Wireless control unit 1-10V, 1-gang Mini
Order No. : 5421 00

Operating 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 devise 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.

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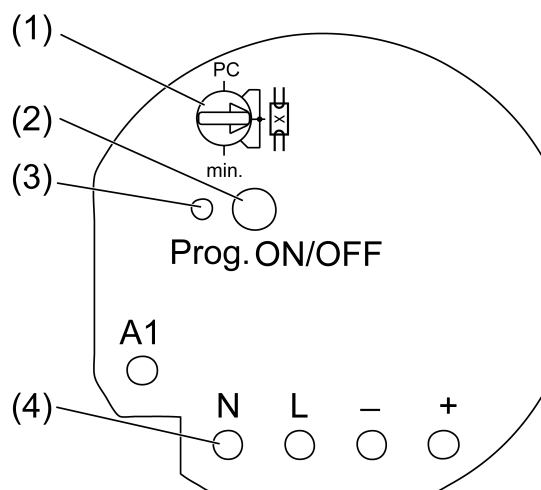
2 Device components

Figure 1: Device components

(1) Operating mode switch
(2) Button **Prog**
(3) Status LED
(4) Measuring points for voltage measurement, terminals rear-mounted

3 Function

Intended use

- Switching and brightness setting of luminaires with 1-10 V interface
- Operation with suitable radio transmitters
- Mounting in appliance box according to DIN 49073 in combination with a suitable cover
- Installation in surface-mounted housing or panel-mounted housing (accessories) for suspended ceilings

Product characteristics

- Switch-on brightness can be saved permanently
- Minimum brightness can be saved permanently

- Scene operation possible
- Status indicator of the 1-10 V subscribers via LED
- Status feedback to radio transmitter
- 1-10 V subscribers switchable with **Prog** button
- 1-10 V interface is protected against reverse polarity

Can be set with eNet server:
- Maximum brightness
- Dimming speed
- Switch-on delay / switch-off delay
- Dim up/dim down ramp
- Switch-off warning
- Operation locks
- Continuous on, Continuous off
- Hotel function
- Run-on time
- Light control

ⓘ If settings are changed with the eNet server, operation and signalling could vary from what is described here.

ⓘ The parameter list is in the Internet in the documentation for this device.

Supplementary functions with eNet server:
- Update of the device software
- Repeater function
- Reading of error memory

Response after mains voltage return

The response after mains voltage return can be configured with the eNet Server. Default setting: Off.

4 Operation

Operation with radio transmitters

Operation is with radio transmitters, please observe the radio transmitter instructions.

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.

Mounting and connecting actuator

To ensure good transmission quality, keep a sufficient distance from any possible sources of interference, e.g. metallic surfaces, microwave ovens, hi-fi and TV systems, ballasts or transformers.
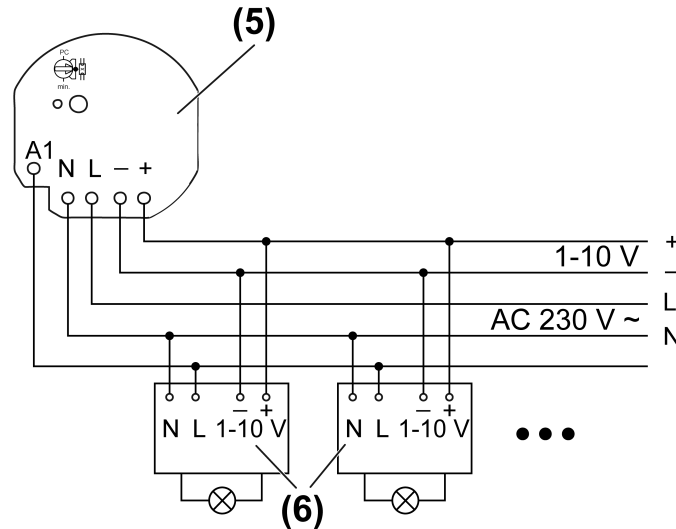
Figure 2: Connection example

ℹ️ Ensure that the control cable is of the appropriate type, cross-section and routing for the VDE specifications for 250 V cable, control voltage has basic insulation.

ℹ️ The control cable and load cable can be run in a shared cable, e.g. NYM J 5×1.5.

- Connect actuator (5) and 1-10 V ballasts (6) as shown in the connection example (Figure 2). At the same time, note the information given by the manufacturers of the ballast.

- If multiple circuit breakers supply dangerous voltages to the device or load, couple the miniature circuit breakers or label them with a warning, to ensure disconnection is guaranteed.

- Insert the actuator in the appliance box in such a way that the **Prog** button (2) and status-LED (3) are visible.
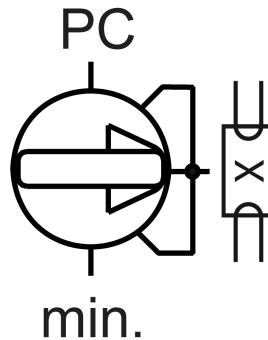

Figure 3: Operating mode switch

Position	Description
PC	Operating mode, parameter set with eNet server *)
⊐⊳ x ⊲⊏	1-10 V operation
min.	Setting of the minimum brightness

*) If the operating mode switch is turned from the position PC, the operating mode and parameters are set to the default setting. The settings made with the eNet Server will be lost.

- Set the operating mode switch (1).

- Switch on mains voltage.
- ⓘ The 1-10 V ballasts can be switched by briefly pressing the **Prog** button.
  Status-LED (3) lights up: switched on
  Status LED (3) off: switched off
- Perform commissioning.
- Mount the cover.

5.2 Commissioning

> ⚠️ **DANGER!**
> **Electrical shock when live parts are touched.**
> **Electrical shocks can be fatal.**
> **During commissioning, cover the parts carrying voltage on radio transmitters and actuators and in their surrounding area.**

ⓘ The actuator can also be commissioned with eNet Server as an alternative to the commissioning described here.

Connecting to radio transmitters

Load is switched off.

- Press the **Prog** button for longer than 4 seconds.

  The status LED (4) flashes after 3 seconds. The actuator is in programming mode for approx. 1 minute.

- Switch radio transmitter to programming mode (see radio transmitter instructions).
- Trigger telegram on the radio transmitter.

  The status LED lights up for 5 seconds.

  The actuator is connected to the radio transmitter. The actuator and radio transmitter exit the programming mode automatically.

ⓘ If the status LED of the control unit flashes 3 times at 1-second intervals for approx. 5 seconds, then the programming operation was not successful. All the memory locations in the actuator or radio transmitter are occupied.

ⓘ All On and All Off buttons of a radio transmitter are connected to the actuator automatically as soon as the first connection to the radio transmitter takes place. Scene buttons must be connected separately.

Disconnecting connection to a radio transmitter

- Carry out the same steps as when connecting (see Connecting to radio transmitter).

  The status LED (3) flashes quickly for 5 seconds. The actuator is disconnected from the radio transmitter. The actuator and radio transmitter exit the programming mode automatically.

ⓘ If there several connections or scene buttons for a radio transmitter, all connections must be disconnected individually.

ⓘ All On and All Off buttons of a radio transmitter are disconnected automatically as soon as the last connection to the radio transmitter is disconnected. Manual disconnection is not possible.

Resetting actuator to default setting

All connections to radio transmitters are disconnected and parameters are reset to default setting.

ⓘ The connections in the radio transmitters are preserved and must be deleted separately.

Load is switched off.

- Press the **Prog** button for at least 20 seconds.

  The status LED flashes after 4 seconds. After 20 seconds the status LED flashes faster.

- Release **Prog** button and press briefly once again within 10 seconds.

  The status LED flashes more slowly for approx. 5 seconds.

The actuator is reset to default setting.

Setting the minimum brightness

The minimum brightness can be set within a range of approx. 1...67 %, if, e.g. the light flickers at low brightness or to compensate for differences in brightness.

- Turn operating mode switch (1) to the **min.** position.
- Adjust brightness with the radio transmitter.
- Turn operating mode switch to the original position again.

  When leaving the position **min.**, the minimum brightness is saved.

Save switch-on brightness

- Switch on light.
- Adjust brightness with the radio transmitter.
- Press button **Prog** (2) for longer than 4 seconds.

  The light switches off briefly and then switches on again to the new switch-on brightness.

  Switch-on brightness is saved.

- [i] Alternatively, the switch-on brightness can be saved with a radio transmitter, e.g. wall transmitter.

6 Appendix

6.1 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 / 60 Hz
Standby power	max. 0.5 W
Ambient temperature	-25 ... +70 °C
Contact type	µ
Control voltage	0.5 ... 11 V
Control current	max. 50 mA
Switching current	
Ohmic	6 A
Fluorescent lamps	3 AX
Minimum switching current	100 mA
Connected load	
Ohmic load	1380 W
Capacitive load	690 VA (560 µF)
Connection	
single stranded	0.75 ... 4 mm²
Finely stranded with conductor sleeve	0.75 ... 2.5 mm²
Dimensions Ø×H	53×28 mm
Total length power cable	max. 100 m
Total length of control cable	max. 100 m
Radio frequency	868.0 ... 868.6 MHz
Transmission capacity	max. 20 mW
Transmitting range in free field	typ. 100 m
Receiver category	2

6.2 Parameter list

The device parameters can be changed with the eNet server:

Device and channels

Parameters	Setting options, Basic setting	Explanations

Function	Light, unused Basic setting: Light	Light The channel is integrated for the "Lighting" central function in the **eNet SMART HOME app**. Unused The channel is not displayed in the **eNet SMART HOME app** and is disabled for use in the commissioning interface.
Operating mode	Normal operation Continuous on Continuous off Basic setting: Normal Operation	Normal operation The output can be operated with radio transmitters and the **Prog** button. Continuous on The output switches to continuously "On". All operations of radio transmitters and the **Prog** button are ignored. Continuous off The output switches to continuously "Off". All operations of radio transmitters and the **Prog** button are ignored.

Advanced device settings

Parameters	Setting options, Basic setting	Explanations
Manual commissioning	On, Off Basic setting: On	Blocks manual commissioning for the device channel. Note: In the "Off" setting, the device cannot be reset to the factory setting.
Repeater mode	On, Off Basic setting: Off	In addition to its other functions, the device can be used as a repeater. In the "On" setting, the device repeats all the received telegrams.

Channel settings

Parameters	Setting options, Basic setting	Explanations
Switch-on brightness	1...100 % Basic setting: 100 %	During brief operation, the output switches on at the set switch-on brightness. Note: If the value is above the set maximum brightness or below the minimum brightness, then the system will switch to the appropriate limit value.

Minimum brightness	1...67 % Basic setting: 5 %	Specifies the minimum settable brightness. Note: If parameters or scene values are set to a level lower than the minimum brightness, then the system will dim to minimum brightness.
Maximum brightness	75...100 % Basic setting: 100 %	Specifies the maximum settable brightness. Note: If parameters or scene values are set to a level higher than the maximum brightness, then the system will dim to maximum brightness.
Dimming adjustment time	1…60 s Basic setting: 4 s	Time from minimum brightness until reaching maximum brightness (dimming speed).
Switch-on delay	0 s … 24 h Basic setting: 0 s	The load switches on after a delay. Repeated switch-on commands restart the delay time. If the load has not yet been switched on due to the delay when a switch-off command comes, then the load will remain off. Note: The set time apply to operation using radio transmitters. The device is switched immediately when the **Prog** button is pressed.
Switch-off delay	0 s … 24 h Basic setting: 0 s	The load switches off after a delay. Repeated switch-off commands restart the delay time. If the load has not yet been switched off due to the delay when a switch-on command comes, then the load will remain on. Note: The set time apply to operation using radio transmitters. The device is switched immediately when the **Prog** button is pressed.
Dim up ramp	0 s … 24 h Basic setting: 0 s	Time between switch-on and reaching switch-on brightness. The light is switched on at minimum brightness and then dimmed to the switch-on brightness. Only applies to switch-on with transmitters (short operation). If scenes are recalled or switching uses logic modules, the switch-on brightness is approached using so-called soft dimming (not configurable).

Dim down ramp	0 s … 24 h Basic setting: 0 s	Time until reaching minimum brightness. The light is dimmed to minimum brightness and then switched off. Only applies to switch-off with transmitters (short operation). If scenes are recalled or switching uses logic modules, the system switches off directly.
Run-on time	0 s … 24 h Basic setting: 0 s	As soon as a run-on time has been entered, the actuator will no longer remain on permanently, but only for the length of the run-on time. The run-on time is restarted if actuation is repeated. This parameter is directly connected to the "Manual switch-off of run-on time" parameter. Note: The set time apply to operation using radio transmitters. The device is switched immediately when the **Prog** button is pressed.
Manual switch-off of the run-on time	On, Off Basic setting: Off	Allows manual switch-off of a running run-on time. If the parameter is switched off, then a switch-off command will also switch the actuator on. Only visible if a run-on time was set.
Operating hours	0...65535 Basic setting: Current value	The time is counted during which the load is physically switched on. This parameter can be reset to "0", for example after exchanging the load. The Reset button is used to reset the meter to "0". The device must be programmed to apply the change.

Extended channel settings

Parameters	Setting options, Basic setting	Explanations
Operating mode	Normal operation Continuous on Continuous off Basic setting: Normal Operation	see Device and channels
Manual commissioning	On, Off Basic setting: On	Blocks manual commissioning for the device channel. Note: In the "Off" setting, the device cannot be reset to the factory setting.

GIRA

Local Operation	On, Off Basic setting: On	Blocks the output for operation using the **Prog** button.
Behaviour on voltage return	On Off Last value Configured brightness Basic setting: Off	Defines the behaviour of the output after voltage return.
Brightness on voltage return	0...100 % Basic setting: 100 %	Brightness value, set by the output after voltage return (mains voltage). The parameter "Behaviour after voltage return" must be set to "Configured position". Note: If the value is above the set maximum brightness or below the minimum brightness, then the system will switch to the appropriate limit value.
Behaviour after the end of the disabling function	On Off no change Last value Basic setting: No change	Behaviour of the output when a block is removed.
Manual saving of the scene values	On, Off Basic setting: On	Disables the saving of the current brightness value as scene value in an actuator for a command via a transmitter.
Switch-off warning	On, Off Basic setting: Off	If the switch-off warning is active, then, during switch-off, the systems dims to minimum brightness within 30 seconds and only then switches off. If the parameter "Dim down ramp" is configured as longer than 30 s, then the length of the dim down ramp is applied. If, during the dim down operation, another command is given, e.g. switch on or scene recall, then the switch-off warning stops and the command is executed. A switch-off command restarts the time for the switch-off warning. Note: The set time apply to operation using radio transmitters. The device is switched immediately when the **Prog** button is pressed.
Priority, lock-out protection	0...4 Basic setting: 1	Specifies the priority for recalling and removing a scene of type Lock-out protection for the channel. Note: 1 is the highest priority and 4 the lowest. 0 means no priority.

Activate lock-out protection brightness value	0…100 % Basic setting: 0 %	Defines the behaviour of the output on activating the lock-out protection.
Deactivate lock-out protection brightness value	0…100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the lock-out protection. Only visible when the priority for the lock-out protection is 0.
Priority, restraint	0...4 Basic setting: 2	Specifies the priority for recalling and removing a scene of type Restraint for the channel.
Activate forced operation brightness value	0…100 % Basic setting: 100 %	Defines the behaviour of the output on activating the forced operation.
Deactivate forced operation brightness value	0…100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the forced operation. Only visible when the priority for the forced operation is 0.
Priority, wind alarm	0...4 Basic setting: 3	Specifies the priority for recalling and removing a scene of type Wind alarm for the channel.
Activate wind alarm brightness value	0…100 % Basic setting: 0 %	Defines the behaviour of the output on activating the wind alarm.
Deactivate wind alarm brightness value	0…100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the wind alarm. Only visible when the priority for the wind alarm is 0.
Priority, sun protection	0...4 Basic setting: 0	Specifies the priority for recalling and removing a scene of type Sun protection for the channel.
Activate sun protection brightness value	0…100 % Basic setting: 100 %	Defines the behaviour of the output on activating the sun protection.
Deactivate sun protection brightness value	0…100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the sun protection. Only visible when the priority for the sun protection is 0.
Priority, twilight	0...4 Basic setting: 0	Specifies the priority for recalling and removing a scene of type Twilight for the channel.
Activate twilight brightness value	0…100 % Basic setting: 100 %	Defines the behaviour of the output on activating the twilight function.

Deactivate twilight brightness value	0…100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the twilight function. Only visible when the priority for the twilight function is 0.
Switch off brightness overshoot	On, Off Basic setting: On	Allows automatic switch-off according to the brightness. If the parameter is On, then the light controller switches off automatically when the brightness setpoint is greatly exceeded. Note: This parameter is not yet active, as a light controller has not yet been implemented.
Switch on brightness undershoot	On, Off Basic setting: Off	Allows automatic switch-on according to the brightness. If the parameter is On, then the light controller switches on automatically when the brightness setpoint is greatly undershot. We recommend only using the parameter in connection with the parameter "Switch-off on brightness overshoot". Note: This parameter is not yet active, as a light controller has not yet been implemented.
Hotel function	On, Off Basic setting: Off	If the hotel function is activated, the system will dim to 20 % brightness when a switch-off command is made. Switch-off is only possible with a forced position command. Note: If the minimum brightness is set to greater than 20 %, then the system dims to the set minimum brightness when the hotel function is activated.

Information window

In the Information window, the load can be controlled and the information about the device can be displays.

Channel control/channel information

Display value	Explanations
Current dimming value	The load can be dimmed using the slider or a brightness value entry.
Load state	The load can be switched on or off.
Restraint	Display of forced position status.
Operating hours	Display of the operating hours since the last restart in the Settings window **Einstellungen**.

6.3 Troubleshooting

Lamps switch to minimum brightness. No dimming is possible.
Cause 1: 1-10 V interface is connected in reverse polarity.
     Connect the control cables with the correct polarity.
Cause 2: 1-10 V control cables have short-circuited.
     Eliminate short-circuit.

Lamps switch to maximum brightness. No dimming is possible.
Cause: 1-10 V control cables are interrupted or not connected.
     Connect the control cables correctly.

6.4 Accessories

Installation adapter Mini housing   Order No. 5429 00
eNet Server   Order No. 5301 00

6.5 Conformity

Gira Giersiepen GmbH & Co. KG hereby declares that the radio system type
 Order No. 5421 00
corresponds to the directive 2014/53/EU. You can find the full article number on the device. The complete text of the EU Declaration of Conformity is available under the Internet address:
www.gira.de/konformitaet

6.6 Warranty

The warranty follows about the specialty store in between the legal framework as provided for by law

Please submit or send faulty devices postage paid together with an error description to your responsible salesperson (specialty trade/installation company/electrical specialist trade). They will forward the devices to the Gira Service Center.

Gira
Giersiepen GmbH & Co. KG
Elektro-Installations-
Systeme

Industriegebiet Mermbach
Dahlienstraße
42477 Radevormwald

Postfach 12 20
42461 Radevormwald

Deutschland

Tel +49(0)21 95 - 602-0
Fax +49(0)21 95 - 602-191

www.gira.de
info@gira.de