

## Description

The MTR10 Timer Relay combines a well-proven mechanical contact system with the flexibility of an electronic timer. As a replacement of a standard automotive relay, the MTR10 provides a possibly missing ON or OFF delay.

It is suitable for standard automotive relay sockets to ISO 7588 (ISO Mini).

## Applications

The MTR10 Timer Relay is available for DC 12 V and DC 24 V applications.

### Scope of applications:

- passenger cars
- trucks
- buses
- construction machinery and emergency cars

### Typical applications:

- Control of pumps, valves, illumination or motors, which are meant to overtravel or stay open for a defined period of time
- Co-ordinated, sequential switch-on of loads to avoid load peaks (e.g. with fans)

## Benefits

- The MTR10's design ensures reverse polarity protection; it is supplied with roughly pre-set timer settings. This saves time and avoids errors in production.
- The MTR10 provides any vehicles in an uncomplicated way with ON and OFF delay without changing the controlgear software. It is sufficient to replace a standard relay by the MTR10 in the power distribution system.

## Qualifications

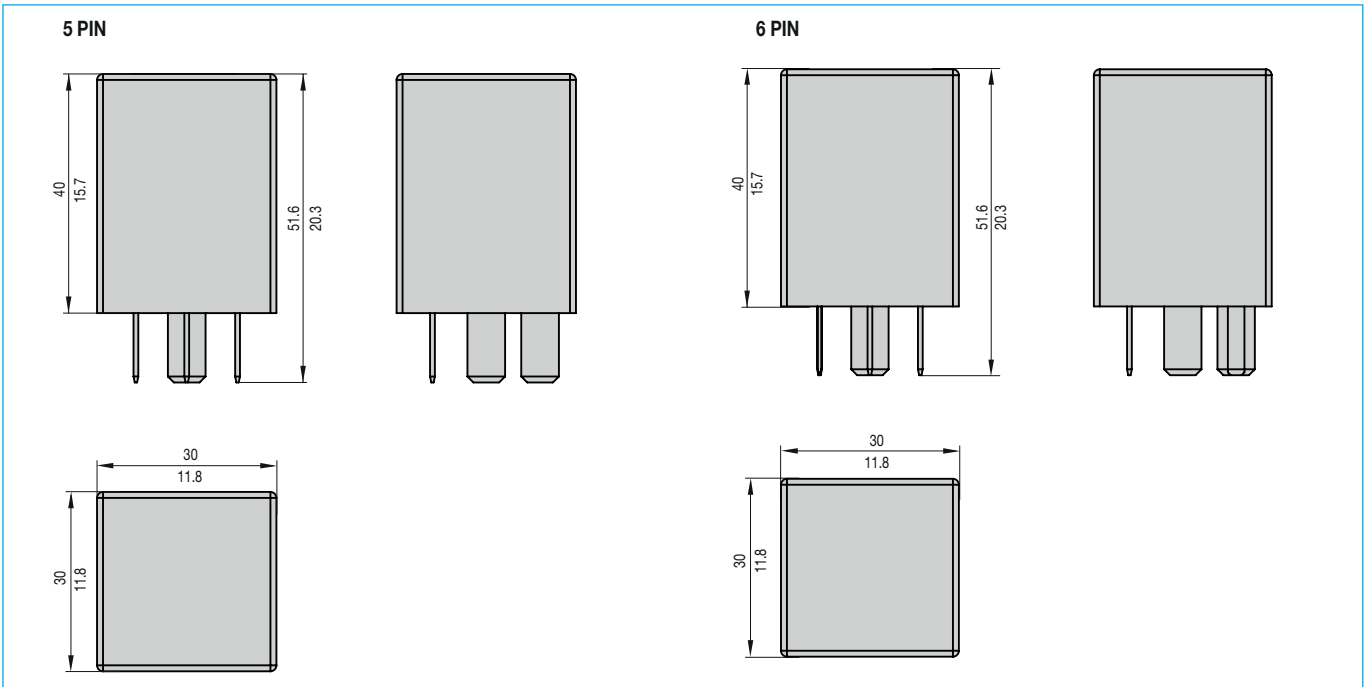
<b>Degree of protection</b>	IP50
<b>Noise immunity</b>	2006/28 EG DIN40839
<b>E1 number</b>	upon request



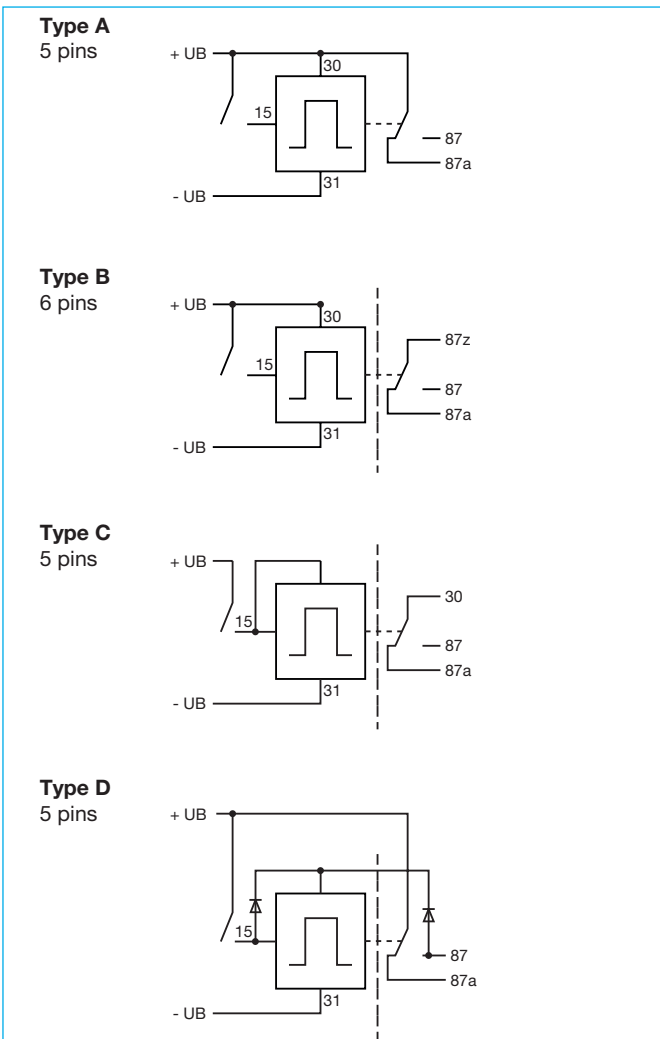
## Technical data

Voltage ratings	12 V	24 V
Operating voltage	9 V...15 V	18 V...32 V
Closed current	< 10 mA	
Test voltage	12 V	24 V
Tolerance	5 %	
Time range	selection via order numbering key	
Input	0 V...15 V	0 V...32 V
Response time	< 100 ms	
Switching time ON	typically 10 ms	
Switching time OFF	typically 5 ms	
Operating temperature	-40 °C...-85 °C	
Typical life	electrically 10 <sup>5</sup>	
Mass	30 Gramm	
Dimensions (lxwxh)	30 mm x 30mm x 40 mm	
<b>Materials</b>		
Blade terminals	A6.3 x 0.8 DIN 46 244 CuZn 37 F37	
Housing material	PA6GF	
<b>Output</b>	change-over contact	
<b>Power output at 12 V / 25 °C</b>	240 W (10 A) 720 W (30 A - upon request, not on stock)	

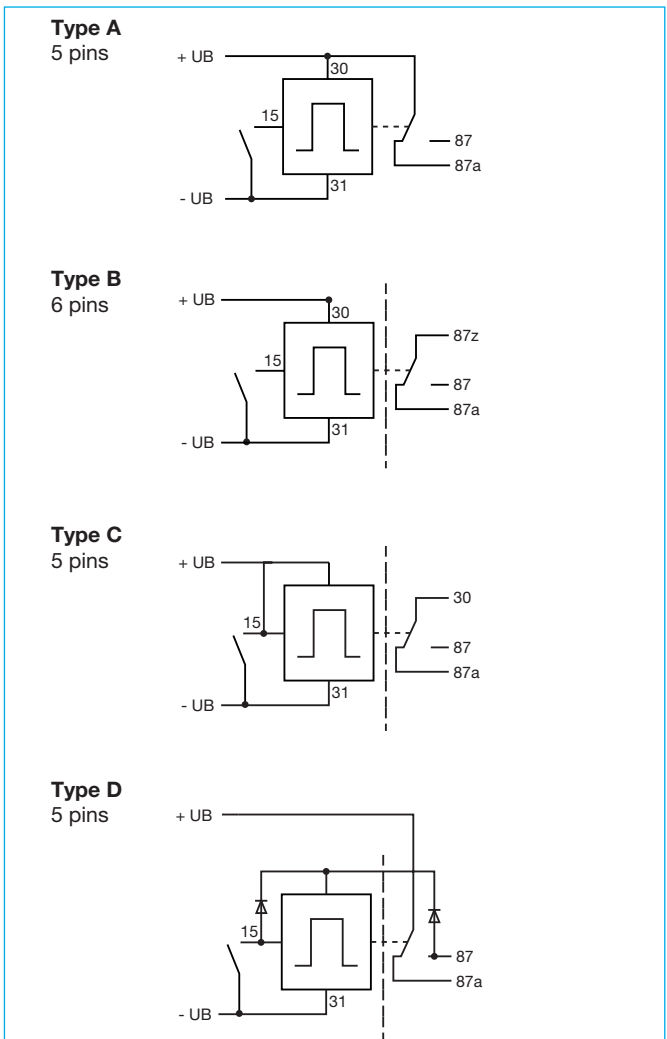
**Dimensions**



**Schematic diagram / Pin assignment / Positive activation**

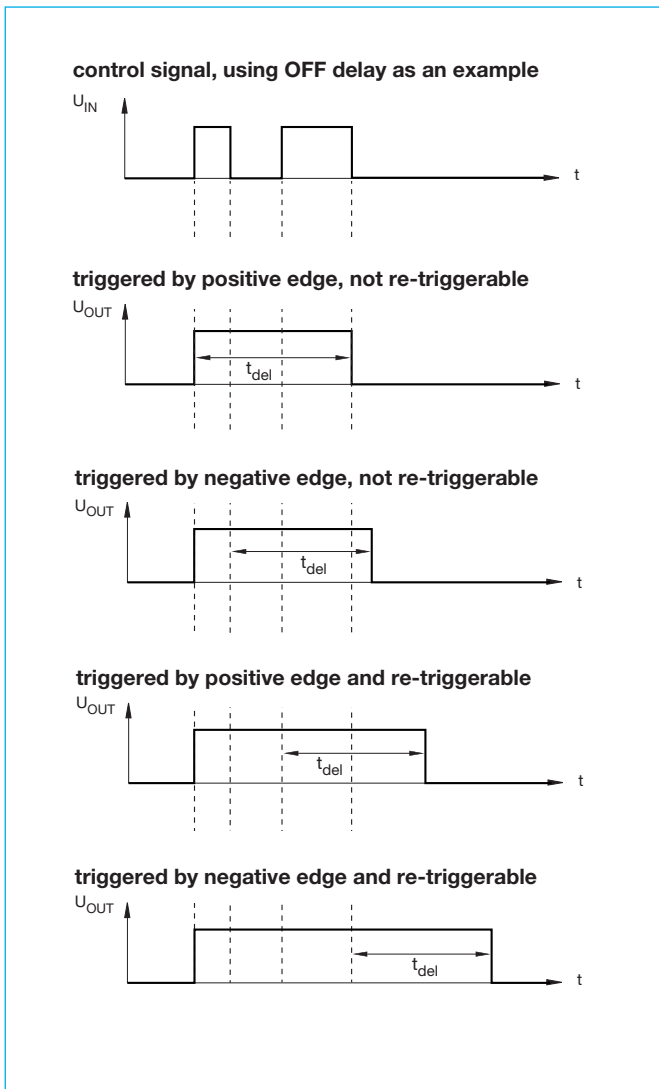


**Schematic diagram / Pin assignment / Negative activation**



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Functional diagram



Order numbering code

Type No.	MTR10	Mechanical Timer Relay
<b>Operating voltage</b>		
1	12 V	
2	24 V	
<b>Function / control</b>		
1	ON delay / type A	
2	ON delay / type B	
3	ON delay / type C	
4	ON delay / type D	
6	OFF delay / type A	
7	OFF delay / type B	
8	OFF delay / type C	
9	OFF delay / type D	
<b>Control level</b>		
0	positive	
1	negative	
<b>Edge direction</b>		
0	positive edge	
1	negative edge	
<b>Re-triggerable</b>		
0	no	
1	yes	
<b>Option 4</b>		
0	without	
<b>Time unit</b>		
S	seconds	
M	minutes	
H	hours (max. 12)	
<b>Time value</b>		
01	1	
02	2	
03	3	
04	4	
05	5	
06	6	
07	7	
08	8	
09	9	
10	10	
11	11	
...	to	
59	59	
<b>Current ratings</b>		
	10 A	
	30 A (upon request, not on stock)	
MTR10 - 1 0 0 0 - 0 0 0 - M 14 - 10 A ordering example		

All information and data given on our products are accurate and reliable to the best of our knowledge, but E-T-A does not accept any responsibility for the use in applications which are not in accordance with the present specification. E-T-A reserves the right to change specifications at any time in the interest of improved design, performance and cost effectiveness. Dimensions are subject to change without notice. Please enquire for the latest dimensional drawing with tolerances if required. All dimensions, data, pictures and descriptions are for information only and are not binding. Amendments, errors and omissions excepted. Ordering codes of the products may differ from their marking.