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Eltako ELECTRONICS

Wireless actuator CE

Impulse switch with integr. relay function with active power measurement FSR70W-16A

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 03/13 (see bottom side of housing)

1 NO contact not potential free 16A/250V AC, incandescent lamps up to 2000 watts.

With integrated active power measurement up to 3680 watts. Bidirectional wireless and repeater function are switchable. Only 0.9 watt standby loss.

Mounting in the 230V power supply cord, e.g. in false ceilings. 100mm long, 50mm wide and 31mm deep.

This wireless actuator is an impulse switch with integrated relay function and 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.

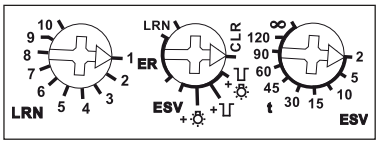
By using a bistable relay coil power loss and heating is avoided even in the on mode.

Power is measured by the integrated **active power meter** from approx 10W when the contact is closed. A wireless telegram is transmitted to the Eltako Building Wireless System within 20 seconds after switching on the load or after a change in power by min 5% and cyclically every 10 minutes.

Evaluation on the computer with Eltako Wireless Building visualisation and control software GFVS or with energy consumption indicators FEA55LED or FEA55D. GFVS Energy supports up to 100 transmitter modules, GFVS 3.0 up to 250 transmitter modules.

From production week 03/2013 **bi-directional wireless** and **repeater** function can be switched. Every change in state and incoming central command telegrams are confirmed by a wireless telegram. This wireless telegram can be taught-in in other actuators, in the GFVS software and in FUA55 universal displays.

Function rotary switches



With the middle rotary switch on the side in the setting LRN up to 35 wireless pushbuttons can be assigned, of which 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. 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 right rotary switch on the side 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 middle rotary switch, this 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 pushbutton 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 as described in the instructions below.
It shows wireless control commands by short flickering during operation.

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 FSR70W-16 A

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 middle rotary switch to CLR. The LED flashes at a high rate. Then within 10 seconds turn the left rotary switch three times to the right stop (turn clokkwise) 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 individual taught-in sensors in the same way as in the teach-in procedure, except that you set the middle 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 left rotary switch to the desired teaching-in function:
   1 = teach-in pushbutton 'ON/OFF';
   2 = teach-in 'central OFF';
   3 = teach-in 'central ON';
   4 = teach-in pushbutton as NC contact;
   5 = teach-in FTK and Hoppe window handle as NC contact;
   6 = teach-in FTK and Hoppe window handle as NO contact;
   7 = teach in scene pushbutton; a complete doubel-rocker pushbutton is assigned automatically;

   The FBH requires no teach-in function. Several FBH devices can be taught-in.

   Caution! Either the FBH or the FTK can be taught-in.

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

Set the middle rotary switch to LRN. Switch on supply voltage. The repeater is switched on or 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:

The confirmation telegrams are switched off when the device leaves the factory. Set the middle rotary switch to CLR. The LED flashes at a high rate. Then within 10 seconds turn the left rotary switch three times to the left stop (turn anticlockwise) and back again. The LED stops flashing and goes out after 2 seconds. The confirmation telegrams are switched on.

Switch-off confirmation telegrams:

Set the middle rotary switch to CLR. The LED flashes at a high rate. Then within 10 seconds turn the left rotary switch three times to the left stop (turn anticlockwise) and back again. The LED goes out immediately. The confirmation telegrams are switched off.

Teaching-in feedback of this actuator in other actuators:

Set the middle rotary switch to CLR, switch on supply voltage, 'switch on' is sent. Set the middle rotary switch to ESV, switch on supply voltage again, 'switch off' is sent.

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.

Teaching-in FSR70W in FEA55 or GFVS software:

When switching on the supply voltage a teach-in telegram, a power telegram and a switching state telegram will be transmitted.

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.

Must be kept for later use!

We recommend the housing for operating instructions GBA12.

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