

V. Repair and maintenance

All repairs of the ST-10 STAIRCASE SWITCH are performed by the manufacturer. The device does not require any maintenance. When the sensor becomes contaminated, clean it with a clean, damp cloth. The device does not require any additional maintenance.

VI. Warranty Card

The manufacturer guarantees the correct operation of the ST-10 STAIRCASE SWITCH. The warranty period is 36 months from the date of sale. The warranty is extended by the time of repair. Warranty repairs are performed by the manufacturer free of charge after the STAIRCASE SWITCH is delivered to the manufacturer. Improper use of the device or independent modifications to it will void the warranty.



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The ST-10 STAIRCASE SWITCH meets the requirements of the European Union Directives
- Directive LVD 2014/35/EU - Low Voltage Directive of 26 February 2014
- Directive EMC 2014/30/EU - Electromagnetic Compatibility Directive of 26 February 2014



In order to protect the environment, do not throw away used electrical appliances and electronics together with municipal waste. Used equipment should be delivered to collection points for recycling free of charge. Any information on this can be obtained at sellers, distributors, manufacturer or on the Internet. The product's packaging is made of ecological materials. The PVC packaging tape will be used while stocks last.



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STAIRCASE SWITCH ST-10

User manual I. Purpose

ST-10 STAIRCASE SWITCH is designed to turn on the lighting for a specified period of time: in staircases, corridors, etc., and as a relay that performs various time functions (e.g. in the range of 0 ... 6 s).

ST-10 STAIRCASE SWITCH is used:

- in a 3-wire installation (sensitive to blockade of the impulse button, the so-called "match")
- in a 4-wire installation (insensitive to blocking the impulse button with the so-called "match")
- to control lighting powered by any AC or DC voltage lower than 250 V

The relay contacts are GALVANICALLY separated (1-2 NO, 2-3 NC), which allows many combinations.

The ST-10 STAIRCASE SWITCH enables selection of functions depending on the type of installation:

>> 3-WIRE INSTALLATION (fig. 2-1, fig. 3):

- activation with impulse button - reaction to pressing a button
- adjustable operating times in the following ranges: 0 ... 6 s, 0 ... 6 min, 0 ... 60 min
- function I - switching the receiver on (off) for a specific (set) time
- function II - function I with additional information that the set time is running out

>> 4-WIRE INSTALLATION (fig. 1-2, fig. 1-3, fig. 4, fig. 5):

- activation with impulse button - reaction to pressing the button and releasing the button
- adjustable operating times in the following ranges: 0 ... 6 s, 0 ... 6 min, 0 ... 60 min
- function I - switching the receiver on (off) for a specific (set) time
- function II - function I with additional information about the approaching end of the set time
- function III - function II with an additional option: service, "cleaning", etc.

The ST-10 STAIRCASE SWITCH enables the receivers to be switched on with many parallel connected impulse buttons, which means that the receivers can be turned on at any place.

The ST-10 STAIRCASE SWITCH can work with an unlimited number of impulse buttons without backlight and a limited number of impulse buttons with backlight connected in parallel.

II. Properties of the ST-10 STAIRCASE SWITCH

- >> short reaction time to pressing the impulse button <40 ms
- >> ON time adjustable in the following ranges: 0 ... 6 s, 0 ... 6 min, 0 ... 60 min
- >> high switching power - 16 A (4000 W), 250 VAC
- >> high inrush current - resistance to 100 A surge current
- >> freedom of connections:
 - > executive relay contacts (one normally open contact 1-2 NO, one normally closed contact 2-3 NC) galvanically separated, they enable connections in various configurations
- >> traffic light (LED):
 - > Green LED - indication of 230 VAC supply voltage on N-L terminals
 - > Red LED - signaling of short-circuited contacts 1-2, and information during programming
 - > Blue LED - signaling of shorted contacts 2-3, and information during programming
- >> mounting on 35 mm DIN rail.
- >> TEST - MODE button, for selecting the appropriate operation option of the ST-10 STAIRMAT

In the ST-10 STAIRCASE SWITCH, a specialized OMRON G2RL-1-E-HR relay was used, designed to switch on various types of lighting lamps. The special design of the relay enables effective switching of lamps with an inrush current up to 100 A.

III. Installation

Connection of the ST-10 STAIRCASE SWITCH may only be performed by a person authorized to operate electrical installations. Remember to choose the right protection.

On the front panel of the ST-10 STAIRCASE SWITCH there are three information LEDs: green, red, and blue the TEST - MODE button and the time setting knob.

On the side walls of the ST-10 STAIRMAT AUTOMATIC machine there are: connection diagrams and variants of selecting various functions.

>> To connect the ST-10 STAIRCASE SWITCH:

1. make sure the electrical system is turned off

2. connect the ST-10 STAIRCASE SWITCH as shown on the diagram (fig. 1-1, fig. 1-2, fig. 1-3, fig. 3, fig. 4, fig. 5)

> when using terminals 1-2 - after switching on the power, the receivers are turned off

> when using terminals 2-3 - after turning on the power, the receivers are turned on

3. switch on the supply voltage:

> the green LED lights up

> after 1 s they will flash once - red LED and blue LED

> after 2 seconds, the blue LED will light up, which indicates closed contacts 2-3

>> check the operation of the ST-10 STAIRCASE SWITCH:

> press the TEST MODE button

> the blue LED turns off, and the red LED turns on

> contacts 1-2 will be closed, and contacts 2-3 will open for a specified (set) time

>> working time selection (set with green LED and blue LED lit):

> press the TEST MODE button for at least 5 seconds but less than 10 seconds

> when the red and blue LEDs flash after 5 seconds, release the TEST MODE button

> The ranges can be changed with single pulses of the TEST MODE button:

- 0 ... 6 s - red LED

- 0 ... 6 min - blue LED

- 0 ... 60 min - red and blue LED

>> function selection (set with green LED and blue glowing LED):

> press the TEST MODE button for 10 s (red and blue LEDs will blink after 5 s, 10 s

the red and blue LEDs will flash again), then release the button

> Single pulses of the TEST MODE button allow you to select the following functions:

LED-red - activation takes place after pressing the impulse button. Terminals 1-2 are short-circuited through specific (set) time. Pressing the impulse button during the countdown does not extend this time.

LED-blue - switching on takes place after pressing the impulse button. Terminals 1-2 are short-circuited through specific (set) time. Pressing the impulse button during the countdown extends time by the value set. Before the end of the countdown, terminals 1-2 will be opened for 2 s and closed again for 10 s.

LED - red and blue - switching on takes place after pressing the impulse button. Terminals 1-2 are closed for a specific (set) time. Pressing the impulse button during the countdown will extend the time by the value set. Before the end of the countdown, terminals 1-2 will remain opened for 2 s and closed again for 10 s.

Pressing the impulse button for 10 seconds causes the AUTOMATIC to run for 30 minutes with the signaling enabled (disabled for 2 s), 30 s before the end of the countdown.

After setting each function, wait 10 seconds for the settings to be accepted. After 10 seconds the red LED will blink for a moment, the blue LED will flash, and the blue LED will light up.

The installation is ready for operation.

The pictorial diagram of the ST-10 STAIRMATER operation is shown in Fig. 2.

ST-10 STAIRCASE SWITCH can work with an unlimited number of buttons without backlight

and a limited number of backlit buttons connected in parallel:

- buttons illuminated with a typical neon (1mA) <5 pcs.

- LED illuminated buttons (0.1mA) <50 pcs.

IV. Technical data

Rated supply voltage LN	230 VAC, + 10%, - 15%
Rated frequency	50 Hz
Maximum load current (power):	
> resistive load	16 A, AC1 (4 000 W)
> incandescent lamps	10 A (2500 W)
> halogen lamps	8 A (2000 W)
> fluorescent lamps	8 A (2000 W)
> energy-saving lamps and LED	8 A (2000 W)
Instantaneous inrush current	100 A
Executive contacts	1 x NO, 1 x NC
Rated power consumption	0,5 W
Short circuit current of impulse buttons	5 mA
Response time to the impulse button	< 40 ms
Time to be ready again	> 200 ms
Programming	TEST-MODE button
Regulation ranges	0...6 s, 0... 6 min, 0... 60 min
Accuracy of measurement	5%
U - supply voltage in version 3	0...250V AC, 0...250 V DC
Mechanical durability	100 000 operations
Protection level	IP 20
Working position	Vertical
Installation	One 18 mm field, 35 mm rail
Connecting cable	0,2+2,5 mm ²
Working temperature	-40...+70 °C
Weight	80 g

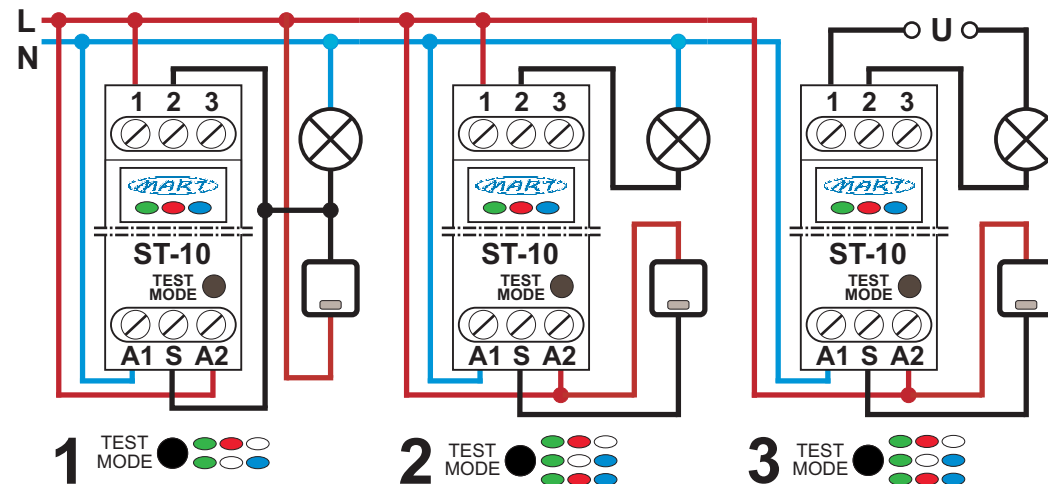


Fig. 1. Connection diagrams for the ST-10 STAIRCASE SWITCH automatic device.

