

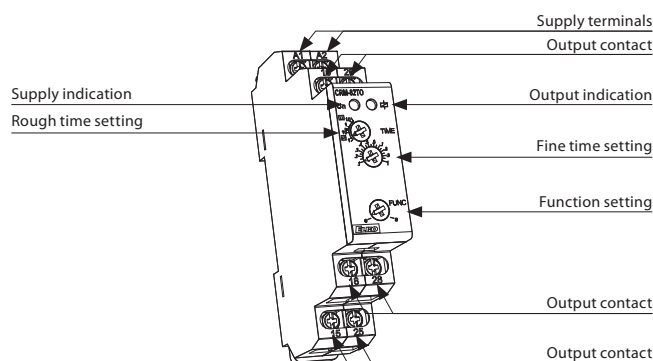


EAN code  
CRM-82TO /UNI: 8595188137614

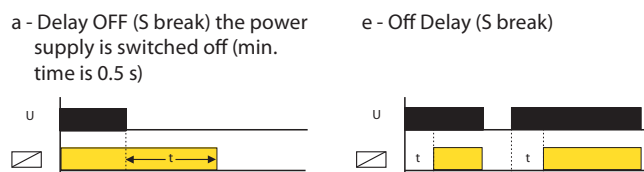
Technical parameters		CRM-82TO
Number of functions:	a - On Delay (Power On) / e - Off Delay (S Break)	
Supply terminals:	A1 - A2	
Voltage range:	AC/DC 12 - 240 V (AC 50 - 60 Hz)	
Burden (max.):	AC 0.7 - 3 VA / DC 0.5 - 1.7 W	
Max. dissipated power (Un + terminals):	2.5 W	
Supply voltage tolerance:	-15 %; +10 %	
Supply indication:	green LED	
Time ranges:	0.1 s - 10 min	
Time setting:	potentiometer	
Time deviation:	5 % - mechanical setting	
Repeat accuracy:	0.2 % - set value stability	
Temperature coefficient:	0.1 % / °C, at = 20 °C (0.1 % / °F, at = 68 °F)	
Output		
Number of contacts:	2x changeover/DPDT (AgNi/ Silver Alloy)	
Current rating:	8 A / AC1	
Breaking capacity:	2000 VA / AC1, 192 W / DC	
Inrush current:	10 A / <3 s	
Switching voltage:	250 V AC1 / 24 V DC	
Output indication:	red LED	
Mechanical life:	3x10 <sup>7</sup>	
Electrical life (AC1):	0.7x10 <sup>6</sup>	
Other information		
Operating temperature:	-20 °C to 55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to 70 °C (-22 °F to 158 °F)	
Electrical strength:	4 kV (supply-output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel / IP10 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Max. cable size (mm <sup>2</sup> ):	solid wire max. 2x 2.5 or 1x 4, with sleeve max. 2x 1.5 or 1x 2.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5" x 0.7" x 2.5")	
Weight:	73 g (2.6 oz.)	
Standards:	EN 61812-1, EN 61010-1	

- „True OFF“ relay - relay timing without supply voltage.
- Example of use: back-up source for Delay OFF in case of voltage failure (e.g. emergency lighting, emergency respirator, or protection of el. controlled doors - in case of fire).
- 2 time functions adjustable by rotary switch:  
a - Delayed return after disconnecting of supply.  
e - Delayed start.
- Time range (adjustable by rotary switch and fine setting by potentiometer): 0.1 s - 10 min.
- Universal supply voltage AC/DC 12 - 240 V.
- Interruptions in the power supply must take time steps (tens to hundreds of milliseconds).
- Output contact: 2x changeover / DPDT 8 A.
- Output status indicated by red LED (only in case of supply voltage connection).
- Clamp terminals.
- 1-MODULE, DIN rail mounting.

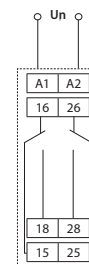
**Description**



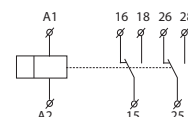
**Function**



**Connection**



**Symbol**



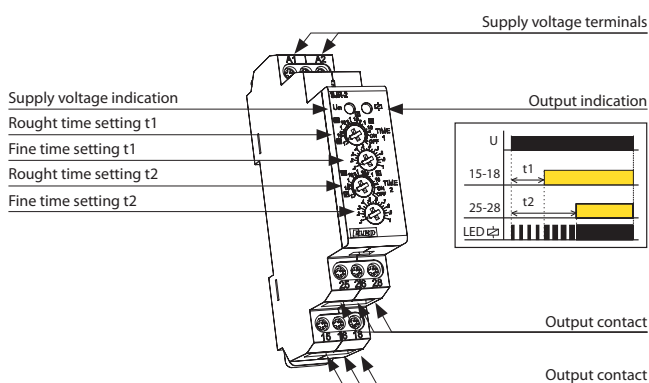


EAN code  
SJR-2 /230 V: 8595188116015  
SJR-2 /UNI: 8595188117401

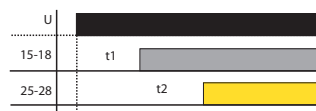
Technical parameters		SJR-2
Number of functions:		2x delay ON
Supply terminals:		A1 - A2
Voltage range:	UNI	AC/DC 12 - 240 V (AC 50 - 60 Hz)
Burden (max.):		AC 0.7 - 3 VA / DC 0.5 - 1.7 W
Voltage range:	230	AC 230 V / 50 - 60 Hz
Power input (apparent/loss):		AC max. 12 VA / 1.3 W
Max. dissipated power (Un + terminals):		4.5 W
Supply voltage tolerance:		-15 %; +10 %
Supply indication:		green LED
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)
<b>Output</b>		
Number of contacts:		2x changeover/ DPDT (AgNi / Silver Alloy)
Current rating:		16 A / AC1
Breaking capacity:		4000 VA / AC1, 384 W / DC
Inrush current:		30 A / < 3 s
Switching voltage:		250 V AC1 / 24 V DC
Output indication:		multifunction red LED
Mechanical life:		3x10 <sup>7</sup>
Electrical life (AC1):		0.7x10 <sup>5</sup>
Reset time:		max. 150 ms
<b>Other information</b>		
Operating temperature:		-20 °C to 55 °C (-4 °F to 131 °F)
Storage temperature:		-30 °C to 70 °C (-22 °F to 158 °F)
Electrical strength:		4 kV (supply-output)
Operating position:		any
Mounting:		DIN rail EN 60715
Protection degree:		IP40 from front panel / IP20 terminals
Overtoltage category:		III.
Pollution degree:		2
Max. cable size (mm <sup>2</sup> ):		solid wire max. 1x 2.5 or 2x1.5/ 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:		UNI - 85 g (3 oz.), 230 - 83 g (2.9 oz.)
Standards:		EN 61812-1, EN 61010-1

- For gradual switching of high power (e.g. el.heating), prevents current strokes in the main.
- Function: 2x Delay ON (2 time relays in one).
- Time scale 0.1s - 10 days divided into 10 time ranges: 0.1s - 1s / 1s - 10s / 0.1min - 1min / 1min - 10min / 0.1h - 1h / 1h - 10hrs / 0.1 day - 1 day / 1 day - 10 days / ON / OFF
- Times t1 and t2 are independently adjustable.
- t1 and t2 are switched on after supply voltage connection.
- Rough time setting via rotary switch.
- Voltage range: AC 230 V or AC/DC 12 - 240 V.
- Output contact: 2 x changeover / DPDT 16 A.
- Output indication: multifunction red LED, flashing at certain states.
- 1-MODULE, DIN rail mounting.

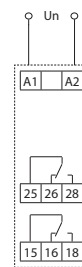
## Description



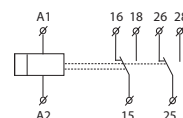
## Function



## Connection



## Symbol



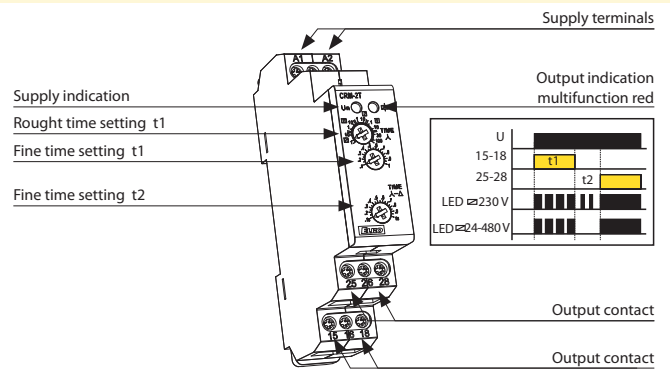


EAN code  
CRM-2T /230 V: 8595188112291  
CRM-2T /UNI: 8595188112437

Technical parameters		CRM-2T
Number of functions:		1
Supply terminals:		A1 - A2
Voltage range:	UNI	AC/DC 12 - 240 V / AC 50 - 60 Hz
Burden (max.):		AC 0.7 - 3 VA / DC 0.5 - 1.7 W
Voltage range:	230	AC 230 V / 50 - 60 Hz
Burden:		AC max. 12 VA / 1.9 W
Max. dissipated power (Un + terminals):		4 W
Supply voltage tolerance:		-15 %; +10 %
Supply indication:		green LED
Time scale:		t1: 0.1 s - 100 days, t2: 0.1 s-1 s
Time setting:		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)
<b>Output</b>		
Number of contacts:		2x changeover/ DPDT (AgNi / Silver Alloy)
Current rating:		16 A / AC1
Breaking capacity:		4000 VA / AC1, 384 W / DC
Inrush current:		30 A / < 3 s
Switching voltage:		250 V AC1 / 24 V DC
Output indication:		multifunction red LED
Mechanical life:		3x10 <sup>7</sup>
Electrical life (resistive):		0.7x10 <sup>5</sup>
Reset time:		max. 150 ms
<b>Other information</b>		
Operating temperature:		-20 °C to 55 °C (-4 °F to 131 °F)
Storage temperature:		-30 °C to 70 °C (-22 °F to 158 °F)
Electrical strength:		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
Terminal wire capacity (mm <sup>2</sup> ):		max.1x 2.5, 2x1.5, 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:		UNI - 84 g (3 oz.), 230 - 81 g (2.9 oz.)
Standards:		EN 61812-1, EN 61010-1

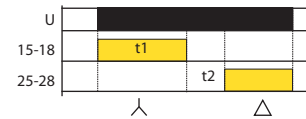
- It serves for delay ON of motors star/delta.
- Time t1 (star)
  - time scale 0.1 s - 100 days divided into 10 time ranges.
  - rough time setting by rotary switch
- Time t2 (delay) between  $\lambda$  /  $\Delta$ :
  - time scale 0.1 s - 1 s
  - fine time setting by potentiometer
- Voltage range: AC 230 V, AC/DC 12 - 240 V.
- Output contact: 2x changeover / DPDT 16 A.
- Output indication: multifunction red LED.
- 1-MODULE, DIN rail mounting.

Description



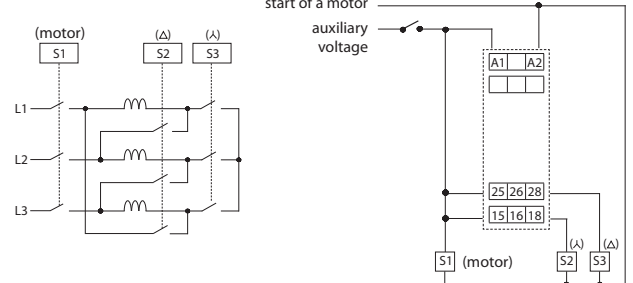
Function

Delay ON star / delta

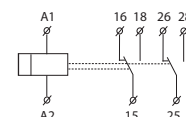


Connection

Start up of motor ( $\lambda$ - $\Delta$ )



Symbol



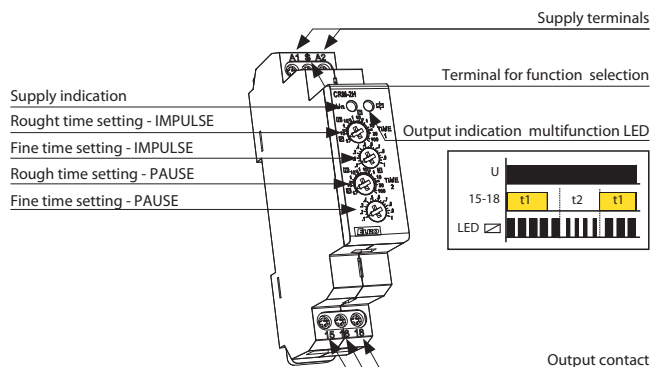


EAN code  
CRM-2H /230 V: 8595188124201  
CRM-2H /UNI: 8595188113007

Technical parameters		CRM-2H
Number of functions:	2 (function is chosen by connecting S-A1)	
Supply terminals:	A1 - A2	
Voltage range:	UNI	AC/DC 12 - 240 V (AC 50 - 60 Hz)
Burden (max.):	AC 0.7 - 3 VA / DC 0.5 - 1.7 W	
Voltage range:	230	AC 230 V / 50 - 60 Hz
Power input (apparent/loss input):	AC max. 12 VA / 1.3 W	
Max. dissipated power (Un + terminals):	4 W	
Supply voltage tolerance:	-15 %; +10 %	
Supply indication:	green LED	
Time scale:	0.1 s - 100 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)	
<b>Output</b>		
Number of contacts:	1x changeover/ SPDT (AgNi / Silver Alloy)	
Current rating:	16 A / AC1	
Breaking capacity:	4000 VA / AC1, 384 W / DC	
Inrush current:	30 A / < 3 s	
Switching voltage:	250 V AC1 / 24 V DC	
Output indication:	multifunction red LED	
Mechanical life:	3x10 <sup>7</sup>	
Electrical life (resistive):	0.7x10 <sup>5</sup>	
Reset time:	max. 150 ms	
<b>Other information</b>		
Operating temperature:	-20 °C to 55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to 70 °C (-22 °F to 158 °F)	
Electrical strength:	4 kV (supply-output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel / IP20 terminals	
Overtoltage category:	III.	
Pollution degree:	2	
Terminal wire capacity (mm <sup>2</sup> ):	solid wire max. 1x 2.5 or 2x 1.5 / 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	UNI - 63 g (2.2 oz.), 230 - 61 g (2.2 oz.)	
Standards:	EN 61812-1, EN 61010-1	

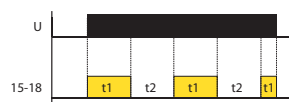
- Cycler with independent adjustable switch ON/OFF
- Used for regular room ventilation, cyclic dehumidification, light control, circulating pumps, illuminated advertising, etc.
- 2 time functions:
  - 1) Cycler beginning with pulse
  - 2) Cycler beginning with pause
- Function choice is done by an external jumper of terminals S-A1
- Time scale 0.1 s - 100 days divided into 10 time 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 / 3 days - 30 days / 10 days - 100 days)
- Rough time setting via rotary switch
- Voltage range: AC 230 V or AC/DC 12 - 240 V
- Output contact: 1x changeover / SPDT 16 A
- Output indication: multifunction red LED
- 1-MODULE, DIN rail mounting

## Description

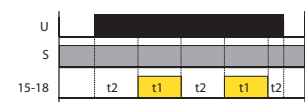


## Function

### Cycler beginning with pulse



### Cycler beginning with pause

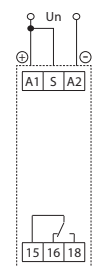


## Connection

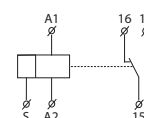
### Cycler beginning with pulse



### Cycler beginning with pause (jumper S-A1)



## Symbol





EAN code  
CRM-91HE /UNI + potentiometr: 8595188142052  
Potentiometr: 8595188125215

Technical parameters	CRM-91HE
Number of functions:	10
Supply terminals:	A1 - A2
Voltage range:	AC/DC 12 - 240 V (AC 50/60 Hz)
Burden (max.):	AC 0.7 - 3 VA/DC 0.5 - 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	
Number of contacts:	1x changeover/SPDT (AgNi/Silver Alloy)
Current rating:	16 A/AC1
Breaking capacity:	4000 VA/AC1, 384 W/DC
Inrush current:	30 A/<3 s
Switching voltage:	250V AC/24V DC
Output indication:	multifunction red LED
Mechanical life:	3x10 <sup>7</sup>
Electrical life (AC1):	0.7x10 <sup>5</sup>

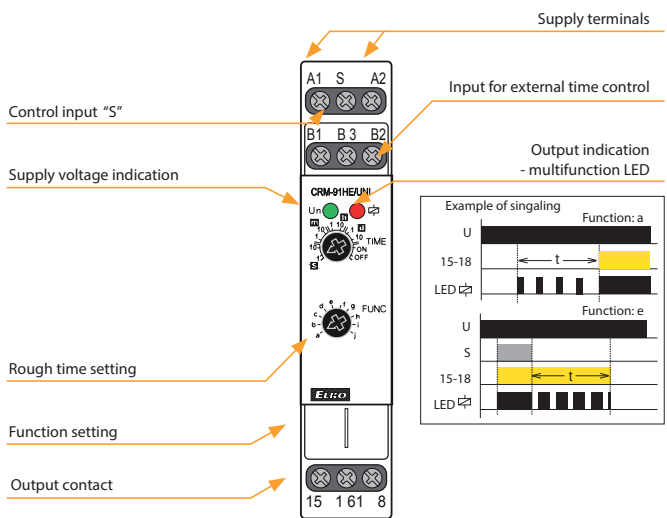
Controlling	
Control. voltage:	AC/DC 12 - 240 V (AC 50/60 Hz)
Consumption of input:	AC 0.025-0.2 VA/DC 0.1-0.7 W
Load between S-A2:	Yes
Glow-tubes:	No
Control. terminals:	A1-S
Impulse length:	min. 25 ms/max. unlimited
Reset time:	max. 150 ms

Other information	
Operating temperature:	-20 °C to +55 °C (-4 °F to 131 °F)
Storage temperature:	-30 °C to +70 °C (-22 °F to 158 °F)
Electrical strength:	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
Max. cable size (mm <sup>2</sup> ):	solid wire max. 1x 2.5 or 2x 1.5/ 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:	75 g (2.6 oz.)
Standards:	EN 61812-1

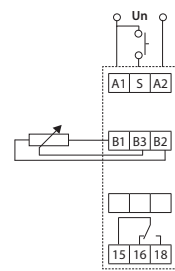
Technical parameters	Potentiometer
Potentiometer:	47 kΩ, linear
Protection degree:	IP 65 from front side/IP20 from back side
Max. cable size (mm <sup>2</sup> ):	1.5 with sleeve/without sleeve max. 2.5 (AWG 12)
Weight:	22 g (0.8 oz.)
Dimensions:	see page Accessories

- 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

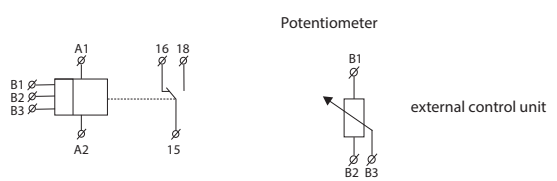
**Description**



**Connection**



**Symbol**



**Function**

For a description of the functions on page 23.



EAN code  
CRM-2HE /UNI + potetiometr: 8595188142069  
Potentiometr: 8595188125215

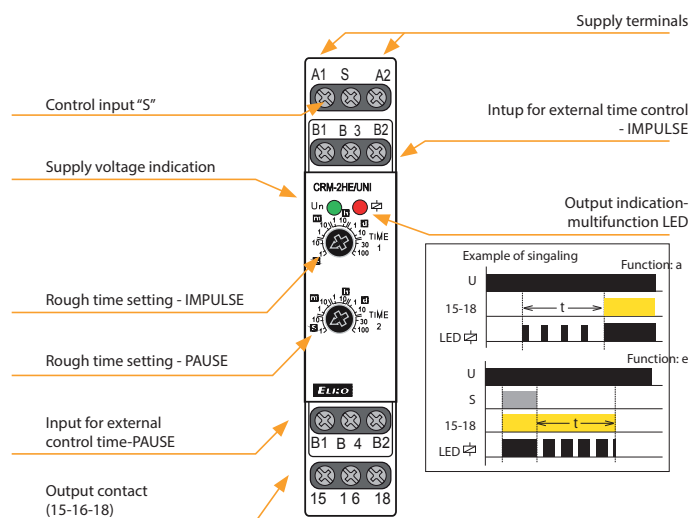
Technical parameters	CRM-2HE
Number of functions:	2
Supply terminals:	A1 - A2
Voltage range:	AC/DC 12 - 240 V (AC 50/60 Hz)
Burden (max.):	AC 0.7 - 3 VA/DC 0.5 - 1.7 W
Max. dissipated power:	4 W (Un + terminals)
Supply voltage tolerance:	-15 %; +10 %
Supply indication:	green LED
Time ranges:	0.1 s - 100 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)
<b>Output</b>	
Number of contacts:	1x changeover/SPDT (AgNi/Silver Alloy)
Current rating:	16 A/AC1
Breaking capacity:	4000 VA/AC1, 384 W/DC
Inrush current:	30 A/<3 s
Switching voltage:	250V AC/24V DC
Output indication:	multifunction red LED
Mechanical life:	3x10 <sup>7</sup>
Electrical life (AC1):	0.7x10 <sup>5</sup>
<b>Controlling</b>	
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
Reset time:	max. 150 ms
<b>Other information</b>	
Operating temperature:	-20 °C to +55 °C (-4 °F to 131 °F)
Storage temperature:	-30 °C to +70 °C (-22 °F to 158 °F)
Electrical strength:	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
Max. cable size (mm <sup>2</sup> ):	solid wire max. 1x 2.5 or 2x 1.5/ 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:	78 g (2.8 oz.)
Standards:	EN 61812-1

#### Potentiometer

Potentiometer:	47 kΩ, linear
Protection degree:	IP 65 from front side/IP20 from back side
Max. cable size (mm <sup>2</sup> ):	1.5 with sleeve/without sleeve max. 2.5 (AWG 12)
Weight:	22 g (0.8 oz.)
Dimensions:	see page Accessories

- Control by external control unit - potentiometer (can be placed/ mounted for example on switch board doors or in panel).
- Asymmetric cyclers - 2 time functions:  
flasher beginning with pulse  
flasher beginning with gap.
- Function selected via external wired link on control input S-A1.
- Possible to connect external potentiometer - max. distance 10 m (32.8 ft.) from relay.

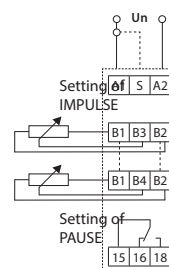
#### Description



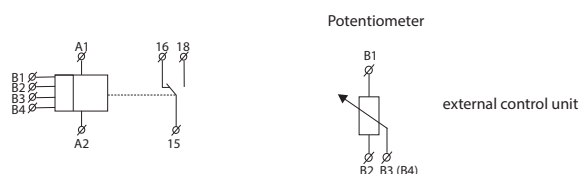
#### Function

Functions of CRM-2HE are identical with CRM-2H (page 14).

#### Connection



#### Symbol



NEW



EAN code  
CRM-131H/UNI: 8595188175562

Technical parameters		CRM-131H
<b>Power supply</b>		
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	
<b>Time circuit</b>		
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)	
<b>Output</b>		
Number of contacts	1x changeover/SPDT (AgNi)	
Current rating:	16 A/AC1	
Breaking capacity:	4000 VA/AC1, 384 W/DC	
Switching voltage:	250V AC/24V DC	
Max. power dissipation:	1.2 W	
Output indication:	multifunction red LED	
Mechanical life:	10 000 000 operations	
Electrical life (AC1):	50 000 operations	
<b>Control</b>		
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	
<b>Other information</b>		
Operating temperature:	-20 °C to +55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to +70 °C (-22 °F to 158 °F)	
Dielectrical 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 (mm <sup>2</sup> ):	solid wire max. 1x 2.5 or 2x 1.5/ with sleeve max. 1x 2.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5 x 0.7 x 2.5 inch)	
Weight:	61 g (2.2 oz)	
Standards:	EN 61812-1	

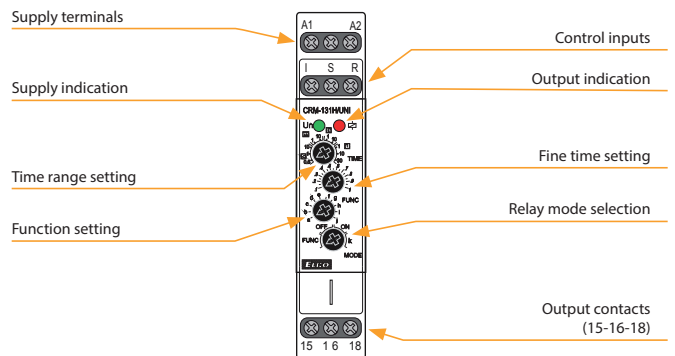
\* for adjustable delay <100 ms, a time deviation of ± 10 ms applies

## Function

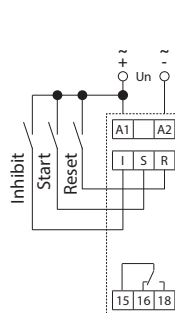
For a description of the functions on page 27.

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

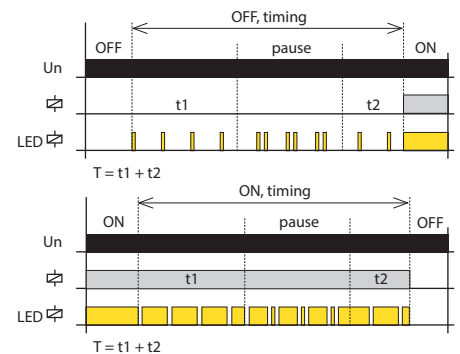
## Description



## Connection



## Indication of operating states



## Relay mode selection

### FUNC. Settings function mode

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

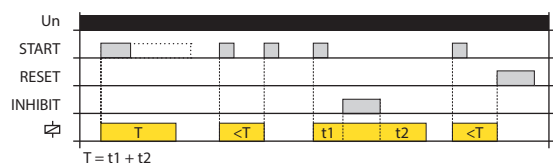
### OFF. Relay open mode



### ON. Relay 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 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.



EAN code  
CRM-121H/UNI: 859518817555

Technical parameters		CRM-121H
<b>Power supply</b>		
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	
<b>Time circuit</b>		
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)	
<b>Output</b>		
Number of contacts	1x changeover/SPDT (AgNi)	
Current rating:	16 A/AC1	
Breaking capacity:	4000 VA/AC1, 384 W/DC	
Switching voltage:	250V AC/24V DC	
Max. power dissipation:	1.2 W	
Output indication:	multifunction red LED	
Mechanical life:	10 000 000 operations	
Electrical life (AC1):	50 000 operations	
<b>Control</b>		
Control terminals:	S1-S2	
Impulse length:	min. 25 ms/max. unlimited	
Reset time:	max. 150 ms	
<b>Other information</b>		
Operating temperature:	-20 °C to +55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to +70 °C (-22 °F to 158 °F)	
Dielectrical strength:	4 kV AC (supply - output)	
	4 kV AC (supply - control input)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel/IP10 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Max. cable size (mm <sup>2</sup> ):	solid wire max. 2x 2.5 or 1x 4/	
	with sleeve max. 1x 2.5 or 2x 1.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5 x 0.7 x 2.5 inch)	
Weight:	72 g (2.5 oz)	
Standards:	EN 61812-1	

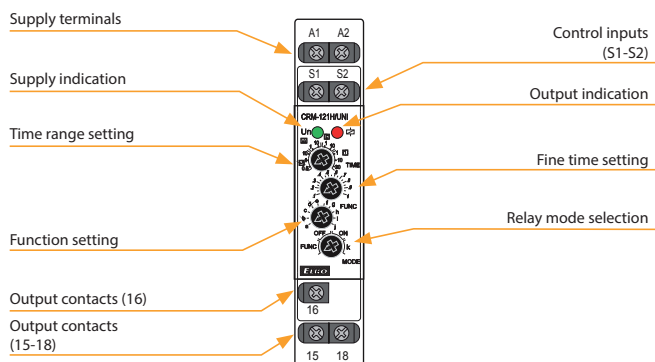
\* for adjustable delay <100 ms, a time deviation of ± 10 ms applies

**Function**

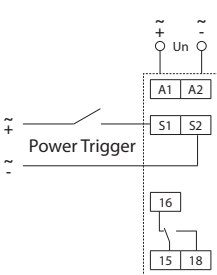
For a description of the functions on page 27.

- Multi-function time relay for universal use in automation, control and regulation or in house installations.
- Galvanically isolated control input (Power Trigger)
- All functions initiated by the supply voltage, except for the flasher function, can use the control input to inhibit the delay (pause).
- Relay mode selection - according to the set function, permanently closed, permanently open, memory latch function with delay.
- Time scale 50 ms - 30 days divided into 10 ranges.
- Multifunction red LED flashes or shines depending on the operating status.

**Description**

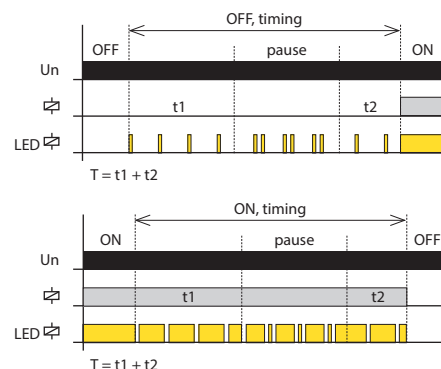


**Connection**



(Voltage range same as input voltage)

**Indication of operating states**



**Relay mode selection**

**FUNC. Settings function mode**

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

**OFF. Relay open mode**



**ON. Relay closed mode**



**k. Function: MEMORY LATCH with delay**



When the supply voltage is applied, the relay is open. If the 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 control contact is closed during timing, the relay opens immediately. Each time the control contact closes during relay timing, it changes status.



NEW

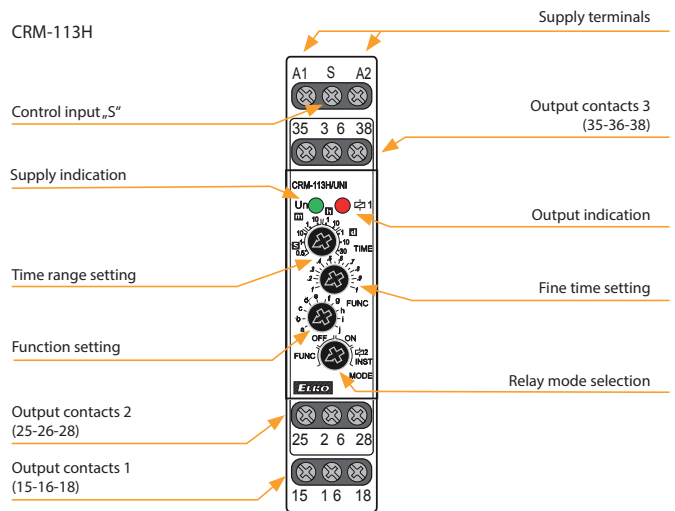


EAN code  
CRM-111H/UNI: 8595188175548  
CRM-113H/UNI: 8595188176880

Technical parameters	CRM-111H	CRM-113H
<b>Power supply</b>		
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
Supply voltage tolerance:	-15 %; +10 %	
Supply indication:	green LED	
<b>Time circuit</b>		
Number of functions:	11	10
Time ranges:	50 ms - 30 days	
Time setting:	rotary switches and potentiometers	
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)	
<b>Output</b>		
Number of contacts 1:	1x changeover/SPDT (AgNi)	
Current rating:	16 A/AC1	
Breaking capacity:	4000 VA/AC1, 384 W/DC	
Electrical life (AC1):	50 000 operations	
Number of contacts 2 (3):	x	2x chang./DPDT (AgNi)
Current rating:	x	8 A/AC1
Breaking capacity:	x	2000 VA/AC1, 192 W/DC
Electrical life (AC1):	x	10 000 operations
Switching voltage:	250V AC/24V DC	
Max. power dissipation:	1.2 W	2.4 W
Output indication:	multifunction red LED	
Mechanical life:	10 000 000 operations	
<b>Control</b>		
Control. terminals:	A1-S	
Load between S-A2:	Yes	
Impulse length:	min. 25 ms/max. unlimited	
Reset time:	max. 150 ms	
<b>Other information</b>		
Operating temperature:	-20 °C to +55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to +70 °C (-22 °F to 158 °F)	
Dielectrical strength:		
supply - output 1	4kV AC	
supply - output 2 (3)	x	1kV AC
output 1 - output 2	x	1kV AC
output 2 - output 3	x	1kV AC
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 (mm <sup>2</sup> ):	solid wire max. 1x 2.5 or 2x 1.5/ with sleeve max. 1x 2.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5 x 0.7 x 2.5 inch)	
Weight:	62 g (2.2 oz)	85 g (3 oz)
Standards:	EN 61812-1	

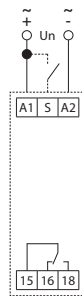
- Multi-function time relay for universal use in automation, control and regulation or in house installations.
- All functions initiated by the supply voltage, except for the flasher function, can use the control input to inhibit the delay (pause).
- Relay mode selection - according to the set function, permanently closed, permanently open, function of memory latch with delay (CRM-111H)/switching of the second relay according to supply voltage (CRM-113H).
- Multifunction red LED flashes or shines depending on the operating status.

## Description

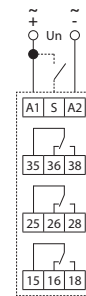


## Connection

CRM-111H



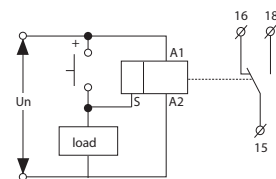
CRM-113H



**CRM-113H:**  
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.



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



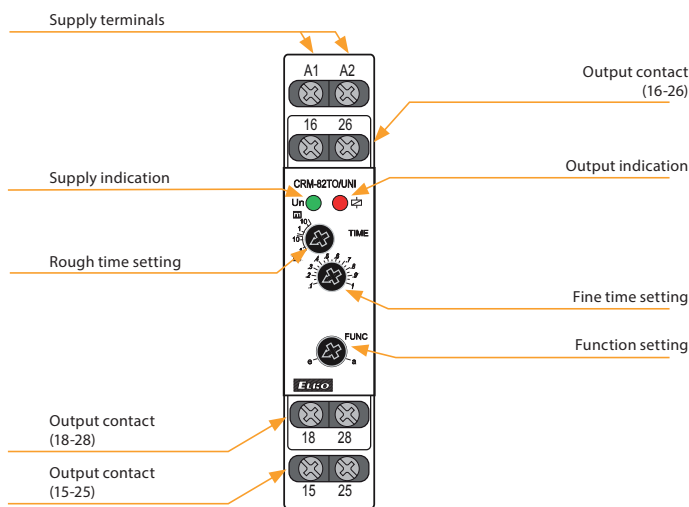
EAN code  
CRM-82TO/UNI: 8595188137614

Technical parameters		CRM-82TO
Number of functions:	a - On Delay (Power On)/ e - Off Delay (S Break)	
Supply terminals:	A1 - A2	
Voltage range:	AC/DC 12 - 240 V (AC 50/60 Hz)	
Burden (max.):	AC 0.7 - 3 VA/DC 0.5 - 1.7 W	
Max. dissipated power (Un + terminals):	2.5 W	
Supply voltage tolerance:	-15 %; +10 %	
Supply indication:	green LED	
Time ranges:	0.1 s - 10 min	
Time setting:	potentiometer	
Time deviation:	5 % - mechanical setting	
Repeat accuracy:	0.2 % - set value stability	
Temperature coefficient:	0.1 %/°C, at = 20 °C (0.1 %/°F, at = 68 °F)	
Output		
Number of contacts:	2x changeover/DPDT (AgNi/Silver Alloy)	
Current rating:	8 A/AC1	
Breaking capacity:	2000 VA/AC1, 192 W / DC	
Inrush current:	10 A/<3 s	
Switching voltage:	250V AC/24V DC	
Output indication:	red LED	
Mechanical life:	3x10 <sup>7</sup>	
Electrical life (AC1):	0.7x10 <sup>5</sup>	
Other information		
Operating temperature:	-20 °C to 55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to 70 °C (-22 °F to 158 °F)	
Electrical strength:	4 kV (supply-output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel/IP10 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Max. cable size (mm <sup>2</sup> ):	solid wire max. 2x 2.5 or 1x 4, with sleeve max. 2x 1.5 or 1x 2.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5" x 0.7" x 2.5")	
Weight:	73 g (2.6 oz.)	
Standards:	EN 61812-1	

- „True OFF“ relay - relay timing without supply voltage.
- Example of use: back-up source for Delay OFF in case of voltage failure (e.g. emergency lighting, emergency respirator, or protection of el. controlled doors - in case of fire).
- 2 time functions adjustable by rotary switch:  
a - Delayed return after disconnecting of supply  
e - Delayed start.
- Time range (adjustable by rotary switch and fine setting by potentiometer): 0.1 s - 10 min.
- Interruptions in the power supply must take time steps (tens to hundreds of milliseconds).
- Output status indicated by red LED (only in case of supply voltage connection).

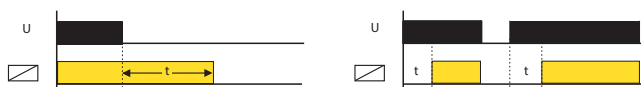
Time relay

**Description**

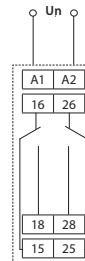


**Function**

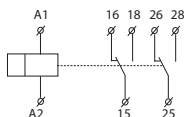
a - Delay OFF (S break) the power supply is switched off (min. time is 0.5 s)      e - Off Delay (S break)



**Connection**



**Symbol**



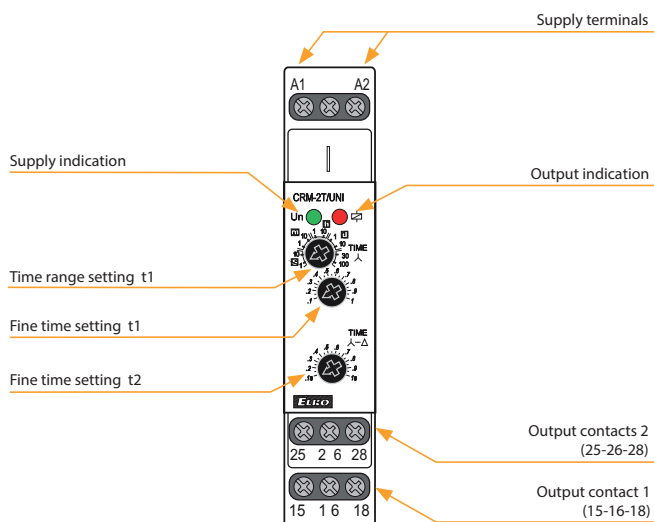


EAN code  
CRM-2T/230 V: 8595188112291  
CRM-2T/UNI: 8595188112437

Technical parameters		CRM-2T
<b>Power supply</b>		
Supply terminals:		A1 - A2
Voltage range:	UNI	AC/DC 12 - 240 V (AC 50/60 Hz)
Power input (max.):		2 VA/1.5 W
Voltage range:	230	AC 230 V (50/60 Hz)
Power input (max.):		AC 3VA/1.4W
Supply voltage tolerance:		-15 %; +10 %
Supply indication:		green LED
<b>Function</b>		
Time scale:		t1: 0.1 s - 100 days, t2: 0.1 s - 1 s
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)
<b>Output</b>		
Number of contacts:		2x changeover/SPDT (AgNi)
Current rating:		16 A/AC1
Breaking capacity:		4000 VA/AC1, 384 W/DC
Inrush current:		30 A/< 3 s
Switching voltage:		250V AC/24V DC
Max. power dissipation:		1.2 W
Output indication:		multifunction red LED
Mechanical life:		10 000 000 operations
Electrical life (AC1):		50 000 operations
Reset time:		max. 150 ms
<b>Other information</b>		
Operating temperature:		-20 °C to 55 °C (-4 °F to 131 °F)
Storage temperature:		-30 °C to 70 °C (-22 °F to 158 °F)
Dielectrical strength:		
supply - output 1		4 kV AC
supply - output 2		4 kV AC
output 1 - output 2		4 kV AC
Operating position:		any
Mounting:		DIN rail EN 60715
Protection degree:		IP40 from front panel/IP20 terminals
Overvoltage category:		III.
Pollution degree:		2
Terminal wire capacity (mm <sup>2</sup> ):		max.1x 2.5, 2x1.5, with sleeve max. 1x 2.5 (AWG 12)
Dimensions:		90 x 17.6 x 64 mm (3.5 x 0.7 x 2.5 inch)
Weight:		UNI - 78 g (2.8 oz), 230 - 73 g (2.6 oz)
Standards:		EN 61812-1

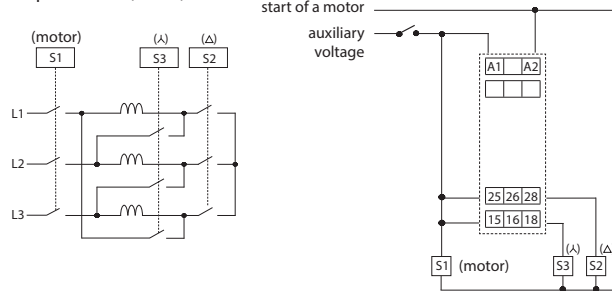
- It serves for delay ON of motors star/delta.
- Time t1 (star):
  - time range setting by rotary switch
  - fine time setting by potentiometer
- Time t2 (delay) between  $\lambda/\Delta$ 
  - fine time setting by potentiometer
- Multifunction red LED flashes or shines depending on the operating status.

**Description**



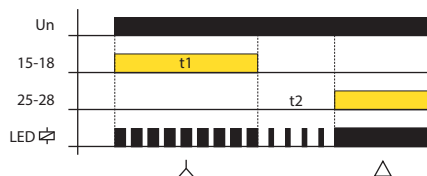
**Connection**

Start up of motor ( $\lambda - \Delta$ )

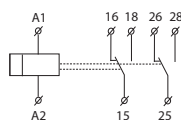


**Function**

STAR/DELTA starter



**Symbol**



Time relay

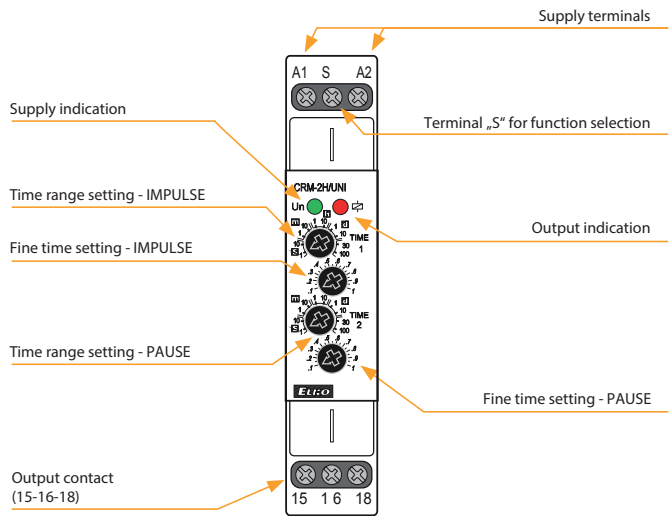


EAN code  
CRM-2H/230V: 8595188124201  
CRM-2H/UNI: 8595188113007

Technical parameters		CRM-2H
<b>Power supply</b>		
Supply terminals:		A1 - A2
Voltage range:	UNI	AC/DC 12 - 240 V (AC 50/60 Hz)
Power input (max.):		2 VA/1.5 W
Voltage range:	230	AC 230 V (50/60 Hz)
Power input (max.):		AC 3VA/1.4W
Supply voltage tolerance:		-15 %; +10 %
Supply indication:		green LED
<b>Function</b>		
Time scale:		0.1 s - 100 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)
<b>Output</b>		
Number of contacts:		1x changeover/SPDT (AgNi)
Current rating:		16 A/AC1
Breaking capacity:		4000 VA/AC1, 384 W/DC
Inrush current:		30 A/< 3 s
Switching voltage:		250V AC/24V DC
Max. power dissipation:		1.2 W
Output indication:		multifunction red LED
Mechanical life:		10 000 000 operations
Electrical life (AC1):		50 000 operations
Reset time:		max. 150 ms
<b>Other information</b>		
Operating temperature:		-20 °C to 55 °C (-4 °F to 131 °F)
Storage temperature:		-30 °C to 70 °C (-22 °F to 158 °F)
Dielectrical 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
Terminal wire capacity (mm²):		solid wire max. 1x 2.5 or 2x 1.5/ with sleeve max. 1x 2.5 (AWG 12)
Dimensions:		90 x 17.6 x 64 mm (3.5 x 0.7 x 2.5 inch)
Weight		UNI - 61 g (2.2 oz), 230 - 58 g (2 oz)
Standards:		EN 61812-1

- Flasher with independent adjustable switch ON and switch OFF.
- Used for regular room ventilation, cyclic dehumidification, light control, circulating pumps, illuminated advertising, etc.
- 2 time functions:
  - 1) Asymmetric FLASHER - ON first
  - 2) Asymmetric FLASHER - OFF first
- Function choice is done by an external jumper of terminals S-A1.
- Time scale 0.1 s - 100 days divided into 10 time ranges.
- Time range setting via rotary switch.
- Fine time setting by potentiometer.
- Multifunction red LED flashes or shines depending on the operating status.

### Description



### Connection

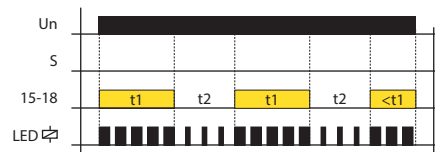
Asymmetric FLASHER - ON first

Asymmetric FLASHER - OFF first  
(jumper S-A1)

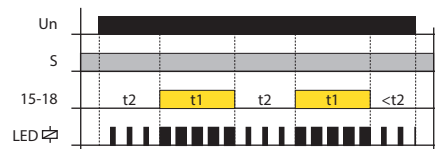


### Function

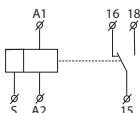
Asymmetric FLASHER - ON first



Asymmetric FLASHER - OFF first



### Symbol



NEW



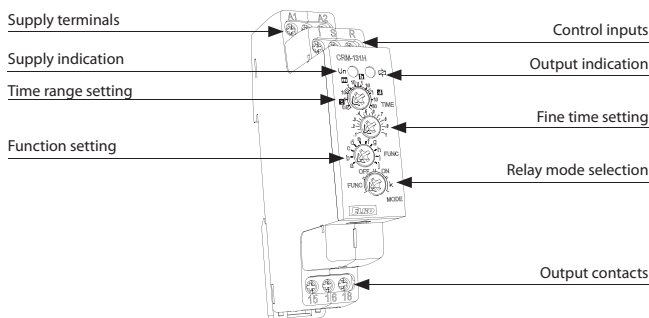
EAN code  
CRM-131H/UNI: 8595188175562

Technical parameters		CRM-131H
<b>Power supply</b>		
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	
<b>Time circuit</b>		
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)	
<b>Output</b>		
Number of contacts	1x changeover / SPDT (AgNi)	
Current rating:	16 A / AC1	
Breaking capacity:	4000 VA / AC1, 384 W / DC	
Switching voltage:	250V AC / 24V DC	
Max. power dissipation:	1.2 W	
Output indication:	multifunction red LED	
Mechanical life:	10 000 000 operations	
Electrical life (AC1):	50 000 operations	
<b>Control</b>		
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	
<b>Other information</b>		
Operating temperature:	-20 °C to +55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to +70 °C (-22 °F to 158 °F)	
Dielectrical 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 (mm <sup>2</sup> ):	solid wire max. 1x 2.5 or 2x 1.5 / with sleeve max. 1x 2.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5 x 0.7 x 2.5 inch)	
Weight:	61 g (2.2 oz)	

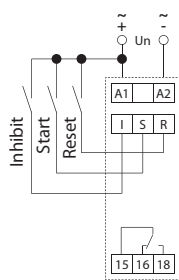
\* for adjustable delay <100ms, a time deviation of ± 10ms applies

- Multi-function time relay for universal use in automation, control and regulation or in house installations.
- Three control inputs - START, INHIBIT, RESET.
- Relay mode selection - according to the set function, permanently closed, permanently open, memory latch function with delay.
- Universal supply voltage AC/DC 12 – 240 V.
- Time scale 50 ms - 30 days divided into 10 ranges: (50 ms - 0.5 s / 0.1 s - 1 s / 1 s - 10 s / 0.1 min - 1 min / 1 min - 10 min / 0.1 hr - 1 hrs / 1 hrs - 10 hrs / 0.1 days - 1 day / 1 day - 10 days / 3 days - 30 days).
- Output contact: 1x changeover / SPDT 16 A.
- Multifunction red LED flashes or shines depending on the operating status.

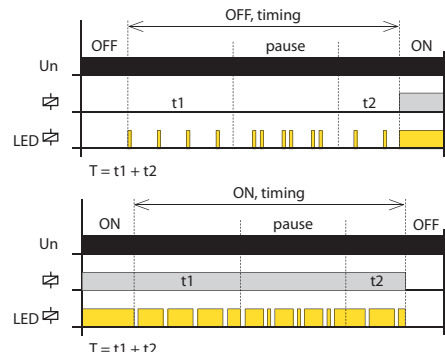
**Description**



**Connection**



**Indication of operating states**



**Relay mode selection**

**FUNC. Settings function mode**

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

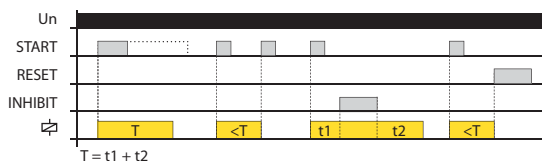
**OFF. Relay open mode**



**ON. Relay 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**

For a description of the functions on page 30.

Function

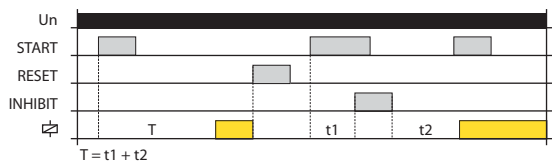
Control input function description:

- 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:

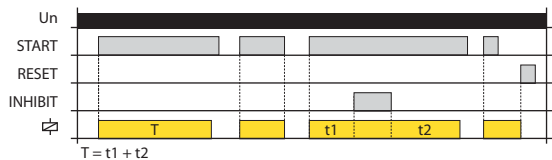
- If the control contact START is closed and the supply voltage is connected, the time function is activated when the supply voltage is connected.
- Closing the control contact INHIBIT pauses the timing, after opening the control contact INHIBIT timing continues from the moment of interruption.
- If 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



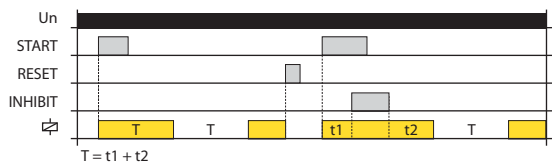
When the supply voltage is applied, the relay is open. If the control contact START is closed, the time delay T starts. The closing of the START control contact during timing is ignored.

b. INTERVAL ON with Control Signal



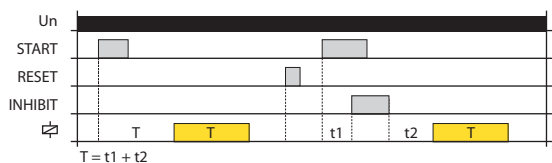
When the supply voltage is applied, the relay is open. When the control contact START is closed, the relay closes and the time delay T begins. If the START control contact is open during timing, the time interval is immediately terminated and the relay opens.

c. FLASHER - ON first with Control Signal



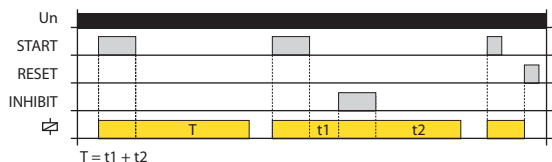
When the supply voltage is applied, the relay is open. When the START control contact is closed, the relay energizes and starts the delay time T. After the end of the timing relay opens and again runs delay time T. Upon completion timing again switches, and the sequence is repeated until the supply voltage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

d. FLASHER - OFF first with Control Signal



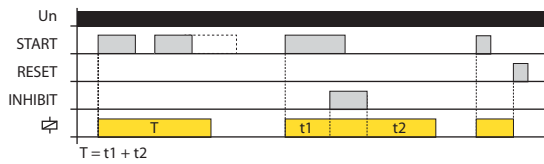
When the supply voltage is applied, the relay is open. When the START control contact is closed, starts the time delay T. After the end of the timing relay closes and again runs delay time T. After the end of the timing relay opens and the sequence is repeated until the supply voltage is disconnected.

e. OFF DELAY



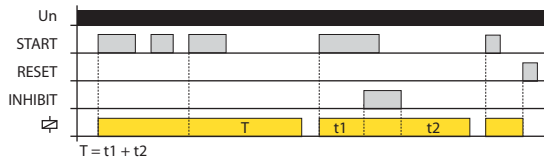
When the supply voltage is applied, the relay is open. If the control contact START is closed, the relay closes. After tripping Contact Start starts the delay time T. After the end of the timing relay is switched off.

f. SINGLE SHOT



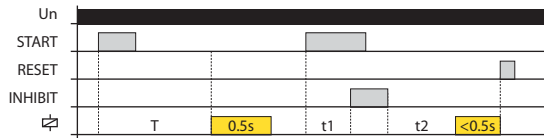
When the supply voltage is applied, the relay is open. When the START control contact is closed, the relay energizes and starts the delay time T. After the end of the timing relay is switched off. The closing of the START control contact during timing is ignored.

g. WATCHDOG



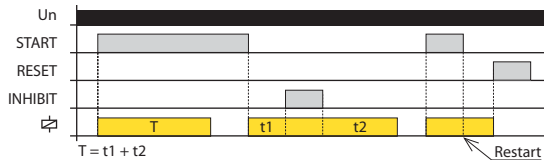
When the supply voltage is applied, the relay is open. When the START control contact is closed, the relay energizes and starts the delay time T. After the end of the timing relay is switched off. Closing control contact START during timing triggers a new time delay T - the relay closing time is thus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

h. PULSE GENERATOR 0.5s with Control Signal

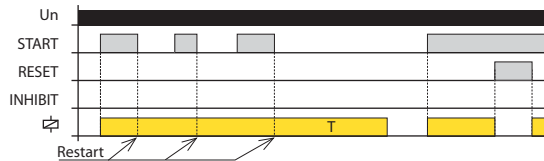


When the supply voltage is applied, the relay is open. When the START control contact is closed, starts the time delay T. After the end of the timing relay switches for the fixed time (0.5 sec).

i. INTERVAL ON/OFF

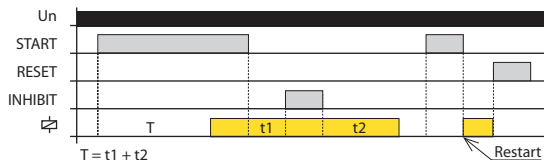


When the supply voltage is applied, the relay is open. When the START control contact is closed, the relay energizes and starts the delay time T. After the end of the timing relay is switched off. By opening the control contact start relay again closes and starts the delay time T. After the end of the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

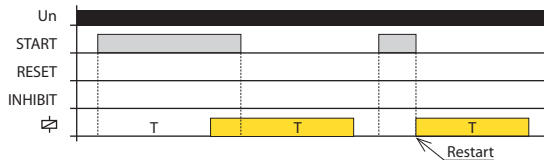


If the START control contact is open during timing, a restart occurs - the relay remains closed and a new time delay T begins. When the timing is complete, the relay opens.

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.



EAN code  
CRM-91HE /UNI + potentiometr: 8595188142052  
CRM-2HE /UNI + potiometr: 8595188142069  
Potentiometr for CRM-91HE, CRM-2HE: 8595188125215

Technical parameters	CRM-91HE	CRM-2HE
Number of functions:	10	2
Supply terminals:	A1 - A2	
Voltage range:	AC/DC 12 - 240 V (AC 50 - 60 Hz)	
Burden (max.):	AC 0.7 - 3 VA / DC 0.5 - 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	0.1 s - 100 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		
Number of contacts:	1x changeover/ SPDT (AgNi / Silver Alloy)	
Current rating:	16 A / AC1	
Breaking capacity:	4000 VA / AC1, 384 W / DC	
Inrush current:	30 A / <3 s	
Switching voltage:	250 V AC1 / 24 V DC	
Output indication:	multifunction red LED	
Mechanical life:	3x10 <sup>7</sup>	
Electrical life (AC1):	0.7x10 <sup>5</sup>	

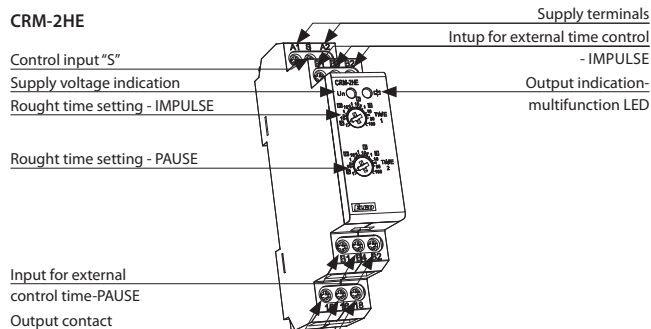
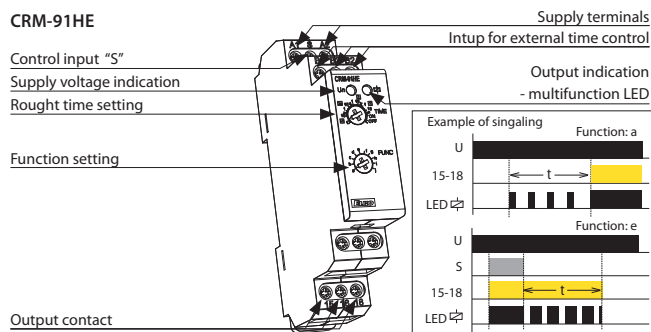
Controlling		
Control. voltage:	AC/DC 12 - 240 V (AC 50 - 60 Hz)	
Consumption of input:	AC 0.025-0.2 VA / DC 0.1-0.7 W	
Load between S-A2:	Yes	
Glow-tubes:	No	
Control. terminals:	A1-S	
Impulse length:	min. 25 ms / max. unlimited	x
Reset time:	max. 150 ms	

Other information		
Operating temperature:	-20 °C to +55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to +70 °C (-22 °F to 158 °F)	
Electrical strength:	4 kV (supply - output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel / IP20 terminals	
Overtoltage category:	III.	
Pollution degree:	2	
Max. cable size (mm <sup>2</sup> ):	solid wire max. 1x 2.5 or 2x 1.5 / 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:	75 g (2.6 oz.)	78 g (2.8 oz.)
Standards:	EN 61812-1, EN 61010-1	

Potentiometer		
Potentiometer:	47 kΩ, linear	
Protection degree:	IP 65 from front side / IP20 from back side	
Max. cable size (mm <sup>2</sup> ):	1.5 with sleeve / without sleeve max. 2.5 (AWG 12)	
Weight:	22 g (0.8 oz.)	
Dimensions:	see page Accessories	

- Control by external control unit - potentiometer (can be placed/ mounted for example on switch board doors or in panel).
- CRM-91HE:** multifunction time relays
  - 10 functions :
    - 5 time functions controlled by supply voltage
    - 4 time functions controlled by control input
    - 1 function of latching relay
  - 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).
- CRM-2HE:** asymmetric cyclus
  - 2 time functions:
    - cyclus beginning with pulse
    - cyclus beginning with gap
  - function selected via external wired link on control input S-A1.
- Universal supply voltage AC/DC 12 - 240 V.
- Output contact: 1x changeover 16 A/SPDT.
- 1-MODULE, DIN rail mounting.
- Possible to connect external potentiometer - max. distance 10 m (32.8 ft.) from relay

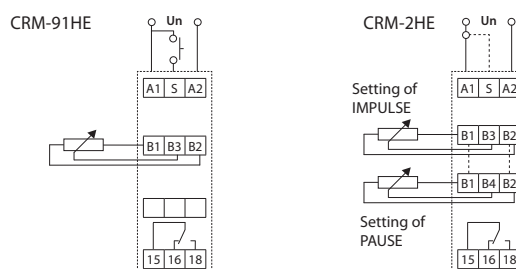
## Description



## Function

Functions of CRM-91HE are identical with CRM-91H.  
Functions of CRM-2HE are identical with CRM-2H.

## Connection



## Symbol

