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Made in Czech Republic

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CRM-71TO CRM-72TO

Multifunction time relays
with supply voltage disconnection

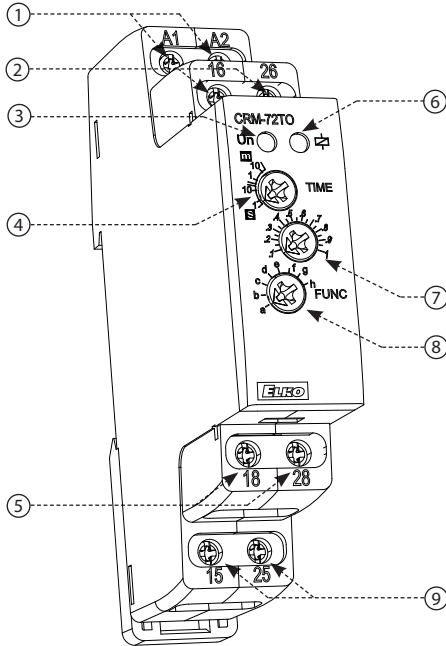


Characteristics

- The relay keeps timing according to the set function even after the power supply is disconnected.
- It can be used for delayed switching off of a backup power supply and systems in case of power failure (e.g. emergency lighting, emergency ventilation, electrically and automatically operated doors – lifts, escalators).
- Comfortable and well-arranged time delay (t) setting by rotary switch.
- Adjustable time delay from 0.1 s to 10 m is split into four ranges: (0.1 s – 1 s / 1 s – 10 s / 0.1 m – 1 m / 1 m – 10 m)
- Power supply outages must be in the order of tens to hundreds of milliseconds.
- Multifunction red LED flashes or shines depending on the operating states.

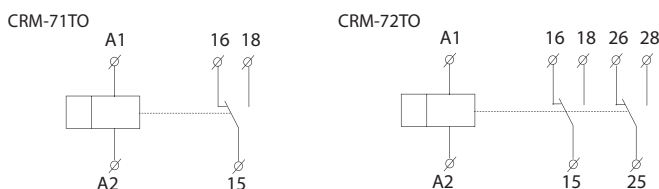
Description

CRM-72TO

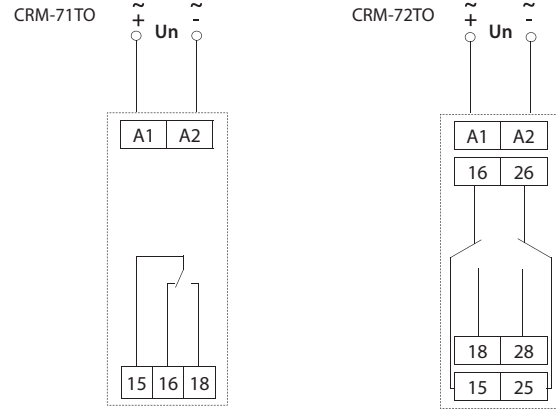


1. Supply voltage terminals (A1-A2)
2. Output contact (16-26)
3. Supply voltage indication
4. Time delay (t) setting
5. Output contact (18-28)
6. Indication of operating states
7. Fine time setting
8. Function setting
9. Output contact (15-25)

Symbol



Connection



Technical parameters

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Power supply

Supply terminals:	A1-A2
Supply voltage:	AC/DC 12 – 240 V (AC 50-60 Hz)
Consumption (max.):	1.9 VA/0.9 W
Supply voltage tolerance:	-15 %; +10 %

Time circuit

Number of features:	8
Time delay (t):	0.1 s – 10 m
Time setting:	rotary switch and potentiometer
Time deviation:	5 % – mechanical setting
Repeat accuracy:	0.2 % – set value stability
Temperature coefficient:	0.01 %/°C, at = 20 °C (0.01%/°F, at = 68 °F)

Output

Contact type:	1x changeover (AgSnO ₂)	2x changeover (AgNi)
Current rating:	16 A/AC *	8 A/AC1 **
Breaking capacity:	4000 VA/AC1, 384 W/DC1	2000 VA/AC1, 192 W/DC1
Inrush current:	20 A/<3 s	10 A/<3 s
Switching voltage:	250V AC/24V DC	
Power dissipation (max.):	1.2 W	
Mechanical life:	2.000.000 ops.	
Electrical life (AC1):	50.000 ops.	200.000 ops.

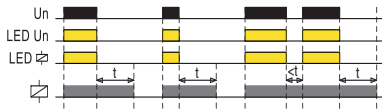
Other specifications

Operating temperature:	-20 .. +55 °C (-4 .. 131 °F)	
Storage temperature:	-30 .. +70 °C (-22 .. 158 °F)	
Dielectric strength:		
supply – output 1	AC 4 kV	AC 3.5 kV
supply – output 2	-	AC 3.5 kV
output 1 – output 2	-	AC 3.5 kV
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 front panel / IP20 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Cross-wire section – solid/ stranded with ferrule (mm ²):	max. 1x 2.5, 2x 1.5/ max. 1x 2.5 (AWG 14)	
Dimensions:	90 × 17.6 × 64 mm (3.54" × 0.69" × 2.52")	
Weight:	63 g (2.22 oz)	69 g (2.43 oz)
Standards:	EN 61812-1	

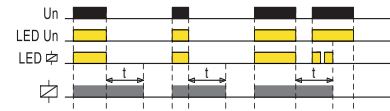
* 1 HP|240 Vac, 1/2 HP|120 Vac; PD. B300

** 1/2 HP|240 Vac, 1/3 HP|120 Vac; PD. B300

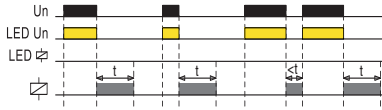
a TRUE OFF DELAY 1



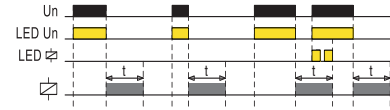
e TRUE OFF DELAY 2



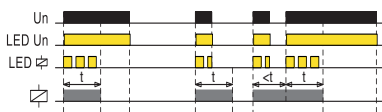
b TRUE SINGLE SHOT falling edge 1



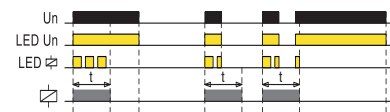
f TRUE SINGLE SHOT falling edge 2



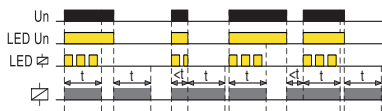
c TRUE INTERVAL ON 1



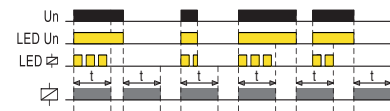
g TRUE INTERVAL ON 2



d TRUE INTERVAL ON/OFF 1



h TRUE INTERVAL ON/OFF 2





















Functions a, b, c, d (1) differ from functions e, f, g, h (2) in behavior after a power failure, shorter than the set time delay (t).

- Functions a, b, c, d (1) after a short outage reset the delay and run from the beginning as when the power was turned on
- The function e, f, g, h (2) does not respond to a short outage and it completes the set delay until the end

If the function or time range rotary switches are in any unused positions, the red LED will flash rapidly after power-up and a short delay.

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Type of load	 cos φ ≥ 0.95 AC1	 AC2	 AC3	 AC5a uncompensated	 AC5a compensated	 HAL230V AC5b	 AC6a	 AC7b	 AC12
Contact material AgNi, 8A	250V / 8A	250V / 3A	250V / 2A	230V / 1.5A (345VA)	x	300W	x	250V / 1A	250V / 1A
Type of load	 AC13	 AC14	 AC15	 DC1	 DC3	 DC5	 DC12	 DC13	 DC14
Contact material AgNi, 8A	x	250V / 3A	250V / 3A	24V / 8A	24V / 3A	24V / 2A	24V / 8A	24V / 2A	x

Warning

This device is constructed for connection in 1-phase network AC/DC 12 – 240 V and must be installed according to norms valid in the state of an application. Installation, connection, setting and servicing must be carried out by qualified electrician staff only, which have perfectly understood the instructions and functions of the device. This device contains protection against overvoltage peaks and disturbing impulses in the power supply network. For the correct function of the protection of this device, there must be suitable protections of higher degrees (A,B,C) installed in front of them and according to the standards, interference of switching devices must be securely eliminated (contactors, motors, inductive loads, etc.). Before installation, make sure that the device is de-energized and the main switch is in the "OFF" position. Don't install the device to sources of excessive electromagnetic interference. Ensure correct installation by perfect air circulation so that during continuous operation and a higher ambient temperature, the device does not exceed the maximum allowed operating temperature. For installation and setting use a screwdriver with a width of approx 2 mm. Keep in mind that this is a fully electronic device and approach accordingly with the installation. Non-problematic function of the device is also dependent on the previous method of transportation, storage, and handling. In case of any signs of damage, deformation, malfunction, or missing parts, don't install this device and claim it at the dealer. The product must be treated as electronic waste at the end of its life.