# CRM-131H | Multifunction time relay with three control inputs



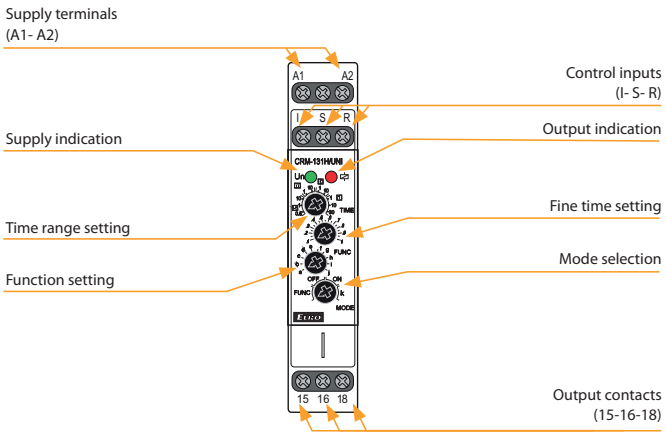
EAN code
CRM-131H/UNI: 8595188175562

- Multifunction time relay for universal use in automation, control and regulation or in house installations.
- Three control inputs - START, INHIBIT, RESET.
- Mode selection - according to the set function, permanently closed, permanently open, function of MEMORY LATCH with delay.
- Multifunction red LED flashes or shines depending on the operating status.

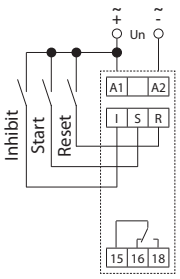
| Technical parameters | CRM-131H |
|---|---|
| **Power supply** | |
| Supply terminals: | A1 - A2 |
| Voltage range: | AC/DC 12 - 240 V (AC 50-60 Hz) |
| Power input (max.): | 2 VA/1.5W |
| Supply voltage tolerance: | -15 %; +10 % |
| Supply indication: | green LED |
| **Time circuit** | |
| Number of functions: | 11 |
| Time ranges: | 50 ms - 30 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** | |
| Number of contacts | 1x 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/DC |
| Switching voltage: | 250 V AC/24 V DC |
| Max. power dissipation: | 1.2 W |
| Output indication: | multifunction red LED |
| Mechanical life: | 10.000.000 ops. |
| Electrical life (AC1): | 100.000 ops. |
| **Control** | |
| Load between I, S, R - A2: | Yes |
| Control terminals: | I, S, R - A1 |
| 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: | 4 kV AC (supply - output) |
| Operating position: | any |
| Mounting: | DIN rail EN 60715 |
| Protection degree: | IP40 from front panel/IP20 terminals |
| Overvoltage category: | III. |
| Pollution degree: | 2 |
| Max. cable size (mm²): | solid wire max. 1x 2.5 or 2x 1.5/<br>with sleeve max. 1x 2.5 (AWG 12) |
| Dimensions: | 90 x 17.6 x 64 mm (3.5˝ x 0.7˝ x 2.5˝) |
| Weight: | 61 g (2.2 oz.) |
| Standards: | EN 61812-1 |

* for adjustable delay <100 ms, a time deviation of ± 10 ms applies

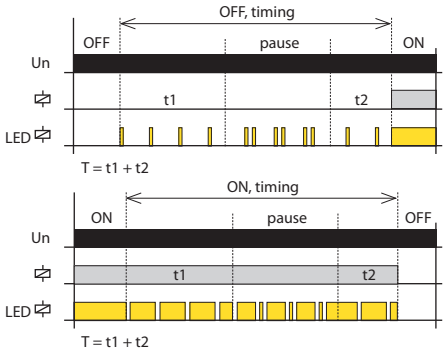
## Description




## Connection




## Indication of operating states



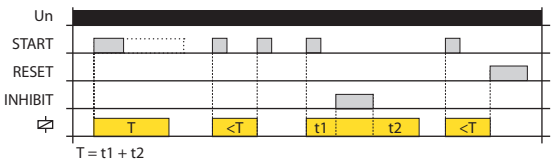

## Mode selection

**FUNC. Settings function mode**
The desired function a-j is set with the FUNC rotary switch.

**OFF. Output contact open mode**


**ON.Output contact closed mode**


**k. MEMORY LATCH with delay**



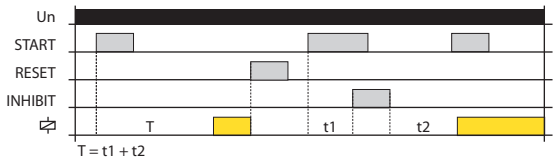

When the supply voltage is applied, the relay is open. If the START control contact is closed, the relay closes and the time delay T starts. It does not matter the length of the control pulse. When the timing is complete, the relay opens. If the START control contact is closed during timing, the relay opens immediately. Each time the control contact closes during relay timing, it changes status. Closing the INHIBIT control contact pauses the timing, after opening the INHIBIT control contact the timing continues from the moment of interruption. Closing the RESET control contact immediately ends the timing and the relay opens, just like as when the supply voltage is disconnected.

## Function

Control input function description:
- Contact START starts the time function
- INHIBIT contact pauses timing (pause)
- The RESET contact simulates switching the supply voltage on and off

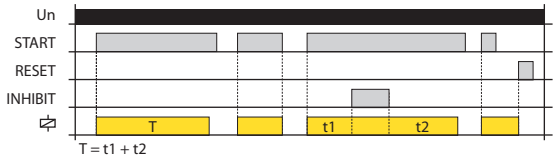
Same for all features:
- If the control contact START is closed and the supply voltage is connected, the time function is activated when the supply voltage is connected.
- Closing the control contact INHIBIT pauses the timing, after opening the control contact INHIBIT timing continues from the moment of interruption.
- If the INHIBIT control contact is closed, the START control contact is activated and the timing is paused.
- Closing the control contact RESET immediately terminates the timing and the relay opens, just as when the supply voltage is disconnected.
- If the control contact RESET is closed and then the control contact START is closed, the time function is activated when the control contact RESET is opened as well as when the supply voltage is connected.

### a. ON DELAY with Control Signal



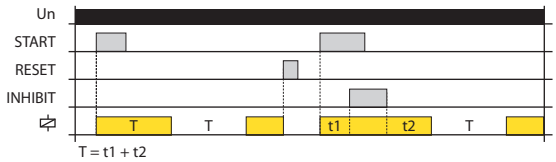

When the supply voltage is applied, the relay is open. If the control contact START is closed, the time delay T starts.
The closing of the START control contact during timing is ignored.

### b. INTERVAL ON with Control Signal



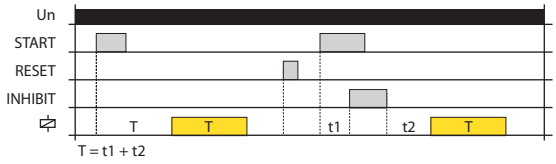

When the supply voltage is applied, the relay is open. When the control contact START is closed, the relay closes and the time delay T begins.
If the START control contact is open during timing, the time interval is immediately terminated and the relay opens.

### c. FLASHER - ON first with Control Signal



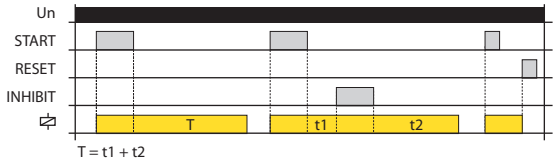

When the supply voltage is applied, the relay is open. When the START control contact is closed, the relay energizes and starts the delay time T. After the end of the timing relay opens and again runs delay time T. Upon completion timing again switches, and the sequence is repeated until the supply voltage is disconnected.

### d. FLASHER – OFF first with Control Signal



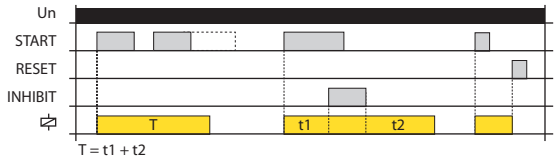

When the supply voltage is applied, the relay is open. When the START control contact is closed, starts the time delay T. After the end of the timing relay closes and again runs delay time T. After the end of the timing relay opens and the sequence is repeated until the supply voltage is disconnected.

### e. OFF DELAY



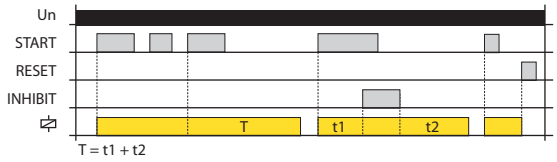

When the supply voltage is applied, the relay is open. If the control contact START is closed, the relay closes. After tripping Contact Start starts the delay time T. After the end of the timing relay is switched off.

### f. SINGLE SHOT



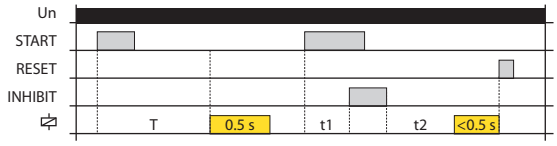

When the supply voltage is applied, the relay is open. When the START control contact is closed, the relay energizes and starts the delay time T. After the end of the timing relay is switched off. The closing of the START control contact during timing is ignored.

### g. WATCHDOG



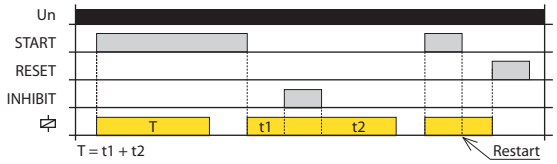

When the supply voltage is applied, the relay is open. When the START control contact is closed, the relay energizes and starts the delay time T. After the end of the timing relay is switched off. Closing control contact START during timing triggers a new time delay T - the relay closing time is thus increased.

### h. PULSE GENERATOR 0.5 s with Control Signal

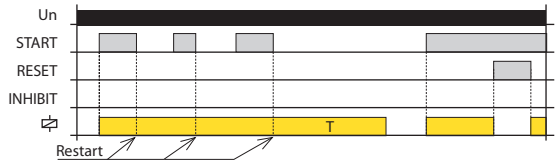



When the supply voltage is applied, the relay is open. When the START control contact is closed, starts the time delay T. After the end of the timing relay switches for the fixed time (0.5 sec).

### i. INTERVAL ON/OFF

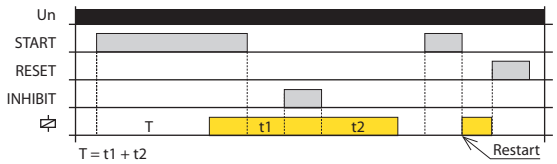



When the supply voltage is applied, the relay is open. When the START control contact is closed, the relay energizes and starts the delay time T. After the end of the timing relay is switched off. By opening the control contact start relay again closes and starts the delay time T. After the end of the timing relay is switched off.

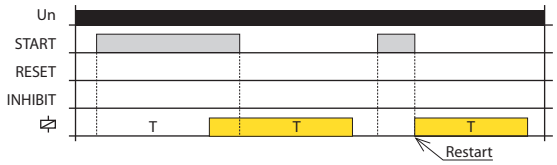



If the START control contact is open during timing, a restart occurs - the relay remains closed and a new time delay T begins. When the timing is complete, the relay opens.

### j. ON/OFF DELAY




When the supply voltage is applied, the relay is open. When the START control contact is closed, starts the time delay T. After the end of the timing relay switches. Opening the control contact START starts a new time delay T. When the timing is complete, the relay opens.




If the START control contact is open during timing, a restart occurs - the relay closes and a new time delay T begins. When the timing is complete, the relay opens.