Timers - Multifunctional

E1ZMWt10
Part No. 110217

ENYA series
7 functions
7 time ranges
Wide input range
1 change over contact
Width 17.5mm
Installation design



Technical data

1. Functions
The function 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
Wtf	Pulse sequence monitoring edge triggered
Wto	Pulse sequence monitoring edge triggered with on state
Wt	Pulse sequence monitoring

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 50022
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 2.5mm² 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

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

6. Output circuit
1 potential free change over contact

Rated voltage:	250V AC
Switching capacity:	2000VA (8A / 250V)
Fusing:	8A fast acting
Mechanical life:	20 x 10^6 operations
Electrical life:	2 x 10^5 operations at 1000VA resistive load
Switching frequency:	max. 6/min at 1000VA resistive load (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:	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 ±5ms
Voltage influence:	-
Temperature influence:	≤0.01% / °C

9. Ambient conditions

Ambient temperature:	-25 to +55°C
Storage temperature:	-25 to +70°C
Transport temperature:	-25 to +70°C
Relative humidity:	15% to 85% (in accordance with IEC 60721-3-3 class 3K3)
Pollution degree:	2, if built in 3 (in accordance with IEC 60664-1)

10. Weight

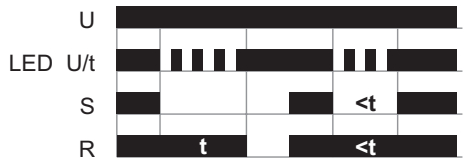
Single packing:	72g

Functions

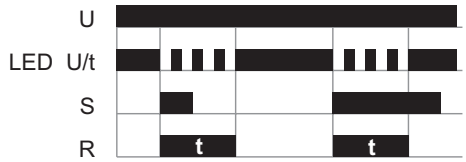
ON delay (E)
When the supply voltage U is applied, the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R switches into on-position (yellow LED illuminated). This status remains until the supply voltage is interrupted.
If the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



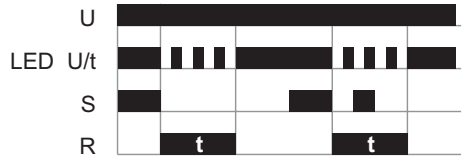
OFF delay (R)
The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (yellow LED illuminated). If the control contact S is opened, the set interval t begins (green LED flashes). After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



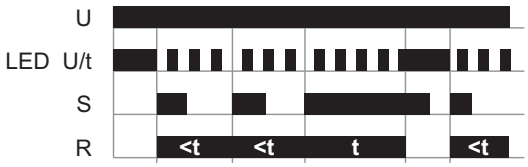
Single shot leading edge with control input (Ws)
The supply voltage U must be constantly applied to the device (green LED U/t illuminated). When the control contact S is closed, the output relay R switches into on-position (green LED U/t illuminated) and the set interval t begins (green LED U/t flashes). After the interval t has expired (green LED U/t illuminated) the output relay R 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.



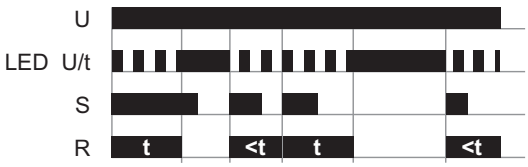
Single shot trailling edge with control input (Wa)
The supply voltage U must be constantly applied to the device (green LED U/t illuminated). Closing the control contact S has no influence on the condition of the output R. When the control contact S is opened, the output relay R switches into on-position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



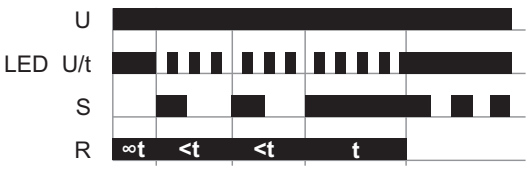
Pulse sequence monitoring edge triggered (Wtf)
When the supply voltage U is applied the green LED U/t illuminated. When the control contact S is closed (rising edge) the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). So that the output relay R remains in on-position, the control contact S must be opened and closed again within the set interval t. If this does not happen, the output relay R switches into off-position. If a new positive edge on the control input is detected, the interval t begins (green LED U/t flashes) and the output relay R switches into on-position (yellow LED illuminated).



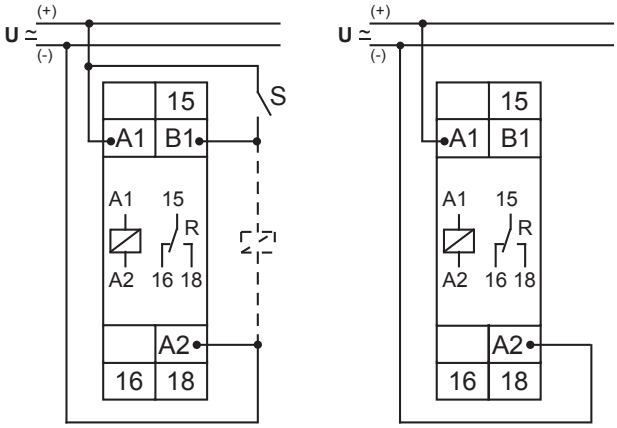
Pulse sequence monitoring edge triggered with on state (Wto)
When the supply voltage U is applied the green LED U/t illuminated and if the control input S ist on at the same time the set interval t begins (green LED U/t flashes) and the output relay R switches into on-position (yellow LED illuminated). If there is no rising edge detected on the control input S, then the Relay R switches into off state. When the control contact S is closed (rising edge) again the output relay R switches into on-position (yellow LED illuminated) and the set interval t begins (green LED U/t flashes). So that the output relay R remains in on-position, the control contact S must be opened and closed again within the set interval t. If this does not happen, the output relay R switches into off-position If a new positive edge on the control input is detected, the interval t begins (green LED U/t flashes) and the output relay R switches into on-position (yellow LED illuminated).



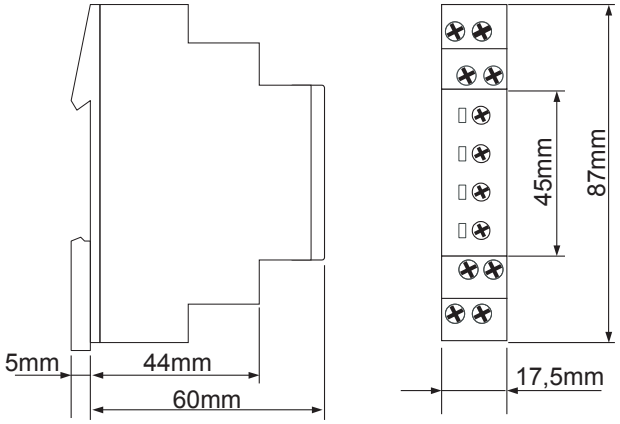
Pulse sequence monitoring (Wt)
When the supply voltage U is applied (green LED U/t illuminated), the output relay R switches into on-position (yellow LED illuminated). When the control contact S is closed, the set interval t begins (green LED U/t flashes). So that the output relay R remains in on-position, the control contact S must be opened and closed again within the set interval t. If this does not happen, the output relay R switches into off-position and all further pulses at the control contact are ignored. To restart the function the supply voltage must be interrupted and re-applied.



Connections



Dimensions



Ordering information

Types	Functions	Supply voltage	Part Nr. (PQ 1)
E1ZMWt10 24-240V AC/DC	E, R, Ws, Wa, Wtf, Wto, Wt	24-240V AC/DC	110217

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Subject to alterations and errors