

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

ON delay R OFF delay

Ws Single shot leading edge with control input Wa Single shot trailing edge with control input

ON delay with control input Es

Wu Single shot leading edge voltage controlled

Flasher pause first

Function sets of the distinct types are according to table ordering information or printing on the unit.

### 2. Time ranges

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

# 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 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 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

Tolerance: Rated consumption:

Supply voltage: 24 to 240V AC/DC

terminals A1(+)-A2 -15% to +10% 4VA (1.5W)

Rated frequency: AC 48 to 63Hz Duty cycle: 100% Reset time: 100ms Residual ripple for DC:

>30% of minimum rated supply voltage Drop-out voltage: Overvoltage category: III (in accordance with IEC 60664-1)

Rated surge voltage:

### 6. Output circuit

1 potential free change over contact Rated voltage: 250V AC

2000VA (8A / 250V) Switching capacity: Fusing: 8A fast acting Mechanical life: 20 x 106 operations Electrical life: 2 x 10<sup>5</sup> operations at 1000VA resistive load

max. 6/min at 1000VA resistive load Switching frequency: (in accordance with IEC 60947-5-1)

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

Rated surge voltage: 4kV

### 7. Control input

Input not potential free: terminals A1-B1

Loadable: Max. line length: 10m

Trigger level (sensitivity): automatic adaption to supply voltage

Min. control pulse length: DC 50ms / AC 100ms

# 8. Accuracy

±1% of maximum scale value Base accuracy: Adjustment accuracy: <5% of maximum scale value

Repetition accuracy: <0.5% or ±5ms Voltage influence: ≤0.01% / °C Temperature influence:

# 9. Ambient conditions

Ambient temperature: -25 to +55°C -25 to +70°C Storage temperature: -25 to +70°C Transport temperature: Relative humidity: 15% to 85%

(in accordance with IEC 60721-3-3

class 3K3)

2 (in accordance with IEC 60664-1) Pollution degree:

# **Functions**

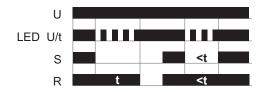
### ON delay (E)

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.



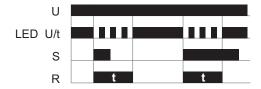
### OFF delay (R)

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 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.



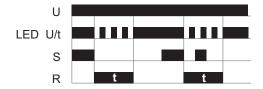
# Single shot leading edge with control input (Ws)

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 trailling 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 ouput 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).

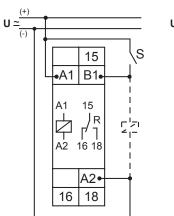
The output relay is triggered at a ratio of 1:1 until the supply voltage is interrupted.

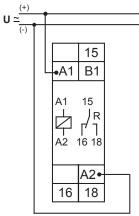


# **Connections**

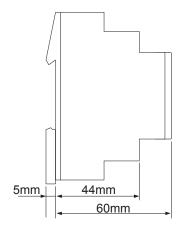
with control input

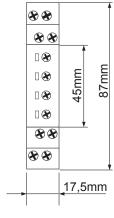
without control input





# **Dimensions**





pes