



Monitoring relays - GAMMA series

Undervoltage monitoring

Supply voltage 230V AC

1 change over contact

Width 45mm

Industrial design



Technical data

1. Functions

1. Functions

DC undervoltage monitoring in 1-phase mains with fixed thresholds and fixed hysteresis.

2. Time ranges

	Adjustment range
Start-up suppression time:	-
Tripping delay:	-

3. Indicators

Green LED ON:	indication of supply voltage
Yellow LED ON/OFF:	indication of relay output
Red LED ON/OFF:	indication of failure of the corresponding threshold

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-rail TS 35 according to EN 60715
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Tightening torque: max. 1Nm
 Terminal capacity:
 1 x 0.5 to 2.5mm² with/without multicore cable end
 1 x 4mm² without multicore cable end
 2 x 0.5 to 1.5mm² with/without multicore cable end
 2 x 2.5mm² flexible without multicore cable end

5. Input circuit

Supply voltage:	230V AC	Terminals A1-A2 (galvanically separated)
Tolerance:	-15% to +15%	
Rated frequency:	50/60Hz	
Rated consumption:	2VA (1,5W)	
Duty cycle:	100%	
Reset time:	500ms	
Ripple and noise:	-	
Drop out voltage:	>30% of the supply voltage	
Overvoltage category:	II (in accordance with IEC 60664-1)	
Rated surge voltage:	4kV	

6. Output circuit

1 potential free change over contact	
Rated voltage:	250V AC
Switching capacity:	750VA (3A / 250V AC)
If the distance between the devices is less than 5mm!	
Switching capacity:	1250VA (5A / 250V AC)
If the distance between the devices is greater than 5mm!	
Fusing:	5A fast acting
Mechanical life:	20 x 10 ⁵ operations
Electrical life:	2 x 10 ⁵ operations at 1000VA resistive load
Switching frequency:	max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1)
Overvoltage category:	III (in accordance with IEC 60664-1)
Rated surge voltage:	4kV

7. Measuring circuit

Fusing:	max. 20A (in accordance with UL 508)
Measuring variable:	DC Sinus (16.6 to 400Hz)
Measuring input:	900V DC
Overload capacity:	terminals E(-) - F(+) 1000V DC
Input resistance:	900V DC
Switching threshold	2M Ω
Max:	400V
Min:	250V
Overvoltage category:	II (in accordance with IEC 60664-1)
Rated surge voltage:	6kV

8. Accuracy

Base accuracy:	$\leq 3\%$
Frequency response:	-
Repetition accuracy:	$\leq 1\%$
Voltage influence:	-
Temperature influence:	$\leq 0.05\% / ^\circ\text{C}$

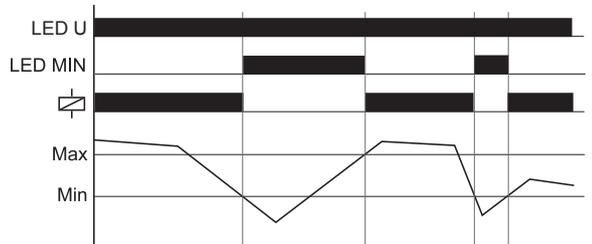
9. Ambient conditions

Ambient temperature:	-25 to +55 $^\circ\text{C}$ (in accordance with IEC 60068-1) -25 to +40 $^\circ\text{C}$ (in accordance with UL 508)
Storage temperature:	-25 to +70 $^\circ\text{C}$
Transport temperature:	-25 to +70 $^\circ\text{C}$
Relative humidity:	15% to 85% (in accordance with IEC 60721-3-3 class 3K3)
Pollution degree:	3 (in accordance with IEC 60664-1)
Vibration resistance:	10 to 55Hz 0.35mm (in accordance with IEC 60068-2-6)
Shock resistance:	15g 11ms (in accordance with IEC 60068-2-27)

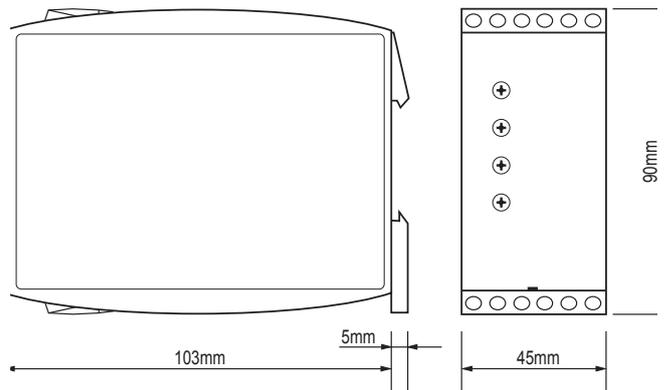
Functions

Undervoltage monitoring (UNDER)

When the supply voltage U is applied, the output relay R switches into on-position, if the measured voltage is beyond the minimum value (Min). When the measured voltage falls below the minimum value, the output relay R switches into off-position immediately. The output relay switches into on-position again, as soon as the measured voltage exceeds the maximum value (Max).



Dimensions



Connections

Range 1000V DC, supply voltage 230V AC

