

Built-In Radio Universal Dimmer

Order No.: 0809 00

Function

This built-in radio universal dimmer is a component of the radio bus system. It facilitates the switching and dimming of various electrical loads, once it has received a certain radio telegram.

The radio universal dimmer switches (short-time key actuation) or dims (long-time key actuation) the lighting, respectively. It is operated via an extension connection or by a hand-held or wall-mounted radio transmitter, respectively. The desired switch-on brightness can be stored (memory function).

You can assign up to 30 different radio channels to the built-in radio universal dimmer.

When receiving a signal from the radio detector, the built-in radio universal dimmer switches on at the memory value for a follow-up time of approx. 1 minute.

Lightscapes

The built-in radio universal dimmer can be integrated into lightscapes. You can call these with the hand-held or wall-mounted radio transmitter.

For this purpose, just assign to the built-in radio universal dimmer the desired lightscape key of the hand-held or wall-mounted radio transmitter.
Up to five different lightscapes can be stored in the memory.

ALL ON/ALL OFF

When a channel is assigned to the built-in radio universal dimmer, the ALL-ON key of the hand-held radio transmitter or the ALL-OFF key of the hand-held or wall-mounted radio transmitter, respectively, is automatically assigned at the same time.

Depressing the ALL-OFF (ALL-ON) key of an assigned hand-held or wall-mounted radio transmitter causes the load to be switched off (on).

Fitting

Safety instructions

Attention: Electrical equipment must be installed and fitted by qualified electricians only.

Not suitable for disconnecting.

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

When using conventional transformers, provide each of such transformers with a primary-side fuse according to the manufacturer's information.

Only use safety transformers as per DIN VDE 0551.

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

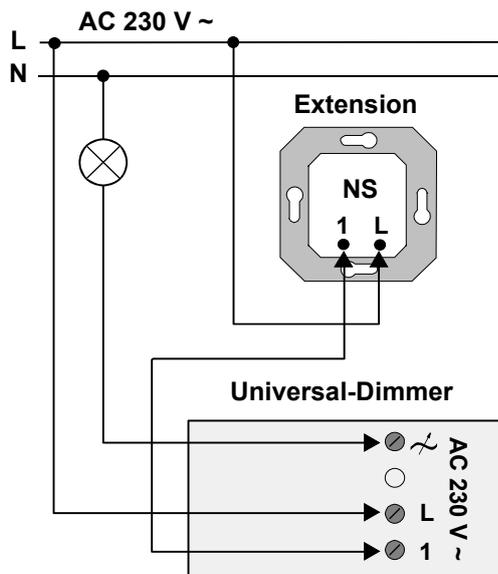
Installation

The distance to electrical loads (e. g. TRONIC transformer, electronic ballast, TV) must be at least 0.5 m.

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.

Extension Signal



The built-in radio universal dimmer can be operated through a System 2000 universal extension insert. Connect one or several extensions to terminal 1 of the built-in radio universal dimmer.

Do not use any installation push-buttons (normally open or normally closed switches) or mechanical extensions.

Short-Circuit Protection

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

Switching off with automatic restarting after short-circuit rectification within 7 sec. After this time, the built-in universal dimmer remains permanently switched off until switched back on manually.

Phase cut-on operation (inductive load):

Switching off with automatic restarting after short-circuit rectification within 100 ms. After this time, the built-in universal dimmer remains permanently switched off until switched back on manually.

Automatic Load Detection

After the first installation and after disconnection from the mains, the universal dimmer detects the load automatically.

Do not connect to the built-in radio universal dimmer capacitive loads (e. g. Tronic transformers) together with inductive loads (e. g. conventional transformers).

For resistive loads (incandescent or halogen HV lamps), the detection process can be noticed by short-time flickering.

Depending upon the mains condition, such detection process lasts between 1 and 10 sec. During this period, no control operation is possible. In case of a short-circuit during the detection process, the load must be measured again after the rectification of the short-circuit.

Any mains failure of more than 0.7 sec. leads to switching off the dimmer.

Overtemperature Protection

Switching off takes place when the ambient temperature is too high. After cooling down, the device must be switched back on.

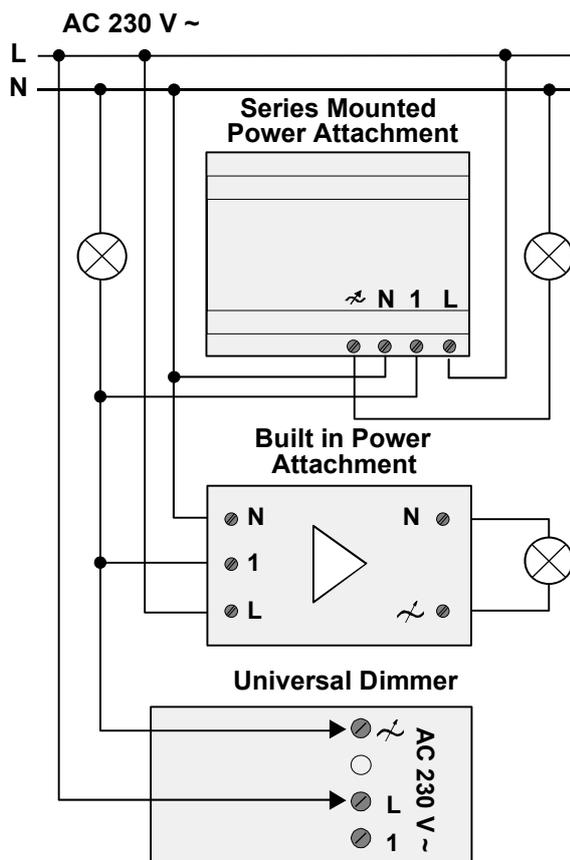
Connected Load

The maximum connected load is 315 W/VA for:

- 230 V incandescent lamps, HV halogen lamps.
- LV halogen lamps with Tronic transformers
or
- LV halogen lamps with conventional transformers.
- Load the transformers with lamps up to at least 85 % of their rated loads.

The total load including the transformer power loss must not exceed 315 W/VA.
The minimum connected load must be 50 W/VA.

Power Attachments



Depending upon the load on the universal dimmer, up to 10 power attachments can be connected.

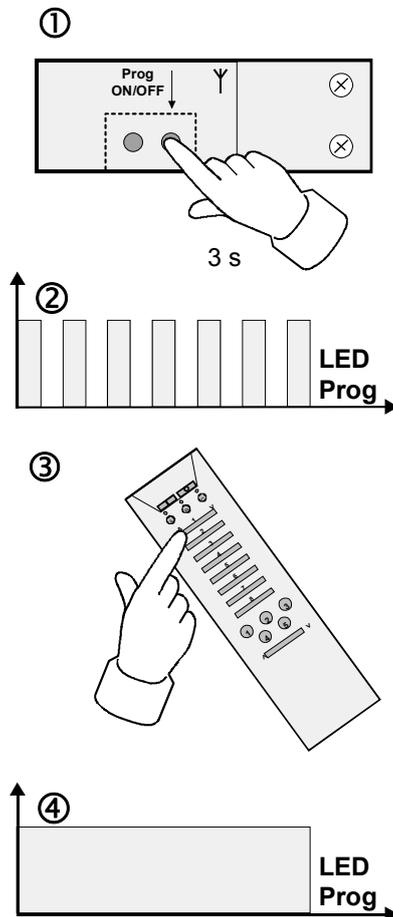
Use Tronic power attachments (built-in or series-mounted type) in combination with Tronic transformers (capacitive loads).

In combination with conventional transformers (inductive loads), use LV power attachments (built-in or series-mounted type).

Assigning Radio Transmitters and Radio

Note:

During the assigning procedure, the sensitivity of the radio receivers of approx. 100 m (in the free field) is reduced to some 5 m.



Procedure

1. Switch off the lighting connected to the built-in radio universal dimmer by shortly (< 1 s) depressing the **ON/OFF** key ①.
2. Depress the **ON/OFF** key for at least 3 s ①.

The red **Prog** LED blinks (duration approx. 1 min) ②. During this time, one radio channel can be assigned.

3. Within this time, initiate a radio telegram at the selected radio transmitter ③ (refer to "Radio Transmitter" Operating Instructions):
 - Assigning a Channel**
Depress the channel key for longer than 1 s.
 - Assigning a Lightscape Key**
Depress the lightscape key for longer than 3 s.
 - Assigning a Radio Detector**
Trigger a movement within the detection field of the radio detector.

4. The built-in radio universal dimmer confirms the storage by the red **Prog** LED being permanently lit ④.

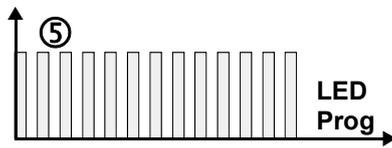
You can cancel this assigning procedure any time by depressing the **ON/OFF** key.

The radio channel is now assigned.

Important:

When a channel is assigned, the ALL- ON or ALL-OFF key, respectively, is automatically stored in the built-in radio universal dimmer.

If all 30 memory locations are occupied, you will have to clear a radio transmitter already assigned to be able to program an additional channel.



Clearing a Channel Assignment

Any new assignment of the same lightscape in the built-in radio universal dimmer will clear the existing assignment.

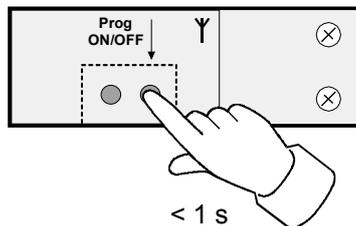
Any new assignment of the same channel in the built-in radio universal dimmer will clear the existing assignments of the channel and the ALL-ON or ALL-OFF keys, respectively.

All channels and lightscape keys must be cleared individually.

Successful clearance is indicated by the red **Prog** LED blinking more quickly ⑤.

Operation

The built-in radio universal dimmer can be operated directly on the device, using the System 2000 universal extension insert, or by receiving an assigned radio telegram from a hand-held, wall-mounted or universal radio transmitter.



On the Built-In Radio Universal Transmitter

By pressing the **ON/OFF** key for less than 1 s, the built-in radio universal transmitter is permanently turned on or off, respectively (alternating operation).

Memory Function

You can store the adjusted dimming value (brightness value) in the built-in radio universal dimmer. This memory value can be recalled by a short key depression.

Procedure

1. Switch on the light with the desired brightness.
2. Depress the **ON/OFF** key for at least 3 s. This is confirmed by a "soft start", i. e. the light is switched off and dimmed brighter, up to the stored memory value.

When the lamp is switched on next time by a short key depression, this stored value is recalled.

Maximum brightness is the default memory value.

With Extension Signal

By means of a System 2000 universal extension insert, the built-in radio universal dimmer can also be switched on and off or dimmed, respectively.

- **Short-time key actuation (< 0.4 s)**
The light is switched on, set to the memory value, or switched off.
- **Long-time key actuation (≥ 0.4 s)**
The light is dimmed up or down.

With Radio Transmitter

Switching or dimming can be effected with the hand-held and wall-mounted transmitter, whereas the universal transmitter can be used for switching only.

When an assigned telegram from a radio detector is received, the built-in radio universal dimmer will switch on for about 1 minute.

Lightscape

The data of a lightscape (illumination brightness) is stored in the built-in radio universal dimmer. You can alter a lightscape any time by storing new data.

Before you can store or recall a lightscape, respectively, you must assign the latter to a lightscape key of a hand-held or wall-mounted radio transmitter (refer to "Assigning a Lightscape Key").

Storing a Lightscape

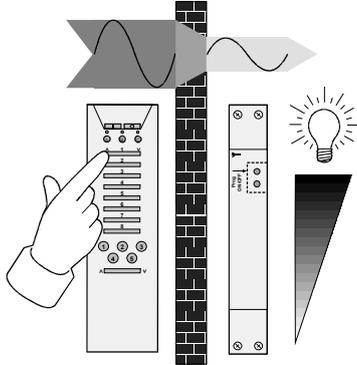
Procedure

1. Adjust the desired brightness of the lighting.
2. Depress the desired lightscape key of the radio transmitter for at least 3 seconds.

Important:

The previous lightscape is recalled first (do not release the key).
After approx. 3 s, the new lightscape is activated and stored.

Radio Transmission



Radio transmission takes place on non-exclusive frequencies. Therefore, interference cannot be excluded. This type of radio transmission is not suitable for safety applications such as emergency shut-off or emergency calling functions.

The range of a radio transmitter (100 m max. in the free field) depends upon the local conditions of the building:

<u>Dry Material</u>	<u>Permeability</u>
Timber, gypsum, gypsum plaster boards	approx. 90 %
Brickwork, particle boards	approx. 70 %
Reinforced concrete	approx. 30 %
Metal, metal grating, aluminium	approx. 10 %

Specifications

Power supply: 230 V AC, 50/60 Hz (no neutral conductor required)
 Connected load: 50–315 VA
 - 230 V incandescent lamps (resistive load, phase cut-off)
 - HV halogen lamps (resistive load, phase cut-off)
 - TRONIC transformers (resistive load, phase cut-off)

or

- Conventional transformers (resistive load, phase cut-on)
 - Mixed loads of the specified types

(Do not combine capacitive with inductive loads.)

When connecting mixed loads using conventional transformers, do not exceed a share in resistive load of 50 % (incandescent lamps, HV halogen lamps).

Power attachments to be connected: 10 max.
 Number of extensions: unlimited
 Spurious radiation: as per EN 55015
 Receive frequency: 433.42 MHz, ASK
 BZT approval: LPD-D
 Protective system: IP 20
 Dimensions (LxWxH): 187 x 28 x 28 mm
 Temperature range: 0 °C to + 55 °C
 Recommended cable type for effective pull relief: H 05 VV-F 3x 1,5

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



The CE sign is a free trade sign addressed exclusively to the authorities and does not include any warranty of any properties.

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