



VEO

MONITORING RELAY / 3-PHASE VOLTAGE

V2PF480Y/277VSY01

Art.Nr.: 2100000

V2PF480Y/277VSY01P

Art.Nr.: 2100010



- ✓ Monitoring of phase sequence and phase loss
- ✓ Monitoring of asymmetry
- ✓ Supply voltage 208-480 V AC
- ✓ Supply circuit = measuring circuit
- ✓ 1 change-over contact
- ✓ Width 22,5 mm

Control elements

- ✓ Asymmetry

Status indication

- ✓ LED U: Supply voltage
- ✓ LED R: Relay status



TECHNICAL DATA

SUPPLY CIRCUIT (=MEASURING CIRCUIT)

Terminals	L1-L2-L3
Supply voltage	208/120 ... 480/277 V AC
Supply voltage tolerance	-10 / +10 %
Rated frequency	50 / 60 Hz
Rated frequency tolerance	48 ... 63 Hz
Rated consumption	3 x 480 V AC typ. 0,55 W / 0,85 VA
Duty-cycle	100 %
Backup power time	< 10 ms
Recovery time	> 500 ms
Drop-out voltage	≥ 121/70 V AC

MEASURING CIRCUIT

Terminals	L1-L2-L3
Measurand	voltage 3-phase
Measuring method	rectified value
Monitoring functions	phase sequence, phase loss, asymmetry
Measuring range	see supply voltage
Frequency	see rated frequency
Input resistance	3 MOhm
Overload capacity	see supply voltage tolerance



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MEASURING CIRCUIT

Thresholds	Max	-
	Min	-
	Asymmetry	5 ... 25 %, OFF
Hysteresis		-

TIMING CIRCUIT

Start-up delay	fixed	approx. 400 ms
Tripping delay		< 250 ms

STATUS INDICATION

Supply voltage	LED U (green) on	supply voltage applied
Relay status	LED R (yellow) on	output relay energized

OUTPUT CIRCUIT

Terminals		11-12-14
Kind of output		Relay
Number of contacts	change-over contact	1
Contact material		AgNi
Rated voltage (IEC 60947-1)		250V
Maximum switching voltage		400V AC
Minimum switching voltage / switching current		12 V / 10 mA
Rated current (IEC 60947-5-1)	AC-1	8 A / 250 V
	AC-15	1,5 A / 240 V (B300)
	DC-12	8 A / 24 V
Endurance	mechanical	30 x 10 ⁶ switching cycles
	electrical (AC-1)	100 x 10 ³ switching cycles
Rated frequency of operation	with load	6/min
	without load	1200/min
Fuse rating		8 A fast acting

ACCURACY

Base accuracy		< 5 % (of full scale)
Setting accuracy		< 5 % (of full scale)
Repeat accuracy		< 1 %
Temperature influence		< 0,05 % / °C



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ACCURACY

Voltage influence

-

Frequency influence

-

ENVIRONMENTAL CONDITIONS

Ambient temperature

operation

-25 ... +60°C

storage

-40 ... +70°C

Relative humidity

5 ... 95 %

Vibration

EN 60947-1

2 ... 13,2 Hz: 1 mm; 13,2 ... 100 Hz: 7 m/s²

Shock

EN 60947-1

150 m/s² 11 ms

GENERAL DATA

Dimensions

W × H × D

22,5 x 67 x 76 mm

Mounting

DIN rail (EN60715)

Mounting position

any

Housing material

PA 66, self-extinguishing plastic, class V-0

Degree of protection

housing

IP40

terminals

IP20

Electrical connection

V2PF...01

Screw terminal

Wire size

flexible with wire end ferrule

0,5 ... 2,5 mm² (20 AWG ... 13 AWG)

flexible without wire end ferrule

0,5 ... 4 mm² (20 AWG ... 12 AWG)

rigid

0,5 ... 4 mm² (20 AWG ... 12 AWG)

Stripping length

8 mm

Tightening torque

max. 1Nm

Electrical connection

V2PF...01P

Push-in terminal

Wire size

flexible with wire end ferrule

0,25 ... 1,5 mm² (24 AWG ... 16 AWG)

flexible with plastic ferrule

0,25 ... 0,75 mm² (24 AWG ... 19 AWG)

flexible without wire end ferrule

0,2 ... 1,5 mm² (24 AWG ... 16 AWG)

rigid

0,2 ... 1,5 mm² (24 AWG ... 16 AWG)

Stripping length

8 mm

MTTF

-

Weight

82 g



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ISOLATION DATA

Pollution degree (IEC 60947-5-1)		2
Overvoltage category (IEC 60947-5-1)		III
Rated insulation voltage (IEC 60947-1)	supply circuit / output circuit	300 V
Rated impulse withstanding voltage (IEC 60947-1)	supply circuit / output circuit	6 kV
Insulation test voltage (IEC 60947-1)	supply circuit / output circuit	3780 V
Degree of protection	supply circuit / output circuit	protective separation

STANDARDS

Product standard	IEC 60947-5-1
Interference immunity	IEC 61000-6-2
Interference emission	IEC 61000-6-4
Approvals	

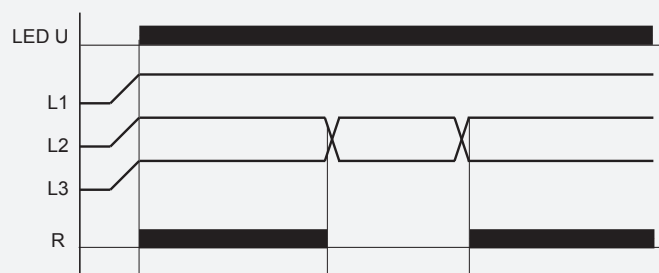


FUNCTIONS

When all the phases are connected in the correct sequence and the measured asymmetry is less than the set value, the output relay R switches into on-position.

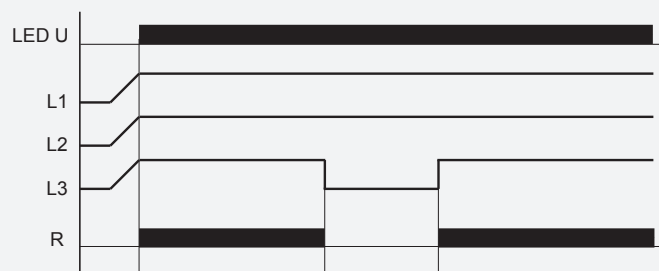
Phase sequence monitoring

When the phase sequence changes, the output relay R switches into off-position.



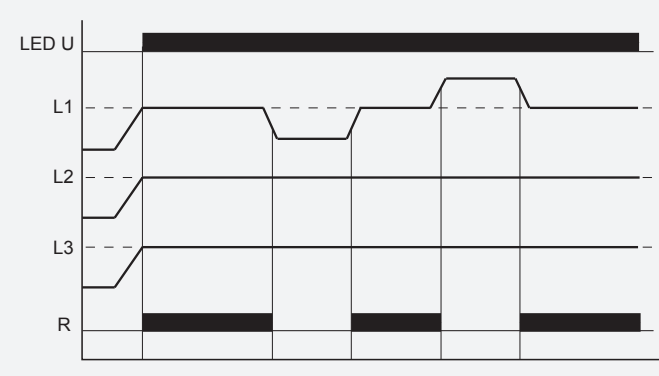
Phase failure monitoring

When one of the three phases fails, the output relay R switches into off-position.



Asymmetry monitoring

When the asymmetry exceeds the value at the ASYM-regulator, the output relay R switches into off-position. Reverse voltages of a consumer (e.g. a motor which continues to run on two phases only) do not effect the disconnection.





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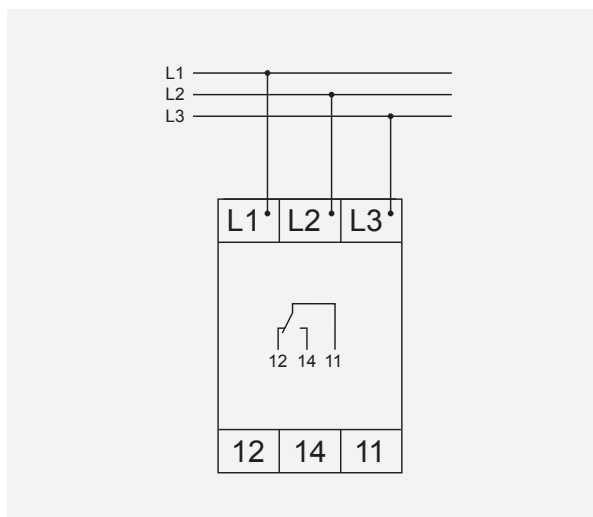
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CONNECTIONS





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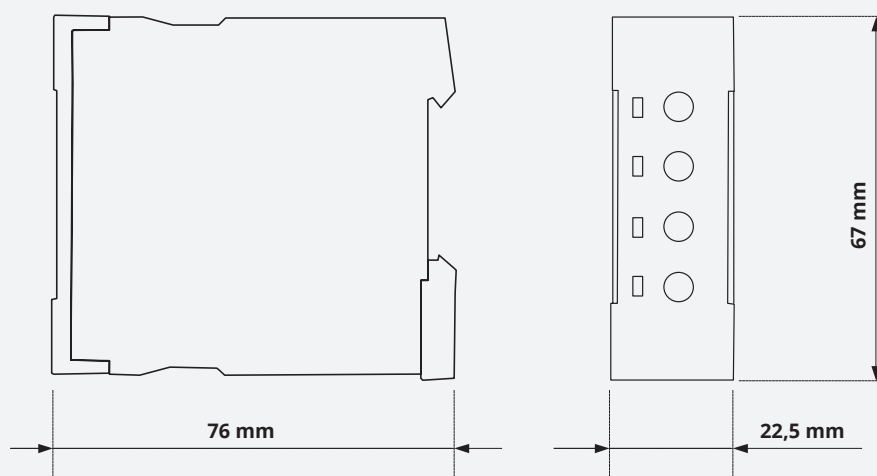
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DIMENSIONS



CONTACT

