



Technical Data Sheet

OMICRON-PHR



OMICRON-PHR monitors AC voltage of a system/equipment and protects it from phase failure issues. Suits applications such as Control close loop operations, Conveyor system, motor protection from faults like incorrect phase sequence, unbalance in phase or loss of phase

Special Features

- True RMS measurement
- Self Powered
- Instrument automatically clears (resets) itself as soon as fault condition is recovered
- Compliance to International Safety standard IEC 61010-1-2010
- LED indication for Unbalance, Phase Fail condition and incorrect Phase Sequence condition
- Well suited for 3PH 3W and 3PH 4W applications

Application

- Motor protection
- Conveyor system
- Control close loop operations
- Incorrect phase sequence protection
- Phase failure protection

Product Features

True RMS measurement	The instrument measures distorted waveform up to 15th harmonics
Protection feature	Phase Unbalance Protection Phase Failure Protection Phase Incorrect Sequence Protection
Self Powered	Needs no external power supply
Auto reset	Instrument automatically clears itself if fault condition is recovered
LED Indication	LED indication for Unbalance, Phase Fail condition and Incorrect Phase Sequence condition
Relay operation	Relay energize and de-energize on fault option available

System type	<ul style="list-style-type: none"> • 3 Phase 3 Wire device uses VLL values for tripping and • 3 Phase 4 Wire device uses VLN for tripping
Compliance to International Safety standards	Compliance to International Safety standard IEC 61010-1-2010

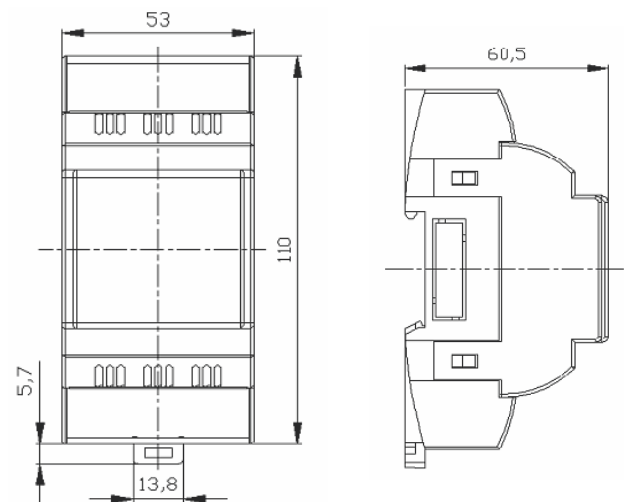
LED indication table

LED indication	Continuous ON	Blinking LED
P-ON	Power ON	Phase Reversal
UB	Unbalance Voltage	---
PF	Phase Fail	---

Technical Specifications

Input Voltage	
Nominal Input Voltage (AC RMS)	110 VLL / 240 VLL / 415VLL / 440VLL (to be specified while ordering)
Nominal Frequency	50 Hz / 60 Hz (to be specified while ordering)
Auxiliary Supply	Self Auxiliary VA burden < 11 VA
Operating Ranges	
Voltage Range	110VLL(85 to 137VLL) 240VLL(204 to 300VLL) 415VLL(330 to 518VLL) 440VLL(350 to 550VLL)
Operating Reference condition	
Reference Condition	23°C +/- 2°C
Input waveform	Sinusoidal (distortion factor 0.005)
Input Frequency	Nominal Frequency ± 2%

Dimensions Details

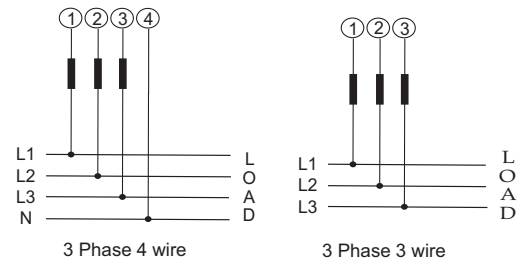


All the dimensions are in mm.

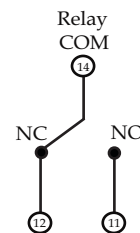
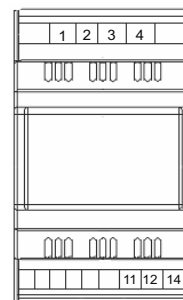
Technical Specifications

Accuracy	± 3% of Nominal Voltage
Applicable Standards	
Safety IP for water & dust Pollution degree Installation category High Voltage Test	IEC 61010-1-2010 IEC 60529 2 CAT III 2.2 kV AC, 50Hz for 1 minute between all Electrical circuits
Environmental	
Operating temperature Storage temperature Relative humidity Shock Vibration Enclosure	-10 to +55°C -25 to +70°C 0..90% non condensing 15g in 3 planes 10...55 Hz, 0.15mm amplitude IP20 (front face only)
Relay Contacts	
Types of output Contact Ratings Mechanical Endurance Electrical Endurance	1CO 5A/250VAC/30VDC (resistive load) 1x10 ⁷ OPS 1x10 ⁵ OPS
Mechanical Attributes	
Weight	120 gm Approx

Electrical Connection



Terminal Details



Note Relay Contacts are shown in power off condition

Default Settings

1. Phase Failure Tripping value	70% of Nominal Voltage
2. Phase failure Trip delay	Instantaneous Tripping
3. Incorrect Phase Sequence Trip delay	Instantaneous Tripping
4. Voltage Unbalance Tripping value	20 % of Nominal voltage
5. Trip delay for voltage unbalance	3.5 Seconds
6. Reset , Power on delay	1 Second Approx
7. Hysteresis	3 % of Trip Value

Ordering information

Product Code	PR10-	X	X	X	X	X	X	0	0	0	0	OST
Model type for PR10	Phase monitor relay	P										
System Type for PR10	3P3W		4									
	3P4W		5									
System Voltage for PR10	110VLL			1								
	240VLL			2								
	415VLL			3								
	440VLL			4								
System Freq for PR10	50Hz				1							
	60Hz				2							
Relay Configuration for PR10	Normally Energized					1						
	Normally De-energized					2						
No. of Relay for PR10	1 relay						1					
Reserved								0	0	0	0	OST



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