

FEATURES

- Voltage Monitoring 1-Phase
- 24 VAC, 24 VDC, 230 VAC
- Multi Function
- 1 x DPDT Output
- 17.5mm Wide Compact Design

FUNCTIONS

- Undervoltage Monitoring
- Phase Sequence Monitoring



SPECIFICATIONS

Supply circuit

Terminals/Connections	E-F1+ (24 VDC), E-F2 (24 VAC), E-F3 (230 VAC)
Supply Voltage	Measuring Voltage (24 VAC/DC, 230 VAC)
Supply Voltage Tolerance	-25% .. +20%
Rated frequency [Hz]	48..63Hz (AC)
Power Consumption	0.6W (24 VDC), 0.8W/ 1.3VA (24 VAC), 0.6W/ 10VA (230 VAC)
Duty Cycle	100%
Reset Time	500ms
Drop-out Voltage	see undervoltage detection
Overvoltage Category	III (IEC 60661-1)
Rated Surge Voltage	4kV

Time Delays

Start-up Suppression time	N/A
Trip Delay	N/A

Indicators

Green LED ON	Supply Voltage present
Red LED OFF	Failure of corresponding threshold
Red LED ON/OFF	Indicator Relay Output

Mechanical/ Environmental Specs

Housing Material	V2
Protection Degree	IP40 (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	20 x 10 ⁶ Switching cycles
Electrical Life	2 x 10 ⁵ Switching cycles (1000 VA)
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)

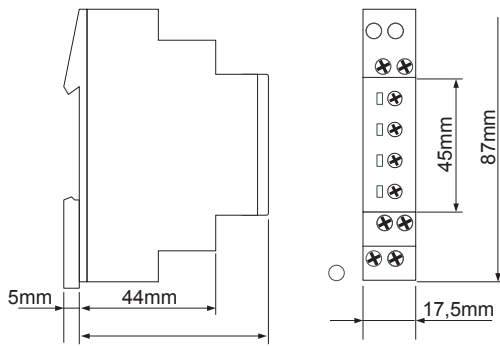
Measuring circuit

Measured Variable	Voltage, 1-Phase, 24 VAC/ DC, 230 VAC (48-63Hz)
Measuring Range 1	24 VDC
Terminals Range 1	E-F1+
Measuring Range 2	24 VAC
Terminals Range 2	E-F2
Measuring Range 3	230 VAC
Terminals Range 3	E-F3
Overload Capacity	120% of Supply
Input Resistance	N/A
Switching Threshold Minimum	N/A
Switching Threshold Maximum	N/A
Rated Surge Voltage	4kV
Overvoltage Category	III (IEC 60664-1)

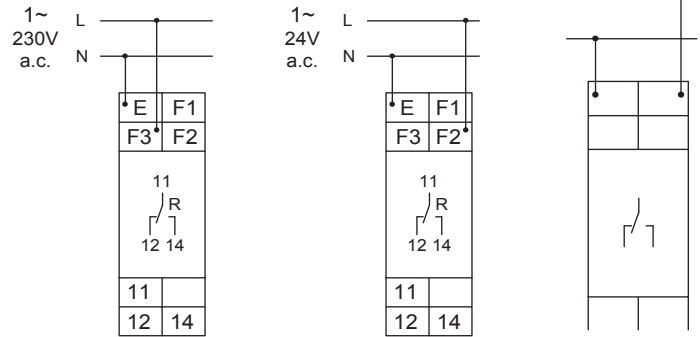
Accuracy

Base Accuracy	≤5% (nom. value)
Adjustment Accuracy	+/-5% (nom. value)
Repetition Accuracy	≤2% (nom. Value)
Voltage Influence	N/A
Temperature Influence	≤0.05% / °C
Frequency Response	N/A

Dimensions

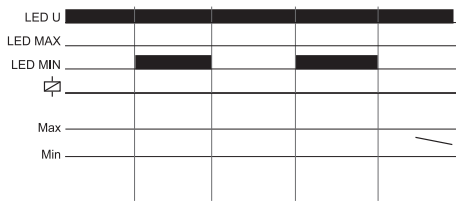


Connection Diagram



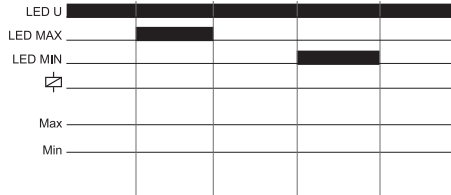
FUNCTIONS

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.

Window Function



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

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.