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EN

CRM-46

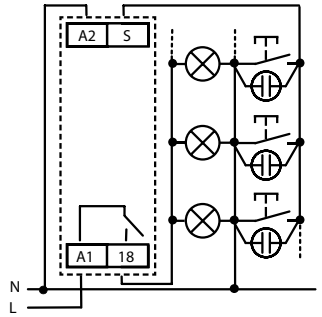
Smart staircase switch

Characteristics

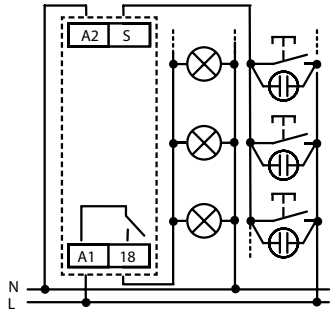
- Staircase switch enables delayed switching off of lighting on stairs, corridors, entrances, common areas or for delayed running of fans in the toilet or bathroom.
- The intelligent staircase switch offers similar application possibilities as the CRM-4, while it is possible to extend the delay for functions a, b repeatedly by briefly pressing the control button (s). Each short press multiplies the time set by the potentiometer, i.e. setting the potentiometer to 2 minutes with three presses extends the delay up to 6 minutes. The maximum value of such an extended delay will always be 30 minutes, regardless of the number of presses.
- Long press (> 2 s) can switch off the output prematurely and end the ongoing delay.
- Control input with the possibility of loading up to 100mA load (glim lamp, LED in the button, etc.).
- Function (selectable by potentiometer on the front panel)
  a – STAIRCASE SWITCH, programmable with signalization
  b – STAIRCASE SWITCH, programmable without signalization
  c – MEMORY LATCH (press to switch on, press to switch off)
  d – MEMORY LATCH with delay
  ON (permanently closed) - e.g. during cleaning, moving
  OFF (permanently open) - e.g. when replacing luminaires
- Adjustable time range 0.5… 10 minutes.
- Output contact 16A AC1 (4000VA), handles surge currents up to 80A.
- 3-wire or 4-wire connection (input S can be controlled by potential A1 or A2).

Connection

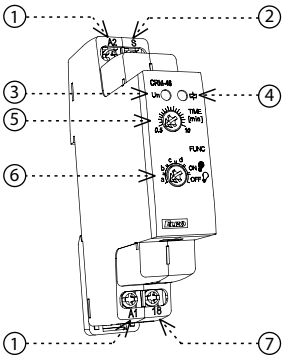
3-wire connection



4-wire connection



Description



1. Supply terminal
2. Controlling input
3. Supply indication
4. Output contact timing / closing indication
5. Time delay setting 0.5 - 10 min
6. Function setting
7. Output contact

Type of load	cos φ ≥ 0.95 AC1	AC2	AC3	AC5a uncompensated	AC5a compensated	HAL.230V AC5b	AC6a	AC7b	AC12
Mat. contacts $AgSnO_2$, contact 16A	250V / 16A	250V / 5A	250V / 3A	230V / 3A (690VA)	230V / 3A (690VA) to max. input C=14uF	1000W	x	250V / 3A	x
Type of load	AC13	AC14	AC15	DC1	DC3	DC5	DC12	DC13	DC14
Mat. contacts $AgSnO_2$, contact 16A	x	250V / 6A	250V / 6A	24V / 10A	24V / 3A	24V / 2A	24V / 6A	24V / 2A	x

Technical parameters

	CRM-46
Number of functions:	6
Supply terminals:	A1 - A2
Supply voltage:	AC 230 V / 50 - 60 Hz
Consumption max.:	3 VA / 1.6 W
Max. dissipated power (Un + terminals):	4 W
Supply voltage tolerance:	-15 %; +10 %
Supply indication:	green LED
Time ranges:	0.5 - 10 min
Time setting:	potentiometer
Time deviation:	5 % - mechanical setting
Repeat accuracy:	5 % - set value stability
Temperature coefficient:	0.01 % / °C, at = 20 °C (0.01 % / °F, at = 68 °F)
Output	
Number of contacts:	1x NO - SPST ($AgSnO_2$), switches potencial A1
Current rating:	16 A / AC1
Breaking capacity:	4000 VA / AC1, 384 W / DC
Inrush current:	30 A / < 3 s
Switching voltage:	250 V AC / 24 V DC
Output indication:	red LED
Mechanical life:	10 000 000 operations
Electrical life (AC1):*	50 000 operations
Control	
Control voltage:	AC 230 V
Power the control input max.:	4.5 VA / 0.3 W
Glow tubes connetions:	Yes
Max. Current of connected glow lamps:	100mA
Control. terminals:	A1-S or A2-S
Impulse length:	min. 40 ms / max. unlimited
Reset time:	max. 320 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)
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP40 from front panel / IP10 terminals
Overvoltage cathegory:	III.
Pollution degree:	2
Max. cable size (mm^2):	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˝)
Weight:	56 g (2 oz.)
Standards:	EN 61812-1

* For higher loads and frequent switching, it is recommended to strengthen the relay contact with a power contactor, e.g. the VSxxx contactor.

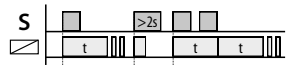
Warning

Device is constructed for connection in 1-phase AC 230 V main alternating current voltage and must be installed according to norms valid in the state of application. Connection according to the details in this direction. Installation, connection, setting and servicing should be installed by qualified electrician staff only, who has learnt these instruction and functions of the device. This device contains protection against overvoltage peaks and disturbancies in supply. For correct function of the protection of this device there must be suitable protections of higher degree (A, B, C) installed in front of them. According to standards elimination of disturbancies must be ensured. Before installation the main switch must be in position "OFF" and the device should be de-energized. Don´t install the device to sources of excessive electro-magnetic interference. By correct installation ensure ideal air circulation so in case of permanent operation and higher ambient temperature the maximal operating temperature of the device is not exceeded. For installation and setting use screw-driver cca 2 mm. The device is fully-electronic - installation should be carried out according to this fact. Non-problematic function depends also on the way of transportation, storing and handling. In case of any signs of destruction, deformation, non-function or missing part, don´t install and claim at your seller it is possible to dismount the device after its lifetime, recycle, or store in protective dump.

Function

When switching between functions, the red LED flashes.

a

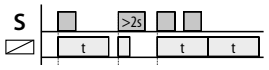


a - STAIRCASE SWITCH, programmable with signalization

The device timed the set time, 30 and 40s before the end of the time by double flashing of the luminaire announces the impending switch-off. You can increase the time interval by briefly pressing the button repeatedly.

Suitable for resistive loads (e.g. bulbs).

b

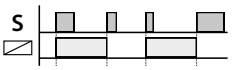


b - STAIRCASE SWITCH, programmable without signalization

The device will timed the set time without flashing at the end of the interval. You can increase the time interval by briefly pressing the button repeatedly.

The function is suitable for loads that can withstand frequent switching on and off (eg energy saving lamps, LED bulbs).

c

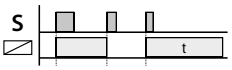


c - MEMORY LATCH (press to switch on, press to switch off)

By pressing the button the output relay closes and by pressing again the relay opens.

This function is primarily intended for locations where long-term lighting (without timing) is desirable and the unit is controlled from multiple locations (e.g. in office buildings).

d



d - MEMORY LATCH with delay

Pressing the button switches the output on / off. If the output is not turned off during the set time "t", it turns off automatically after the timer.

This function is suitable for places where lighting is often forgotten (e.g. toilets, corridors, cellars).