

Wireless actuator

Impulse switch with integrated
relay function FSR61-230V**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%.

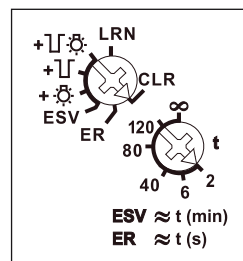
**valid for devices from production week
35/16** (see bottom side of housing)1 NO contact potential free 10A/250V AC,
incandescent lamps up to 2000 watts,
off delay with switch-off early warning
and switchable pushbutton permanent
light. Encrypted wireless, bidirectional
wireless and repeater function are
switchable.

Only 0.8 watt standby loss.

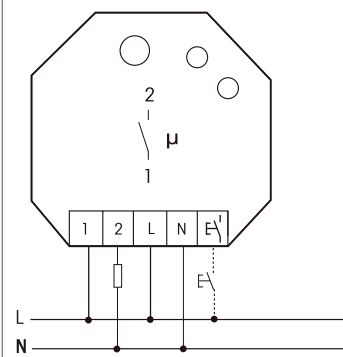
For installation.

45 mm long, 45 mm wide, 33 mm deep.
Supply voltage and control voltage
locally 230V.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.In addition to the wireless control input
via an internal antenna, this wireless
actuator can also be controlled locally
by a conventional 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, 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, 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
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, with-
out 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.ESV function position: The contact clo-
ses 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 immedi-
ately.**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 wind-
ow 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-brightness sen-
sor or motion sensor FB65B 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) wireless detector and
brightness detector is taught-in, use the
lower rotary switch to define the swit-
ching 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) or FB65B so
that motion is only evaluated in dark-
ness. If FAH or FBH (master) detects
brightness, the contact opens immedi-
ately.**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	0.01 μF (30m)
Standby loss (active power)	0.8W

¹⁾ Applies to lamps of max. 150W.* EVG = electronic ballast units;
KVG = conventional ballast units**Teaching-in wireless sensors in wire-
less actuators****All sensors must be taught-in in
actuators so that they can detect and
execute their commands.****Teaching-in actuator FSR61-230V**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 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.

The FB65B can be taught-in in any position.

The GFVS teach-in telegram 0xE0400D80 can be taught-in in any position. The confirmation telegrams are hereby automatically activated.

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 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 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:

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.

ELTAKO GmbH hereby declares that the products that relates to this operating manual, are in compliance with the essential requirements and other relevant provisions of directive 1999/5/EC. A copy of the EU declaration of conformity can be requested at the address below.

Must be kept for later use!

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35/2016 Subject to change without notice.