



# CRM-181J, CRM-182J, CRM-183J | Singlefunction time relays



| EAN code         | CRM-181J      | CRM-182J      | CRM-183J      |
|------------------|---------------|---------------|---------------|
| CRM-181J/UNI ZR: | 8595188180382 | 8595188176903 | 8595188180610 |
| CRM-181J/UNI ZN: | 8595188180399 | 8595188176910 | 8595188180603 |
| CRM-181J/UNI BL: | 8595188180405 | 8595188176927 | 8595188180580 |
| CRM-181J/UNI OD: | 8595188180412 | 8595188176934 | 8595188180597 |

## Technical parameters CRM-181J CRM-182J CRM-183J

### Power supply

|                           |                                |              |              |
|---------------------------|--------------------------------|--------------|--------------|
| Supply terminals:         | A1 - A2                        |              |              |
| Voltage range:            | AC/DC 12 - 240 V (AC 50-60 Hz) |              |              |
| Power input (max.):       | 2 VA/1.5 W                     | 2.5 VA/1.5 W | 2.5 VA/1.5 W |
| Supply voltage tolerance: | -15 %; +10 %                   |              |              |
| Supply indication:        | green LED                      |              |              |

### Time circuit

|                          |   |  |  |
|--------------------------|---|--|--|
| Time ranges:             | 0.1 s - 100 h                               |  |  |
| 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:       | 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/DC1                           |  |                                  |
| Electrical life (AC1):  | 100.000 ops.                                     |  |                                  |
| Output contact 2 (3):   | x  | 1x chang./SPDT (AgNi)                            | 2x chang./DPDT (AgNi)            |
| Current rating:         | x  | 16 A/AC1; 1 HP 240 Vac, 1/2 HP 120 Vac; PD. B300 | 8 A/AC1; 1/2 HP 240Vac; PD. B300 |
| Breaking capacity:      | x  | 4000 VA/AC1, 384 W/DC1                           | 2000 VA/AC1, 192 W/DC1           |
| Electrical life (AC1):  | x  | 100.000 ops.                                     | 50.000 ops.                      |
| Switching voltage:      | 250 V AC/24 V DC                                 |  |                                  |
| Max. power dissipation: | 1.2 W  | 2.4 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               |  |  |

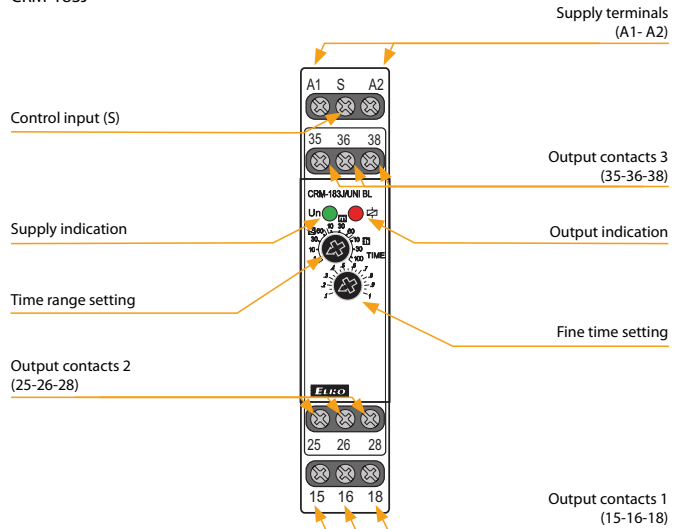
### Other information

|                        |   |             |             |
|------------------------|---|-------------|-------------|
| 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   | 4 kV AC     | 1 kV AC     |
| output 1 - output 2    | x   | 4 kV AC     | 1 kV AC     |
| output 2 - output 3    | x   | 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   |             |             |
| 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)   | 84 g (3 oz) | 84 g (3 oz) |
| Standards:             | EN 61812-1  |             |             |

- Single function time relays are suitable for applications where there is a clear function requirement in advance and are suitable for universal use in automation, control and regulation or in house installations.
- Choice of four types: ZR, ZN, BL, OD.
- All functions initiated by the supply voltage can use the control input to inhibit the ongoing delay (pause).
- Multifunction red LED flashes or shines depending on the operating status.

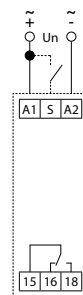
## Description

### CRM-183J

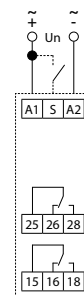


## Connection

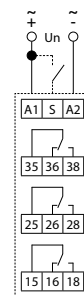
### CRM-181J



### CRM-182J



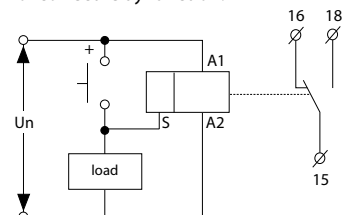
### CRM-183J



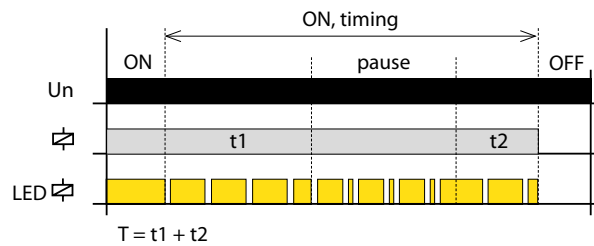
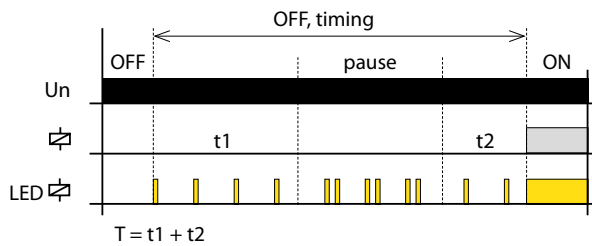
**CRM-183J:**  
The potential difference between the supply terminals (A1-A2), output contact 2 (25-26-28) and output contact 3 (35-36-38) must be a maximum of 250 V AC rms/DC.

## 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.

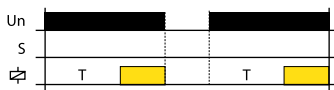


## Indication of operating states



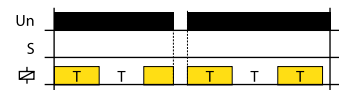
## Function

### ZR: ON DELAY



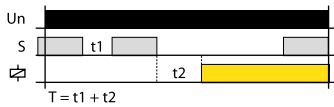
When the supply voltage is applied, the time delay  $T$  begins. When the timing is complete, the relay closes and this condition continues until the supply voltage is disconnected.

### BL: FLASHER - ON first



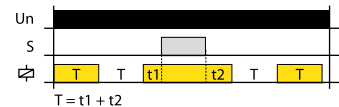
If the control contact is closed and the supply voltage is connected, the relay will close and the timing will start only after the control contact has been opened. When the timing is complete, the relay opens.

### ON DELAY with Inhibit



If the control contact is closed and the supply voltage is connected, the relay is opened and timing does not start until the control contact opens. When the timing is complete, the relay closes. If the control contact is closed during timing, the timing is interrupted and continues only after the control contact opens.

### FLASHER - ON first with Inhibit



If the control contact is closed during an active timer setting, the timing is interrupted and continues only after the control contact opens again.

### ZN: INTERVAL ON



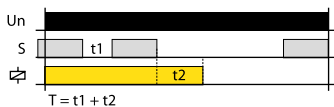
After supply voltage relay closes and starts the delay time  $T$ . After the end of the timing relay opens and this state lasts until the supply voltage is disconnected.

### OD: OFF DELAY



When the supply voltage is applied, the relay is open. When the control contact is closed, the relay closes. When the control contact opens, the time delay  $T$  begins. If the control contact is closed during timing, the time is reset and the relay remains closed. When the control contact opens, the time delay  $T$  starts again and opens when the relay closes.

### INTERVAL ON with Inhibit



If the control contact is closed and the supply voltage is connected, the relay will close and the timing will start only after the control contact has been opened. When the timing is complete, the relay opens. If the control contact is closed during timing, the timing is interrupted and continues only after the control contact opens.

### Note:

ZR, ZN and BL functions are initiated by connecting the supply voltage to the product, i.e. In the event of a failure and recovery of the supply voltage, the relay automatically performs 1 cycle.

## Looking for pricing, stock, or lifecycle information?

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- ⊖ [ELKO EP North America LLC Information](#)

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