CRM-91H-SL, CRM-93H-SL | Multifunction time relays - screwless terminals

NEW

EAN code
CRM-91H/UNI-SL: 8595188184816
CRM-93H/UNI-SL: 8595188184823

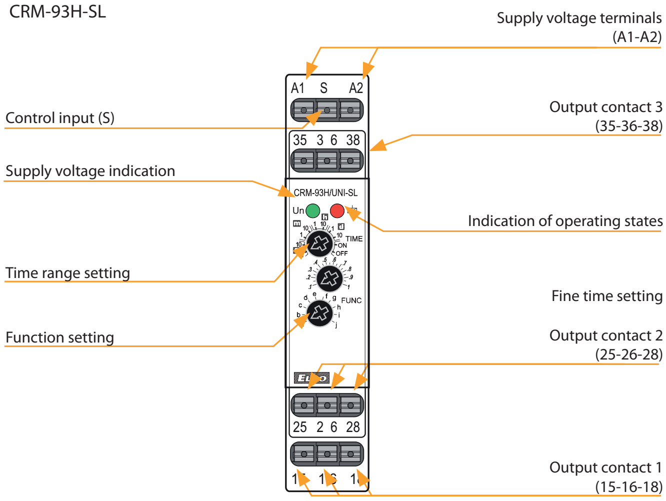
- Multi-function time relay for universal use in automation, control and regulation or in house installations
- Universal supply voltage AC/DC 12 – 240V
- Easy connection with screw-less terminals
- Comfortable and well-arranged function and time-range setting by rotary switches.
- Time scale 0.1 s - 10 days divided into 10 ranges: (0.1 s - 1 s / 1 s - 10 s / 0.1 min - 1 min / 1 min - 10 min / 0.1 hrs - 1 h / 1 h - 10 hrs / 0.1 day - 1 day / 1 day - 10 days / only ON / only OFF)
- Output contact:
  - CRM-91H-SL: 1x changeover / SPDT 16A
  - CRM-93H-SL: 1x changeover / SPDT 16A, 2x changeover / DPDT 8A
- Multifunction red LED flashes or shines depending on the operating states

Technical parameters

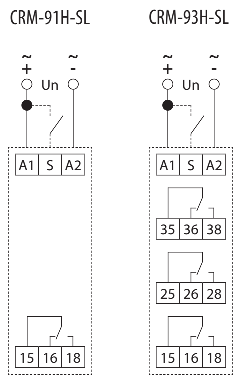
Technical parameters	CRM-91H-SL	CRM-93H-SL
Power supply		
Supply terminals:	A1-A2	
Supply voltage:	AC/DC 12 – 240 V (AC 50-60 Hz)	
Consumption (max.):	2 VA/1.5 W	2.5 VA/1.5 W
Supply voltage tolerance:	−15 %; +10 %	
Time circuit		
Number of functions:	10	
Time ranges:	0.1 s – 10 days	
Time setting:	rotary 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		
Output contact 1:	1× changeover/SPDT (AgNi)	
Current rating:	16 A/AC1; 1 HP|240 Vac, 1/2 HP|120 Vac; PD. B300	
Breaking capacity:	4000 VA/AC1, 384 W/DC1	
Electrical life (AC1):	100.000 ops.	
Output contact 2 (3):	x	2× chang./DPDT (AgNi)
Current rating:	x	8 A/AC1; 1/2 HP|240Vac; PD. B300
Breaking capacity:	x	2000 VA/AC1, 192 W/DC
Electrical life (AC1):	x	50.000 ops.
Switching voltage:	250 V AC/24 V DC	
Power dissipation (max.):	1.2 W	2.4 W
Mechanical life:	10.000.000 ops.	
Control		
Control terminals:	A1-S	
Load between S-A2:	Yes	
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)	
Dielectric strength:		
supply – output 1	4 kV AC	
supply – output 2 (3)	x	1 kV AC
output 1 – output 2	x	1 kV AC
output 2 – output 3	x	1 kV AC
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 front panel / IP20 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Connected wire cross-section (mm²):	solid wire max. 1× 2.5, 2× 1.5/ with sleeve max. 1× 2.5 (AWG 12)	
Dimensions:	90 × 17.6 × 64 mm (3.5˝ × 0.7˝ × 2.5˝)	
Weight:	58 g (1.86 oz)	
Standards:	EN 61812-1	

Description

CRM-93H-SL



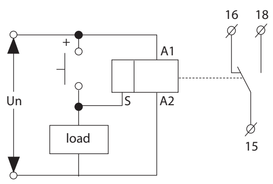
Connection



CRM-93H-SL:
The potential difference between the supply terminals (A1-A2), output contact 2 (25-26-28) and output contact 3 (35-36-38) must be a maximum of 250V AC rms/DC.

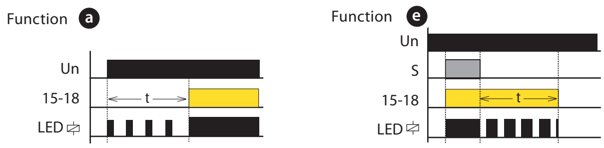
Possibility to connect load onto controlling input

It is possible to connect the load (e.g.: contactor) between terminals S-A2, without any interruption of correct relay function.



Indication of operating states

Signaling examples:



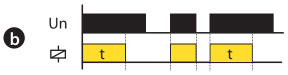
Function

Function (page 17).

Function

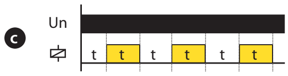
ON DELAY

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.



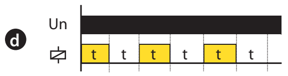
INTERVAL ON

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.



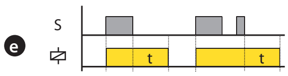
FLASHER - OFF first

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.



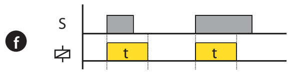
FLASHER - ON first

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.



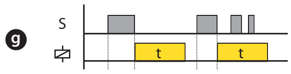
OFF DELAY

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.



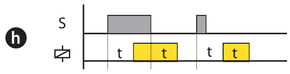
SINGLE SHOT

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.



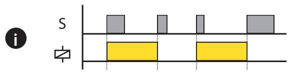
SINGLE SHOT falling edge

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.



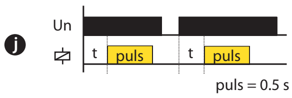
ON/OFF DELAY

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.



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.



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.