



Timing relay - Multifunction

Status: **Available** Data sheet created: **23.05.2022**

Item Number: 120100 - Serie: Gamma - EAN: 9008662000254



- ✓ **GAMMA series**
- ✓ **Multifunction**
- ✓ **16 functions**
- ✓ **16 time end ranges**
- ✓ **Remote potentiometer connection**
- ✓ **Supply voltage selectable via transformer modules series TR2/SNT2**
- ✓ **2 changeover contacts**
- ✓ **width 22.5mm**
- ✓ **Industrial design**

Description

Precise and reliable switching and control in industrial and commercial applications.

General information

Short description	Multifunction (16 fct.), 2 changeover contacts, 1 instantaneous and 1 delayed contact
Item Number	120100
EAN	9008662000254
Main category	Timing Relays
Series	Gamma
Type	G2ZMF11
Design	Industrial design
Supply	12-400V AC
Dimensions	22.5 x 90 x 108 mm
Weight	141 g

Functions

Amount functions

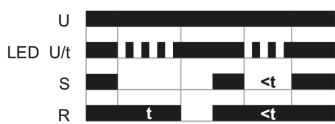
15 Functions

Functional descriptions of this article



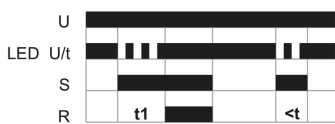
Switch-on delayed (E)

When the supply voltage U is applied, the set time t starts to run (green LED U/t flashes). After the time t has elapsed (green LED U/t illuminated), the output relay R switches into on-position (yellow LED illuminated). This state remains until the supply voltage is interrupted. If the supply voltage is interrupted before the time t has elapsed, the time that has already elapsed is deleted and restarted when the supply voltage is next applied.



OFF delay (R)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (yellow LED illuminated). If the control contact is opened, the set interval t begins (green LED flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). If the control contact is closed again before the interval t has expired, the interval already expired is erased and is restarted.



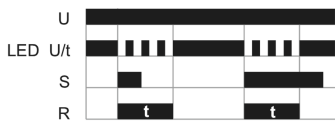
ON delay with control input (Es)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, 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 control contact is opened again. If the control contact is opened before the interval t has expired, the interval already expired is erased and is restarted with the next cycle.



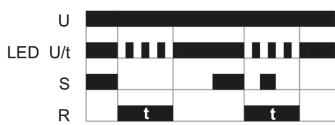
Single shot leading edge voltage controlled (Wu)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the interval t has expired, the output relay switches into off-position. The interval already is erased and is restarted when the supply voltage is next applied.



Single shot leading edge with control input (Ws)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (green LED U/t illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



Single shot trailing edge with control input (Wa)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). Closing the control contact S has no influence on the condition of the output R. When the control contact is opened, the output relay switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated), the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



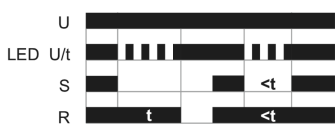
Flasher pulse first (Bi)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired, the output relay R switches into off-position (yellow LED not illuminated) and the set interval t begins again (green LED U/t flashes). The output relay is triggered at a ratio of 1:1 until the supply voltage is interrupted.



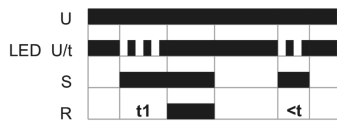
Flasher pause first (Bp)

When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins again. After the interval t has expired, the output relay switches into off-position (yellow LED not illuminated). The output relay is triggered at a ratio of 1:1 until the supply voltage is interrupted.



OFF delay (R)

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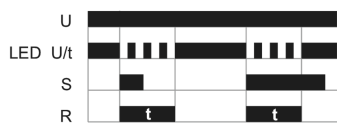
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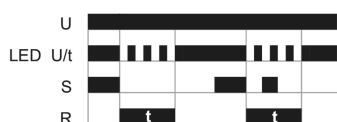
Single shot leading edge voltage controlled (Wu)

When the supply voltage U is applied, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay switches into off-position (yellow LED not illuminated). This status remains until the supply voltage is interrupted. If the supply voltage is interrupted before the interval t has expired, the output relay switches into off-position. The interval already is erased and is restarted when the supply voltage is next applied.



Single shot leading edge with control input (Ws)

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Single shot trailing edge with control input (Wa)

The supply voltage U must be constantly applied to the device (green LED U/t illuminated). Closing the control contact S has no influence on the condition of the output R. When the control contact is opened, the output relay switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated), the output relay switches into off-position (yellow LED not illuminated). During the interval, the control contact can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



Flasher pulse first (Bi)

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Flasher pause first (Bp)

When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins again. After the interval t has expired, the output relay switches into off-position (yellow LED not illuminated). The output relay is triggered at a ratio of 1:1 until the supply voltage is interrupted.

Supply circuit

Terminals	A1-A2 (galvanically isolated)
Supply voltage a.c.	12 ... 400 V
Supply voltage tolerance a.c.	According to power supply unit specification
Rated consumption a.c.	1,5 W / 2 VA
Duty cycle	100%
Recovery time	100 ms
Drop-out voltage	>30% the supply voltage
Overvoltage category	III (IEC 60664-1)
Rated surge voltage	4kV



Time ranges

Number Of Areas 16

	Adjustment range	
	Time range	Adjustment range
	1s	50ms - 1s
	3s	150ms - 3s
	10s	500ms - 10s
	30s	1500ms - 30s
	1min	500ms - 1min
	3min	1500ms - 3min
	10min	500ms - 10min
Time ranges	30min	1500ms - 30min
	1h	3min - 1h
	3h	9min - 3h
	10h	30min - 10h
	30h	90min - 30h
	1d	72min - 1d
	3d	216min - 3d
	10d	12h - 10d
	30d	36h - 30d

Indicators

Supply/time lapse 1	Green LED U ON: Supply voltage applied
Supply/time lapse 2	Green LED U flashes: Display of the time lapse t
Relay state 1	Yellow LED ON/OFF: output relay position



Mechanical design

Housing	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	Touch-proof clamping yoke terminals according to DGUV 3 (Screwdriver PZ1 required)
Terminals - protection degree	IP20
Mounting position	any
Max. Tightening Torque	1 Nm
Terminal capacity	<ul style="list-style-type: none"> ■ 1 x 0.5 to 2.5mm² with/without ferrule ■ 1 x 4mm² without wire end ferrule ■ 2 x 0.5 to 1.5mm² with/without end sleeves ■ 2 x 2.5mm² flexible without ferrules

Output circuit

Total	2 changeover contacts
Type	Relay
Contact 1	1 changeover contacts
Terminals 1	15-16-18
Rated voltage	250V a.c.
Contacts 2	1 changeover contact
Terminals 2	25-26-28
Fuse Protection	5A quick
Mechanical life	20 x 10 ⁶ ; Switching cycles
Electrical life (resistive load)	53 x 10 ⁵ ; (1000VA) Switching cycles
Switching frequency	max. 60/min at 100VA
Switching frequency 2	max. 6/min at 1000VA (according to IEC 60947-5-1)
Rated surge voltage	4kV
Overvoltage category	III (nach IEC 60664-1)



Control input

Terminals	Bridge Y1-Y2
Control voltage	max. 5V
Loadable	No
Maximum line length	10m
Minimum control pulse length d.c.	50ms
Minimum control pulse length a.c.	50ms

Ambient conditions

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) 3K3
Vibration resistance	10 ... 55Hz 0.35mm (IEC 60068-2-6)
Shock resistance	15g 11ms (IEC 60068-2-27)

Accuracy

Base accuracy	±1% (from full scale) at 1M Ω Remote potentiometer
Adjustment accuracy	<=5% (from full scale) at 1M Ω Remote potentiometer
Repetition accuracy	<0.5% or ±5ms
Temperature influence	<=0.01% / °C



Logistics

EAN 9008662000254

Country of Origin AT

Available declarations / conformities

EAC ✓

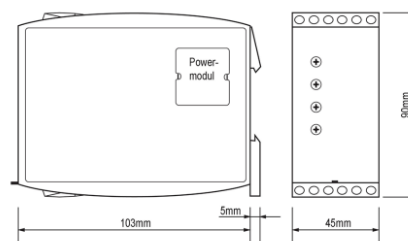
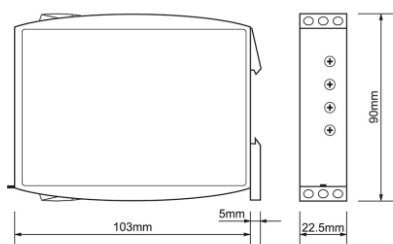
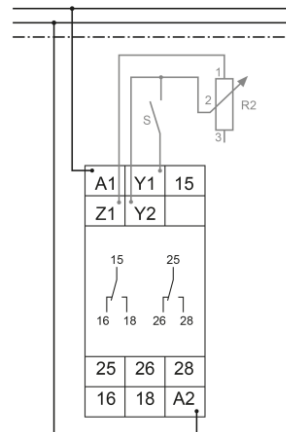
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Media & drawings



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