

Description

The MTR30 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 MTR30 provides a possibly missing ON or OFF delay.

The MTR30 Timer Relay can be adjusted on site by means of a position switch with 10 positions and a potentiometer on the housing top with a small screw driver. Depending on the version ordered, the 10 positions of the position switch are assigned different functions and time windows. The exact time can be adjusted with potentiometer.

The MTR30 is suitable for standard automotive relay sockets to ISO 7588 (ISO Mini).

Applications

The MTR30 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 MTR30's design ensures reverse polarity protection; it is supplied with roughly pre-set timer settings. This saves time and avoids errors in production.
- The MTR30 easily provides any vehicle with ON and OFF delay without changing the controlgear software. It is sufficient to replace a standard relay by the MTR30 in the power distribution system.
- The tremendous flexibility of the MTR30 timer relay eliminates the need of additional timer relays. Complexity of stockkeeping and related costs are cut drastically.

Qualifications

Degree of protection	IP50
Noise immunity	95/54 EG & DIN 40839
E1 number	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	100,000 cycles	
Mass	30 Gramm	
Dimensions (lxwxh)	30 mm x 30 mm x 40 mm	
Materials		
Blade terminals	A6.3 x 0.8 DIN 46 244 CuZn 37 F37	
Housing material	PA6GF	
Output	change-over contact	
Power output at 12 V / 25 °C	240 W (10 A) 720 W (30 A, upon request, not on stock)	

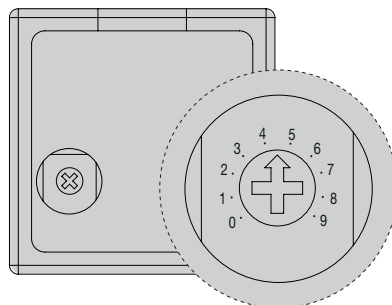
Order numbering code

Type No.	MTR30	mechanical timer relay
Operating voltage		
1	12 V	
2	24 V	
Function / pin assignment		
A	type A	
B	type B	
C	type C	
D	type D	
Option 1		
0	control input - triggered by rising edge - resettable	
1	control input - triggered by falling edge - resettable	
2	control input - triggered by rising edge - not resettable	
3	control input - triggered by falling edge - not resettable	
Option 2		
0	without	
Option 3		
0	without	
Option 4		
0	without	
Function / time window		
T	A position switch allows selection from 10 settings (function and time window)	
Settings		
01	position 0	OFF delay 0.5 sec...10 sec
	position 1	OFF delay 5 sec...60 sec
	position 2	OFF delay 0.5 min...10 min
	position 3	OFF delay 5 min...60 min
	position 4	OFF delay 0.5 hrs...6 hrs
	position 5	ON delay 0.5 hrs...6 hrs
	position 6	ON delay 5 min...60 min
	position 7	ON delay 0.5 min...10 min
	position 8	ON delay 5 sec...60 sec
	position 9	ON delay 0.5 sec...10 sec
02	position 0	OFF delay 0.5 sec...3 sec
	position 1	OFF delay 2 sec...12 sec
	position 2	OFF delay 5 sec...30 sec
	position 3	OFF delay 20 sec...120 sec
	position 4	OFF delay 0.5 min...3 min
	position 5	OFF delay 3 min...12 min
	position 6	OFF delay 5 min...30 min
	position 7	OFF delay 20 min...120 min
	position 8	OFF delay 0.5 hrs...3 hrs
	position 9	OFF delay 2 hrs...12 hrs
03	position 0	OFF delay 0.5 sec...3 sec
	position 1	ON delay 2 sec...12 sec
	position 2	ON delay 5 sec...30 sec
	position 3	ON delay 20 sec...120 sec
	position 4	ON delay 0.5 min...3 min
	position 5	ON delay 3 min...12 min
	position 6	ON delay 5 min...30 min
	position 7	ON delay 20 min...120 min
	position 8	ON delay 0.5 hrs...3 hrs
	position 9	ON delay 2 hrs...12 hrs
MTR30 - 2 A 0 - 0 0 0 - T 01	ordering example	

Order numbering code

MTR30 - 2 A 0 - 0 0 0 - T 01	ordering example
04	position 0 ON delay 0 min...1 min
	position 1 ON delay 1 min...5 min
	position 2 ON delay 5 min...15 min
	position 3 ON delay 15 min...30 min
	position 4 ON delay 30 min...1 hr
	position 5 ON delay 1 hr...2 hrs
	position 6 ON delay 2 hrs...3 hrs
	position 7 ON delay 3 hrs...4 hrs
	position 8 ON delay 4 hrs...5 hrs
	position 9 ON delay 5 hrs...6 hrs
05	position 0 OFF delay 0 min...1 min
	position 1 OFF delay 1 min...5 min
	position 2 OFF delay 5 min...15 min
	position 3 OFF delay 15 min...30 min
	position 4 OFF delay 30 min...1 hr
	position 5 OFF delay 1 hr...2 hrs
	position 6 OFF delay 2 hrs...3 hrs
	position 7 OFF delay 3 hrs...4 hrs
	position 8 OFF delay 4 hrs...5 hrs
	position 9 OFF delay 5 hrs...6 hrs
Current ratings	
	10 A
	30 A (upon request, not on stock)
MTR30 - 2 A 0 - 0 0 0 - T 01 - 10 A	ordering example

Enlarged view of position switch

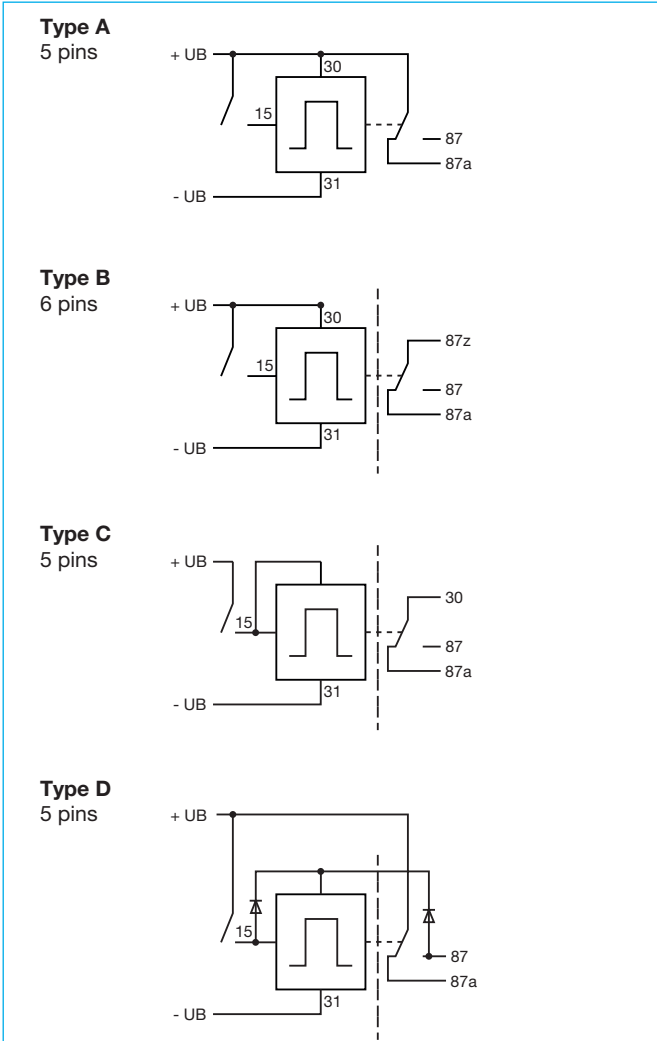


Note regarding MTR30-xxx-000-T01:

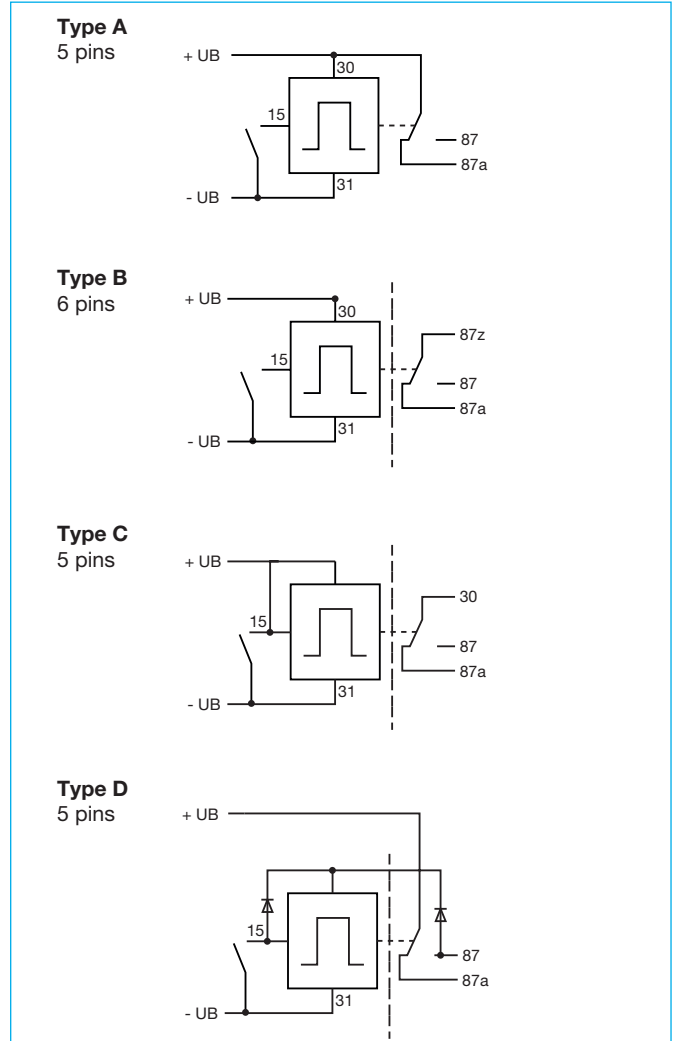
ON delay triggered by positive edge
 OFF delay triggered by negative edge
 independent of the edge selection in option 1

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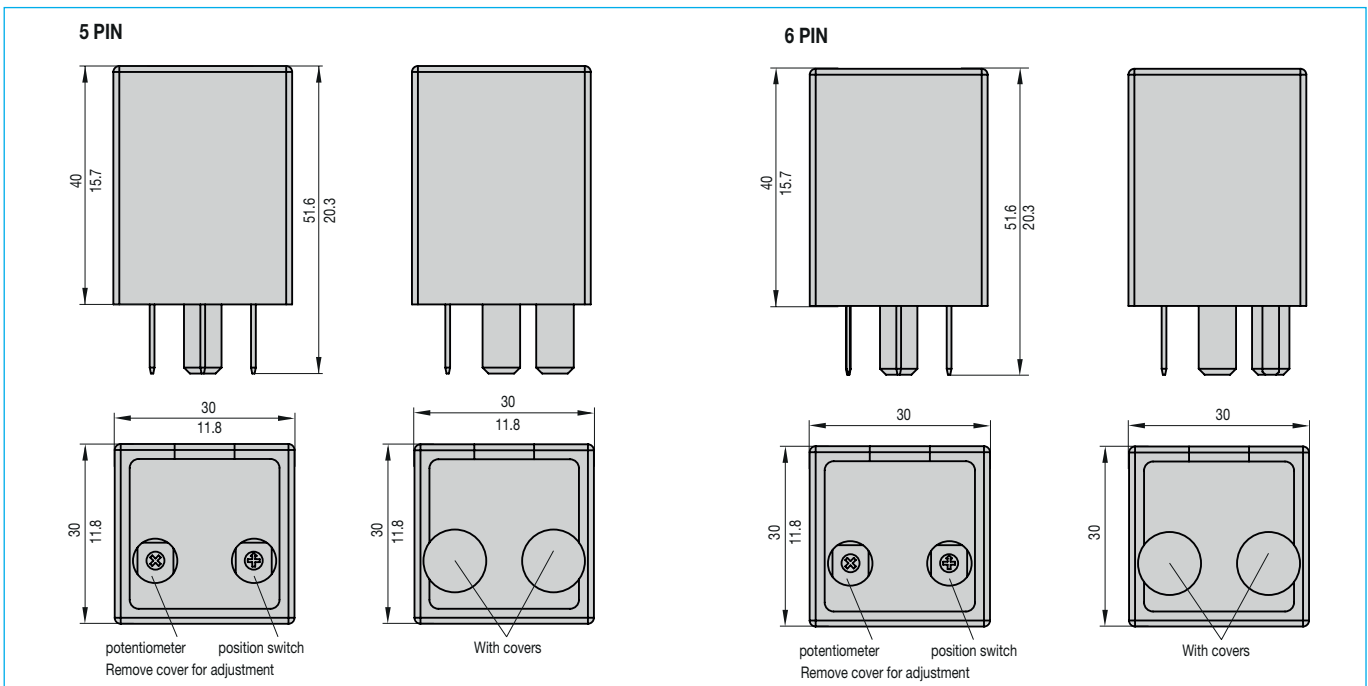
Schematic diagram / Pin assignment / Positive activation



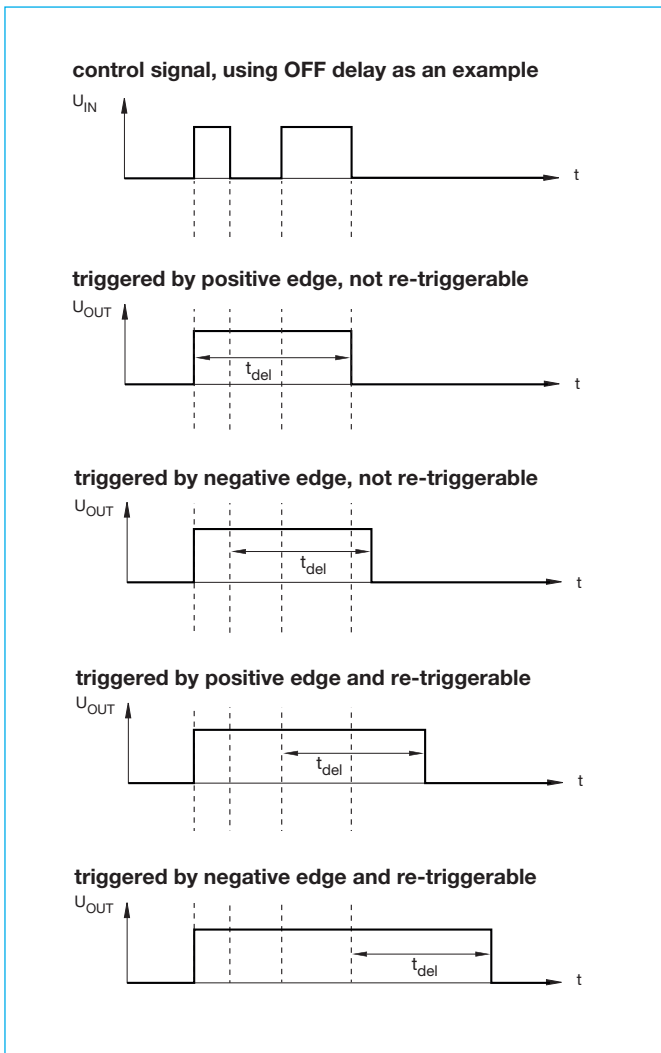
Schematic diagram / Pin assignment / Negative activation



Dimensions



Functional diagram



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