G2PM690VSY20

Manufacturer data sheet: V1.070

Monitoring relay - voltage monitoring 3-phase

Status: Available Data sheet created: 01.07.2025
Item Number: 2390517 - **Serie:** Gamma - **EAN:** 9008662011953



- Monitoring relays GAMMA series
- Undervoltage monitoring 3-phase
- Phase sequence monitoring
- measuring voltage 3x 208 - 690V AC
- supply voltage = measuring voltage
- 2 changeover contacts
- width 22,5mm
- industrial design

Description

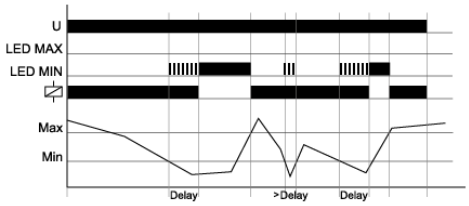
Voltage monitoring in 3-phase mains with adjustable thresholds, adjustable tripping delay, monitoring of phase sequence and phase failure, monitoring of asymmetry with adjustable threshold.

General information

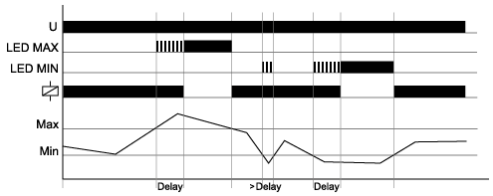
Short description	Voltage monitoring 3-phase, 690V, phase sequence and phase failure, 2 changeover contacts
Item Number	2390517
EAN	9008662011953
Main category	Monitoring Relays
Series	Gamma
Type	G2PM690VSY20
Design	Industrial design
Supply	3~ 208V - 690V
Dimensions	22.5 x 90 x 108 mm

Functions and measurands

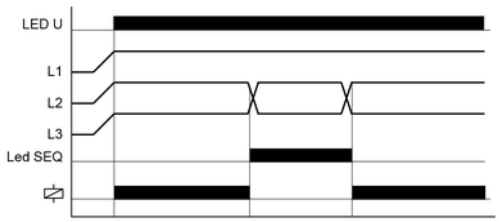
Amount of functions 5



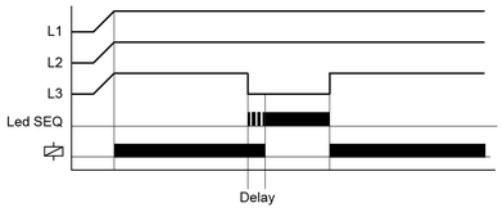
Undervoltage monitoring (UNDER, UNDER+SEQ)
The output relay R switches into on-position, if the measured voltage of all three phase voltages is beyond the Min-value. As soon as the measured voltage falls below the Min-value, the output relay R switches into off-position after the interval of the tripping delay (Delay) has expired.



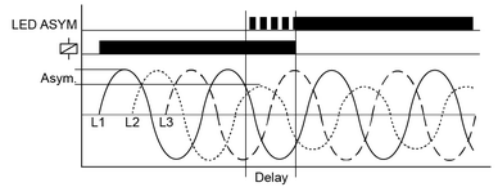
Windowfunktion (WIN, WIN+SEQ)
The output relay switches into on-position (yellow LED illuminated) when the measured voltage (mean value of phase-to-phase voltages) exceeds the value adjusted at the MIN-regulator. When the measured voltage exceeds the value adjusted at the MAX-regulator, the set interval of the tripping delay (DELAY) begins (red LED MAX flashes). After the interval has expired (red LED MAX illuminated) the output relay switches into off-position (yellow LED not illuminated). The output relay again switches into on-position (yellow LED illuminated) when the measured voltage falls below the value adjusted at the MAX-regulator (red LED MAX not illuminated). When the measured voltage falls below the value adjusted at the MIN-regulator, the set interval of tripping delay (DELAY) begins again (red LED MIN flashes). After the interval has expired (red LED MIN illuminated), the output relay switches into off-position (yellow LED not illuminated).



Phase sequence monitoring (SEQ)
Phase sequence monitoring is selectable for all functions. If a change in phase sequence is detected (red LED SEQ illuminated), the output relays switch into off-position immediately (yellow LED not illuminated).



Phase failure monitoring (SEQ)
If one of the phase voltages fails, the set interval of the tripping delay (DELAY) begins (red LED SEQ flashes). After the interval has expired (red LED SEQ illuminated), the output relays switch into off-position (yellow LED not illuminated). Reverse voltages of a consumer (e.g. a motor which continues to run on two phases only) do not effect the disconnection but can be monitored by using a proper value for the asymmetry.



Asymmetry monitoring (ASYM)
If the asymmetry of the phase-to-phase voltages exceeds the value set at the ASYM-regulator, the set interval of the tripping delay (DELAY) begins (red LED ASYM flashes). After the interval has expired (red LED ASYM illuminated), the output relays switch into off-position (yellow LED not illuminated).

Time ranges

Number Of Areas	1	
	Setting range	
Time ranges	Start-up delay	-
	Shutter delay	0,1 ... 10s

Indicators

Relay state	Yellow LED ON/OFF: output relay position
Error / monitoring function	Red LED ASYM ON: Display error asymmetry
Error / monitoring function	Red LED SEQ ON: Indication of phase sequence error
Error / monitoring function 2	Red LED MIN/MAX ON: Display of undervoltage/overvoltage error
Error / monitoring function 2	Red LED MIN/MAX flashes: Indication of tripping delay for corresponding threshold

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

Supply	= measuring voltage
Terminals/connections	L1-L2-L3
Supply voltage a.c.	3~ 208 ... 690 V
Supply voltage tolerance a.c.	-15% ... +15%
Rated frequency [Hz]	a.c. 20 ... 70 Hz
Rated consumption a.c.	1,2 W / 2 VA
Duty cycle	100%
Recovery time	500 ms
Drop-out voltage	>20% the supply voltage
Overvoltage category	III (IEC 60664-1)
Rated surge voltage	6 kV
Rated impulse withstand voltage	800 V a.c.

Output curcuit

Type	Relay
Contact 1	1 change over contact
Terminals 1	15-16-18
Contacts 2	1 change over contact
Terminals/connections 2	25-26-28
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 / DC 13
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	Current - three phase
Measuring range	3~ 208 V - 690 V
Terminals/connections	L1-L2-L3
Overload capacity	3~ 794 V
Frequency - sinusoidal	20 ... 70 Hz
Switching threshold minimum	-50% ... +10% Un
Switching threshold maximum	-45% ... +15% Un
Switching threshold asymmetrical	approx. 2% of selected threshold
Hysteresis	5% ... 25%, OFF
Rated impulse withstand voltage	800 V a.c.
Rated surge voltage	6 kV
Overvoltage category	III (IEC 60664-1)

Accuracy

Base accuracy	≤3 % (from full scale)
Adjustment accuracy	≤5 % (from full scale)
Repetition accuracy	≤2 %
Temperature influence	≤0.05 % / °C

Ambient conditions and general specifications

Ambient temperature IEC	-25 to +70°C @ C300, -25 to +55°C @ B300 (IEC 60068-1)
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	9008662011953
Country of Origin	AT
Product Weight (g)	148.7

Available declarations / conformities

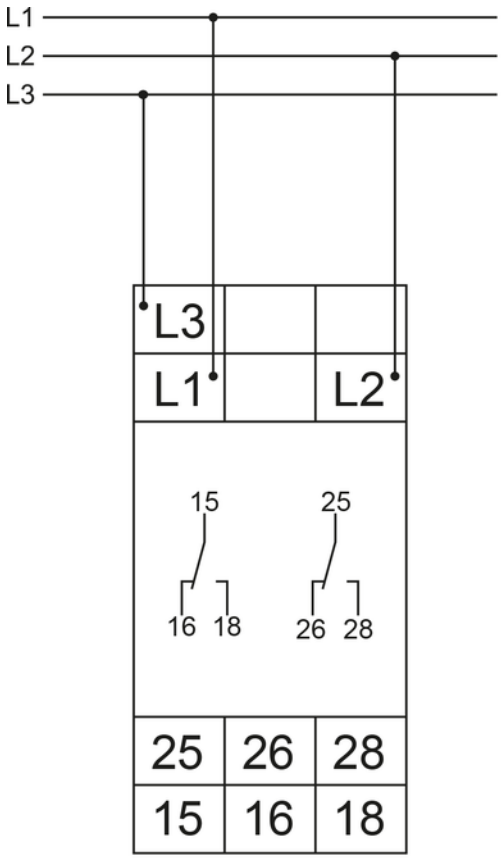
EAC	✓
CE	Open document
UL	Open document
c(UL)	Open document
REACH	Open document
WEEE	Open document
TSCA	Open document
RoHs	Open document
CMRT	Open document

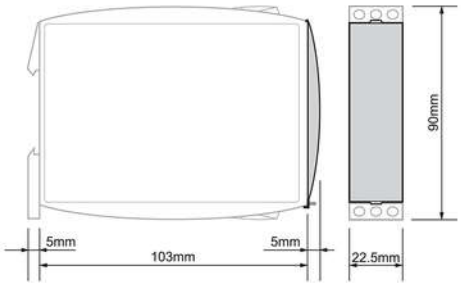
CAD Files

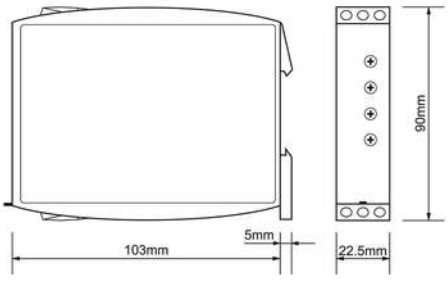
STEP_G2_en.STEP	Download file

Media & drawings













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Changes and errors excepted