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Eltako ELECTRONICS

Wireless actuator CE

Impulse switch with integrated relay function FSR61NP-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 38/12 (see bottom side of housing)

1 NO contact not potential free 10A/250V AC, incandescent lamps up to 2000 watts, off delay with switch-off early warning and switchable pushbutton permanent light. Bidirectional wireless and repeater function are switchable. Only 0.7 watt standby loss.

For installation.
45mm long, 55mm wide, 33mm deep.
Switching voltage and control voltage local 230V.

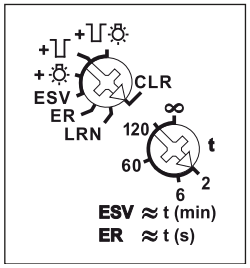
This wireless actuator features state-of-the-art hybrid technology that we developed: we combined the wear-free receiver and evaluation electronics and a bistable relay with zero passage switching.

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

From production week 38/2012 **bidirectional wireless** and **repeater** function can be switched on. 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, in the FVS software and in FUA55 universal displays.

Scene control: several FSR61s 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 top rotary switch in the setting LRN up to 35 wireless pushbuttons can be assigned therefrom one or more central control pushbuttons. In addition wireless window/door contacts with the function N/O contact or N/C contact while the window is open, wireless outdoor brightness sensors FAH and wireless motion/brightness sensors FBH. 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 push-button 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.

Twilight switch with taught-in wireless outdoor brightness sensor FAH and then in function setting ESV. In time setting 120 the contact opens with a delay of 4 minutes if the brightness level is sufficient. In time setting ∞ the contact opens instantly. The local and central push-button control is still possible.

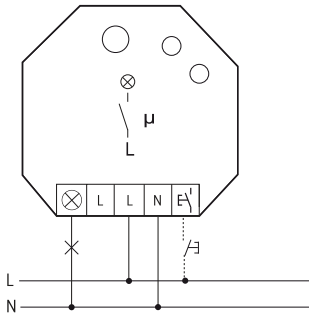
Motion detection with taught-in wireless motion detector FBH in function setting ER. The device switches on when motion is detected. If no more motion is detected, the contact opens after the time delay setting t = 2 to 255 seconds (Position ∞).

Outdoor brightness sensor and motion detector can be used together with function setting ER to evaluate motion only in darkness. If the FAH 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

Rated switching capacity	10A/250V AC
Incandescent lamp and halogen lamp load [1] 230V	2000W
Fluorescent lamp load with KVG* in lead-lag circuit or non compensated	1000VA
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	500VA
Compact fluorescent lamps with EVG* and energy saving lamps	15x7W 10x20W
Local control current at 230V control input	3.5mA
Max. parallel capacitance (approx. length) of local control lead at 230V AC	0.01µF (30m)
Standby loss (active power)	0.7W

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

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

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 FSR61NP-230V

The teach-in memory is empty on delivery from the factory. If you are unsure whether the teach-in memory contains something or not, **you must first clear the memory contents completely:**

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

Clear individual taught-in sensors in the same way as in the teach-in procedure, except that you set the upper rotary switch to CLR instead of LRN, and operate the sensor. The LED previously flashing at a high rate goes out.

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' and FTK and Hoppe window handle as NC contact;

   Pos 6 = teach in scene pushbutton; a complete doubelrocker pushbutton is assigned automatically;

   Pos 60 = teach-in pushbutton 'ON/OFF';

   Pos. 120 = teach-in pushbutton as NC contact;

   Right stop ∞ = teach-in 'central ON' and FTK and Hoppe window handle as NO contact

   The FBH requires no teach-in function.

   When a **FAH is taught-in as twilight sensor,** the position of the bottom rotary switch defines the threshold: 2 = complete darkness and 120 = break of twilight.
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.

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 doublerocker scene pushbutton for 3-5 seconds.

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 tot he left (anticlockwise) and then back away. The LED goes out immediately. The confirmation telegrams are switched-off.

Teaching-in feedback of this atuator in other actuators:
for changing of switching state and simultaneously 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.

For later use!

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