Over voltage (Window)			
Hysteresis:	2% fixed				
Selectable nominal voltages (Un):	12, 24, 48,	12, 24, 48, 110, 115, 230, 240V			
Jnder trip level adjustment:		70 – 95% of Un			
Over trip level adjustment:		105 – 130% of Un			
Time delay (t):	0.1 - 30S (0.1 – 30S (from fault occurring to relay de-energising)			
Power up delay (Td):		1 second (fixed)			
Reset time:	100mS	. ,			
Accuracy:	+ 1% of ma	± 1% of maximum full scale			
Adjustment accuracy:		< 5% of maximum full scale			
Repeat accuracy:		$\pm 0.5\%$ at constant conditions			
Drift with temperature:		±0.05% / °C			
Drift with voltage:		±0.2% / V			
-					
Monitoring input (B1, B2):		0.2 to 350V AC/DC			
Frequency:		DC, 48 – 500Hz 500V			
Maximum input rating:					
Overload:	1kV for 1s				
Overvoltage category:		III (IEC 60664) 4kV (1.2/50μS) IEC 60664			
Rated impulse withstand voltage:	4KV (1.2/5	0µS) IEC 60664			
Power on indication:	Green LED	Green LED			
Under voltage trip indication	Red LED	Red LED			
Over voltage trip indication	Red LED	Red LED			
Ambient temp:	-20 to +60	-20 to +60°C			
Relative humidity:	+95%	+95%			
,	SPDT relay				
Output (15, 16, 18) : Output rating:	AC1		2501/ 104	(2500VA)	
output rating.	AC1 AC15			no), 3A (nc)	
	DC1		250V 5A (25V 10A (
Electrical life:		≥ 150,000 ops at rated load		25011)	
Dielectric voltage:		2kV AC (rms) IEC 60947-1			
Rated impulse withstand voltage:		4kV (1.2/50µS) IEC 60664			
Housing:		Orange flame retardant UL94 V0			
Weight:	63g	5			
Mounting option:	or direct su	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 2.5m	\leq 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 DIMENSIONS . . . N/-v 89 (exc 1. Power supply status വ 67.5 (Green) LED Supply A1 ® A2 45 2. Over voltage trip L/+ve indication (Yellow) LED 8 8 3. Under voltage trip indication (Yellow) LED 4. Relay energised (Red) LFD R 5. Under voltage trip level 36.5 |7 16 adjustment 6 6. Time delay adjustment 7. Over voltage trip level e 6 adjustment 8. Nominal voltage selector N/-v 8 B2 4 92 (+/- 1mm) L/+v ns in mr



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