AMR-EP1F480Y277V1D Voltage Monitoring Relay

c UL us LISTED E233019

CE

FEATURES

- Voltage Monitoring 3-Phase
- 208V/120V to 480V/277V
- Multi Function
- 1 x DPDT Output
- 17.5mm Wide Compact Design

FUNCTIONS

- Phase Failure
- Phase Sequence
- Phase Assymmetry (adjustable)
- Tripping Delay

SPECIFICATIONS

Supply Circuit	
Terminals/Connections	L1, L2, L3
Supply Voltage	Measuring Voltage (208V/120V - 480V/277V)
Supply Voltage Tolerance	-10% .. +10%
Rated Frequency [Hz]	48..63Hz
Power Consumption	1W/ 10VA (400V/ 50Hz), 1.5W/ 16VA (480V/ 60Hz)
Duty Cycle	100%
Reset Time	500 ms
Drop-out Voltage	>20% supply
Overvoltage Category	III (IEC 60661-1)
Rated surge Voltage	4kV

Time Delays	
Start-up Suppression time	N/A
Trip Delay	0.1-10s

Indicators	
Green LED ON	Supply Voltage present
Red LED ON	Indicator Failure
Red LED Flashes	Indicator Tripping Delay
Yellow LED ON/ OFF	Indicator Relay Output

Mechanical/ Environmental Specs	
Housing Material	V2
Protection Degree	IP20 (Enclosure) IP20 (Terminals)
Mounting	DIN Rail
Mounting Position	any
Dimensions	17.5 x 87 x 49 mm
Stripping Length	7 mm
Terminal Torque	1.0 Nm (8.5 lb.in)
Wire Size Terminals	20-14AWG
Ambient Temperature IEC	-25..+55°C (IEC 60068-1)
Ambient Temperature UL	-25..+40°C (UL 508)
Storage Temperature	-25..+70 °C
Transport Temperature	-25..+70 °C
Relative Humidity	15%..85% (IEC 60721-3-3 class 3K3)
Vibration Resistance	10..55 Hz 0.35 mm (IEC 60068-2-6)
Shock Resistance	15 g 11 ms (IEC 60068-2-27)
Pollution Degree	3 (IEC 60664-1)
Installation Altitude	Up to 2000 m above sea level

Output Circuit	
Output Configuration	1 x DPDT (C/O)
Terminals Output	11/12/2014
Output Contact Rating	5A/ 250VAC
Mechanical Life	2 x 105 Switching cycles (1000 VA)
Electrical Life	17.5 x 87 x 49 mm
Utilization Category	AC 15
Switching Frequency	max. 60/min @ 100 VA resistive load max. 6/min @ 1000 VA resistive load (IEC 60947-5-1)
Rated Surge Voltage	4kV
Overvoltage Category	III (IEC 60664-1)

Measuring Circuit	
Measurand	Voltage, 3-Phase (48-63Hz)
Measuring Range	208V/120V - 480V/277V
Terminals	L1, L2, L3
Overload Capacity	Tolerance of Supply voltage
Input Resistance	N/A
Assymmetry Threshold	5% - 25%
Rated surge Voltage	4kV
Overvoltage Category	III (IEC 60664-1)

Accuracy	
Base Accuracy	≤5%
Adjustment Accuracy	≤5%
Repetition Accuracy	+-2%
Voltage Influence	N/A
Temperature Influence	≤0.05% / °C
Frequency Response	N/A

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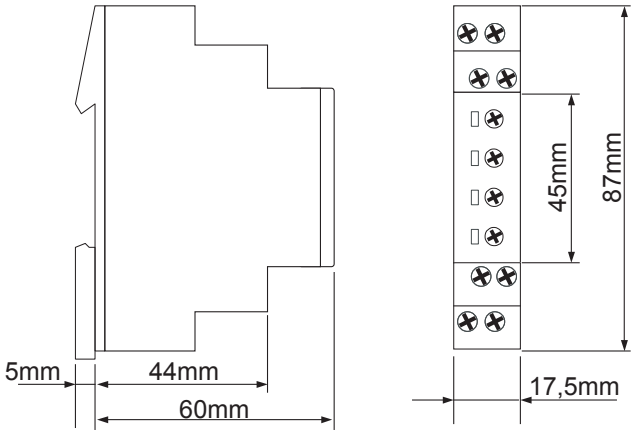
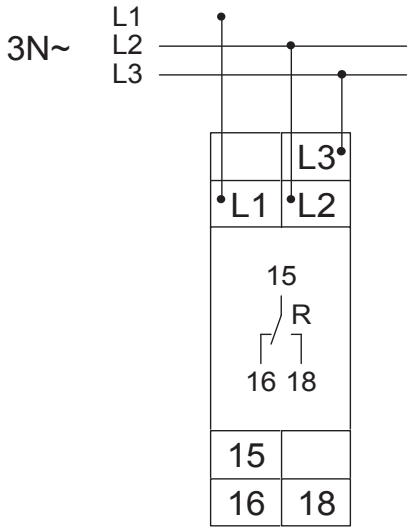
Dimensions

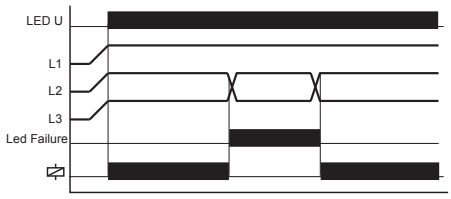


Connection Diagram



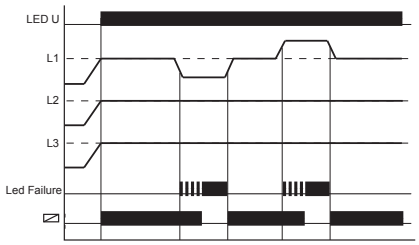
FUNCTIONS

Undervoltage Monitoring



When measured voltage (mean value phase-to-phase) drops below set MIN value, set Trip Delay interval starts (red LED MIN flashes). After interval has expired (red LED MIN ON), output relays switch into OFF-position (yellow LED OFF). Output relays switch back to ON-position (yellow LED ON), when measured voltage exceeds set MIN value.

Assemetry Monitoring



If a change in phase sequence is detected (red LED SEQ ON), output relays switch into OFF-position immediately (yellow LED OFF).

Phase Failure Monitoring

If one phase voltage fails, set Trip Delay interval starts (red LED MIN flashes). After interval has expired (red LED MIN ON), output relays switch into OFF-position (yellow LED OFF). Reverse load voltages (e.g. a motor which continues to run on 2 phases only) do not affect the disconnection, but can be monitored by using a proper asymmetry value.

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