

### Timers - Multifunctional

### **ENYA** series Up to 7 functions 7 time ranges Wide input voltage range 1 change over contact Width 17.5 mm Installation design



E1ZM, E1Z1

### **Technical data**

#### 1. Functions

The function has to be set before connecting the relay to the supply voltage. <u>\_\_\_\_</u>

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
Вр	Flasher pause first

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

#### 2. Time ranges Т

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: Green LED U/t flashes: Yellow LED R ON/OFF:

#### 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

indication of supply voltage

indication of time period

indication of relay output

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: terminals A1(+)-A2 E1Z... 12-240VAC/DC: 12 to 240V AC/DC 12V -10% to 240V +10% Tolerance E1Z... 24-240VAC/DC: 24 to 240V AC/DC Tolerance: 24V-15% to 240V+10% Rated consumption: 4VA (1.5W) Rated frequency: AC 48 to 63Hz 100% Duty cycle: 100ms Reset time: Residual ripple for DC: 10% Drop-out voltage: >30% of minimum rated supply voltage Overvoltage category: III (in accordance with IEC 60664-1) 4kV Rated surge voltage:

#### 6. Output circuit

1 potential free change over contact Rated voltage: Switching capacity: Fusing: Mechanical life: Electrical life: Switching frequency: Overvoltage category:

Rated surge voltage:

#### 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 50ms / AC 100ms

#### 8. Accuracy

Base accuracy: Adjustment accuracy: Repetition accuracy: Voltage influence: Temperature influence:

≤0.01% / °C

-25 to +55°C -25 to +70°C

-25 to +70°C

15% to 85%

#### 9. Ambient conditions

Ambient temperature: Storage temperature: Transport temperature: Relative humidity:

Pollution degree:

#### 10. Weight Single packing: Package 10pcs:

72g 670g per Package

250V AC 2000VA (8A / 250V) 8A fast acting 20 x 10<sup>6</sup> operations 2 x 10<sup>5</sup> operations at 1000VA resistive load max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1) III (in accordance with IEC 60664-1) 4kV

±1% of maximum scale value <5% of maximum scale value <0.5% or ±5ms

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(in accordance with IEC 60721-3-3 class 3K3)

2, if built-in 3 (in accordance with IEC 60664-1)

## **Functions**

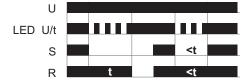
#### ON delay (E)

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.



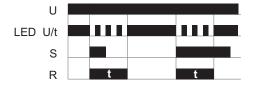
#### OFF delay (R)

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.



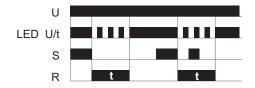
#### Single shot leading edge with control input (Ws)

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.



#### Bp - Cíclico simétrico, comienzo por pausa

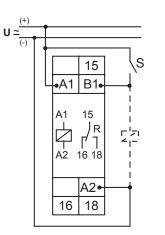
Al aplicar la tensión U, el relé R conecta en un tiempo t, desarrollando un ciclo simétrico con tiempos t iguales de conexión y desconexió.

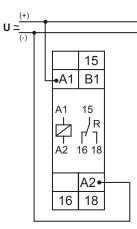


## Connections

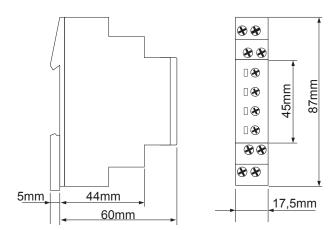
### with control input

without control input





## **Dimensions**



## **Ordering information**

Types	Functions	Supply voltage	Part Nr. (PQ 1)	Part Nr. (PQ 10)
E1ZM10 12-240V AC/DC	E,R,Ws, Wa, Es, Wu, Bp	12-240V AC/DC	110100	110100A
E1ZM10 24-240V AC/DC	E,R,Ws, Wa, Es, Wu, Bp	24-240V AC/DC	110200	110200A
E1ZMQ10 24-240V AC/DC	E,R, Wu, Bp	24-240V AC/DC	110202	110202A
E1Z1E10 24-240V AC/DC	E	24-240V AC/DC		110204A
E1Z1R10 24-240V AC/DC	R	24-240V AC/DC		110205A

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Subject to alterations and errors



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