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Eltako ELECTRONICS

Wireless actuator

Impulse switch with integr. relay function with current measurement FSR61VA-10 A

CE

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 11/14 (see bottom side of housing)

1 NO contact not potential free 10 A/250 V AC, incandescent lamps up to 2000 watts, off delay with switch-off early warning and switchable pushbutton permanent light. With integrated current measurement up to 10 A. Encrypted wireless, bidirectional wireless and repeater function are switchable. Only 0.8 watt standby loss.

For installation.

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

Supply and switching voltage 230 V.

If a power failure occurs, the switching state is retained. If a power failure occurs repeatedly, the device is switched off in a defined sequence.

After installation, wait for short automatic synchronisation before the switched consumer is connected to the mains.

Apparent power is measured by the integrated current measurement from approx. 10 VA to 2300 VA when the contact is closed. A wireless telegram is transmitted into the Eltako wireless network within 30 seconds after switching on the load or after a change in power by min 5% and cyclically every 10 minutes.

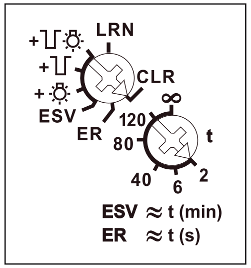
Evaluation on the computer with Eltako Wireless Building Visualisation and Control Software GFVS or with energy consumption indicator FEA65D. GFVS-Energy supports up to 100 transmitter modules and GFVS 3.0 up to 250 transmitter modules.

Starting in production week 11/14, 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 confirmed by a wireless telegram. This wireless telegram can be taught-in in other actuators, in the GFVS 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 ore 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 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.

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.

FTK wireless window/door contact and Hoppe window handles: ER function position: Several FTK devices and (or) Hoppe window handles are interlinked;

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).

Twilight pushbutton with taught-in **FAH** wireless outdoor brightness sensor in function position ESV. 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.

Motion detection with taught-in **FBH (slave)** wireless motion detector 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 seconds (position ∞).

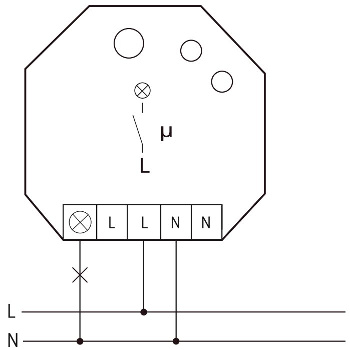
When an **FBH (master)** wireless detector and brightness detector is taught-in, use the lower rotary switch to define the switching threshold at which the lighting is switched on or off depending on the brightness (in addition to motion).

An FAH wireless outdoor brightness sensor or an FBH (master) wireless motion detector and brightness sensor can be used in ER function position together with FBH (slave) motion detector so that motion is only evaluated in darkness. If FAH 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

Rated switching capacity	10 A/250 V AC
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
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	500 VA
Compact fluorescent lamps with EVG* and energy saving lamps	15 x 7 W 10 x 20 W
Local control current at 230 V control input	3.5 mA
Max. parallel capacitance (approx. length) of local control lead at 230 V AC	0.01 μF (30 m)
Standby loss (active power)	0.8 W

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

* 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 FSR61VA-10 A

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 and Hoppe window as NC contacts.

   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 button.

   120 = Teach in universal pushbutton as NC contact.

   Right stop ∞ = Teach in 'Central ON', FTK and Hoppe window handles as NO contact and FBH (slave).

   Either an FAH 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.

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).

Within 2 seconds, turn the upper rotary switch three times to right stop LRN (turn clockwise). The LED flashes 'double'.

'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 *Teach 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 doublerocker scene pushbutton for 3-5 seconds.

Switching on/off repeater:

Set the upper 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:

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

Teaching-in feedback of this actuator in other actuators:

set the upper rotary switch to CLR, switch on supply voltage, 'switch on' is sent. Set the upper 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 FSR61VA 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.

EnOcean wireless

Frequency	868.3 MHz
Transmit power	max. 10 mW

Hereby, Eltako GmbH declares that the radio equipment type FSR61VA-10 A is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: eltako.com

Must be kept for later use!

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13/2018 Subject to change without notice.