

Description

The MTR20 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 MTR20 provides a possibly missing ON or OFF delay.

The part number defines the time window for ON or OFF delay. The exact time within this window can be adjusted on the top of the device on site by means of a small screw driver.

The MTR20 is suitable for standard automotive relay sockets to ISO 7588 (ISO Mini).

Applications

The MTR20 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 MTR20's design ensures reverse polarity protection; it is supplied with roughly pre-set timer settings. This saves time and avoids errors in production.
- The MTR20 easily provides any vehicle with ON and OFF delay without changing the controlgear software. It is sufficient to replace a standard relay by the MTR20 in the power distribution system.
- Frequently, a clever selection of the time window can replace several timer relays and thus reduce complexity. The timer function can be adjusted on site by means of a small screw driver.

Qualifications

Degree of protection	IP54
Noise immunity	2006/28 EG DIN40839
E1 number	upon request

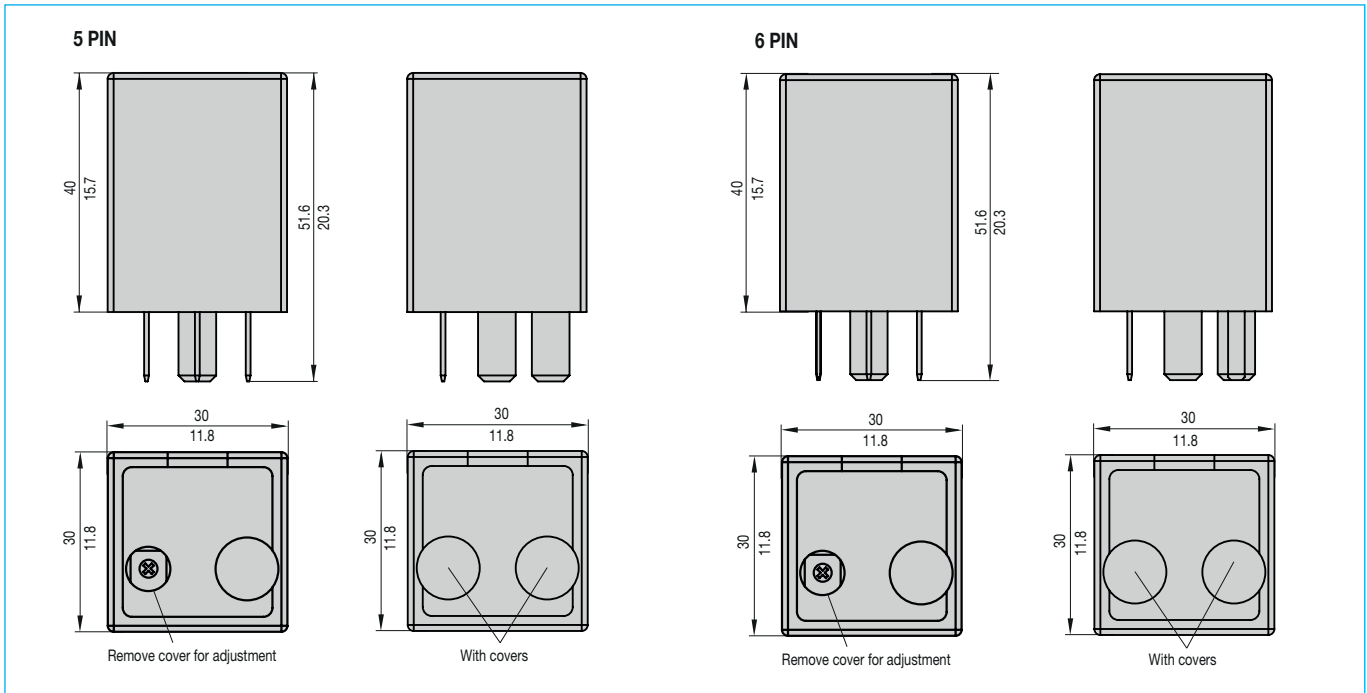


MTR20

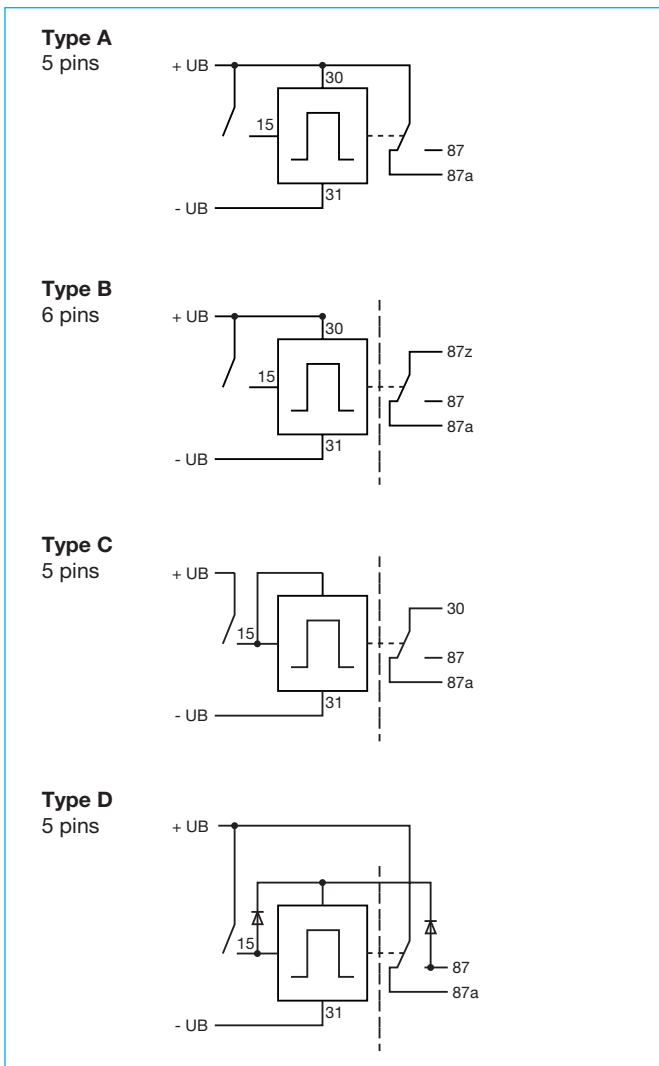
Technical data

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 30mm 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)	

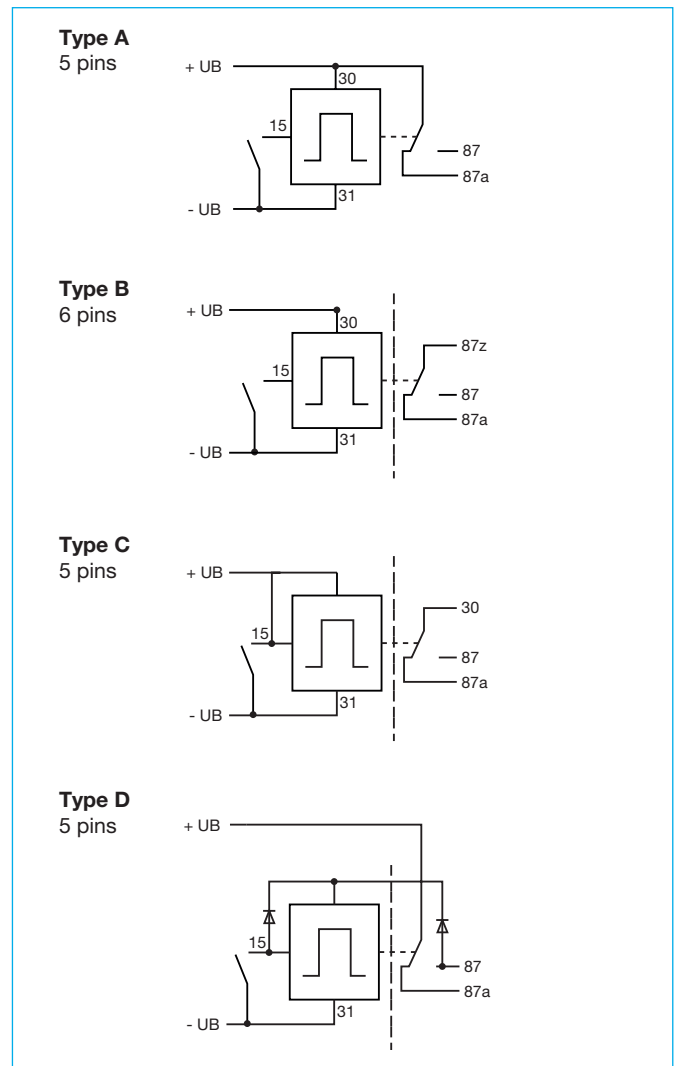
Dimensions



Schematic diagram / Pin assignment / Positive activation

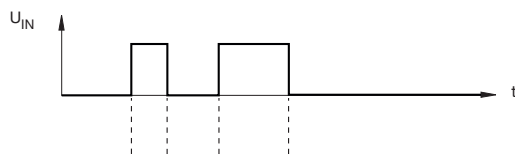


Schematic diagram / Pin assignment / Negative activation

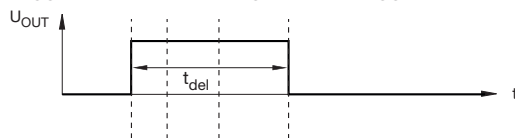


Functional diagram

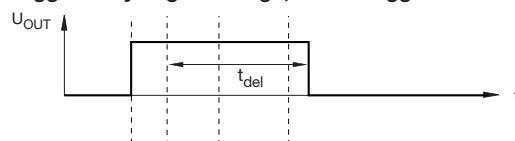
control signal, using OFF delay as an example



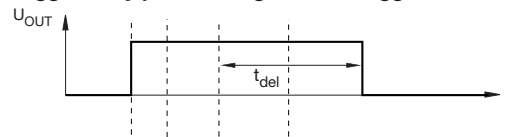
triggered by positive edge, not re-triggerable



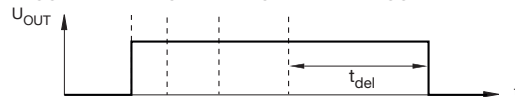
triggered by negative edge, not re-triggerable



triggered by positive edge and re-triggerable



triggered by negative edge and re-triggerable



Order numbering code

Type No.

MTR20 Mechanical Timer Relay

Operating voltage

1 12 V

2 24 V

Function / control

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

Control

0 control input - triggered by rising edge - resetable

1 control input - triggered by falling edge - resetable

2 control input - triggered by rising edge - not resetable

3 control input - triggered by falling edge - not resetable

Beginning of time window (unit)

S second

M minute

H hour (max. 12)

Beginning of time window (value)

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

End of time window (unit)

S second

M minute

H hour (max. 12)

End of time window (value)

01 1

02 2

03 3

04 4

05 5

06 6

07 7

08 8

09 9

10 10

11 11

... to

059 59

Current ratings

10 A

30 A (upon request, not on stock)

MTR20 - 1 0 0 - M 0 - M 45 - 10 A ordering example

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