Wireless actuator
for shading elements and
roller shutters FSB61NP-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
11/16** (see bottom side of housing)

1+1 NO contact not potential free
4A/250V AC, for roller blinds and
shading systems. Encrypted wireless,
bidirectional wireless and repeater
function are switchable. Only 0.8 watt
standby loss.
For installation.
45mm long, 45mm wide, 33mm deep.
Supply voltage, switching voltage and
control voltage local 230V.
If a power failure occurs, the device is
switched off in a defined sequence.
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.
You can teach in encrypted sensors.
You can switch on **bidirectional wireless**
and/or a **repeater** function .
Every change in state and incoming cen-
tral command telegrams are confirmed
with a wireless telegram by bidirectional
wireless. This wireless telegram can be
taught-in in other actuators, in the GFVS
software and in universal displays.

Function rotary switches

GS4   LRN
GS3
GS2   CLR
GS1
GR   3 max
          2   t
          1 min

GR : 10 s -∞
GS1-4 : 10-200 s
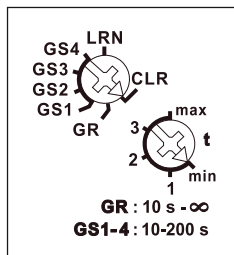
With the top rotary switch in the setting
LRN up to 35 wireless pushbuttons can
be assigned therefrom one ore more
central pushbuttons. The required function
of this impulse group switch can then be
selected:

GS1 = Group switch with pushbutton
control and off delay in seconds. Both a
wireless pushbutton with the function
'Up-Hold-Down-Hold' as well as the
local pushbutton can be taught-in or a
wireless pushbutton like a roller Venetian
blind double pushbutton with pressing
above 'Up' and pressing below 'Down'.
Tap briefly to interrupt the movement
immediately.
**Dynamic central control with and with-
out priority can be implemented:** The
switch position 'Up' at the top or 'Down'
at the bottom are activated specifically
by a control signal < 2 seconds from a
pushbutton taught-in as a central control
switch.
Dynamic central control with priority:
The switch position 'Up' or 'Down' and the
priority are activated specifically by a
control signal >2 seconds and
<10 seconds from a pushbutton taught-in
as a central control switch. With priority
because these control signals cannot be
overridden by other control signals **until**
the central command is again cancelled
by a gate pulse 'Up' or 'Down' from the
central control switch.
The switch position 'Up' or 'Down' and
the priority are activated specifically by a
control signal >10 seconds, e.g. from a
central control switch FSM61.

With priority because these control
signals cannot be overridden by other
control signals **until** the central
command is again cancelled by the end
of the control signal.
GS2 = Group switch same as GS1, central
switch always without priority.
GS3 = Group switch same as GS2, **in
addition with double-click reverse
function** for the local pushbutton and a
wireless pushbutton as universal switch
taught-in appropriately: After double-
clicking, the Venetian blind moves in
the opposite direction until it is stopped
by a brief tap.
GS4 = Group switch same as GS2, **in
addition with tip reverse function**: The
control pushbutton is initially in static
mode. The relay is energised as long as
the pushbutton is tapped so that the
Venetian blind can be reversed in the
opposite direction by short impulses.
When tapped, the direction switch moves
the Venetian blind in the corresponding
direction. The universal switches move
opposite to the previous direction. If the
pushbutton remains closed a little longer,
the relay switches over to dynamic
mode and the relay remains closed to
close or open the Venetian blind, even it
the pushbutton is open before the end
of the movement. A brief tap interrupts
this process immediately.
GR = Group relay. As long as the wire-
less pushbutton is closed, a contact is
closed. Then it reopens. On reception of
the next wireless signal the other contact
closes, etc. A mandatory pause of
500ms is maintained after a contact
change. A local 230V control push-
button initiates the same function. Only
for wireless: the control signal 'Central
up' closes Contact ▲ and 'Central
down' closes Contact ▼ as long as the
pushbutton is closed. When the bottom
rotary switch is in position 'max', no
time delay is activated at GR (time delay
time = ∞). A time delay of 10 to 200
seconds is adjustable between rotary
switch positions 'min' and shortly before
'max'. This opens the closed contact
automatically on expiry of the time
delay, even if the switch is still closed.

Use the bottom rotary switch to set the
time delay to the position 'Halt' in
seconds. Select a delay time that is at
least as long as the shading element or
roller shutter needs to move from its
end position to the other position.

Shading scene control:
Up to 4 saved 'Down' running times are
retrievable using the control signal of a
pushbutton and double rocker taught-in
as a **scene button** or taught-in by a PC
loaded with the GFVS software. If this
was not the last function anyway, the
shading element is first moved 'Up' at
the RV delay time programmed by the
bottom rotary switch to ensure a safe
starting position. The device then
switches over automatically to 'Down'
and stops on expiry of the saved time.
A move command is started only for the
first time for scenes with RV time (fully
'Up' or 'Down').

For control via the GFVS software, up
and down commands can be started
with an exact running time. The actuator
sends after every motion the exact run-
ning time, also after a command by
pushbutton, by this way the GFVS soft-
ware displays always the current posi-
tion. At reaching the end position up or
down, the position is automatically
synchronized.

If a **wireless outdoor brightness sensor
FAH60** is also taught-in in addition to a
scene pushbutton, the taught-in scenes
1, 2 and 4 are executed automatically
depending on the outdoor brightness:
Scene 1 in direct sunlight (>25kLux),
Scene 2 in daylight (300 Lux to 25kLux)
and Scene 4 in darkness (1-30 Lux).
During the first teach-in, therefore, a
scene pushbutton is assigned automati-
cally to Scenes 1 = no function, 2 =
raise fully and 4 = lower fully. Scene 1
must be taught-in separately if the FAH60
is to trigger a shading system when
direct sunlight is detected. A taught-in
Scene 3 is only retrievable by means of
a scene pushbutton.
Scenes 2 and 4 can be changed
separately at any time. However, this is
not advisable if the right rocker is

programmed to be used as a normal
up/down shutter pushbutton or an
FAH60 was taught-in.
FAH60 wireless telegrams for Scenes 1 =
direct sunlight are executed immediately
and 4 = darkness. Three telegrams are
required for Scene 2 = daylight in order
to mask out interference lights. To pre-
vent 'nervous' opening and closing of a
shading element when there is rapid
fluctuation between darkness and
brightness, changing FAH60 wireless
telegrams are only executed every 2
minutes.
The automatic systems can be cancelled
or overridden at any time by confirming
any one of the taught-in pushbuttons.
Central pushbuttons always have priority.
**When you teach in an FTK wireless
window/door contact or a Hoppe window
handle,** a lock out protection is set
when doors are opened to prevent
Central Down and Scene Down.
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

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▲ ▼ L N E
M
L
N
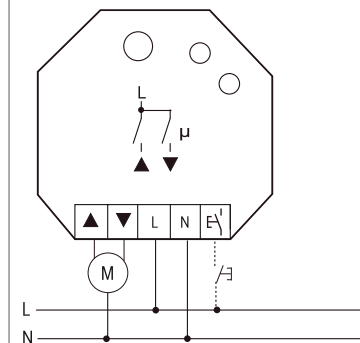
Teaching-in wireless sensors in wireless actuators

All sensors must be taught-in in the actuators so that they can detect and execute commands.

Teaching-in actuator FSB61NP-230 V

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 min = teach-in direction switch top 'UP' and bottom 'DOWN' or 'hold' in both cases;
   Direction switches are completely taught-in automatically when operating the top or bottom pushbutton. Otherwise top and bottom must be taught-in in the same way if the top and bottom pushbutton are to have the same function.
   Position 1 = teach-in 'central DOWN';
   Position 2 = teach-in universal switch 'DOWN-HOLD-UP-HOLD' and window/door contact FTK;
   Position 3 = teach-in 'central UP';
   Right stop max = scene button and PC;

When a FAH60 is taught-in, the position of the lower rotary switch determines the threshold at which scene 4 is called. 'min' = total darkness to 'max' = 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 shading scenes:

The following scenes are saved in scene pushbuttons that are taught-in in fully automatic mode, as described above. 1 = No function; 2 = Raise fully; 3 = No function, and 4 = Lower fully. Scenes 1 and 3 may have to be taught-in separately. Scenes 2 and 4 may also be changed separately. However, this is not advisable if the right-hand rocker is programmed to be used as a normal up/down shutter pushbutton or an FAH60 was taught-in.

Individual teach-in: Start 'Down' from the top end position with an already taught-in universal or direction switch. The point of time of repressing the pushbutton then determines the function which can **then** be taught-in in the scene pushbutton:
a) Press the pushbutton immediately to cancel another function that is saved.
b) Press the pushbutton after approx. 1s to trigger the standard function 'Up'.
c) Press the pushbutton after more than 2s, but shorter than the RV time setting to trigger the function 'Stop after this time' for shading purposes.
d) Do not press pushbutton any more and wait until the RV time has expired. This triggers the standard function 'Down'.

The teach-in the scene pushbutton:

Press the required double rocker end for approx. 3s but not longer than 5s. Then open the shading element fully by pressing the universal or direction switch and continue as described above for other scenes.

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 actuator in other actuators or GFVS software:

For raising and lowering and simultaneously transmitting of feedback the local control input has to be applied. The corresponding feedback will be sent when reaching the end position top or bottom after the set RV time at the device.

Teaching-in feedback of other actuators in this actuator: 'Raising' will be taught-in in position 'central up'. 'Lowering' will be taught-in in position 'central down'. After teach-in the function and desired 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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