

Applications:

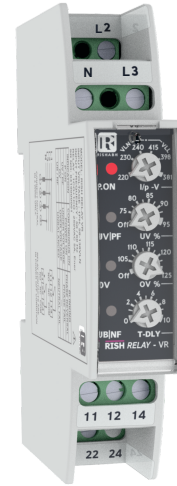
Motor protection, Server rooms, Control system

Features:

Compact size 17.5 mm
 True RMS measurement
 Under voltage protection
 Over voltage protection
 Phase unbalance protection
 Phase failure protection
 Phase incorrect sequence protection
 Neutral failure protection
 Adjustable Nominal voltage, Trip point, Trip time delay
 Onsite selection of VLL / VLN value based tripping
 Self powered
 1CO, 1CO+1CO relay configuration
 LED indication for faults
 Disabling of Over & Under Voltage fault on site is possible

Voltage Protection Relay

RISH Relay - VR



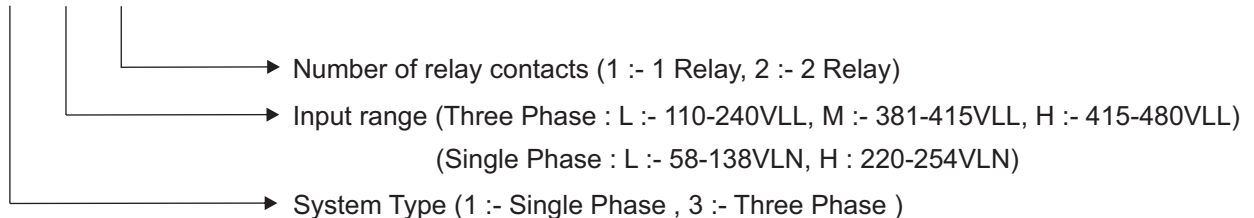
Parameter Settings:

Nominal AC Voltage (Vn) (Variable)	3 Phase : L : 110-240 VLL / 63-138 VLN M : 381-388-415 VLL / 220-230-240 VLN H : 415-440-480 VLL / 240-254-277 VLN
	1 Phase : L : 58-63-110-120-127-138 VLN H : 220-230-240-254 VLN
Over Voltage Trip point	105-125% (Variable)
Under Voltage Trip point	75-95% (Variable)
Voltage Unbalance*	Trip point : 20% (Fixed)
Phase Failure	Trip point : 70 % (Fixed)
Hysteresis value	3% (Fixed) of Trip point
	3% (Fixed) of Vn for Unbalance
Trip delay	0-10 seconds variable for Undervoltage, Over voltage and Unbalance Instant tripping for Phase reversal, Neutral fail and Phase fail conditions
Reset Delay	1 second (Fixed)
Power On Delay	Approx. 3 seconds (Fixed)

* Setting is not applicable in 1 Phase model

Ordering Information :

VR - X- X - X



Order code example: VR - 3 - M - 2

Voltage protection relay VR - 3 phase, input range 381-415 VLL, 2 relay model, relay contacts in normally energized confi. Energized configuration : Relay is normally energized (ON) condition and become de-energized (OFF) upon fault.

Note : Normally de-energised relay configuration can be manufactured on request.



Measure



Control



Record

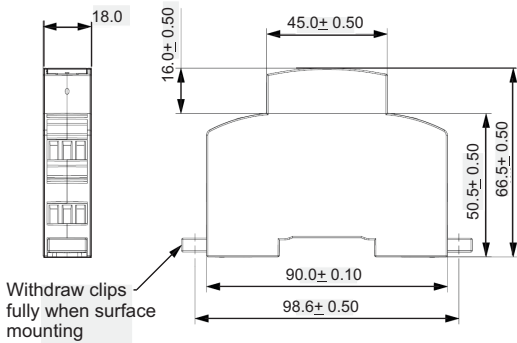


Analyze

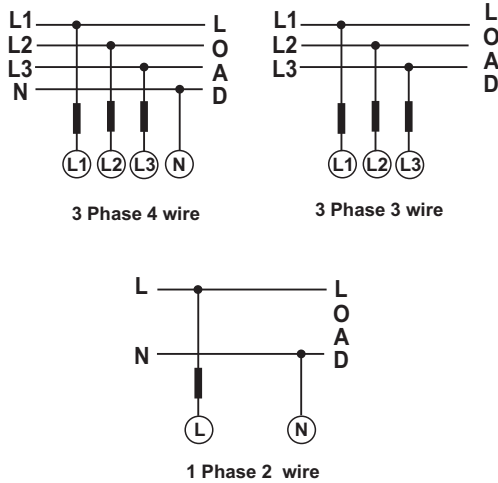
Voltage Protection Relay

RISH Relay - VR

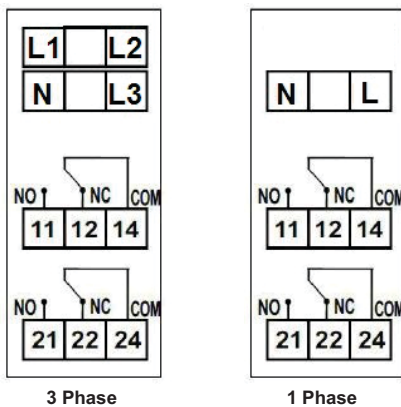
Dimensions Details:



Electrical Connection:



Terminal Details:



Note- Relay Contacts shown are in power off condition

Technical Specifications:

Input Voltage

Nominal Input Voltage (AC RMS) (Programmable on site)	3 Ph : L.V. : 110-240VLL (63-138VLN)
	: M.V. : 381-388-415VLL (220-230-240VLN)
	: H.V. : 415-440-480VLL (240-254-277VLN)
	1 Ph : L.V. : 58-63-110-120-127-138VLN
	: H.V. : 220-230-240-254VLN

Max Continuous Input Voltage	127% of nominal value
Nominal Frequency	50 / 60 Hz
Input Voltage Burden Per Phase	< 2 VA approx.
Input Voltage Burden Three Phase	< 4 VA approx.

Operating Measuring Ranges

Voltage Range	70...125% of nominal value
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Operating reference condition

Reference Condition	23°C +/- 2°C
Input waveform	Sinusoidal (distortion factor 0.005)
Input Frequency	50 / 60 Hz ± 2%

Accuracy

Tripping Accuracy	± 3% of Nominal Value ± 0.8 sec for Trip delay
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Response Time	Less than 200 msec
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Applicable Standards

Safety	IEC 61010-1-2010
IP for water & dust	IEC60529
Pollution degree:	2
Installation category:	CAT III
High Voltage Test	2.2 kV AC, 50Hz for 1 minute between all Electrical circuits.

Environmental

Operating temperature	-10 to +55°C
Storage temperature	-25 to +70°C
Relative humidity	0...90% non condensing
Shock	15g in 3 planes
Vibration	10...55 Hz, 0.15mm amplitude
Enclosure	IP20 (front face only)

Relay Contacts

Types of output	1CO, 1CO+1CO
Contact Ratings (Res. Load)	5A/250VAC/30VDC (resistive load)
Mechanical Endurance	1x10 ⁷ OPS
Electrical Endurance	1x10 ⁵ OPS

Mechanical Attributes

Weight	80 gm Approx.
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LED Indication	Continuous ON	Blinking
P-ON	Power On	Incorrect Phase Sequence
UV/PF	Under Voltage	Phase Fail
OV	Over Voltage	—
UB/NF	Unbalanced Voltage	Neutral Fail

Rishabh Instruments always tries for Improvement and therefore product specifications are subject to change without notice



Measure



Control



Record



Analyze