

# CM3

## Time relay with two mechanical changeover output contacts 7 time functions, ON-OFF function, 50 ms ... 60 h DIN Rail mounting according to DIN 43 880

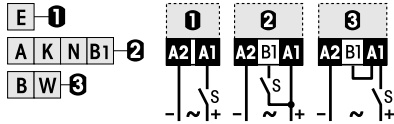


### Type: CM3/... V R

Multifunction time relay, 7 time functions, time ranges: 50 ms ... 60 h, multifunction LED state indicator, ON / OFF switching function for maintenance, emergency, etc., suitable for railway applications

**Maximum contact load** 5 A / 250 V AC-1 150 W DC-1  
**Recommended minimum contact load** 10 mA / 10 V

**Time functions and related connection diagrams** (Function diagrams: refer to page 130)  
The functions are selectable by rotary switch



LED function table:

| LED            | Relay | Time run |
|----------------|-------|----------|
| OFF            | OFF   | NO       |
| Continuous ON  | ON    | NO       |
| Short blinking | OFF   | YES      |
| Long blinking  | ON    | YES      |

### Time data

7 partial time ranges,  $t_{max}$  (rotary switch) 0.6, 6, 60 s / 6, 60 min / 6, 60 h  
Fine adjustment range (rotary knob)  $t_{min} \dots t_{max}$ , 0.5 ... 6  
Time range tolerance  $t_{min}$ : -5 % ... +0 % /  $t_{max}$ : -0 % ... +5 %  
Repetition accuracy  $\pm 0.1$  % or DC: 2 ms / AC: 10 ms  
Response time, power on, on A1  $\leq 25$  ms  
Min. trigger pulse on B1 35 ms (AC / DC)  
Reset time B1 (AC/DC)  $\leq 40$  ms  
Voltage failure buffering  $\geq 15$  ms

### Contacts

Type 2 CO, micro disconnection  
Material AgNi  
Rated operational current 5 A  
Max. inrush current 25 A  
Max. switching voltage AC-1 250 V  
Max. AC load AC-1 (Fig.1) 1250 VA  
Max. DC load DC-1, 30 V / 250 V (Fig.2) 150 W / 75 W

### Power supply and control input

|                                    | DC 12-24 V     | DC 24-48 V / AC 24-240 V |                 |
|------------------------------------|----------------|--------------------------|-----------------|
| Nominal voltage                    | DC 12-24 V     | DC 19 ... 60 V           | AC 19 ... 250 V |
| Operating voltage range            | 9.6 ... 28.8 V | DC 19 ... 60 V           | AC 19 ... 250 V |
| Power consumption                  | approx. 1.3 W  | approx. 1.3 W            |                 |
| Frequency range                    | -              | -                        | 45 ... 63 Hz    |
| Control current into B1            | $\leq 13.8$ mA | $\leq 6$ mA              |                 |
| Allowed residual current into B1   | $\leq 4.5$ mA  | $\leq 1.5$ mA            |                 |
| Trigger threshold voltage on B1    | 5.8 ... 6.5 V  | DC 13 ... 18 V           | AC 11 ... 15 V  |
| Inrush current B1, $\tau = 0.4$ ms | $\leq 2.6$ A   | -                        | $\leq 2.6$ A    |

### Insulation

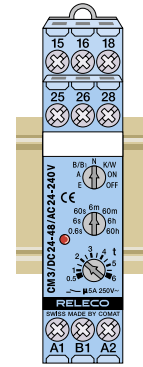
Test voltage open contact 1 kVrms 1 minute  
Test voltage between poles 2.5 kVrms 1 minute  
Test voltage between contacts and control input 2.5 kVrms 1 minute

### General Specifications

Ambient temperature storage / operation -40 ... 80 °C / -25 ... 60 °C  
Mechanical life of contacts 15 x 10<sup>6</sup> operations  
Conductor cross section Stranded wire 2.5 mm<sup>2</sup>, 2 x 1.5 mm<sup>2</sup>  
Ingress protection degree IP 20  
Max. Screw torque 0.4 Nm  
Housing material / weight Lexan / 72 g

### Standard types

**DC** CM3/DC12-24V R  
**DC, AC 45...63 Hz** CM3/DC24 -48V/AC24-240V R



Connection diagram

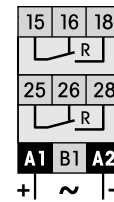


Fig.1 AC voltage endurance

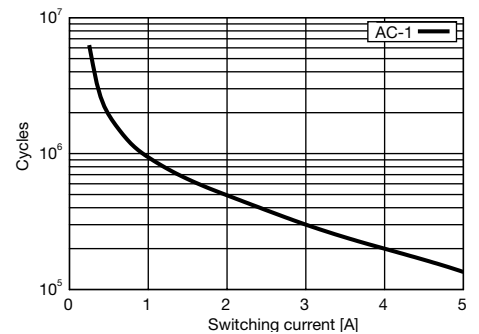
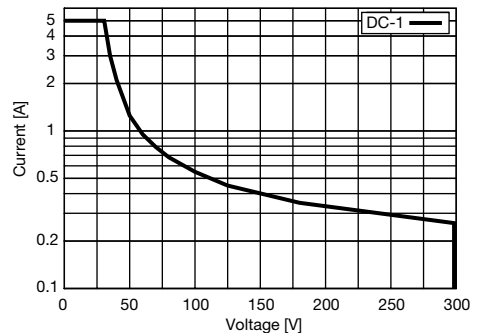
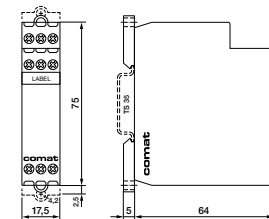


Fig. 2 DC load limit curve



### Dimensions [mm]



### Technical approvals, conformities



EN 50155, EN 60730