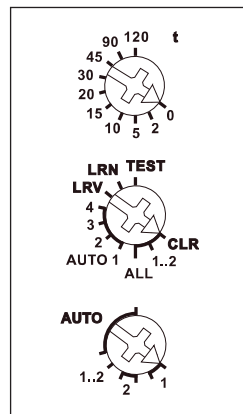
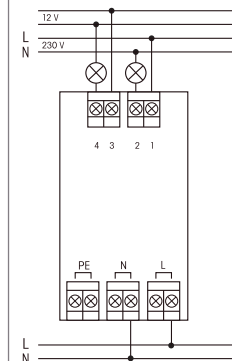




Wireless actuator

2-channel impulse switch with  
integrated relay function  
FSR71-2x-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  
40/17** (see bottom side of housing)2-channel impulse switch with integrated  
relay function, 1 NO contact each  
potential free 16A/250V AC, incandescent  
lamps 2000 watts. With light scene  
control by PC or wireless pushbuttons.  
Encrypted wireless, bidirectional wireless  
and repeater function are switchable.  
Only 0.8 watt standby loss.  
Mounting in the 230V power supply  
cord, e.g. in false ceilings and lamps.  
166mm long, 46mm wide and 31mm  
high.If supply voltage fails, the switching state  
is retained. When supply voltage is  
restored, the device is switched off in  
defined mode.**The channels can be taught-in as ES  
and/or ER channel separately from  
each other.****Scene control:**Several channels of one or several  
FSR71-2x devices can be switched on or  
off in a scene by one of the four signals  
of a pushbutton with double rocker  
taught-in as a scene button.**Central commands on PC** are sent  
using the Wireless Building Visualisation  
and Control Software GFVS. To do this,  
teach-in one or several FSR71-2x devices.**Encrypted sensors** can be taught in.You can switch on **bidirectional wire-  
less** and/or a **repeater function**.Every change in state and incoming  
central command telegrams are confirmed  
by a wireless telegram. This wireless tele-  
gram can be taught-in in other actuators,  
in universal displays FUA55 and in the  
GFVS software.**Function rotary switches****Use the rotary switches** to teach-in the  
pushbuttons and test the 2 channels as  
required. For normal mode, the middle  
and lower rotary switches are then set to  
AUTO. With the upper rotary switch the  
EW time (0-120 seconds) is directly set  
for relays or the RV time (0-120 minutes)  
for impulse switches for all channels if  
necessary.When **FBH wireless motion/brightness  
sensors (masters)** are taught-in, the  
switching threshold is defined separately  
for each channel using the upper rotary  
switch. The switching threshold switches  
the lighting on or off depending on the  
brightness (in addition to motion) (from  
approx. 30lux in position 0 to approx. 0  
300lux in position 90).If **FBH devices (slaves)** are taught-in in  
Position 120, they are only evaluated as  
motion detectors. Several FBH devices  
are interlinked per channel. If an FBH  
signals 'motion', the NO contact closes.  
Only when all FBH devices signal 'no  
motion' does the NO contact open after  
the preset RV time. When an FBH is  
taught-in, the RV time only applies to the  
FBH.Press the ON side of a direction pushbut-  
ton for 2 seconds to switch it on perma-  
nently. Signals are not evaluated by the  
FBH. Press the OFF side of a direction  
pushbutton for 2 seconds to switch it off  
permanently. Signals are not evaluated by  
the FBH. Press the direction pushbutton  
briefly to re-evaluate FBH signals.**Semi-automatic motion detection with  
taught-in FB65B wireless motion sensor  
(factory setting):** Press the pushbutton  
to switch on. This starts a release delay  
time of 5 minutes during which the  
device switches on again if motion is  
detected. When no further motion is  
detected, the device switches off auto-  
matically after 5 minutes in addition to  
the set RV time. The actuator then res-  
ponds to motion for a further 5 minutes  
before switching off automatically. After  
this time expires, the device must be  
switched on again by pressing the push-  
button. You can switch the device off at  
any time by pressing the pushbutton.  
Motion is then no longer evaluated.**Fully automatic motion detection with  
taught-in FB65B wireless motion sensor:**  
If the actuator is not to switch on auto-  
matically when motion is detected, e.g.  
in rooms without daylight, replug the jum-  
per to 'active' on the FB65B device. When  
no further motion is detected, the device  
switches off automatically after a release  
delay time of 5 minutes in addition to the  
set RV time. Press the pushbutton at any  
time to switch the device on or off. When  
motion is detected, the device switches  
on again automatically.When **wireless brightness sensors  
FAH60** are taught-in, define the switching  
threshold separately for each channel  
using the top rotary switch. The switching  
threshold switches the lighting on or off  
depending on the brightness (from approx.  
0lux in position 0 to approx. 50lux in  
position 120). A hysteresis of approx.  
300lux is permanently set for switch on/  
off. An additionally set RV time is not ta-  
ken into account.Only one FBH (masters) or FAH is taught-in  
per channel. However, one FBH (masters)  
or FAH can be taught-in in several chan-  
nels.When **wireless window/door contacts****FTK oder Hoppe window handles** are  
taught-in, different functions can be set  
with the middle rotary switch in position  
AUTO 1 to AUTO 4 and linked to maximum  
116 FTKs: AUTO 1 = window closed then  
output active. AUTO 2 = window open then  
output active. In settings AUTO 3 and  
AUTO 4 the FTKs taught-in to a single  
channel are linked automatically. With  
AUTO 3 all FTKs must be closed so that  
the NO contact closes (e.g. for climate  
control). With AUTO 4 one open FTK is  
sufficient to close the NO contact (e.g. for  
an alarm signal or to switch on the power  
supply for an extractor hood). One or  
several FTKs can be taught-in in several  
channels to allow several simultaneous  
functions in each FTK. After a power failure  
the link is restored by a new signal to the  
FTK and a signal on the next status  
message 15 minutes later. An additionally  
set RV time is not taken into account.When **FRW** wireless smoke alarms are  
taught-in, they are interlinked per channel.  
When an FRW signals 'smoke', the NO  
contact closes. Only after all FRW devices  
signal 'no smoke' does the NO contact  
open.When **water probes** are taught-in, a  
variety of functions can be set using the  
middle rotary switch in positions AUTO 1  
to AUTO 4.  
AUTO 1 = 'no water', then NO contact  
closed.AUTO 2 = 'water', then NO contact closed.  
In Positions AUTO 3 and AUTO 4 the  
water probes taught-in to a single channel  
are interlinked automatically. With AUTO 3,  
all water probes must signal 'no water'  
before the NO contact closes. The NO  
contact opens when a water probe signals  
'water'. With AUTO 4, the NO contact  
closes when a water probe signals 'water'.  
Only when all water probes signal 'no  
water' does the NO contact open. An  
additionally set RV time is ignored.**The red LED** accompanies the teach-in  
process and indicates control commands  
in operation by flashing briefly.**The green LED** flashes briefly when a  
confirmation telegram is sent.**Typical connection****Teaching-in wireless sensors in wire-  
less actuators****All sensors must be taught-in in the  
actuators so that they can detect and  
execute commands.****Teaching-in actuator FSR71-2x-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 middle rotary switch to ALL. The  
LED flashes at a high rate. Within the next  
10 seconds, turn the upper rotary switch  
three times to the right stop (turn clock-  
wise) and then turn back away from the  
stop. The LED stops flashing and goes  
out after 2 seconds. All taught-in sensors  
are cleared.**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.**Clear device configuration:**Set the middle rotary switch to ALL. The red  
LED flashes at a high rate. Within the next

10 seconds, turn the upper rotary switch six times to the left stop (turn anticlockwise) and away again. The red LED stops flashing and goes out after 5 seconds. The factory settings are restored.

#### Teaching-in sensors:

A total of 120 memory locations are available.

1. Select the required channel 1, 2 or 1..2 using the lower rotary switch.

2. Use the upper rotary switch to select the required teach-in function.

0 = teach in 'direction button';

Rocker is completely taught-in automatically when operating the pushbutton. The side on which the pushbutton is first operated is defined for switching on, the other side for switching off.

5 = teach in 'universal pushbutton ES';

10 = teach in 'universal pushbutton ER';

15 = teach in 'central control pushbutton ON' with priority;

20 = teach in 'central control pushbutton OFF' with priority;

Central pushbutton have priority as long as they are pressed.

30 = teach in 'scene button';

Scene pushbuttons (double rocker) are taught-in in fully automatic mode. 'Save scenes' as described further on.

45 = teach in 'central control button ON';

90 = teach in 'central control button OFF';

120 = teach in FBH (slave) and FRW;

3. Set the middle rotary switch to LRN.

The LED flashes at a low rate.

4. Press the sensor to be taught-in.

The LED goes out.

With **FTK**, **window handle**, **FB65B** and **water probes**, you need pay no attention to the teach-in position of the upper rotary switch.

With **rotary switches** and **GFVS** pay no attention to the teach-in position. On teach-in, confirmation telegrams are switched on and sent automatically.

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

You can teach in unencrypted and encrypted sensors.

#### Teach in encrypted sensors:

1. Set the middle rotary switch to LRV.

The red LED flashes at a high rate.

2. Within 120 seconds, enable sensor encryption. The red LED goes out.

Caution: Do not switch off the power supply.

3. Then teach in the encrypted sensor as described in 'Teaching-in sensors'.

To teach in other encrypted sensors, turn the middle rotary switch briefly away from position LRV 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.

#### Teach in scenes

Up to 4 scenes are being saved with a previously taught-in scene pushbutton.

1. All 2 channels of the impulse switch can be turned on or off individually with a previously taught-in universal-, direction-, or central pushbutton as it is desired for one scene.

2. The switch state is saved within 60 seconds when you press one of the four rocker ends of the doublerocker scene button for longer than 3 seconds but shorter than 10 seconds.

3. If more scenes have to be saved return back to point 1.

#### Recall scenes

Press one rocker of the scene pushbutton briefly to recall the scene you require. An additionally set RV time is not taken into account.

#### When the middle rotary switch is set to TEST,

the 2 contacts can be closed individually using the lower rotary switch:

TEST + AUTO = all contacts open,

TEST + 1 = contact 1 closed,

TEST + 2 = contact 2 closed,

TEST + 1..2 = all contacts closed.

#### Switch on repeater:

The repeater is switched off in the factory setting. When disconnected, set the middle rotary switch to CLR and the lower rotary switch to the left stop (turning it counter-clockwise). Switch on the power supply. The red LED lights up to two seconds. The repeater is switched on.

#### Switch off repeater:

When disconnected, set the middle rotary switch to CLR and the lower rotary switch to the right stop (turning it clockwise).

Switch on the power supply. The red LED lights up to 0.5 seconds. The repeater is switched off.

#### Switch-on confirmation telegrams:

For deliveries ex-works the confirmation telegrams are switched-off. Set the lower rotary switch to 1. Set the middle rotary switch to CLR. The red LED flashes nervously. Now within 10 seconds turn the upper rotary switch 3 times to the left (anticlockwise) and then back away.

The red LED goes out and the green LED lights up for 2 seconds. The confirmation telegrams are switched-on.

#### Switch-off confirmation telegrams:

Set the lower rotary switch to 1. Set the middle rotary switch to CLR. The red LED flashes nervously. Now within 10 seconds turn the upper rotary switch 3 times to the left (anticlockwise) and then back away. The red LED goes out immediately. The confirmation telegrams are switched-off.

Use the data transformer DAT71 to create a link to a PC running the PCT14 software.

#### Configure FSR71:

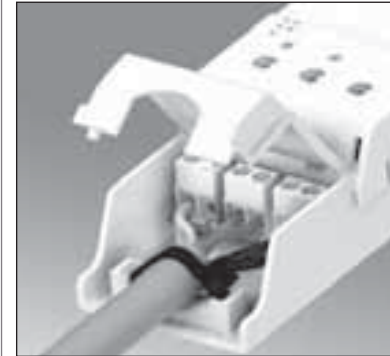
The following points can be configured using the PC PCT14 tool:

- behavior upon return of supply voltage
- teaching-in of wireless pushbuttons and wireless Hoppe window handles with single or double click
- scenes for scene pushbuttons
- add or change sensors



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.

#### Cable fixation



The cable must be fastened with standard cable ties (width <3,6mm).

#### EnOcean wireless

Frequency	868.3 MHz
Transmit power	max. 10mW

**Hereby, Eltako GmbH declares that the radio equipment type FSR71-2x-230V 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](http://eltako.com)**

**Must be kept for later use!**

#### Eltako GmbH

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03/2018 Subject to change without notice.