



GAMMA series

5 Functions

4 time ranges

Supply voltage selectable via power modules / switching power supply

2 change over contacts

Width 22.5mm

Industrial design



## Technical data

### 1. Functions

The function has to be set before connecting the relay to the supply voltage.

E	ON delay
A	OFF delay without auxiliary voltage
nWa	Maintained single shot trailing edge
nWu	Maintained single shot leading edge
nWuWa	Maintained single shot leading and single shot trailing edge

### 2. Time ranges

Time range	Adjustment range	
1s	100ms	1s
10s	1s	10s
1min	6s	1min
10min	1min	10min

### 3. Indicators

Green LED U ON: indication of supply voltage

### 4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40

Mounted 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 2.5mm<sup>2</sup> with/without multicore cable end
- 1 x 4mm<sup>2</sup> without multicore cable end
- 2 x 0.5 to 1.5mm<sup>2</sup> with/without multicore cable end
- 2 x 2.5mm<sup>2</sup> flexible without multicore cable end

### 5. Input circuit

Supply voltage:

12 to 400V a.c. terminals A1-A2 (galvanically separated)  
(selectable via power module TR2)

Tolerance: according to specification of power module

Rated frequency: 48 to 63Hz

Supply voltage:

24V d.c. terminals A1-A2 (galvanically separated)  
(selectable via switching power supply SNT2)

Tolerance: according to specification of switching power supply

Rated frequency: 48 to 63Hz

Rated consumption: 1.2VA (0.6W)

Duty cycle: 100%

Reset time: 100ms

Residual ripple of d.c.: -

Drop out voltage: ≥8V

Overvoltage category: III (in accordance with IEC 60664-1)

Rated surge voltage: 4kV

### 6. Output circuit

2 potential free change over contacts

Rated surge: 250V a.c.

Switching capacity: 750VA (3A / 250V a.c.)

If the distance between the devices is less than 5mm!

Switching capacity: 1250VA (5A / 250V a.c.)

If the distance between the devices is greater than 5mm!

Fusing: 5A fast acting

Mechanical life: 20 x 10<sup>6</sup> operations

Electrical life: 2 x 10<sup>5</sup> 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. Accuracy

Base accuracy: ±1% of maximum scale value

≤10% for time range 1s

Adjustment accuracy: <5% of maximum scale value

Repetition accuracy: 1% or 100ms

Voltage influence: -

Temperature influence: ≤0.02% / °C

### 8. Ambient conditions

Ambient temperature: -25 to +55°C (in accordance with IEC 60068-1)

Storage temperature: -25 to +70°C

Transport temperature: -25 to +70°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 55 Hz 0.35mm

(in accordance with IEC 60068-2-6)

Shock resistance: 15g 11ms

(in accordance with IEC 60068-2-27)

### Note:

After transport the output relay maybe in any position. The correct operation will be given after the first cycle.

## Functions

### ON delay (E)

When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted.

If the supply voltage is interrupted before the expiry of the interval t, the interval already expired is erased and is restarted when the supply voltage is next applied.

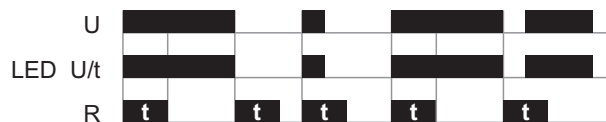


### Maintained single shot leading and trailing edge (nWuWa)

When the supply voltage U is applied, the output relay R switches into on-position and the set interval t begins (green LED U illuminated). After the interval t has expired the output relay switches into off-position.

As soon as the supply voltage is interrupted the output relay switches into on-position again and the set interval t begins (green LED not illuminated). After the set interval t has expired the output relay switches into off-position.

If the supply voltage is interrupted (nWu) or reconnected (nWa) before the interval t has expired the unit continues to perform the actual single shot.



### OFF-Delay without auxiliary voltage (A)

When the supply voltage U is supplied, the output relay R switches into on-position (green LED U illuminated). If the supply voltage is interrupted (green LED U not illuminated), the set interval t begins. After the set interval t has expired the output relay R switches into off-position.

If the supply voltage is reconnected before the interval t has expired the interval already is erased and is restarted with the next cycle.



### Maintained single shot trailing edge (nWa)

When the supply voltage U is supplied, the output relay R remains into off-position (green LED U illuminated). As soon as the supply voltage is interrupted the output relay switches into on-position and the set interval t begins (green LED not illuminated). After the set interval t has expired the output relay switches into off-position.

When the supply voltage is reconnected before the interval t has expired, the unit continues to perform the actual single shot.

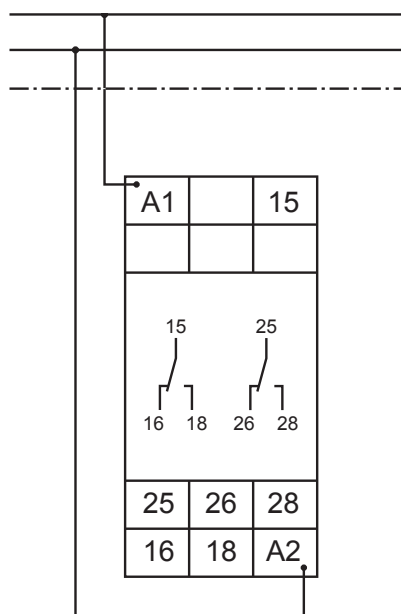


### Maintained single shot leading edge (nWu)

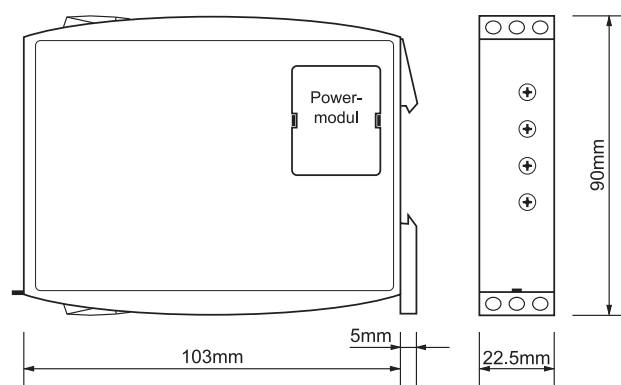
When the supply voltage U is applied (green LED U illuminated), the output relay R switches into on-position and the set interval t begins (green LED U/t flashes). After the interval t has expired the output relay switches into off-position. This status remains until the supply voltage is interrupted. If the supply voltage is reconnected before the interval t has expired, the unit continues to perform the actual single shot.



## Connections



## Dimensions



## Ordering information

Type	Functions	Supply Voltage	Part. No.
G2ZA20 10min	E, A, nWa, nWu, nWuWa	Power module TR2 or SNT2	120601