

TIME RELAYS

MULTIFUNCTION TIME RELAY ZR5MF011



SCHRACK-INFO

- Timers multifunctional
- Up to 7 functions
- 7 time ranges
- Wide input voltage range
- 1 change over contact
- Width 17,5 mm
- Installation design

TECHNICAL DATA

1. Functions

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

E	ON delay
R	OFF delay
Ws	Single shot leading edge with control input
Wa	Single shot trailing edge with control input
Es	ON delay with control input
Wu	Single shot leading edge voltage controlled
Bp	Flasher pause first

2. Time ranges

Time range	Adjustment range	
1 s	50 ms	1 s
10 s	500 ms	10 s
1 min	3 s	1 min
10 min	30 s	10 min
1 h	3 min	1 h
10 h	30 min	10 h
100 h	5 h	100 h

3. Indicators

Green LED U/t ON:	indication of supply voltage
Green LED U/t flashes:	indication of time period
Yellow LED R ON/OFF:	indication of relay output

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
Mounted on DIN-rail TS 35 according to EN 50022
Mounting position: any
Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
Tightening torque: max. 1 Nm
Terminal capacity:
1 x 0.5 to 2.5 mm² with/without multicore cable end
1 x 4 mm² without multicore cable end
2 x 0.5 to 1.5 mm² with/without multicore cable end
2 x 2.5 mm² flexible without multicore cable end

5. Input circuit

Supply voltage:	terminals A1(+)-A2
Type ZR5MF025	12 to 240 V AC/DC
Tolerance:	12 V-10% to 240 V+10%
Rated consumption:	4 VA (1.5 W)
Rated frequency:	AC 48 to 63 Hz
Duty cycle:	100%
Reset time:	100 ms
Residual ripple for DC:	10%
Drop-out voltage:	>30% of minimum rated supply voltage

Overvoltage category:	III (according to IEC 60664-1)
Rated surge voltage:	4kV

6. Output circuit

1 potential free change over contact	
Rated voltage:	250 V AC
Switching capacity:	2000 VA (8 A / 250 V)
Fusing:	8 A fast acting
Mechanical life:	20 x 10 ⁶ operations
Electrical life:	2 x 10 ⁵ operations at 1000 VA resistive load max. 60/min at 100VA resistive load max. 6/min at 1000VA resistive load (according to IEC 947-5-1)
Switching frequency:	

Overvoltage category:	III. (according to IEC 60664-1)
Rated surge voltage:	4kV

7. Control input

Input not potential free:	terminals A1-B1
Loadable:	yes
Max. line length:	10m
Trigger level (sensitivity):	automatic adaption to supply voltage
Min. control pulse length:	DC 50 ms / AC 100 ms

8. Accuracy

Base accuracy:	±1% of maximum scale value
Adjustment accuracy:	<5% of maximum scale value
Repetition accuracy:	<0.5% or ±5 ms
Voltage influence:	-
Temperature influence:	≤0.01% / °C

9. Ambient conditions

Ambient temperature:	-25 to +55 °C (according to IEC 68-1)
Storage temperature:	-25 to +70 °C
Transport temperature:	-25 to +70 °C
Relative humidity:	15% to 85% (according to IEC 721-3-3 class 3K3)
Pollution degree:	2, if built in 3 (according to IEC 664-1)
Vibrations resistance:	10 to 55 Hz 0.35 mm (according to IEC 68-2-6)
Shock resistance:	15 g 11 ms (according to IEC 68-2-27)

FUNCTIONS

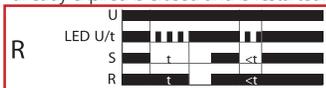
ON delay (E)

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.



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 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). If the control contact is closed again before the interval t has expired, the interval already expired is erased and is restarted.



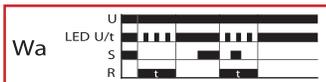
Single shot leading edge with control input (Ws)

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.



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.

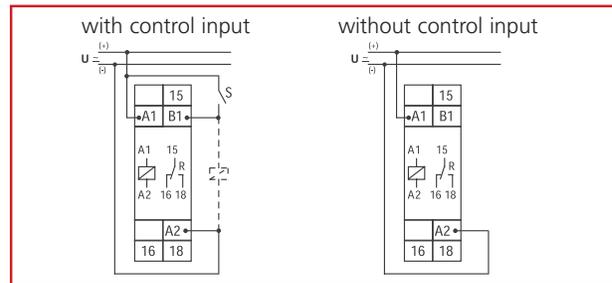


Flasher pause first (Bp)

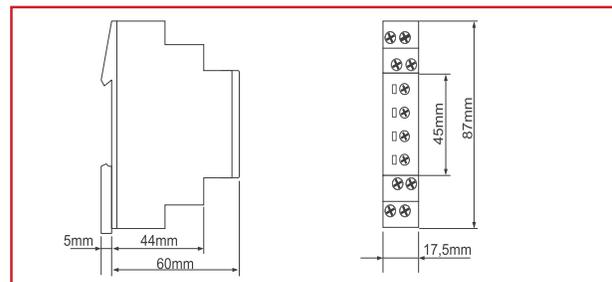
When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired, the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins again. After the interval t has expired, the output relay switches into off-position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



CONNECTIONS



DIMENSIONS



WEIGHT

Single packing: 72 g

DESCRIPTION	EAN CODE	AVAILABLE	ORDER NO.
Multifunction time relay E, R, Ws, Wa, Es, Wu, Bp, 12-240VAC, 1 change over, 8A/250V	9004840459043		ZR5MF011