G2ZMF11

Manufacturer data sheet: V.087

Timing relay - Multifunction

Status: Available Data sheet created: 01.07.2025

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.

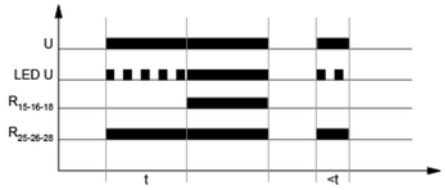
General information

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 a.c.
Dimensions	22.5 x 90 x 103 mm

Functions and measurands

The selection of the time function must be made in the de-energized state.

Amount of functions 16



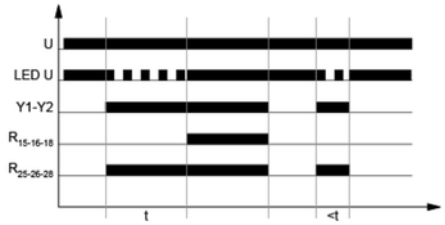
ON delay - G2ZMF11 (E11)

When the supply voltage U is applied, the instantaneous contact switches into on-position and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact 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.



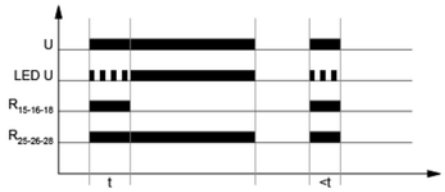
OFF delay with control input - G2ZMF11 (R11)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, both contacts switch into on-position (yellow LED illuminated). If the control contact is opened, the instantaneous contact switches into off-position and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact 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 with the next cycle.



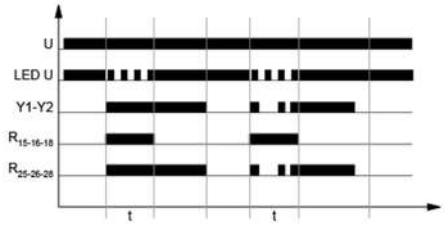
ON delay with control input - G2ZMF11 (Es11)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, the instantaneous contact switches into on-position and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact 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.



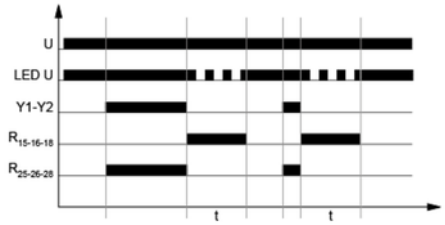
Single shot leading edge voltage controlled - G2ZMF11 (Wu11)

When the supply voltage U is applied, both contacts switch into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact 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 both contacts switch into off-position. The interval already expired is erased and is restarted when the supply voltage is next applied.

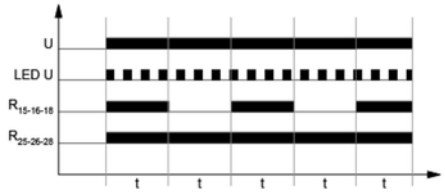


Single shot leading edge with control input - G2ZMF11 (Ws11)

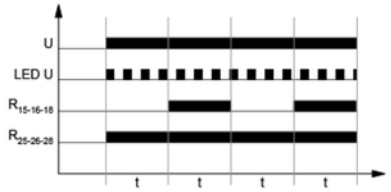
The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, both contacts switch into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the delayed contact switches into off-position (yellow LED not illuminated). The instantaneous contact remains in on-position, until the control contact is opened again. During the interval, the control contact (and the instantaneous contact) can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



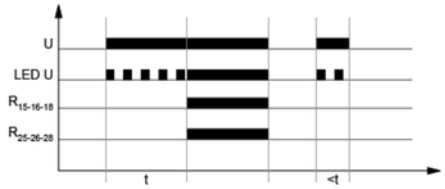
Single shot trailing edge with control input - G2ZMF11 (Wa11)
The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed the instantaneous contact switches into on-position. When the control contact is opened, the instantaneous contact switches into off-position, the delayed contact switches into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated), the delayed contact switches into off-position (yellow LED not illuminated). During the interval, the control contact (and the instantaneous contact) can be operated any number of times. A further cycle can only be started when the cycle run has been completed.



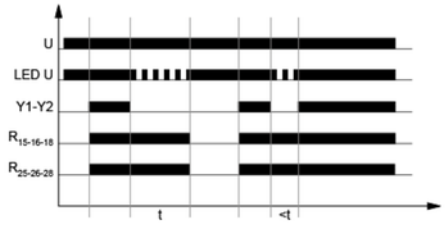
Flasher pulse first - G2ZMF11 (Bi11)
When the supply voltage U is applied, the instantaneous contact and the delayed contact switch into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired, the delayed contact switches into off-position (yellow LED not illuminated) and the set interval t begins again. The delayed contact is triggered at a ratio of 1:1 until the supply voltage is interrupted.



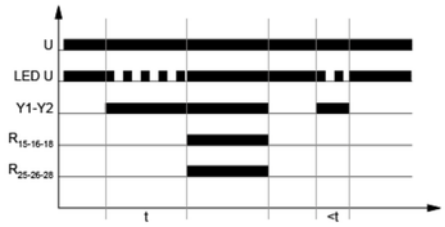
Flasher pause first - G2ZMF11 (Bp11)
When the supply voltage U is applied, the instantaneous contact switches into on-position and the set interval t begins (green LED flashes). After the interval t has expired, the delayed contact switches into on-position (yellow LED illuminated) and the set interval t begins again. After the interval t has expired, the delayed contact switches into off-position (yellow LED not illuminated). The delayed contact is triggered at a ratio of 1:1 until the supply voltage is interrupted.



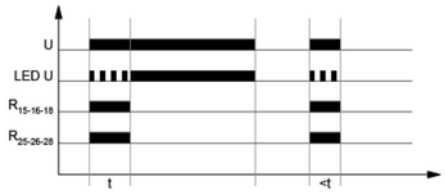
ON delay - G2ZMF11 (E20)
When the supply voltage U is applied, the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted. If 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.



OFF delay with control input - G2ZMF11 (R20)
The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 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 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 with the next cycle.

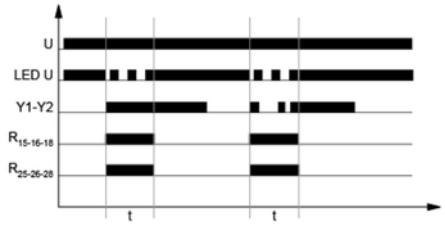


ON delay with control input - G2ZMF11 (Es20)
The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, the set interval t begins (green LED flashes). After the interval t has expired (green LED illuminated) the output relay R switches 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 - G2ZMF11 (Wu20)

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 flashes). After the interval t has expired (green LED 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 expired is erased and is restarted when the supply voltage is next applied.



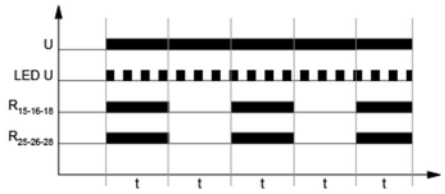
Single shot leading edge with control input - G2ZMF11 (Ws20)

The supply voltage U must be constantly applied to the device (green LED illuminated). When the control contact Y1-Y2 is closed, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED flashes). After the interval t has expired (green LED 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 - G2ZMF11 (Wa20)

The supply voltage U must be constantly applied to the device (green LED illuminated). Closing the control contact Y1-Y2 has no influence on the condition of the output relay 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 flashes). After the interval t has expired (green LED 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 - G2ZMF11 (Bi20)

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



Flasher pause first - G2ZMF11 (Bp20)

When the supply voltage U is applied, the set interval t begins (green LED 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.

Time ranges

Number Of Areas	16		
	Time range	**Adjustment range**	
Time ranges	1s	50ms	1s
	3s	150ms	3s
	10s	500ms	10s
	30s	1500ms	30s
	1min	500ms	1min
	3min	1500ms	3min
	10min	500ms	10min
	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	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
Max. Tightening Torque	1 Nm
Terminal capacity	• 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

Supply circuit

Terminals/connections	A1-A2 (galvanically isolated)
Supply voltage a.c.	12 ... 400 V
Supply voltage tolerance a.c.	According to power supply unit specification
Rated frequency [Hz]	laut Angabe Netzteil
Rated consumption a.c.	1,5 W / 2 VA
Drop-out voltage	>30% the supply voltage
Overvoltage category	III (IEC 60664-1)
Rated surge voltage	4 kV

Output curcuit

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

Control input

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

Accuracy

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

Remote potentiometer

Info	Info potentiometer
Connection	1MΩ potentiometer (type RONDO R2), terminals Z1-Y2
Cable type	twisted wires or twin wires
Control voltage	max. 5V
Short circuit current	max. 5µA
Cable length	max. 5m

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 ... 55Hz 0.35mm (IEC 60068-2-6)
Shock resistance	15g 11ms (IEC 60068-2-27)
Pollution degree	2, pollution level can be increased by installation in suitable enclosures (according to IEC 60664-1)

Logistics

Minimum Quantity	1
Tariff Number	85364900
EAN	9008662000254
Country of Origin	AT
Product Weight (g)	141

Available declarations / conformities

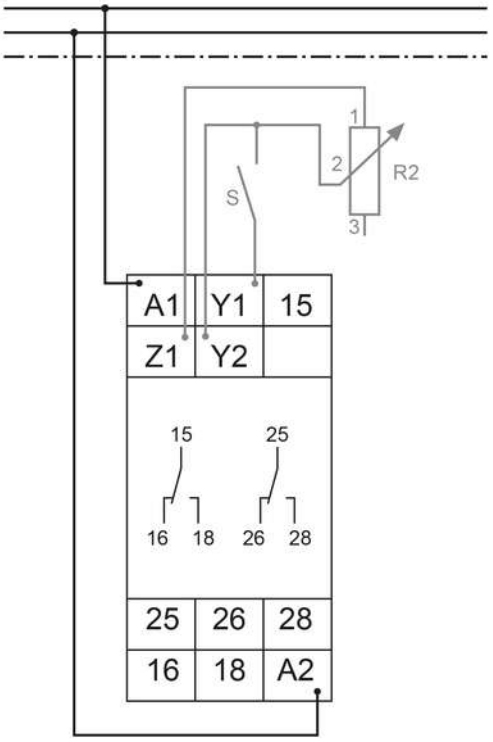
EAC	✓
CE	Open document
UL	Open document
c(UL)	Open document
REACH	Open document
WEEE	Open document
TSCA	Open document
RoHs	Open document
CMRT	Open document

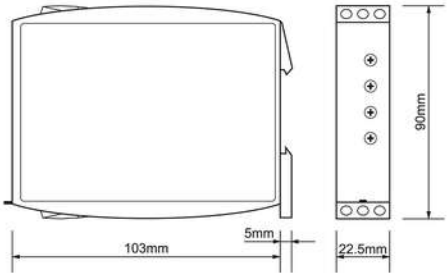
CAD Files

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Media & drawings











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