

Universal series dimming insert
 Order-No. : 2263 00

Operating instructions

1 Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons. Serious injuries, fire or property damage possible. Please read and follow manual fully. Danger of electric shock. Do not operate the device without a cover.

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. Device is not suitable for disconnection from supply voltage. The load is not electrically isolated from the mains even when the device is switched off.

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.

Exchange defective load on output a1 immediately, because the overheating protection is no longer provided when the load is defective. Device can be damaged.

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

2 Device components

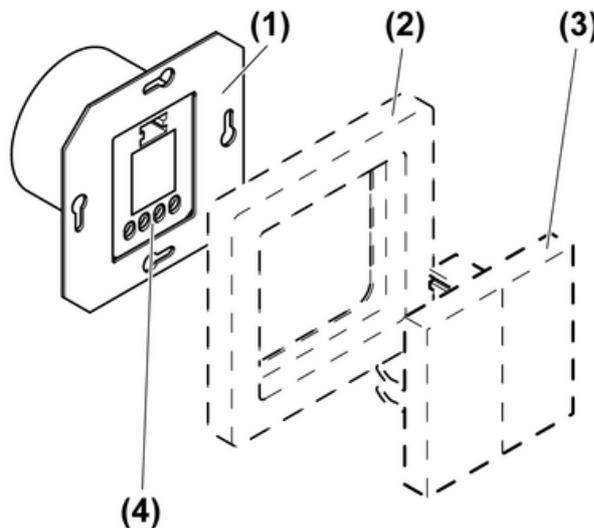


Figure 1: Device components

- (1) Dimmer
- (2) Frame
- (3) Cover (see chapter 6.3. Accessories)
- (4) Screw terminals

3 Function

Intended use

- Switching and dimming of incandescent lamps, HV halogen lamps and dimmable inductive transformers or Tronic transformers with halogen lamps
 - Suitable for mixed load up to the specified output (see chapter 6.1. Technical data)
 - Suitable for luminaire groups via the two independent outputs **a1** and **a2**
 - Installation in appliance box to DIN 49073
 - Operation with suitable cover (see chapter 6.3. Accessories)
- i** No mixed-load operation of Tronic and inductive transformers on the same output.

Product characteristics

- Electronic short-circuit protection with permanent switch-off after 7 seconds at the latest
 - Electronic over-temperature protection
 - Bulb-preserving soft start
 - Power extension through power boosters (see power booster instructions)
 - Different load types are possible on the two outputs
 - Asymmetric load distribution possible
 - Automatic setting of the dimming principle suitable for the load
 - Connection of more than one 2-wire extension is possible (see Accessories section)
- i** The connection of installation buttons as extensions is not possible. This will not function.

Load type	Electrical behaviour	Dimming principle
Incandescent lamps	ohmic	Phase cut-off
HV halogen lamps	ohmic	Phase cut-off
Tronic transformers with halogen lamps	capacitive	Phase cut-off
Dimmable inductive transformers with halogen lamps	inductive	Phase cut-on

- i** Flickering of the connected lamps due to undershoot of the specified minimum load or through centralised pulses from the power stations. Brief flickering upon load detection of ohmic loads. No operation is possible during load detection. These are not device faults.

4 Operation

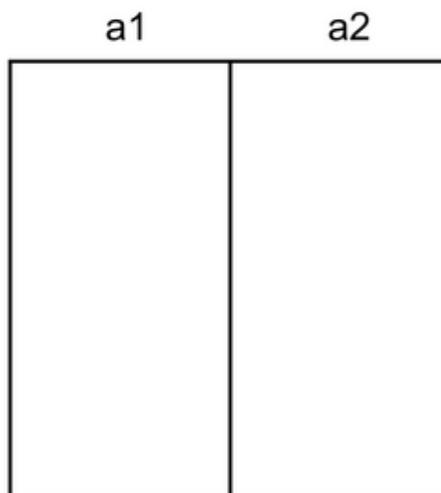


Figure 2: Operating sections of the button

The button field is subdivided into two areas:

- Left: operation of output **a1**.
- Right: operation of output **a2**.

 A 2-wire extension is always used to operate both outputs simultaneously.

Switching on the light

- Press button at top for less than 0.4 seconds.

 The light is switched on using the stored switch-on brightness.

Switching the light off

- Press button at bottom for less than 0.4 seconds.

Adjust the brightness

Light is switched on.

- Press up or down button until the desired brightness is reached.

Switching the light on with minimum brightness.

Light is switched off.

- Press button at bottom for longer than 0.4 seconds.

Save switch-on brightness

 Separate switch-on brightnesses can be saved for outputs **a1** and **a2**. In the state as supplied the maximum switch-on brightness is saved.

Light is switched on.

- Set light to the required brightness.
- Press button for longer than 3 seconds.

Switch-on brightness is saved.

The lighting switches briefly off and on again as confirmation.

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.



CAUTION!

Do not connect outputs together.

Operating both outputs on a common load will destroy the device.

For power extension use power boosters



CAUTION!

**Electronic overheating protection only with active output a1.
Operation without electronic overheating protection can destroy the device.
Never operate output a2 alone.**

Connecting and mounting the dimmer

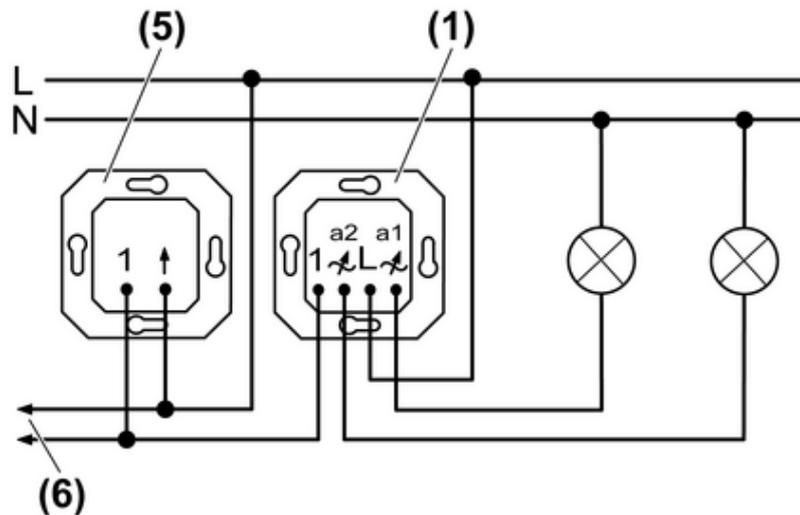


Figure 3: Connection diagram

- (1) Dimmer
- (5) 2-wire extension
- (6) to additional extensions
- i** Output **a1** can also be operated alone.
- i** Pay attention to load distribution when an output is loaded with more than 260 W/VA(see chapter 6.1. Technical data). Determine intermediate values by means of interpolation.
 - Connect the dimmer according to the connection diagram (Figure 3).
 - 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.
 - Mount the dimmer in an appliance box. The terminals must be at the bottom.
 - Attach the frame and the cover.

6 Appendix

6.1 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 / 60 Hz
Ambient temperature	+5 ... +25 °C
Connected load per output at 25°C	
Incandescent lamps	50 ... 260 W
HV halogen lamps	50 ... 260 W
Tronic transformers	50 ... 260 W
Inductive transformers	50 ... 260 VA
Ohmic-inductive	50 ... 260 VA
ohmic-capacitive	50 ... 260 W
capacitive-inductive	not permitted

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

- i** Power specifications including transformer power dissipation.
- i** For ohmic-inductive mixed load, maximum 50% proportion of ohmic load. Otherwise incorrect calibration of the dimmer may result.

Load distribution at 25 °C

Output a1	Output a2
350 W/VA	50 W/VA
310 W/VA	140 W/VA
290 W/VA	200 W/VA
260 W/VA	260 W/VA
200 W/VA	290 W/VA
140 W/VA	310 W/VA
50 W/VA	350 W/VA

Power reduction per output at 35° C	max. 240 W/VA
per output at 45° C	max. 220 W/VA
when installed in wooden or dry construction walls	-15 %
when installed in multiple combinations	-20 %
Connection	
Single stranded	max. 4 mm ²
Number of extension units	unlimited
Total length of extension unit cable	max. 100 m
Total length power cable	max. 100 m



The symbols used to label the dimmer load shows the load type that can be connected to a dimmer and the electric behaviour of a load:
 R = ohmic, L = inductive, C = capacitive

6.2 Troubleshooting

Operation via extensions is not possible.

Output **a1** not connected correctly.

Check installation.

Defect load on output **a1**.

Check load on output **a1**.

Device switches both outputs off and can only be switched on again after a certain time.

Electronic overheating protection has tripped

Reduce the connected load.

Check the installation situation.

- i** Electronic overheating protection only functions when a load is connected to output a1. No automatic switch-on after cooling.

Device switches and output off briefly and then on again.

Short-circuit protection has tripped but now there is no longer a fault.

Or: The device switches one or both outputs off and cannot be switched on again.

Short-circuit protection has tripped.

Eliminate short-circuit.

- i** Short-circuit protection is not based on a conventional fuse, no metallic separation of the operational current.

Dimmer is defective and has been disconnected from the mains permanently by internal fuse.
Exchange dimmer.

6.3 Accessories

Series top unit for switching and dimming
Series top unit for switching and dimming
Auxiliary insert

Order-No. 2264 ..
Order-No. 2315 ..
Order-No. 0333 00

6.4 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade.
Please submit or send faulty devices postage paid together with an error description to your responsible salesperson (specialist trade/installation company/electrical specialist trade). They will forward the devices to the Gira Service Center.

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