

Universal dimmer insert 50 - 420 W/V System 2000

Order no.: 0305 00, 0495 07

Function

Universal dimmer for switching and dimming extensive light sources such as:

- 230 V incandescent lamps
- 230 V halogen lamps
- LV halogen lamps in conjunction with TRONIC transformers
- LV halogen lamps in conjunction with conventional transformers.

Switching and dimming commands are given when the covers of the dimmer, of the extension insert or of the radio transmitter are actuated.

The universal dimmer works on the basis of the two-area principle, i. e. there is one touch area each for the 'brighter' and 'darker' dimming directions.

The lights are turned on by a lamp-saving soft start.

This Operating Instructions paper describes the functionality in combination with the manual attachment.

For the exact functionality in connection with the use of other attachments or of the remote control unit, respectively, please refer to the corresponding instructions.

Operation from the switched-off state:

Short touch (less than 400 ms):

UPPER or LOWER touch area
or full area: ON

Longer touch (more than 400 ms):

UPPER touch area: Dimming from minimum to maximum brightness

LOWER touch area: Turning on to minimum brightness

Operation from the switched-on state:

Short touch (less than 400 ms):

UPPER or LOWER touch area
or full area: OFF

Longer touch (more than 400 ms):

UPPER touch area: Increasing the light intensity to maximum (dimming up)

LOWER touch area: Decreasing the light intensity to minimum (dimming down)

Full-area operation (3 s min.): The current brightness is stored and adjusted upon restarting (short actuation).
The storing process is indicated by a soft start



Warning

Attention: Electrical equipment must be installed and fitted only by qualified electricians and in observance of the applicable accident prevention regulations.

Not suitable for disconnecting.

When the universal dimmer is off the load is not electrically isolated from the mains.

When using conventional transformers, protect the primary side of each transformer by a fuse as indicated by the manufacturer. Only use safety transformers as per EN 61558-2-6.

Non-observance of the installation instructions may cause fire or other hazards.

Installation Instructions

Fit universal dimmer insert ① into a box as per DIN 49073 (Fig. A).

The connecting terminals of the insert must be at the bottom.

Use the universal dimmer insert only in combination with an attachment. Plug attachment ② onto the insert ① together with frame ③.

The electrical contact is established through plug ④.

The universal dimmer insert consists of the dimmer insert and the plugged-on control or receiver part. Plug on the attachment prior to applying the mains voltage. Do not change the attachment while the mains voltage is on, or malfunctioning will be caused.

After installation of the universal dimmer, the brightness value in memory is the maximum brightness.

Do not connect capacitive loads (e. g. TRONIC-transformers) and inductive loads (e. g. conventional transformers) to the universal dimmer at the same time.

For resistive loads (incandescent lamps, halogen HV lamps), the learning process becomes noticeable by short-time flickering.

Depending upon the conditions of the mains, the learning process lasts between 1 and 10 seconds. During this time, no actuation is possible.

In case of a short-circuit during the learning process, the load must be learned again after the elimination of the short-circuit.

Short-Circuit Protection

Phase cut-off operation (capacitive load, resistive load):

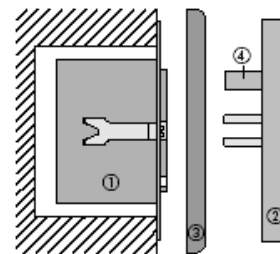
Disconnection with automatic re-starting after elimination of the short-circuit within 7 s. After this, permanent disconnection until the universal dimmer is re-started manually.

Mains failures of longer than 0.7 sec. will lead to switching off the dimmer.

The overall power rating of the consumers connected must not exceed the maximum load specified in the technical data.

Load the transformers with lamps up to at least 85 % of their rated loads. The overall load including transformer losses must not exceed the maximum power rating.

Fig. A



Operation with mixed loads of the specified types is possible up to the total admissible load.

Minimum load 50 W/VA.

Depending upon the type of installation, the maximum connected load must be reduced by:

- 10 % per 5 °C exceeding of the ambient temperature of 25°C
- 15 % for installation in wooden, gypsum plaster or hollow walls
- 20 % for installation in multiple combinations

Phase cut-on operation (inductive load):

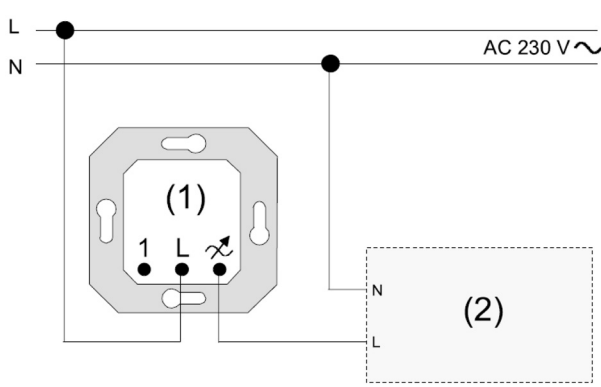
Disconnection with automatic re-starting after elimination of the short-circuit within 100 seconds. After this, permanent disconnection until the universal dimmer is re-started manually.

Overtemperature Protection

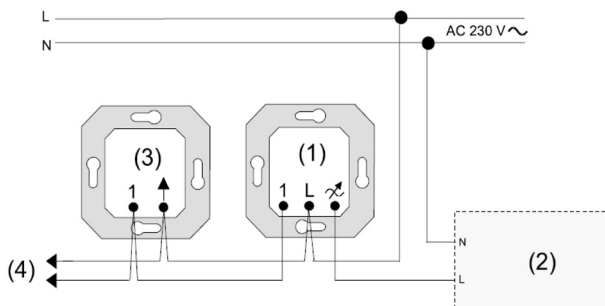
Switching off in case of an excessively high ambient temperature. After cooling down, the device must be switched back on.

Connection

Connect as shown in **Fig. B**



For dimming from several places, refer to **Fig. C**.



Power boost units can be connected to the universal dimmer to increase the load rating when the dimmer capacity is exhausted.

Select a boost unit suited to the universal dimmer and to the load.

Further details can be found in the operating instructions of the respective boost unit.

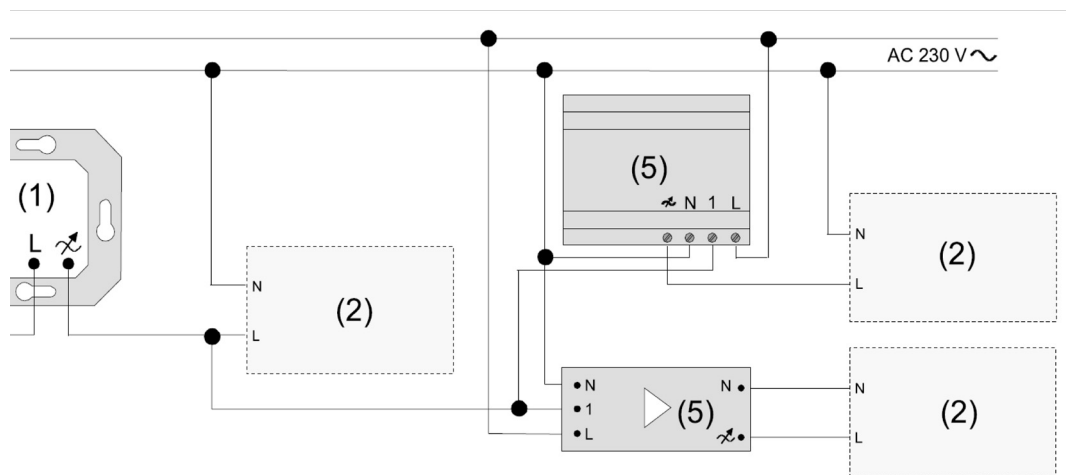
Connect as shown in **Fig. D**

- (1) Universal dimmer insert
- (2) Load
- (3) extension
- (4) for further extensions
- (5) Power attachments (EB or REG)

Note the technical connection conditions of the power stations.

Centralised multi-service control pulses of the power stations may be noticeable by short-time flickering at low dimming positions.

Fig. D



Using Extensions

Control from an extension unit is possible only if the attachment on the main unit is in place.

Extension insert: The same functionality with an attachment as on the universal dimmer.

Mechanical button (normally open):

Short push: ON/OFF
Longer push: Dimming to maximum brightness

Dwell time of approx. 1 s at maximum, then dimming down to minimum brightness.

Dwell time of approx. 1 s at minimum, the dimming up to maximum brightness.

This procedure repeats continuously. Storing any brightness value by the mechanical push-button (normally open) is not possible.

Illuminated mechanical pushbuttons must have a separate N terminal.

Specifications

Rated voltage: AC 230 V ~, 50 / 60 Hz

Connected load

Best.-Nr. 0305 00: 50 - 420 W / VA
Best.-Nr. 0495 07: 50 - 350 W / VA

Type of loads:

- 230 V incandescent lamps (resistive load, phase cut-**off**)
- HV halogen lamps (resistive load, phase cut-**off**)
- TRONIC transformers (capacitive load, phase cut-**off**) or
- Conventional transformers (inductive load, phase cut-**on**)
- Mixed loads of the specified types (**non-capacitive with inductive loads**).

Power boost units: see boost unit operating instructions

Number of Extensions:
extension insert,
mechanical push-button: unlimited
extension insert for
presence detector and
automatic switch: 5

Different types of extension units can be combined.

Total length of extension
connecting cable: max. 100 m

Spurious radiation: according EN 55015

For mixed loads with conventional transformers, do not exceed a resistive load (incandescent lamps, halogen HV lamps) portion of 50 %.



.The symbols used to identify dimmer loads designate the type of the electrical behaviour of loads connected to dimmers:

R = ohmic, L = inductive, C = capacitive

Acceptance of guarantee

We accept the guarantee in accordance with the corresponding legal provisions.

Please return the unit postage paid to our central service department giving a brief description of the fault:

Gira
Giersiepen GmbH & Co. KG
Service Center
Dahlienstrasse 12
D-42477 Radevormwald

Gira
Giersiepen GmbH & Co. KG
Postfach 1220
D-42461 Radevormwald

Telefon: +49 / 21 95 / 602 - 0
Telefax: +49 / 21 95 / 602 - 339
Internet: www.gira.de