

**Rotary dimmer (R, L, LED)**

Order No. : 2876

**Operation- and  
Assembly Instructions****1 Safety instructions**

Electrical devices may only be mounted and connected by electrically skilled persons.

**Serious injuries, fire or property damage possible. Please read and follow manual fully.**

**Danger of electric shock. Always disconnect before carrying out work on the device or load. In so doing, take all the circuit breakers into account, which support dangerous voltages to the device and or load.**

**Danger of electric shock. Device is not suitable for disconnection from supply voltage.**

**Fire hazard. For operation with inductive transformers, each transformer must be fused on the primary side in accordance with the manufacturer's instructions. Only safety transformers according to EN 61558-2-6 may be used.**

**Do not connect any LED or compact fluorescent lamps that are not specifically suitable for dimming. Device can be damaged.**

**Do not connect any luminaire with integrated dimmers. Device can be damaged.**

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

## 2 Device components

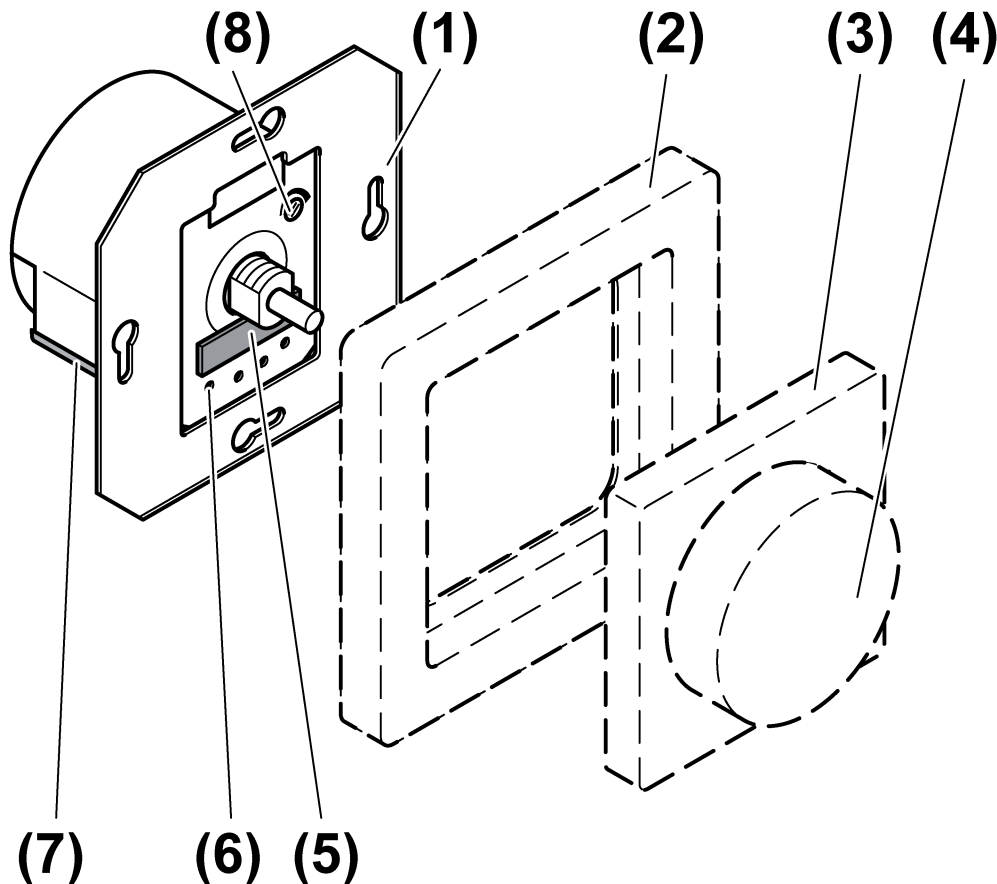


Figure 1: Device components

- (1) Dimmer
- (2) Frame
- (3) Central plate
- (4) Control button
- (5) Fuse holder
- (6) Measuring points for voltage test
- (7) Release lever for plug terminal
- (8) Adjuster, minimum brightness

## 3 Function

### Intended use

- Switching and dimming of incandescent lamps, HV halogen lamps, dimmable inductive transformers for halogen or LED lamps, dimmable HV-LED or compact fluorescent lamps.
- Mounting in appliance box according to DIN 49073.
- i** No mixed-load operation of HV LED and compact fluorescent lamps. All other specified load types can be used in mixed-load operation.
- i** No operation with electronic transformers.

### Product characteristics

- Leading edge phase control dimming principle
- Short-circuit protection through fine-wire fuse
- Electronic over-temperature protection

- Changeover switch possible in combination with two dimmers
- Control output **A** (9) (Figure 2) to output the switching state of the device for automatic power disconnection or relay
- i** Do not use control output **A** as a load output.
- i** Flickering of the connected lamps due to undershoot of the specified minimum load or through centralised pulses from the power stations and soft humming of the device due to the radio interference suppressor. These are not device faults.

## 4 Operation

### Switch light

- Press the control button.

### Adjust the brightness

- Turn control button.

## 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 working on the device, disconnect the power supply and cover up live parts in the working environment.

#### Connecting and mounting the dimmer

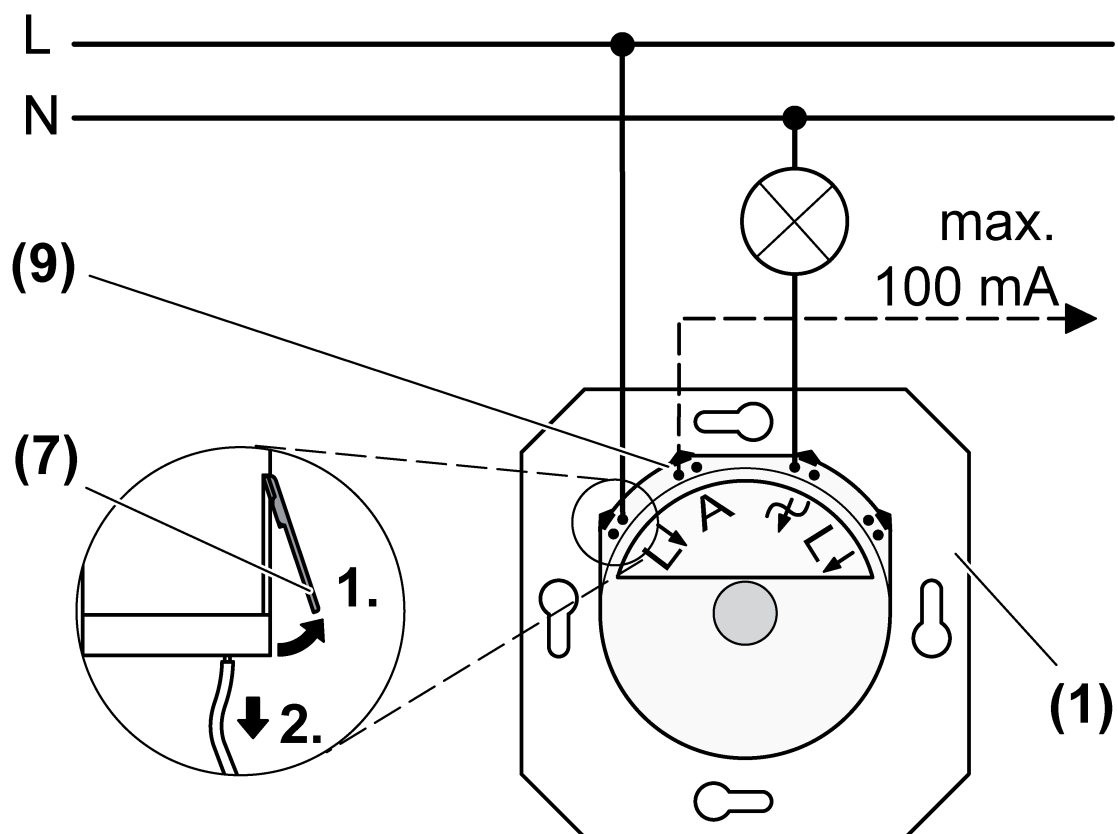


Figure 2: Connection diagram

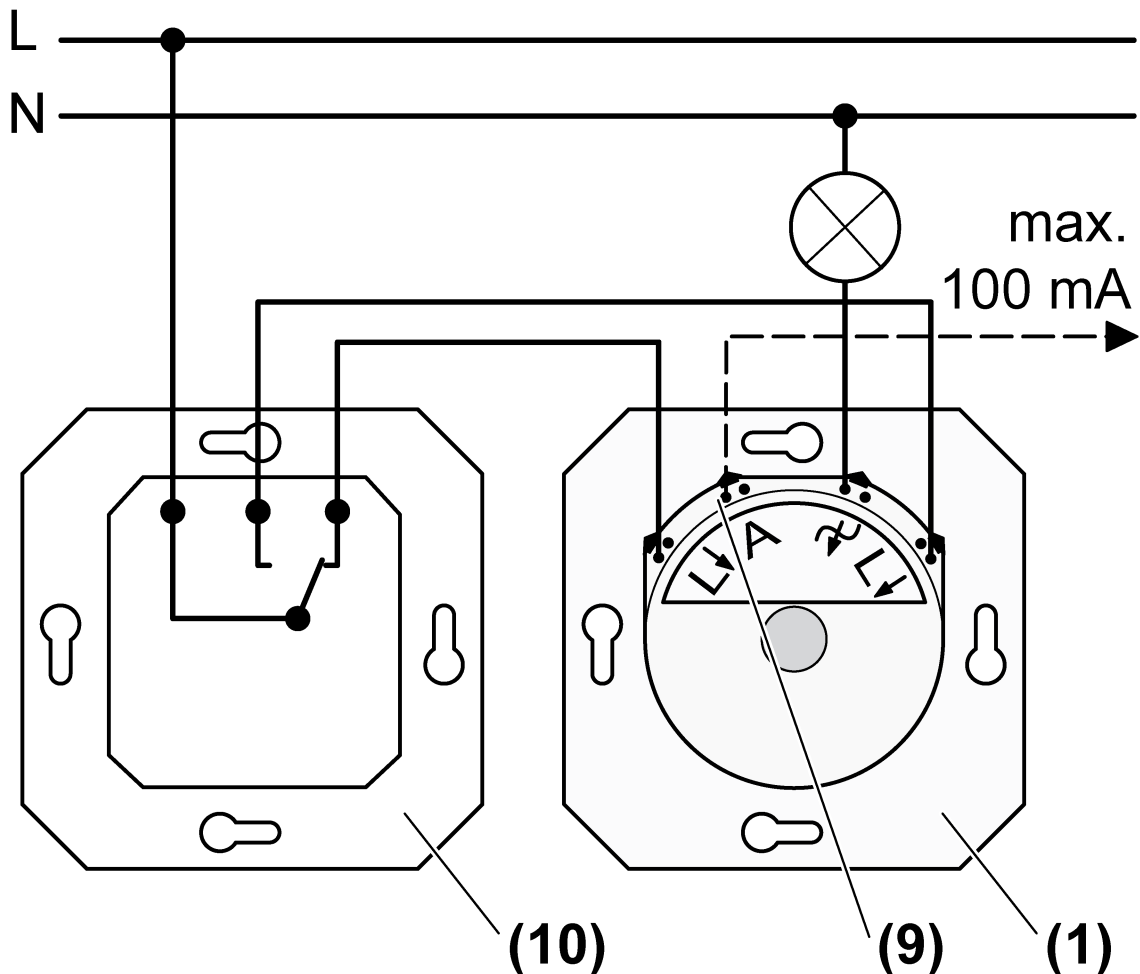


Figure 3: Changeover circuit

- Remove approx. 15 mm of insulation from the connecting cables.
- Connect the dimmer (1) according to the connection diagram (Figure 2). Alternatively, install with a changeover switch (10) (Figure 3).
- ⓘ No changeover circuit possible with two dimmers.
- ⓘ HV-LED lamps and compact fluorescent lamps: Only connect lamps of one manufacturer and of the same type.
- ⓘ Connect 300 Watt LED lamps or compact fluorescent lamps at most per 16 ampere circuit breaker.
- ⓘ If inductive transformers are connected, observe the data of the transformer manufacturer on possible connectable loads.
- ⓘ The connected load and dimmer quality on LED lamps are dependent on the type of lamp and installation conditions. The connected load of the specified values could vary. We cannot assume any guarantee for proper function.
- ⓘ Pull the connecting cable out of the screwless terminal (7).
  - Fit dimmer in appliance box, connection terminals must be at the bottom.
  - Mount the frame and the central plate. Attach the control button.

## 5.2 Commissioning

### Setting the minimum brightness

The minimum brightness can be set by an electrically skilled person as required.

**DANGER!****Electrical shock when live parts are touched.****Electrical shocks can be fatal.****Use only insulated tools to set the minimum brightness! Cover up live parts in the working environment.**

The device is connected as described above and fitted in an appliance box. The frame, central plate and control button are not fitted.

- Switch on mains voltage.
- Press the rotary axle to switch on the lighting and turn it left to the minimum brightness.
- Adjust minimum brightness by turning the adjuster (8) (Figure 1).
- ⓘ According to EN 60669-2-1 (01.2000), lamp brightness should be detectable over the whole load area, with darkness at – 10 % rated voltage.
- Switch off the mains voltage.
- Mount the frame and the central plate. Attach the control button.
- Switch on mains voltage again.

## 6 Appendix

### 6.1 Technical data

Rated voltage	AC 230 / 240 V ~
Mains frequency	60 Hz
Ambient temperature	+5 ... +45 °C
Fine-wire fuse	D 3.15 H 250
Connected load at 25 °C	
ⓘ Power specifications including transformer power dissipation.	
Incandescent lamps	20 ... 500 W
HV halogen lamps	20 ... 500 W
HV-LED lamps	typ. 3 ... 100 W
Compact fl lamp.	typ. 3 ... 100 W
Inductive transformers	20 ... 500 VA
Inductive transformers with LV-LED	typ. 20 ... 100 VA

- ⓘ Operate inductive transformers with at least 85% nominal load.

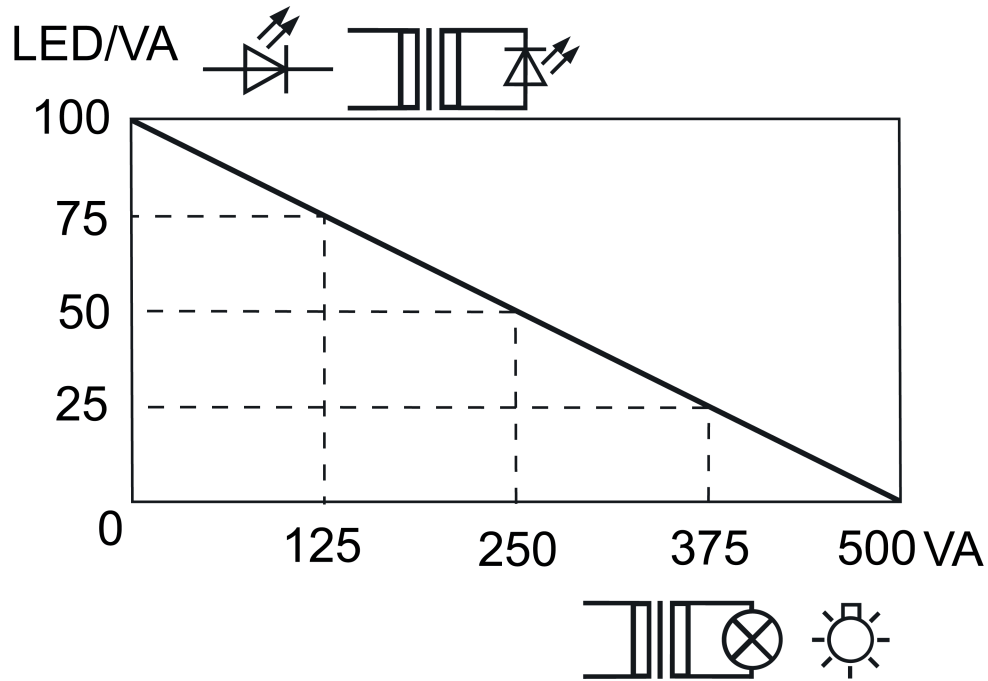


Figure 4: Load curve of mixed loads

**i** Mixed-load operation of LED lamps or compact fluorescent lamps with other permissible loads possible. Note load curve (Figure 4).

Power reduction	
when surface mounting	20 ... 450 W/VA
per 5°C in excess of 25°C	-10 %
when installed in wooden or dry construction walls	-15 %
when installed in multiple combinations	-20 %
Connection	
single stranded	1.0 ... 2.5 mm <sup>2</sup>
Power boosters	See power booster instructions
Control output A	
Current carrying capacity	100 mA

## 6.2 Troubleshooting

### Connected lamps switch off in the lowest dimming position or flicker

Cause: The set minimum brightness is too low.

Increase minimum brightness.

### Connected LED lamps or compact fluorescent lamps flicker

Cause: Lamps are not dimmable.

Check manufacturer's instructions.

Exchange lamps for another type.

### Connected lamps do not switch on in the lowest dimming position or only after a delay

Cause: The set minimum brightness is too low.

Increase minimum brightness.

### Connected lamps in the lowest dimming position are too bright; dimming range is too small

Cause 1: The set minimum brightness is too high.

Reduce minimum brightness.

Cause 2: Dimming principle leading edge phase control does not optimally match to the connected LED or compact fluorescent lamps.

Exchange lamps for another type.

**The device switches the load off and only on again after some time.**

Cause: overheating protection has tripped.

Reduce the connected load.

Check the installation situation.

**The device switches the load off and cannot be switched on again.**

Cause: short-circuit protection has tripped.

Eliminate short-circuit.

Replace the fine-wire fuse, replacement fuse in the fuse holder. Use only original fuses.

### **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.

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