CRM-91HE | Multifunction time relay with external potentiometer

5 YEAR WARRANTY

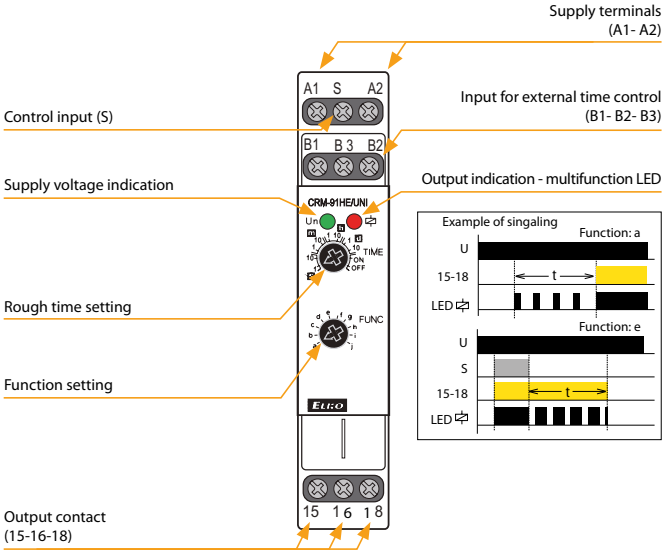
EAN code
CRM-91HE/UNI: 8595188118958
CRM-91HE/UNI + potentiometer: 8595188142052
Potentiometer: 8595232367967

- Control by external control unit - potentiometer (can be placed/mounted for example on switch board doors or in panel).
- 10 functions:
  5 time functions controlled by supply voltage
  4 time functions controlled by control input
  1 function of latching relay.
- Possible to connect external potentiometer - max. distance 10 m (32.8 ft.) from relay.

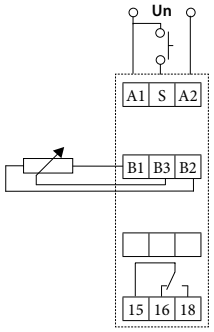
Technical parameters	CRM-91HE
Number of functions:	10
Supply terminals:	A1 - A2
Supply voltage:	AC/DC 12 - 240 V (AC 50-60 Hz)
Consuption (max.):	3 VA/1.7 W
Max. dissipated power:	4 W (Un + terminals)
Supply voltage tolerance:	–15 %; +10 %
Supply indication:	green LED
Time ranges:	0.1 s – 10 days
Time setting:	rotary switch, external 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:	1× changeover/SPDT (AgNi/Silver Alloy)
Current rating:	16 A/AC1; 1 HP|240 Vac, 1/2 HP|120 Vac; PD. B300
Breaking capacity:	4000 VA/AC1, 384 W/DC1
Inrush current:	30 A/<3 s
Switching voltage:	250V AC/24V DC
Output indication:	multifunction red LED
Mechanical life:	10.000.000 ops.
Electrical life (AC1):	100.000 ops.
Controlling	
Control voltage:	AC/DC 12 - 240 V (AC 50-60 Hz)
Consumption of input:	AC 0.025-0.2 VA/DC 0.1-0.7 W
Load between S-A2:	Yes
Glow-tubes:	No
Control. terminals:	A1-S
Impulse length:	min. 25 ms/max. unlimited
Reset time:	max. 150 ms
Other information	
Operating temperature:	–20 .. +55 °C (–4 .. 131 °F)
Storage temperature:	–30 .. +70 °C (–22 .. 158 °F)
Dielectrical strength:	AC 4 kV (supply – output)
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP40 from front panel/IP20 terminals
Overvoltage category:	III.
Pollution degree:	2
Cross-wire section – solid/ stranded with ferrule (mm^2):	max. 1× 2.5, 2× 1.5/ max. 1× 2.5 (AWG 12)
Dimensions:	90 × 17.6 × 64 mm (3.5˝ × 0.7˝ × 2.5˝)
Weight:	75 g (2.6 oz)
Standards:	EN 61812-1

Technical parameters	Potentiometer
Potentiometer:	5 - 150kΩ, linear
Protection degree:	IP 65 front side / IP20 f back side
Max. cable size (mm^2):	1.5 with sleeve/without sleeve max. 2.5 (AWG 12)
Weight:	16 g (0.6 oz.)
Dimensions:	see page Accessories

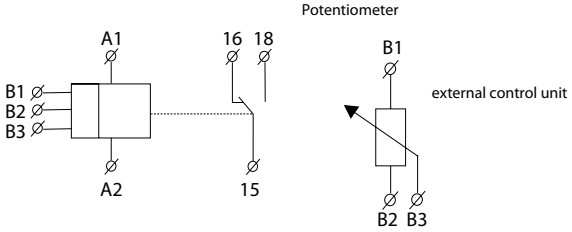
Description



Connection



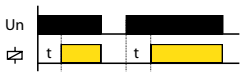
Symbol



CRM-91H, CRM-93H, CRM-91H-SL, CRM-93H-SL, CRM-9S, CRM-91HE

Function

a



ON DELAY

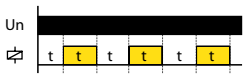
When the input voltage U is applied, timing delay t begins. Relay contacts R change state after time delay is complete. Contacts R return to their shelf state when input voltage U is removed. Trigger switch is not used in this function.

b

INTERVAL ON

When input voltage U is applied, relay contacts R change state immediately and timing cycle begins. When time delay is complete, contacts return to shelf state. When input voltage U is removed, contacts will also return to their shelfstate. Trigger switch is not used in this function.

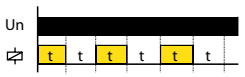
c



FLASHER - OFF first

When input voltage U is applied, time delay t begins. When time delay t is complete, relay contacts R change state for time delay t. This cycle will repeat until input voltage U is removed. Trigger switch is not used in this function.

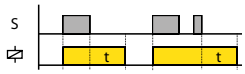
d



FLASHER - ON first

When input voltage U is applied, relay contacts R change state immediately and time delay t begins. When time delay t is complete, contacts return to their shelf state for time delay t. This cycle will repeat until input voltage U is removed. Trigger switch is not used in this function.

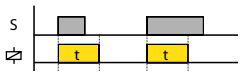
e



OFF DELAY

Input voltage U must be applied continuously. When trigger switch S is closed, relay contacts R change state. When trigger switch S is opened, delay t begins. When delay t is complete, contacts R return to their shelf state. If trigger switch S is closed before time delay t is complete, then time is reset. When trigger switch S is opened, the delay begins again, and relay contacts R remain in their energized state. If input voltage U is removed, relay contacts R return to their shelf state.

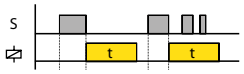
f



SINGLE SHOT

Upon application of input voltage U, the relay is ready to accept trigger signal S. Upon application of the trigger signal S, the relay contacts R transfer and the preset time t begins. During time-out, the trigger signal S is ignored. The relay resets by applying the trigger switch S when the relay is not energized.

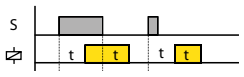
g



SINGLE SHOT falling edge

Upon application of input voltage U, the relay is ready to accept trigger signal S. Upon application of the trigger signal S, the relay contacts R transfer and the preset time t begins. At the end of the preset time t, the relay contacts R return to their normal condition unless the trigger switch S is opened and closed prior to time out t (before preset time elapses). Continuous cycling of the trigger switch S at a rate faster than the preset time will cause the relay contacts R to remain closed. If input voltage U is removed, relay contacts R return to their shelf state.

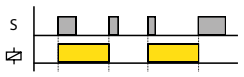
h



ON/OFF DELAY

Input voltage U must be applied continuously. When trigger switch S is closed, time delay t begins. When time delay t is complete, relay contacts R change state and remain transferred until trigger switch S is opened. If input voltage U is removed, relay contacts R return to their shelf state.

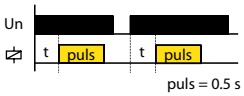
i



MEMORY LATCH

Input voltage U must be applied continuously. Output changes state with every trigger switch S closure. If input voltage U is removed, relay contacts R return to their shelf state.

j



PULSE GENERATOR

Upon application of input voltage U, a single output pulse of 0.5 seconds is delivered to relay after time delay t. Power must be removed and reapplied to repeat pulse. Trigger switch is not used in this function.