GB CE

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Eltako

Wireless actuator

Impulse switch with integrated relay function noiseless FSR61G-230V

Only skilled electricians may install this electrical equipment otherwise there is the risk of fire or electric shock!

Temperature at mounting location:
-20°C up to +50°C.
Storage temperature: -25°C up to +70°C.
Relative humidity:
annual average value <75%.

valid for devices from production week 09/23 (see bottom side of housing)

Noiseless solid-state relay not potential-free, 400 Watt, off delay with switch-off early warning and switchable pushbutton permanent light. Encrypted wireless, bi-directional wireless and repeater function are switchable. Only 0.8 watt standby loss.

For installation. 45 mm long, 45 mm wide, 33 mm deep.

Supply voltage, switching voltage and control voltage local 230 V.

Zero passage switching.

With automatic electronic over temperature shutdown. At a load of < 1 W a GLE has to be switched parallely to the load.

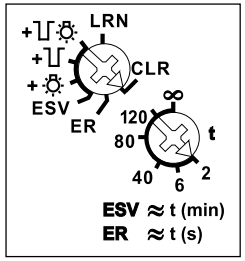
In addition to the wireless control input via an internal antenna, this wireless actuator can also be controlled locally by a conventional 230 V control pushbutton mounted upstream. Glow lamp current is not approved.

You can teach in encrypted sensors.
You can switch on **bidirectional wireless** and/or a **repeater** function.

Every change in state and incoming central command telegrams are then confirmed by a wireless telegram. This wireless telegram can be taught-in in other actuators and in a Smart Home Controller.

Scene control: several FSR61 can be switched on or off in a scene by one of the four control signals of a double-rocker pushbutton taught-in as scene pushbutton.

Function rotary switches



With the upper rotary switch in the setting LRN up to 35 wireless pushbuttons can be assigned therefrom one ore more central control pushbuttons. In addition wireless window/door contacts with the function NO contact or NC contact while the window is open, wireless brightness sensors and wireless motion/brightness sensors. The required function of the impulse switch with integrated relay function can then be selected:

ER = switching relay
ESV = impulse switch.
Possibly with off delay, then:
+ ☼ = ESV with pushbutton permanent light
+ ⊓ = ESV with switch-off early warning
+ ⊓ ☼ = ESV with pushbutton permanent light and switch-off early warning

If the permanent light function ☼ is switched on, the function can be activated by pressing the pushbutton for longer than 1 second. This function switches off automatically after 2 hours or by pressing the pushbutton.

If the switch-off early warning ⊓ is switched on, the light starts to flicker approx. 30 seconds before time-out. This is repeated three times at decreasing time intervals.

If both switch-off early warning and pushbutton permanent light ⊓ ☼ are switched on, switch-off early warning is activated before automatic switch-off of the permanent light.

The function ESV **on the bottom rotary switch** sets the off delay from 2 to 120 minutes. In setting ∞ normal impulse switch function ES without off delay, without pushbutton permanent light and without switch-off early warning.

In setting ER = switching relay of the other rotary switch, this 2nd rotary switch fulfils a safety and power saving function in the settings except ∞. If the switch-off command is not recognised, e.g. since the pushbutton is jammed or it was pressed too quickly, the relay switches off automatically on expiry of a time adjustable between 2 and 120 seconds. When a FTK is taught-in, this time function is turned off.

Rotary switches can be used in function ES and ESV, the permanent light cannot be activated by them.

Universal pushbutton as NC contact:
ER function position: The contact opens when the power supply is applied. When the pushbutton is released, the contact closes immediately and when the pushbutton is pressed, the contact opens immediately.

ESV function position: The contact closes when the power supply is applied. When the pushbutton is operated, the contact opens immediately. When the pushbutton is released, the time setting (2 to 120 minutes) starts. On expiry of the preset time, the contact closes. In position ∞ the contact closes immediately.

FTK wireless window/door contact (EEP D5-00-01, F6-10-00, A5-14-01, -03, -09, -0A):
ER function position: Several FTK are interlinked;

Lower rotary switch to position 2, a monitoring function is active, i. H. If the cyclical telegram from the window sensors remains off for 35 minutes, or if the battery voltage falls below 2.5 V, the red LED flashes. Lower rotary switch to position 00, the monitoring function is not active.

Normally open function (e.g. control of extractor hoods): if a window is opened, the contact closes. If all windows are closed, the contact opens.

Monitoring function: if at least one window sensor no longer sends cyclical telegrams, the contact opens after 35 minutes.

Normally open function (e.g. alarm system): if a window is opened, the contact closes.

If all windows are closed, the contact opens.

Monitoring function: if at least one window sensor no longer sends cyclical telegrams, the contact closes after 35 minutes.

Function NC contact (e.g. climate control): if a window is opened, the contact opens. All windows must be closed for the contact to close.

Monitoring function: if at least one window sensor no longer sends cyclical telegrams, the contact opens after 35 minutes.

NO contact: When a window is opened, the contact closes. All windows must be closed before the contact opens (e. g. controller for cooker extraction hoods).

NC contact: All windows must be closed before the contact closes. When a window is opened, the contact opens (e. g. for climate control systems).

Function setting ER and lower rotary switch to pos. 2:
If only **one** FTK is taught in (as normally open or normally closed) a monitoring function is active, i.e. If the cyclical telegram remains off for 35 minutes, or if the battery voltage falls below 2.5V, the contact switches off and the red LED flashes. If several FTKs have been taught in and the rotary switch position ∞ the monitoring function is not active.

Twilight pushbutton with taught-in (EEP A5-06-01, -02, -03) wireless brightness sensor in function position ESV. The contact closes when the switch-on threshold is not reached and opens when the switch-off threshold is exceeded, a hysteresis of 300 lux is permanently set. In time setting 120, the contact opens with a time delay of 4 minutes when brightness reaches high enough levels. In time setting ∞, the contact opens immediately. Pushbutton activation also remains available.

Vibration sensor (EEP A5-14-05):
function setting ESV: With 'vibration' it is switched on, with 'not vibration' it is switched off immediately.

Function setting ER: with 'Vibration' it is switched on and switched off automatically after the time adjustable between 2 and 120 seconds has elapsed.

Motion detection with taught-in **FBH-slave** (EEP A5-07-01) wireless motion-brightness sensor or motion sensor FB65B (EEP A5-07-01) and in ER function position. The device switches on when motion is detected. When no more motion is detected, the contact opens after the present release delay time t = 2 up to 255 (FB65B: 120 to 380) seconds (position ∞). When an **FBH-master** (EEP A5-08-01) wireless detector and brightness detector is taught-in, use the lower rotary switch to define the switching threshold at which the lighting is

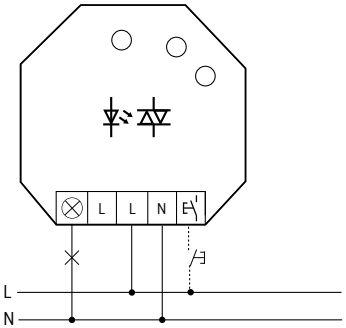
switched on or off depending on the brightness (in addition to motion.

A wireless outdoor brightness sensor FHD60SB (EEP A5-06-01) or a wireless motion / brightness sensor FBH-Master can be used in the function setting ER together with FBH-Slave or FB65B so that movement is only evaluated when it is dark. If the FHD60SB or FBH master detects brightness, the contact opens immediately.

When teaching-in, the switching threshold is also taught-in: between break of twilight and complete darkness.

The LED performs during the teach-in process according to the operation manual. It shows wireless control commands by short flickering during operation.

Typical connection



Technical data

230 V LED lamps	up to 400 W [2]
Incandescent lamp and halogen lamp load[1] 230 V	2000 W
Fluorescent lamp load with KVG* in lead-lag circuit or non compensated	1000 VA
Compact fluorescent lamps with EVG* and energy saving lamps	15x7 W
Local control current at 230V control input	3.5 mA
Max. parallel capacitance (approx. length) of local control lead	3 nF (10m)
Standby loss (active power)	0,8 W

* EVG = electronic ballast units; KVG = conventional ballast units

[1] Applies to lamps of max. 150 W.

[2] Due to different lamp electronics and depending on the manufacturer, the maximum number of lamps may be limited, especially if the wattage of the individual lamps is very low (e.g. with 2 W LEDs).

Teaching-in wireless sensors in wireless actuators

All sensors must be taught-in in actuators so that they can detect and execute their commands.

Teaching-in actuator FSR61G-230V

The teach-in memory is empty on delivery from the factory. To ensure that a device was not previously taught-in, **clear the memory completely:**

Turn the upper rotary switch to CLR. The LED flashes at a high rate. Within 10 seconds, turn the lower rotary switch three times to right stop (turn clockwise) and back again. The LED stops flashing and goes out after 2 seconds. All taught-in sensors are cleared; the repeater and the confirmation telegrams are switched off.

Clear single taught-in sensors:
Turn the upper rotary switch to CLR. The LED flashes at a high rate. Operate the sensor. The LED goes out.

If all the functions of an encrypted sensor are cleared, teach-in must be repeated as described under *Teach-in encrypted sensors.*

Teaching-in sensors:

1. **Setting of the lower rotary switch** to the desired teaching-in function:
   The flashing of the LED as soon as a new setting range has been reached when turning the rotary switch helps to find the desired position reliably.
   Left stop 2 = Teach in 'Central OFF', FTK as NC contacts (aircon or heating control).
   6 = Teach in scene pushbuttons, a complete pushbutton with double rocker is automatically assigned.
   40 = Teach in direction button. Direction pushbuttons are completely taught-in automatically when pressed.
   Where the button is pressed is then defined for switch-on and the other side is the switch-off side.
   80 = Teach in universal pushbutton and FTK as normally open contact (alarm system).
   120 = Teach in universal pushbutton as NC contact.
   Right stop ∞ = Teach in 'Central ON', FTK as NO contact (Extractor hood) and FBH-slave.
   Either an FHD60SB or an FBH-master can be taught-in. During teach-in, the position of the lower rotary switch determines the switching threshold: from 2 = full darkness to 120 = start of twilight.
   Rotary switches and **controllers** can be taught-in in any position, confirmation telegrams are automatically activated and sent.
   Teach-in of a wireless switch FS .. as a 'universal button' (lower rotary switch to position 80): Press the radio switch up or down to teach-in.
   Function: the radio switch only works in the ESV function, press the radio switch up or down, the switch position of the actuator changes (toggling) with each actuation. If several radio switches or radio buttons are taught in together, the radio switch fulfills the function of a toggle switch.
2. **Set the upper rotary switch** to LRN. The LED flashes at a low rate.
3. **Operate the sensor which should be taught-in.**
   The LED goes out.

To teach-in further sensors, turn the upper rotary switch briefly away from position LRN. Continue the procedure from pos 1.

After teach-in, set the rotary switches of the actuators to the required function.

To prevent unintentional teach-in, teach in pushbuttons by 'double-clicking' (pressing rapidly twice in succession).

1. Within 2 seconds, turn the upper rotary switch three times to right stop LRN (turn clockwise). The LED flashes 'double'.
2. 'Double-click' the pushbutton you want to teach in. The LED goes out.

To change back to teach-in with a 'single click', turn the upper rotary switch 3 times to right stop LRN (clockwise) within 2 seconds. The LED flashes at a low rate.

After a power supply failure, the device reverts automatically to teach-in with a 'single click'.

You can teach in unencrypted and encrypted sensors.

Teach in encrypted sensors:

1. Turn the upper rotary switch to LRN.
2. Turn the lower rotary switch three times to left stop (anticlockwise).
   The LED flashes very rapidly.
3. Within 120 seconds, enable sensor encryption. The LED goes out.
   Caution: Do not switch off the power supply.
4. Then teach in the encrypted sensor as described in *Teaching-in sensors.*

To teach in other encrypted sensors, turn the upper rotary switch briefly away from position LRN and then turn it to 1.

With encrypted sensors, use the 'rolling code', i. e. the code changes in each telegram, both in the transmitter and in the receiver.

If a sensor sends more than 50 telegrams when the actuator is not enabled, the sensor is no longer recognised by the enabled actuator and you must repeat teach-in as 'encrypted sensor'. It is not necessary to repeat the function teach-in.

Teaching-in scenes:
Four scenes can be saved by a scene pushbutton previously taught-in.

1. Switch on/off impulse relays
2. The switching state is saved by pressing one of the four rocker ends of a double-rocker scene pushbutton for 3-5 seconds.

Change local control input to 'switch mode':
Set the upper rotary switch to CLR. The LED flashes fast.

Now press the switch ON side of the switch 3 times within 10 seconds.

The LED stops flashing and goes out after 3 seconds.

ESV (ES) function:
Press the switch up or down, the switch position of the actuator changes each time

it is pressed (toggling). Only one switch can be connected.

Change local control input back to 'push-button operation':
Set the upper rotary switch to CLR. The LED flashes fast.
Now press the button 3 times within 10 seconds.
The LED goes out immediately.

Switching on/off repeater:
If control voltage is applied to the local control input when the power supply is switched on, the repeater is switched on/off. When the power supply is switched on, the LED lights up for 2 seconds = repeater off (as-delivered state) or 5 seconds = repeater on to indicate the state.

Switch-on confirmation telegrams:
For deliveries ex-works the confirmation telegrams are switched-off. Set the upper rotary switch to CLR. The LED flashes nervously. Now within 10 seconds turn the bottom rotary switch 3 times to the left (anticlockwise) and then back away. The LED stops flashing and goes out after 2 seconds. The confirmation telegrams are switched-on.

Switch-off confirmation telegrams: Set the upper rotary switch to CLR. The LED flashes nervously. Now within 10 seconds turn the bottom rotary switch 3 times to the left (anti-clockwise) and then back away. The LED goes out immediately. The confirmation tele-grams are switched-off.

Teaching-in feedback of this atuator in other actuators:
For changing of switching state and simulta-neously transmitting of feedback the local control input has to be applied.

Teaching-in feedback of other actuators in this actuator:
Teaching-in feedback other actuators is only reasonable if this actuator is run in function setting ESV.
'switch on' will be taught-in in position 'central ON'.
'switch off' will be taught-in in position 'central OFF'.
After teach-in the function ESV and the off-delay will be set.

When an actuator is ready for teach-in (the LED flashes at a low rate), the very next incoming signal is taught-in. Therefore, make absolutely sure that you do not activate any other sensors during the teach-in phase.

Manuals and documents in further languages

http://eltako.com/redirect/FSR61G-230V

enocean®
THE UNIQUE WIRELESS **PROFESSIONAL SMART HOME** STANDARD

Frequency	868.3 MHz
Transmit power	max. 10 mW

Hereby, Eltako GmbH declares that the radio equipment type FSR61G-230V is in com-pliance with Directive 2014/53/EU.
The full text of the EU declaration of con-formity can be accessed via the QR code or the internet address under 'Documents'.

Must be kept for later use!

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49/2022 Subject to change without notice.