



- Single Function Time Relays
- 7 time rangers 1s...100h
- Universal supply of 12V AC/DC to 240V AC/DC
- Low power consumption - <2.5 VA or < 1.5 W - high energy efficiency
- Installation design DIN 35mm
- Width 17.5mm
- For building and industrial applications
- In accordance with PN - EN 61812-1



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**Technical data**

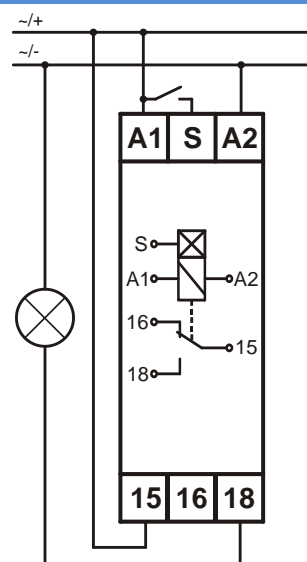
**Description**

Output circuit		MTR17-...-U240-116	
Contact arrangement		1 form C	
Rated voltage	V AC	250/400	
Switching current range AC1	A/V AC	16/250	
DC1	A/V DC	16/24	
Switching load range AC1	VA	4 000	
Contact resistance	mΩ	≤ 100 max.(at 1A 6 VDC)	
Max. rated current ②	A	12	
Input circuit			
Supply voltage U <sub>n</sub> AC/DC (AC:50-60Hz)	V	12...240	
Tolerance		0,8...1,1U <sub>n</sub> (9,6...264V)	
Rated consumption	AC VA	≤ 2,5	
	DC W	≤ 2	
Rated frequency	Hz	47...63	
Control input S		0,7U <sub>n</sub>	
▪ Min. trigger level S-A2 ( sensitivity) ①		AC: ≥ 90 DC: ≥ 45	
▪ Min. control pulse length	ms	yes	
▪ Loadable		yes	
Rated surge voltage	V	1 000	
Max. line length	m	10	
Insulation			
Insulation rated voltage	V AC	250	
Rated surge voltage	V	2 500 1,2/50μs	
Overvoltage category		III	
Dielectric strength			
▪ Input - output	V AC	4 000	
▪ Open contact		1 000	
General data			
Electrical life AC1 at 1000 VA resistive load		≥ 1,5 x 10 <sup>5</sup> operations	
Mechanical life		≥ 3 x 10 <sup>7</sup> operations	
Dimensions (L x W x H) / Weight	mm / g	90 x 17,5 x 66 / 53g	
Ambient temperature / storage temperature	°C	-40...+45 / -20...+70	
IP rating		IP20	
Relative humidity	%	to 85	
Shock resistance	g	15	
Vibration resistance	mm	0,35 10...55Hz	
Time module data			
Functions		TA/TB, TC/TD, BA	
Time ranges		1s, 10s, 1m, 10m, 1h, 10h, 100h	
Timing adjustment		smooth 0,1...1,0 x time range	
Setting accuracy	%	5 ②	
Repeatability	%	0,5 ②	
Recovery time	ms	≤ 100	

The single function timers are designed for applications in automation and control. Universal power supply allows you to connect to any source of AC or DC voltage from 12 to 240V.

The brain chip of your application-specific miniature controller is the ideal solution for realizing custom control applications within minimum space at low-cost.

**Connections**



**Mounting**

Relays are designed for direct mounting on 35 mm rail mount acc. to PN-EN 60715. Operational position - any. Connections: max. cross section of the cables: 1 x 2,5 mm<sup>2</sup> / 2 x 1,5 mm<sup>2</sup> (1 x 14 / 2 x 16 AWG), length of the cable deinsulation: 6,5 mm, max. tightening moment for the terminal: 0,6 Nm.

- ① The control input S is activated by connection to A1 terminal via the external control contact S.
- ② For first range setpoint (1s) setting accuracy and repeatability are smaller than the given ones in technical parameters (significant influence of the operational relay operating time, processor start-time, and the moment of supply switching as referred to the AC). Calculated from the final range values, for the setting direction from minimum to maximum.
- ③ Maximum rated current together of all the relay contacts.



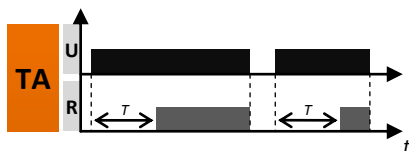
**Attention**

Read and understand these instructions before installing, operating or maintaining the equipment.

Never carry out work on live parts! Danger of fatal injury! The product must not be used in case of obvious damage. To be installed by an authorized person.



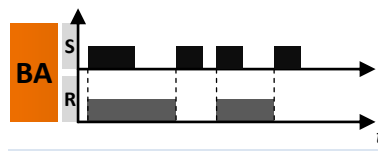
Time functions



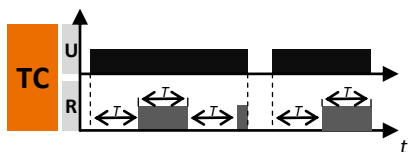
**ON delay (TA)** - on applying the supply voltage U the set interval T begins - off-delay of the output relay R. After the interval T has lapsed, the output relay R switches on and remains on until supply voltage U is interrupted.  
To execute TA function the S contact must be floating.



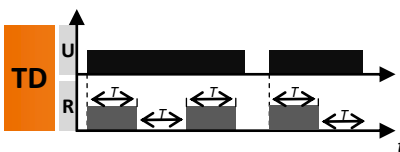
**ON for the set interval (TB)** - applying the supply voltage U immediately switches the output relay R on for the set interval T. After the interval T has lapsed, the output relay R switches off.  
To execute TB function the S contact must be connected to A1.



**Bistable operation with the control contact S (BA)** - The input of the time relay is supplied with U voltage continuously. Closing of the control contact S immediately switches on the output relay R. Each next closing of the control contact S results in a change of the status of the output relay R to an opposite one (the feature of a bistable relay).



**Symmetrical cyclical operation pause first (TC)** - applying the supply voltage U starts the cyclical operation from the T interval - switching the output relay R off followed by switching on the output relay R for the interval T. The cyclical operation lasts until the supply voltage U is interrupted.  
To execute TC function the S contact must be floating.

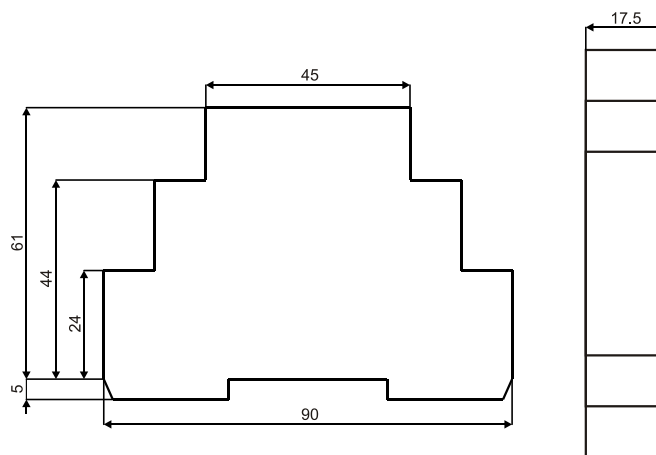


**Symmetrical cyclical operation pulse first (TD)** - applying the supply voltage U starts the cyclical operation from switching on the output relay R for the set interval T. After the interval T has lapsed, the output relay R switches off for the interval T. The cyclical operation lasts until the supply voltage U is interrupted.  
To execute TD function the S contact must be connected to A1.

Coding

Dimensions

MTR17-TAB-U240-116	TA and TB functions
MTR17-TCD-U240-116	TC and TD functions
MTR17-BA-U240-116	BA function



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