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
	DC-13	0,1 A / 250 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

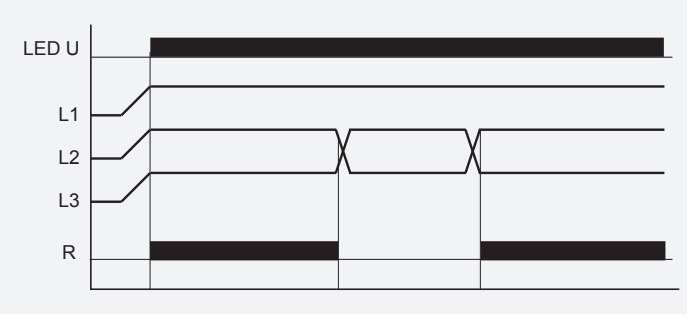
STANDARDS

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

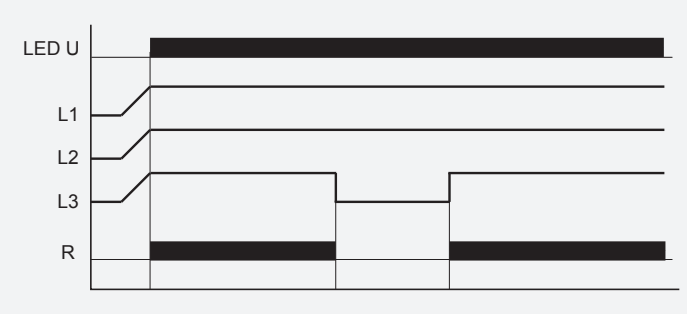
FUNCTIONS

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.

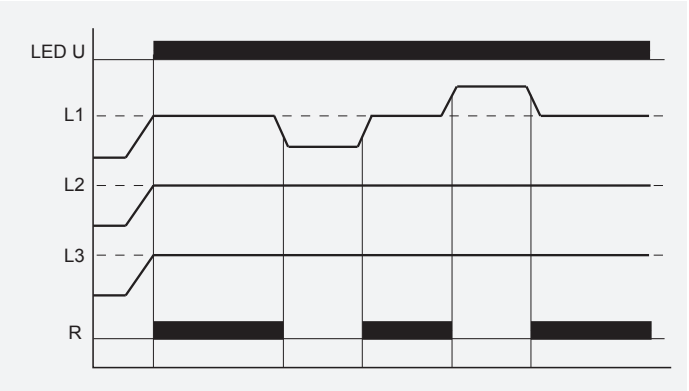
Phase sequence monitoring
When the phase sequence changes, the output relay R switches into off-position.



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



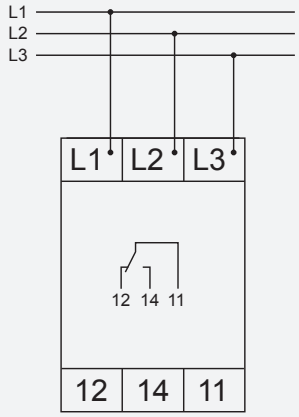
Asymmetry monitoring
When the asymmetry exceeds the value at the ASYM-regulator, the output relay R switches into off-position. Reverse voltages of a consumer (e.g. a motor which continues to run on two phases only) do not effect the disconnection.



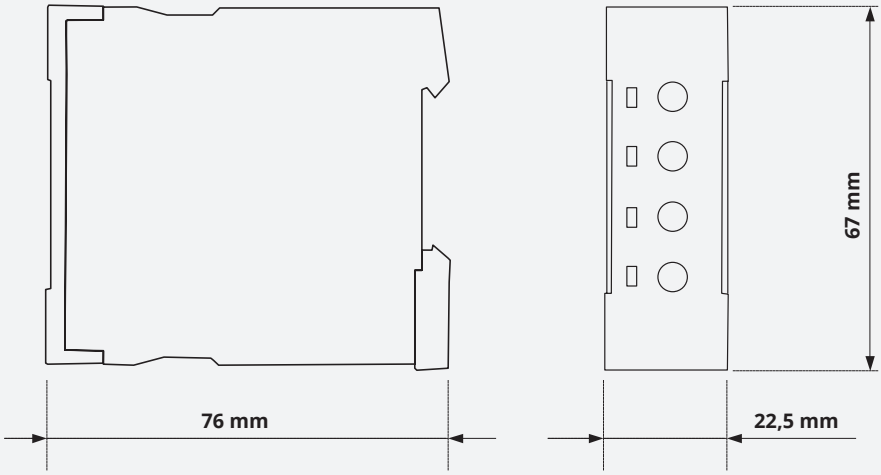
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CONNECTIONS



DIMENSIONS



CONTACT

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Technik Braucht Kontrolle

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