

# VOLTAGE PROTECTION RELAY

VPR-33N

## APPLICATIONS

DG Set Panels

---

Motor Control Center Panels

---

Control Panels

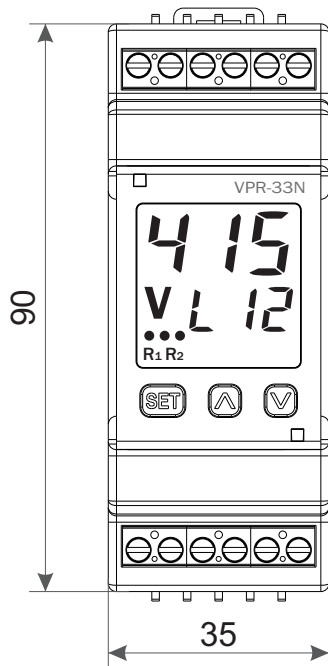
---

Distribution Panels

---

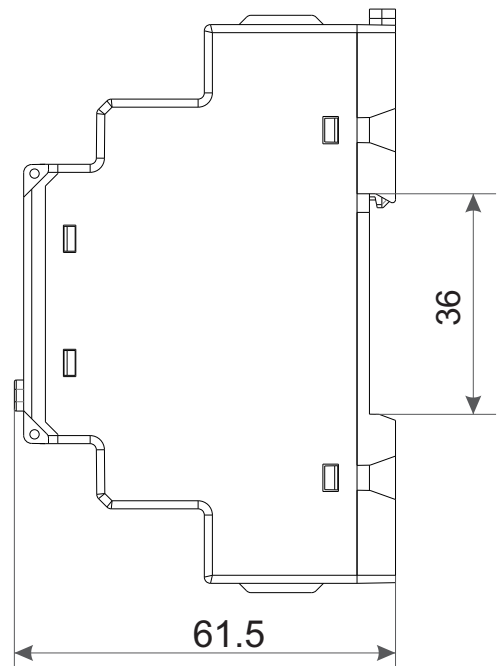
# Mechanical Dimensions

## Body Dimensions



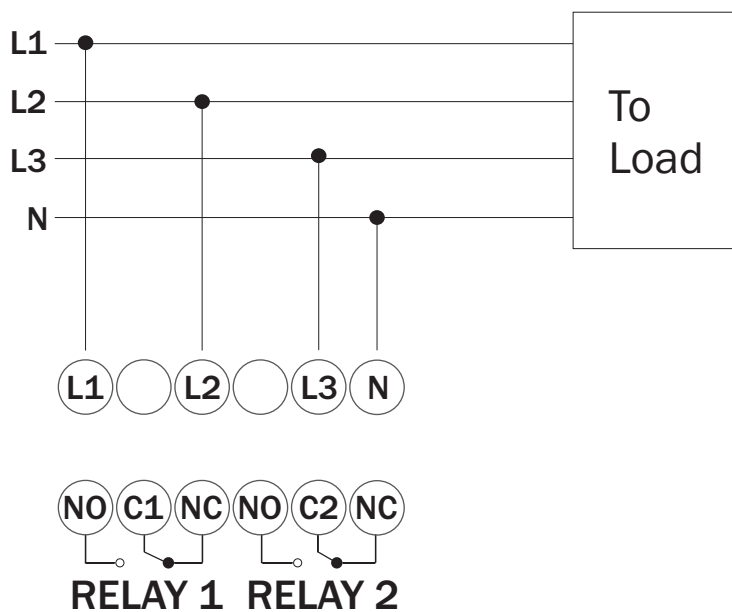
**FRONT VIEW**

All dimensions are in mm



**RIGHT SIDE VIEW**

# Connection Diagram



# TECHNICAL DATA

<b>Input Voltage</b>	240 to 520 V AC (L-L) 3Ø-3W 140 to 300 V AC (L-N) 3Ø-4W
<b>Output</b>	1 <sup>ST</sup> Relay 1 C/O, 5A, 230 V AC (Resistive load) 2 <sup>ND</sup> Relay 1 C/O, 5A, 230V AC, 24V DC
<b>Accuracy</b>	Class 1.0

## Features

- Auto/Manual (Reset Option)
- Last 5 Fault History Indicate  
Time parameter : Power on delay  
Trip delay  
Recovery time (Auto reset)

## Protection Available

- Over Voltage
- Under Voltage
- Over Frequency
- Under Frequency
- Asymmetry
- Phase Loss
- Phase Sequence
- Neutral Loss

## Input

<b>Direct Voltage</b>	240 To 520V (L-L) 140 TO 300V (L-N)
<b>Resolution</b>	1 Volt
<b>Frequency</b>	45.0 TO 65.0 Hz

## Display LED & Keys

<b>Display</b>	0.4" Red LED, 3 digit UPPER 0.28" Red LED, 3 digit LOWER
<b>Key</b>	SET, RESET, INC, DEC

## Meter type

3Ø-3W/3Ø-4W

## Auxiliary Power Supply

<b>Power Supply</b>	Self Power
---------------------	------------

## Output

<b>Relay</b>	1 <sup>ST</sup> Relay with 1 C/O,5A 230 V AC On Resistive Load 2 <sup>nd</sup> Relay 1 C/O, 5A, 230V AC, 24V DC
--------------	--

## Trip Setting

<b>Under Voltage</b>	240-520 V AC (3Ø-3W) 140-300 V AC (3Ø-4W)
<b>Over Voltage</b>	240-520 V AC (3Ø-3W) 140-300 V AC (3Ø-4W)
<b>Under Frequency &amp; Over Frequency</b>	45.0 TO 65.0 Hz
<b>Phase Asymmetry</b>	2 to 30%
<b>Hysteresis</b>	0-99V

## Time Parameter

<b>Power ON Delay Time</b>	0.0 to 99.9 Seconds
<b>Trip Delay Time</b>	0.0 to 999 Seconds
<b>Recovery Time</b>	0.0 to 99.9 Seconds

## Accuracy

Class 1.0 ( Standard )

### Environmental Characteristics

Operating Temperature	0 to 55 °C
Storage Temperature	0 to 70 °C
Relative Humidity	95% RH Non-condensing

### Mechanical Characteristics

Mounting Type	Din Rail Mount
Dimension (HxWxD) mm	90 x 35 x 61.5
Material Body	Polycarbonate (PC)
Terminal Screw Size	M3
Screw Torque (N.m)	0.5
Wire Gauge (AWG)	28-12
Weight (Approx) gms	Unpacked : 200 Packed : 255

# Compliance

Applicable EMI / EMC Standards		
Standard : IEC 61326 - 1		
Category		Standards Compliance
Surge Immunity	IEC 61000 - 4 - 5	+ / - 2kV Common Mode, (Line to Ground) + / - 1kV Differential Mode, (Line to Line)
Power Frequency Magnetic Field Test	IEC 61000 - 4 - 8	Range:1 to 100 A/m
Conducted Susceptibility	IEC 61000 - 4 - 6	Level II (3V / m)
Voltage Dips and Interruptions	IEC 61000 - 4 - 11	<b>Dips</b> : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C) 70% residual voltage / 25 cycles 50Hz / 30 cycles 60Hz (Criteria C) <b>Interruptions</b> : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C)
Radiated Emission	CISPR - 11	
Electrical Fast Transient	IEC 61000 - 4 - 4	Level III (2kV)
Conducted Emission	CISPR - 11	