



- Multifunction timers
- 7 functions, 7 time ranges
- Wide input voltage range 12...240V AC/DC
- Low power consumption - <2.5VA or < 1.5W
- high energy efficiency
- Installation design DIN 35mm
- 17.5mm width
- For building and industrial applications
- In accordance with PN - EN 61812-1



Technical data

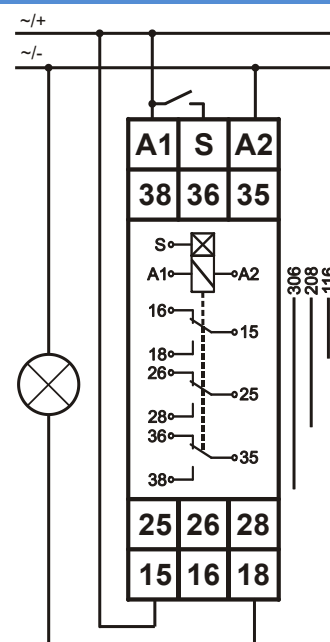
Output circuit		MTR17-...-116	MTR17-...-208	MTR17-...-306
Contact arrangement		1 form C	2 form C	3 form C
Rated voltage		V AC	250/400	
Switching current range	AC1	A/V AC	16/250	8/250
	DC1	A/V DC	16/24	8/24
Switching load range AC1		VA	2 000	2 000
Contact resistance		mΩ	≤ 100	
Max. rated current ③		A	12	
Input circuit				
Supply voltage U _n AC/DC (AC:50-60Hz)		V	12...240	
Tolerance			0,8...1,1U _n (9,6...264V)	
Rated consumption	AC	VA	≤ 2,5	
	DC	W	≤ 2	
Rated frequency		Hz	47...63	
Control input S			0,7U _n	
▪ Min. trigger level S-A2 (sensitivity) ① ▪ Min. control pulse length ▪ Loadable		ms	AC: ≥ 90 DC: ≥ 45	
			yes	
			1 000	
Rated surge voltage		V	1 000	
Max. line length		m	10	
Insulation				
Insulation rated voltage		V AC	250	
Rated surge voltage		V	4 000 1,2/50μs	
Overvoltage category			III	
Dielectric strength				
▪ Input - output ▪ Open contact		V AC	4 000	
			1 000	
General data				
Electrical life AC1 at 50% I _n			≥ 1,5 x 10 ⁵	≥ 5 x 10 ⁴
Mechanical life			≥ 3 x 10 ⁷	≥ 10 ⁷
Dimensions (L x W x H) / Weight		mm / g	90 x 17,5 x 66 / 53g	90 x 17,5 x 66 / 57g
Ambient temperature / storage temperature		°C	-40...+55 / -20...+70	
IP rating			IP20	
Relative humidity		%	85	
Shock resistance		g	15	
Vibration resistance		mm	0,35 10...55Hz	
Time module data				
Functions			TM, TE, TH, TN,TO,TL,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	

Description

Multifunction time relays are particularly accurate in reaching the time limit even over long periods of time. With the universal supply of 12V AC/DC to 240V AC/DC and different functions it is possible to find solutions even to the most challenging problems.

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 35mm DIN rail according to PN-EN 60715 in any operational position. Connections: max. cross section of the cables: 1x2,5 mm²/2x1,5mm² (1x14/2x16 AWG). Cable deinsulation length: 6,5 mm, maximum tightening moment for the terminal 0,6 Nm.

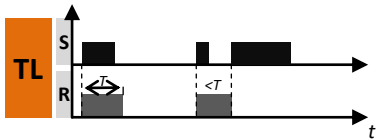
- ① The control input S is activated by connection to A1 terminal via the external control contact S.
- ② For first range setpoint (1s) setting accuracy and repeatability are smaller than the given ones in technical parameters (significant influence of the operational relay operating time, processor 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

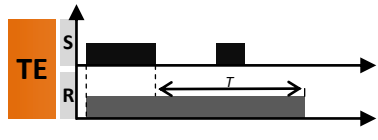


Indicators:
Green LED ON: indication of supply voltage
Green LED flashes: indication of time period
Yellow LED: indication of relay output

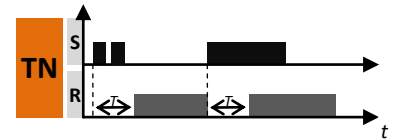
Time functions



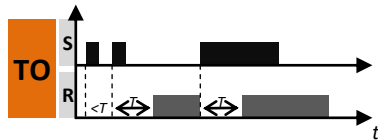
ON for the set interval controlled by closing of the control contact S, with the function of switching off the output relay R prior to the lapse of the interval T (TL) - the input of the time relay is supplied with voltage U continuously. Closing of the control contact S immediately switches the output relay R on for the set interval T. After the interval T has lapsed, the output relay R is switched off. Any next closing of the control contact S switches on the output relay R again. In case the control contact S is closed again during the interval T, the output relay is immediately switched off, and the measured interval is cancelled. In the course of the interval T, any opening of the control contact S does not affect the function to be performed.



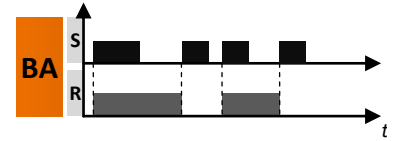
OFF delay with the control contact S, without extension of the interval T (TE) - the input of the time relay is supplied with voltage U continuously. Closing of the control contact S immediately switches on the output relay R. Opening of the control contact S starts the set time of the delayed switching off of the output relay R. After the interval T has lapsed, the output relay R switches off. Opening or closing of the control contact S within the interval T does not affect the function to be performed.



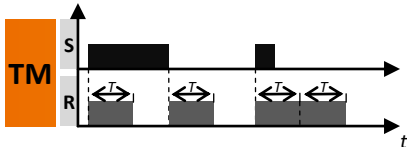
ON delay with the control contact S without the interval T extension (TN) - the input of the time relay is supplied with voltage U continuously. Closing of the control contact S starts the interval T - on-delay of the output relay R. After the interval T has lapsed, the output relay R switches on and remains in this position until the control contact S is closed again, which instantly switches the output relay off for the time T, and after the interval T has lapsed, the output relay R switches on again. In the course of measurement of the interval T, opening or closing of the control contact S does not affect the status of the output relay R. The output relay R may be switched on again after the current cycle has been completed.



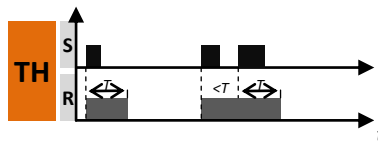
ON delay with closing of the control contact, with the interval T extended (TO) - the input of the time relay is supplied with voltage U continuously. Closing of the control contact S starts the interval T, and after the interval T has lapsed, the output relay R switches on and remains in this position until the control contact S is closed again or until the supply voltage U is interrupted. Closing of the control contact S resets the thus far measured time and starts the new interval T.



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).

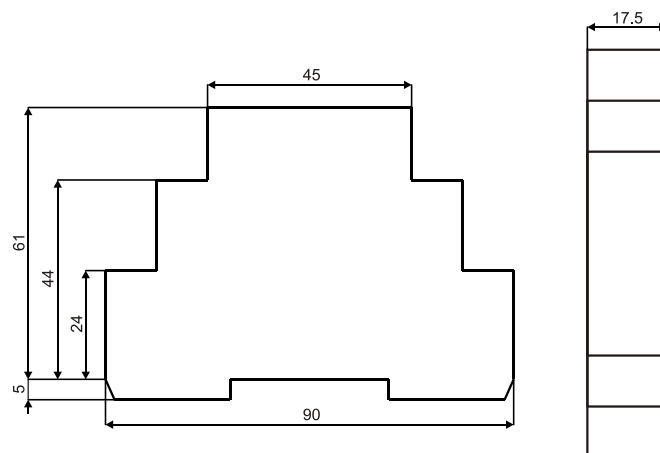


Single shot leading and single shot trailing edge with control input (TM) - the supply voltage U must be constantly applied to the device. When the control contact S is closed, the output relay R switches into on-position and the set interval t begins. After the interval t has expired, the output relay R switches into off-position. If the control contact S is opened, the output relay R switches into on-position again and the set interval t begins (green LED U/t flashes). After the interval t has expired the output relay R switches into off-position (yellow LED not illuminated). During the interval, the control contact S can be operated any number of times.



ON for the set interval by closing the control contact S, with extension of the interval T - extension of the time of switching on the output relay R (TH) - the input of the time relay is supplied with voltage U continuously. Closing of the control contact S immediately switches the output relay R on for the set interval T. After the interval T has lapsed, the output relay R is switched off. The next closing of the control contact S immediately switches on the output relay R for the interval T. In case the control contact S is closed within the interval T, the measured time is cancelled, and the interval T starts again.

Dimensions



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