G2PF230VS02

Monitoring relay - phase sequence

Status: Available Data sheet created: 01.07.2025

Item Number: 2390001 - **Serie:** Gamma - **EAN:** 9008662002326



- Monitoring relays series GAMMA
- Phase sequence monitoring
- Phase failure monitoring
- Asymmetry monitoring (reverse voltage detection)
- Measuring voltage = supply voltage
- Supply voltage 3x 230V
- 2 changeover contacts
- width 22,5mm
- industrial design

Description

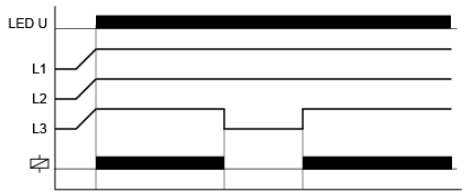
Monitoring of phase sequence, phase failure and detection of return voltage (by means of evaluating the asymmetry)

General information

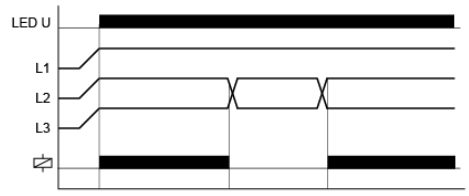
Short description	Phase sequence, phase failure monitoring, 230V, 2 changeover contacts
Item Number	2390001
EAN	9008662002326
Main category	Monitoring Relays
Series	Gamma
Type	G2PF230VS02
Design	Industrial design
Supply	230V AC
Dimensions	22.5 x 90 x 108 mm

Functions and measurands

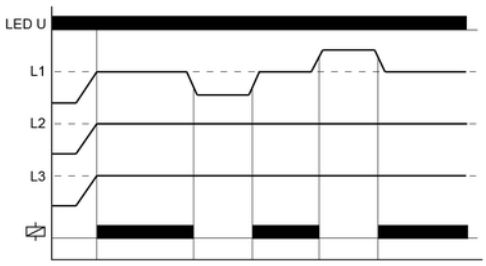
Amount of functions 3



Phase failure (Pha)
As soon as one of the three phases fails, the output relay R pulls in and drops out (yellow LED does not light up). For safe detection of phase failures, the asymmetry function should be activated. It is recommended to connect the neutral conductor of the monitoring relay as soon as loads in the system use the neutral conductor connection.



Phase sequence (Phf)
If all phases are connected in the correct sequence and the measured asymmetry is smaller than the set value, the output relay pulls in (yellow LED lights up). If the phase sequence changes, the output relay drops out (yellow LED does not light up). It is recommended to connect the neutral conductor of the monitoring relay as soon as loads in the system use the neutral conductor connection.



Detection of reverse voltage (by means of evaluation of asymmetry) (-)
The output relays switch into off-position (yellow LED not illuminated) when the asymmetry between the phase voltages exceeds the fixed value of the asymmetry. An asymmetry caused by the reverse voltage of a consumer (e.g. a motor which continues to run on two phases only) does not effect the disconnection.

Time ranges

Number Of Areas	2	
	Setting range	
Time ranges	Start-up delay	fix, max. 500 ms
	Shutter delay	fix, max. 300 ms

Indicators

Supply/time lapse 1	Green LED U ON: Supply voltage applied
Relay state	Yellow LED ON/OFF: output relay position

Mechanical design

Housing material	made of self-extinguishing plastic
Housing - protection degree	IP40
Mounting	top hat rail TH 35 7,5-15 according to IEC 60715:2017 / EN 60715:2017
Terminals/connections	Touch-proof clamping yoke terminals according to DGUV 3 (Screwdriver PZ1 required)
Terminals - protection degree	IP20
Mounting position	any
Stripping length	7 mm
Max. Tightening Torque	1 Nm
Terminal capacity	• 1 x 0.5 to 2.5mm² with/without ferrule • 1 x 4mm² without ferrule • 2 x 0.5 to 1.5mm² with/without ferrules • 2 x 2.5mm² flexible without ferrules

Supply circuit

Terminals/connections	(N)-L1-L2-L3
Supply voltage a.c.	3(N)~ 230/132 V
Supply voltage tolerance a.c.	3(N)~ 198 ... 264 V
Rated frequency [Hz]	a.c. 48 ... 63 Hz
Rated consumption a.c.	6 VA
Duty cycle	100%
Backup power time	<100 ms
Drop-out voltage	>20% the supply voltage
Overvoltage category	III (IEC 60664-1)
Rated surge voltage	4 kV
Rated impulse withstand voltage	400 V a.c.

Output curcuit

Type	Relay
Contact 1	1 change over contact
Terminals 1	11-12-14
Contacts 2	1 change over contact
Terminals/connections 2	21-22-24
Rated voltage	250 V a.c.
conditional short-circuit current	1 kA
Fuse Protection	5 A quick
Mechanical life	15 x 10^6 Switching cycles
Electrical life	100 x 10^3 Switching cycles (1000 VA)
Utilization categorie	AC 15
Switching frequency	max. 60/min at 100 VA resistive load
Switching frequency 2	max. 6/min at 1000 VA resistive load (IEC 60947-5-1)
Rated surge voltage	4 kV
Overvoltage category	III (IEC 60664-1)

Measuring circuit

Measurand	Voltage - three phase
Measuring range	3(N)~ 230/132 V
Terminals/connections	(N)-L1-L2-L3
Overload capacity	3(N)~ 264/152 V
Input resistance	10 kΩ
Frequency - sinusoidal	48 ... 63 Hz
Switching threshold asymmetrical	fixed, typ. 30%
Rated impulse withstand voltage	440 V a.c.
Rated surge voltage	4kV
Overvoltage category	III (IEC 60664-1)

Ambient conditions and general specifications

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

Logistics

Minimum Quantity	1
Tariff Number	85364900
EAN	9008662002326
Country of Origin	AT
Product Weight (g)	138

Available declarations / conformities

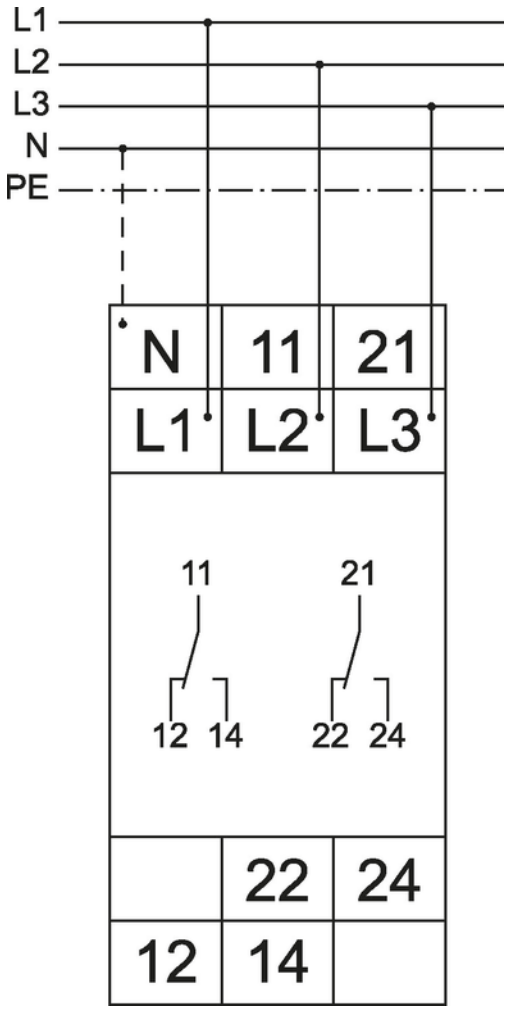
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c(UL)	Open document
REACH	Open document
WEEE	Open document
TSCA	Open document
RoHs	Open document
CMRT	Open document

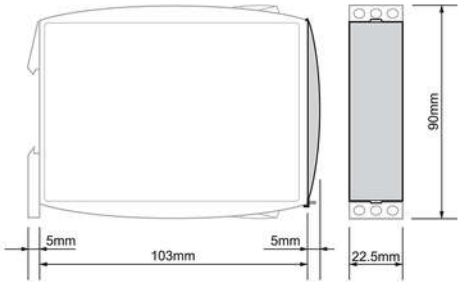
CAD Files

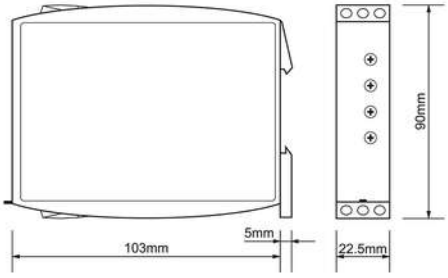
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Media & drawings













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