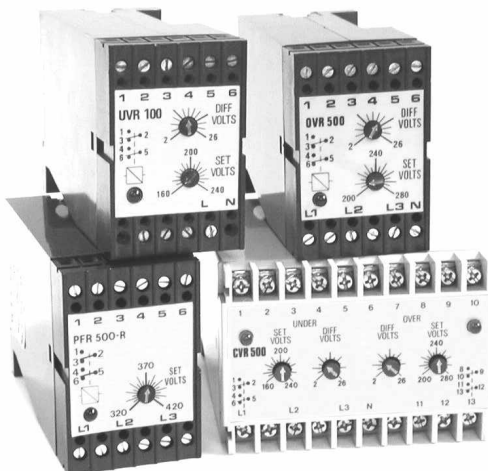


AC voltage relays

UVR, OVR, CVR and PFR series



- **Under/over voltage monitoring and tripping**
- **Adjustable trip/reset voltages**
- **Single or 3 phase options**
- **DIN rail or surface mount**

Description

The Murphy range of voltage relays provide monitoring of single or three phase AC mains/generator supplies. Relay outputs give controlled signalling/tripping at customer set voltage levels.

Our range includes:-

- UVR/OVR100 series Under and over voltage relays, single phase systems
- UVR/OVR500 series Under and over voltage relays, three phase and neutral systems
- CVR500 UVR500 and OVR500 combined into one case
- PFR500 series Phase failure (under voltage) relays for 3 phase, 3 wire (no neutral) systems, with optional phase rotation check circuit (R option).

Each relay circuit includes:

- a double pole change-over relay, configured to be energised at normal AC voltage.
- an LED to indicate the relay state: the LED lights when the relay is energised (when AC voltage is healthy)
- a front facia 'set volts' adjustment control, for setting the under/over trip voltage. UVR, OVR and CVR units also have a 'differential volts' adjuster, allowing independent setting of the relay reset voltage.

On **UVR and CVR units**, the under voltage relay de-energises if any of the phase to neutral input voltages fall below the 'set volts' level. The relay does not energise (or the UVR LED light) until all phase to neutral voltages are restored to above the set volts *plus* the (adjustable) differential voltage.

On **OVR and CVR units**, the over voltage relay de-energises if any of the phase to neutral voltages rises above the 'set volts' level. The relay does not energise (or the OVR LED light) until all the phase to neutral voltages return below the set voltage *minus* the differential voltage. The over voltage relay also de-energises on total loss of supply.

Product Specification

AC input/power supply:

undervoltage trip range	see 'how to order' overleaf
overvoltage trip range	see 'how to order' overleaf
trip point differential volts	see 'how to order' overleaf
maximum input voltage	see 'how to order' overleaf
power consumption	< 20 VA
operating frequency	see 'how to order' overleaf

Relay output:

contact type	2 x volt free DPDT contacts
contact rating	5 A max. @ 240 V AC (resistive)
rated operations	2 x 10 ⁵ operations at rated load
trip time	approx. 500 mS

General:

ambient temperature	-10 to +55 °C
dimensions (W x H x D)	see diagrams overleaf
weight (approx.)	UVR, OVR, PFR: 360 g CVR: 775g

On **PFR units**, two phase voltages are compared with the third phase. The relay de-energises if either phase to phase voltage falls below the set level. The relay does not energise until the phase to phase voltages rise above the set volts level *plus* the (fixed) differential voltage. On 'R' option units, the relay only energises if the correct phase sequence is connected.

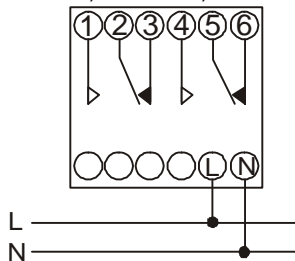
Electrical connection to all units is via screw terminals (accepting stripped wires or narrow blade crimps). Each unit has a robust polycarbonate casing, designed for DIN rail or surface mounting.

Warranty

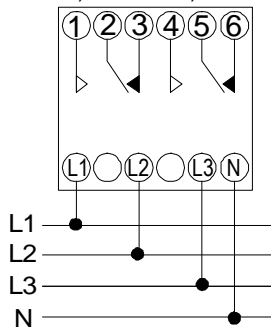
A two year limited warranty on materials and workmanship is given with this Murphy product. Details are available on request and are packed with each unit.

Electrical Connection

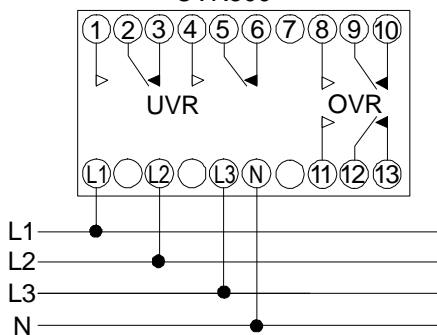
UVR100, OVR100, UVR101



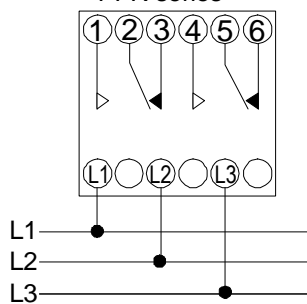
UVR500, OVR500, UVR501



CVR500

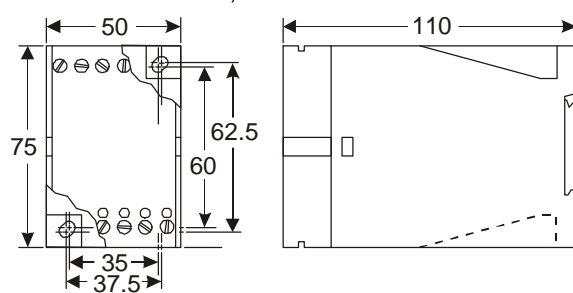


PFR series

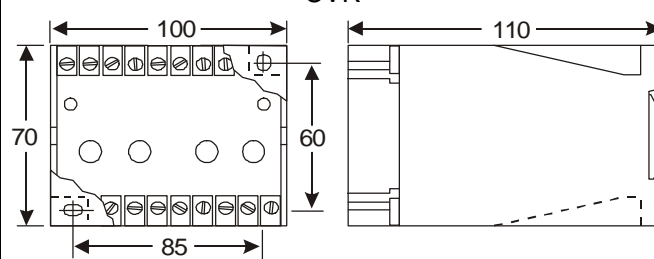


Dimensions

UVR, OVR and PFR



CVR



How to Order

Stock No.	Model	under (U) or over (O) volts relay operation	nominal operating frequencies (Hz)	single phase nominal (max.) voltage	3 Phase and neutral nominal (max.) voltage, VAC ph-N	3 Phase, no neutral nominal (max.) voltage, VAC ph-ph	set (trip) voltage adjustment range	(trip point) differential voltage
76.70.0024	UVR100	U	50/60/400	230 (280)	-	-	160 - 240 VAC	2 - 26 VAC
76.70.0009	UVR101	U	50/60/400	110 (150)	-	-	70 - 110 VAC	1 - 13 VAC
76.70.0061	OVR100	O	50/60/400	230 (280)	-	-	200 - 280 VAC	2 - 26 VAC
76.70.0031	UVR500	U	50/60/400	-	230 (280)	-	160 - 240 VAC ph-N	2 - 26 VAC ph-N
76.70.0010	UVR501	U	50/60/400	-	110 (150)	-	70 - 110 VAC ph-N	1 - 13 VAC ph-N
76.70.0055	OVR500	O	50/60/400	-	230 (280)	-	200 - 280 VAC ph-N	2 - 26 VAC ph-N
76.70.0056	CVR500	U/O	50/60/400	-	230 (280)	-	160 - 240 VAC ph-N 200 - 280 VAC ph-N	2 - 26 VAC ph-N 2 - 26 VAC ph-N
76.70.0177	PFR500	U	50/60/400	-	-	400 (480)	320 - 420 VAC ph-ph	10 VAC ph-ph
76.70.0178	PFR500-R	U	50/60	-	-	400 (480)	320 - 420 VAC ph-ph	10 VAC ph-ph
76.70.0179	PFR501	U	50/60/400	-	-	200 (280)	170 - 230 VAC ph-ph	5 VAC ph-ph
76.70.0008	PFR501-R	U	50/60	-	-	200 (280)	170 - 230 VAC ph-ph	5 VAC ph-ph

Related Products

UFR/OFR series AC frequency relays (see bulletin ms5734)
OLR series AC over current relays (see bulletin ms6262)



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In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time.