Voltage Protection Relay

VPRD-2 280/520V-CE



Features:

- 1Ø - 2 Wire, 3Ø - 3 Wire, 3Ø - 4 Wire input
- Monitors under voltage, Over voltage, Under frequency, Over frequency, Phase asymmetry, Phase failure, Phase sequence
- True RMS measurement
- Power ON delay, Trip time delay and recovery time delay
- Adjustable switching hysteresis
- Two separate relays NO & NC operation selectable

Certifications : CE

Technical specifications

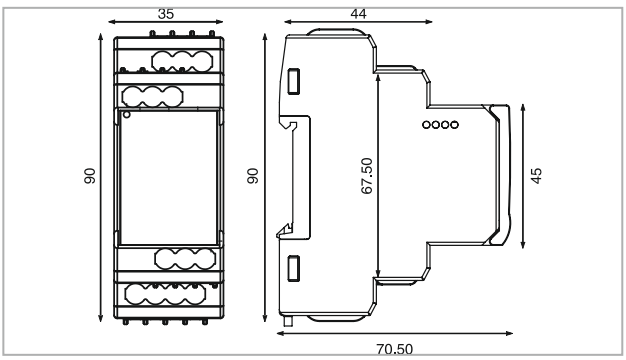
Display specifications			
Type	Digital		
Display	Liquid crystal display with backlight		
No. of LED	3		
No. of push button	3		
LED Indication chart			
Condition	**Power LED**	**'R1' LED**	**'R2' LED**
No fault	ON	OFF	OFF
Trip (relay1)	ON	ON	OFF
Trip (relay2)	ON	OFF	ON
Trip (if programming for both relay)	ON	ON	ON
Display specifications			
Functions			
Measurements	Under voltage, Over voltage, Under frequency, Over frequency, Phase asymmetry, Phase failure, Phase sequence		
Time setting	Power on delay, Trip time delay and Recovery time delay		
Alarm indications	Trip		
Latching	Fail safe & Shunt trip mode (selectable)		
Reset	Auto / Manual		
Measuring range	3Ø - 3 wire (L-L): 280 to 520V AC 3Ø - 4 wire (L-N): 160 to 300V AC 1Ø - 2 wire (L1-L2)+N: 160 to 300V AC		
Trip settings			
Under voltage	280 to 520V AC (L-L) [for 3Ø - 3 wire] 160 to 300V AC (L-N) [for 3Ø - 4 wire] 160 to 300V AC (L1-L2)+N [for 1Ø - 2 wire]		
Over voltage	280 to 600V AC (L-L) [for 3Ø - 3 wire] 160 to 300V AC (L-N) [for 3Ø - 4 wire] 160 to 300V AC (L1-L2)+N [for 1Ø - 2 wire]		
Under frequency	45.0 to 65.0HZ		
Over frequency	45-65Hz		
Phase asymmetry	5.0-99.9%		
Hysteresis			
Voltage	1.0V-99.9V		
Frequency	0.2-2.0Hz		
Asymmetry	2.0-20.0%		

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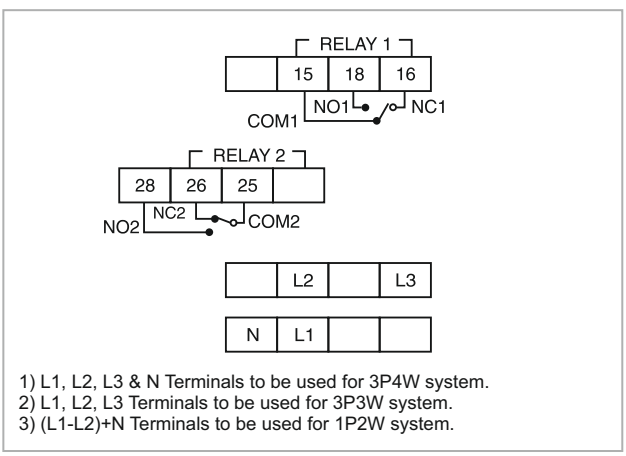
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Input specifications	
Resolution	
Voltage	1V
Frequency	0.1 Hz
Accuracy	
Voltage	±1% of full range
Frequency	±0.3 Hz
Time	±5% of setting, ±250ms
Output specifications	
Relay output	2 SPDT relays (1 C/O)
Relay rating	NO (5A @ 250V AC), NC (3A @ 250V AC)
Environmental specifications	
Operating temperature	0 to 55 °C
Storage temperature	-20 to 70 °C
Humidity (non - condensing)	Up to 95% RH
Degree of protection	IP20
Mechanical specifications	
Dimension (in mm)	35 x 90 x 70.5 (W x H x D)
Weight (unpacked)	135 gm
Mounting	DIN rail
Terminal torque & capacity	0.5 NM
Enclosure	LEXAN N923 (PC)

Dimensions (all are in mm)



Terminal connections



1) L1, L2, L3 & N Terminals to be used for 3P4W system.
2) L1, L2, L3 Terminals to be used for 3P3W system.
3) (L1-L2)+N Terminals to be used for 1P2W system.

Compliance

Applicable EMC standards		
Product standard - IEC 60947-5-1		
Category	**Reference standards**	**Levels**
Electrostatic discharge	IEC 61000-4-2	Contact discharge: 4 Air discharge: 3
Electrical fast transient / Burst	IEC 61000-4-4	1P2W: 4 3P2W: 4
Electromagnetic field	IEC 61000-4-3	Level 3 1P2W Level 3 3P4W
Surge	IEC 61000-4-5	1P2W: 4 3P4W: 4
Conducted RF	IEC 61000-4-6	1P2W: 3 3P4W: 3
Rated power frequency	IEC 61000-4-8	1P2W: 4 3P4W: 4
Voltage dip / Short interruptions	IEC 61000-4-11	1P2W: Class 3
Conducted emissions	CISPR-22	Class A group1
Radiated emissions	CISPR-11	Class A group1, 10m

Environmental

Product standard: IEC 60947-5-1
Safety test standard: IEC 61010-1

1. High voltage test
2. Impulse voltage withstand test
3. Single fault test
4. Temperature rise test

Ordering information

Product code	Operating range	Certification
VPRD-2-280/520V-CE	280 to 520V AC	CE