

BLC insert for time switch
Order-No. : 2934 10
BLC time switch RMD for stairway light
Order-No. : 163 01

Operation- and Assembly Instructions

1 Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons.

Failure to observe the instructions may cause damage to the device and result in fire and other hazards.

Danger of electric shock. Always disconnect before carrying out work on the device or load. At the same time, take into account all circuit breakers that supply dangerous voltage to the device or load.

Danger of electric shock. Automatic RMD is not suitable for disconnection from supply voltage.

Do not connect automatic RMDs in parallel. Damage to devices may result.

Danger of electric shock. Do not operate the insert without a cover.

Use pulse insert exclusively for activation of the automatic RMD.

These instructions are an integral part of the product, and must remain with the end customer.

2 Device components

Automatic RMD (Figure 1)

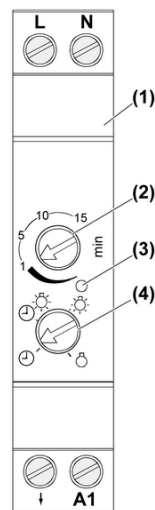


Figure 1

- (1) Automatic RMD
- (2) Adjuster for run-on time
- (3) LED on/off: Light switched on/off
- (4) Adjuster for operating mode

Pulse insert (Figure 2)

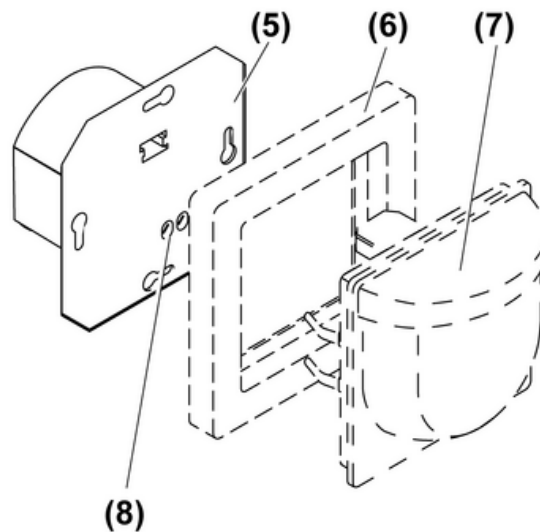


Figure 2

- (5) Up insert
- (6) Frame
- (7) Motion detector cover
- (8) Screw terminals

i Optionally it is also possible to use a presence detector cover or pushbutton cover.

3 Function

Intended use of automatic RMD

- Manual or automatic switching of light in stairways
- Installation in distribution boxes on DIN rail according to EN 60715
- Switch-on via pulse insert or installation buttons

Product characteristics of the automatic RMD

- Adjustable run-on time
- Electronic overload protection for the control input
- Four different operating modes can be set:
 - Automatic function without switch-off pre-warning
 - Automatic function with switch-off pre-warning
 - Light switched on continuously
 - Light switched off continuously

Intended use of pulse insert

- Manual or automatic switch-on of an automatic RMD
- Installation in appliance box to DIN 49073
- Operation with suitable cover

Product characteristics of pulse insert

- Manual switching in combination with pushbutton cover
- Automatic switching in combination with motion detector cover
- Insert designed with 2-wire technology

Automatic switching of light

The pulse insert is combined with a motion detector cover. As soon as the brightness drops below a value set on the motion detector cover and motions are detected, the pulse insert sends a switch-on signal cyclically to the automatic RMD. The latter switches on the light for the set run-on time. After the run-on time has elapsed, the automatic RMD switches the light off.

After switch-off, pulse inserts with motion detector covers will not detect any motions for approx. 3 seconds.

4 Operation

Switching the light on manually

An automatic function is active on the automatic RMD, adjuster (4) is set to position ⊕ or ⊕⊙.

- Press pushbutton cover on pulse insert or installation button.
Light is switched on independently of the brightness for the run-on time.
LED (3) on automatic stairway light switch lights up.

Setting operating mode on automatic RMD

⊕ Automatic function without switch-off pre-warning. The lighting is switched off after the run-on time elapses.

⊕⊙ Automatic function with switch-off pre-warning. After the run-on time elapses, the lighting is not switched off immediately, but rather only after flashing three times at intervals of 10 seconds.

i In this operating mode, the service life of the relay contact may be reduced when fluorescent lamps or energy-saving lamps are used.

⊙ Light is switched on continuously.

⊙ Light switched off continuously.

- Turn adjuster (4) for the operating mode to the desired position.

i Any operating mode switch present on a motion detector cover has no function.

Setting the run-on time

Adjustment range from approx. 10 seconds (lower end stop) to approx. 15 minutes (upper end stop).

- Set adjuster (2) on automatic RMD to the desired time.

i In the case of automatic function with prewarning the set run-on time is extended by approx. 30 seconds.

5 Information for electrically skilled persons

5.1 Fitting and electrical connection



DANGER!

Electrical shock when live parts are touched.

Electrical shocks can be fatal.

Before carrying out work on the device or load, disengage all the corresponding circuit breakers. Cover up live parts in the working environment.

Fitting and connection

The automatic RMD can be used for a 3-conductor circuit (Figure 3) or a 4-conductor circuit (Figure 4). The 4-conductor circuit has the advantage that an additional luminaire can be switched separately.

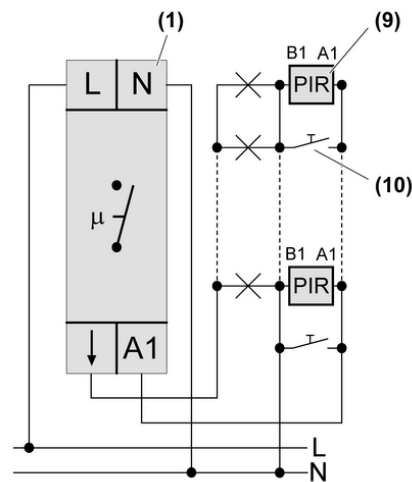


Figure 3: Connection diagram for 3-conductor circuit

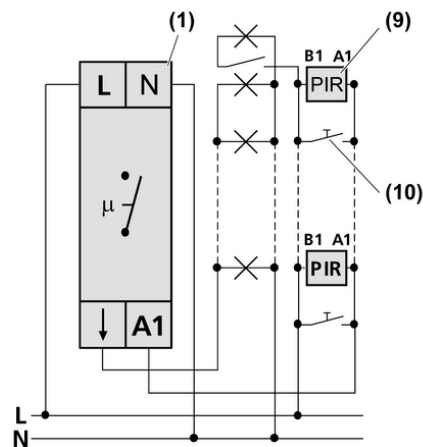


Figure 4: Connection diagram for 4-conductor circuit

- (1) Automatic RMD
- (9) Pulse insert is with motion detector cover or pushbutton cover
- (10) Installation button, NO contact



CAUTION!
Overvoltage when connected two external conductors.
Destruction of the automatic RMD.
Connect to only a single phase.

Do not operate multiple automatic RMDs next to each other.
 Avoid having heat sources, e.g. RMD dimmers, in the immediate vicinity of the automatic RMD.
 Ensure sufficient heat dissipation.

- i** On control input **A1** of the automatic RMD the aggregate current load must not exceed 40 mA. To determine the current load, add together the current consumption of all connected pulse inserter and lighting elements of the installation buttons.

Example:

6 x pulse inserts: $6 \times 2.5 \text{ mA} = 15 \text{ mA}$

Available current for lighting elements: $40 \text{ mA} - 15 \text{ mA} = 25 \text{ mA}$

Number of lighting elements at 0.9 mA per element: $25 \text{ mA} / 0.9 \text{ mA} = 27.7$

Thus 27 illuminated installation buttons can be connected. The number of unilluminated installation buttons is not limited.

- Mount automatic RMD on DIN rail.
- Connect automatic RMD, pulse insert 9) and installation button according to connection diagram (Figure 3) or (Figure 4).
- Install pulse insert in an appliance box, terminals must be at the bottom.
- Mount the installation button in an appliance box.
- Mount frame and cover.
- If multiple miniature circuit breakers supply dangerous voltages to the device or load, couple the miniature circuit breakers or label them with a warning, to ensure release is guaranteed.

5.2 Commissioning

Setting the automatic RMD

- Set operating mode on automatic RMD (see "Operation").
- Set run-on time on automatic RMD (see "Operation").
- Switch on mains voltage.

Setting the motion detector cover



DANGER!

Electrical shock when live parts are touched.

Electrical shocks can be fatal.

Before working on the device, disconnect all the corresponding miniature circuit breakers. Cover up live parts in the working environment.

- i** For a function test with motion detector cover, set the motion detector cover to brightness-independent switching (see instructions for the cover).
- Performing a function test.
 - If necessary, adjust the sensitivity on the motion detector cover (see instructions for the cover).
 - Set brightness value on the motion detector cover (see instructions for the cover).
 - For motion detector covers that have short-time operation, set short-time operation (see instructions for the cover).

6 Appendix

6.1 Technical data

BLC insert for time switch, Order-No. 2934 10

Rated voltage	AC 230 V ~
Mains frequency	50 Hz
Power consumption	approx. 0.5 W
Current consumption	approx. 2.5 mA
Ambient temperature	+5 ... +35 °C
pulse duration	approx. 60 ms
pulse stop	approx. 6 s
Connection	
Single stranded	max. 4 mm ²

BLC time switch RMD for stairway light, Order-No. 163 01

Rated voltage	AC 230 V ~
Mains frequency	50 Hz
Power consumption	approx. 1 W
Ambient temperature	+5 ... +45 °C
Switch-off delay	approx. 10 s ... 15 min
Tolerance	± 20 %
Control input A1	
Current carrying capacity	40 mA
Switching voltage	AC 250 V ~
Switching current	
Ohmic	16 A
Switch-on current 20 ms	max. 165 A
Minimum switching current AC	100 mA
Contact type	µ contact
Connected load	
Incandescent lamps	2300 W
HV halogen lamps	2300 W
Fluorescent lamps, parallel compensated	920 VA
Fluorescent lamps, uncompensated	1200 VA
Fluorescent lamps, duo circuit	2300 VA (140 µF)
Tronic transformers	1500 W
Inductive transformers	1000 VA
Electronic ballast	Type-dependent
Connection	
Single stranded	1.5 ... 4 mm ²
finely stranded with conductor sleeve	0.5 ... 2.5 mm ²
finely stranded without conductor sleeve	0.75 ... 4 mm ²
Fitting width	18 mm / 1 modules
Total length power cable	max. 100 m
Total length of control cable	max. 100 m

6.2 Troubleshooting

Light switches on but not off

Cause 1: The overload protection of the control input has tripped on the automatic RMD, because too many pulse inserts or illuminated installation buttons are connected.

Reduce number of connected devices.

Cause 2: The overload protection of the control input has tripped on the automatic RMD, because the automatic RMD has been installed too close to an external heat source, e.g. a dimmer.

Check installation situation, ensure better cooling.

Light does not switch off.

Cause: Constant motion in detection area of motion detector cover.

Check installation situation of motion detector cover.

Reduce sensitivity on the motion detector cover (see instructions for the cover).

6.3 Warranty

We reserve the right to make technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.

If you have a warranty claim, please contact the point of sale or ship the device postage free with a description of the fault to the appropriate regional representative.

BLC

BLC time switch RMD and insert for stairway light



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