

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

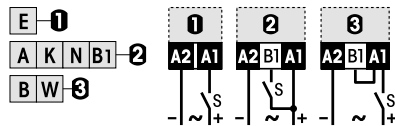
Multifunction time relay, 7 time functions, time ranges: 50 ms ... 60 h, multifunction LED state indicator, ON / OFF switching function for maintenance, emergency, etc., suitable for railway applications

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 152)
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	± 0.1 % or DC: 2 ms / AC: 10 ms
Response time, power on, on A1	≤ 25 ms
Min. trigger pulse on B1	35 ms (AC / DC)
Reset time B1 (AC/DC)	≤ 40 ms
Voltage failure buffering	≥ 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 24-48 V / AC 24-240 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	≤ 13.8 mA	≤ 6 mA
Allowed residual current into B1	≤ 4.5 mA	≤ 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	≤ 2.6 A	- ≤ 2.6 A

Insulation

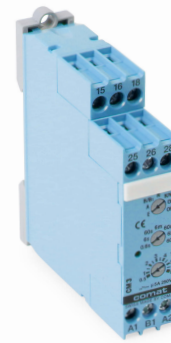
Test voltage open contact	1 kVrms 1 minute
Test voltage between poles	2.5 kVrms 1 minute
Test voltage between contacts and control input	2.5 kVrms 1 minute

General Specifications

Ambient temperature storage / operation	-40 ... 80 °C / -25 ... 60 °C
Mechanical life of contacts	15 x 10 ⁶ operations
Conductor cross section	Stranded wire 2.5 mm ² , 2 x 1.5 mm ²
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

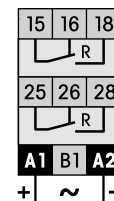


Fig.1 AC voltage endurance

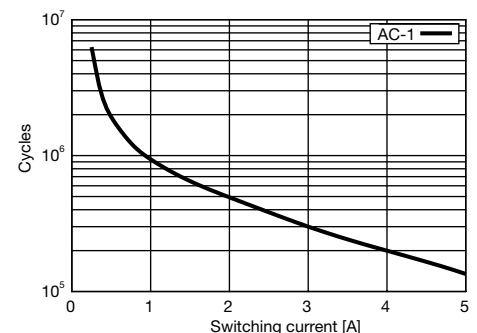
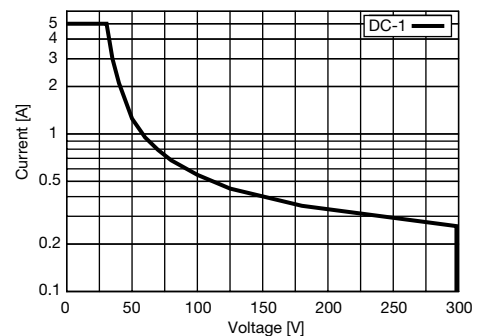
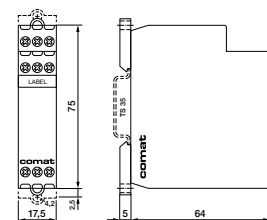


Fig. 2 DC load limit curve



Dimensions [mm]



Technical approvals, conformities



EN 50155, EN 60730