GB
30 100 008 - **1**

Eltako ELECTRONICS

Wireless actuator

CE

Wireless socket heating actuator
FSHA-230V

Temperature at mounting location:
-20°C up to +50°C.
Storage temperature: -25°C up to +70°C.
Relative humidity:
annual average value <75%.

1 NO contact nor potential free 10A/250V AC. Encrypted wireless, bidirectional wireless and repeater function switchable. Only 0.8 watt standby loss. Adapter for German fused safety socket. With increased shock protection.

Supply and switching voltage 230V. Zero passage switching.

If a power failure occurs, the switching state is retained.

Device is programmed to switch off when the power supply is restored.

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

Encrypted sensors can be taught in. Bidirectional wireless and/or a **repeater** function can be switched on.

Every change of state is then confirmed by a wireless telegram. This wireless telegram can be taught in other actuators and the GFVS.

The FSHA evaluates the data of wireless temperature controllers or sensors. Can be supplemented by window/door ontacts, window handles, motion detectors and wireless pushbuttons.

The FSHA operates as a two-point controller:
Switches off at 'actual temperature >= set temperature'.
Switches off at 'actual temperature >= set temperature'.
Hysteresis is defined at 1°.

The **frost protection function** is always enabled. As soon as the actual temperature drops below 8°C, the temperature is regulated to 8°C.

If one or several windows are open, the output remains off **provided the window/door contacts or window handles** are taught-in. However, the frost protection remains enabled.

As long as all taught-in **motion detectors** detect no motion, the device is switched to setback mode and the reference temperature is set back by 2°. As soon as a motion detector signals movement again, the device is switched to normal mode.

When a **wireless pushbutton** is taught-in, the assignment of the 4 keys is assigned with the following fixed functions:
Top right: Normal mode (AUTO), can also be enabled by timer.
Bottom right: Night setback mode by 4°, can also be enabled by timer.
Top left: Setback mode by 2°
Bottom left: Off (frost protection enabled)

If the motion detector and wireless pushbutton are taught-in at the same time, the last telegram received is always the one that is valid. A motion detector therefore switches off a setback mode selected by wireless pushbutton when a movement is detected.

Malfunction mode:
If a temperature sensor fails to receive a wireless telegram for longer than 1 hour, the LED lights up and the device switches to fault mode. The FSHA-230V switches cyclically between 'ON' for 4.5 minutes and 'OFF' for 10.5 minutes. When a wireless telegram is again received, the LED goes out and the device switches back to normal mode.

The LED lights up during teach-in. Wireless control commands are indicated by short flickering during operation.

Teaching-in wireless sensors in wireless actuators

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

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:

Press the left button *LRN/CLR* for approximately 3 seconds, the LED flashes exitedly. Press the right button *AUTO/** approximately 5 seconds, the LED goes out. All taught-in sensors are cleared, the repeater and the confirmation telegrams are switched off.

Clear individual taught-in sensors:
Press the left button *LRN/CLR* for approximately 3 seconds, the LED flashes exitedly. Press the sensor which is to be cleared, 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.*

Teach in sensors:
Teaching in temperature controllers FTR, FUTH, FTF (set temperature 20°C), motion detectors, window/door contacts, window handles and GFVS:

Press the left button LRN/CLR for approx. 0.5 seconds and then release. The LED lights up.

Press the teach-in sensor. The LED goes out.

Teach in wireless pushbuttons:
Press the left button *LRN/CLR* for approx. 0.5 seconds and then release. The LED lights up. Briefly press the right button *AUTO/** once to confirm. The LED flickers once. Press the teach-in wireless pushbutton. The LED goes out.

Briefly press the *LRN/CLR* button to exit the teach-in and clear mode immediately.

The teach-in and clear mode is automatically cleared after 60 seconds.

To prevent unintentional teach-in, teach in pushbuttons by 'double-clicking' (pressing rapidly twice in succession).

1. Briefly press the left button LRN/CLR button 2 times, the LED blinks 2 times for confirmation.
2. Select the desired teaching-in function with the right button *AUTO/**.
3. Press the taught-in button with *'double click'*. The LED goes out.

Unencrypted and encrypted sensors can be taught-in.

Teach in encrypted sensors:
1. Press the left button *LRN/CLR* for approximately 0.5 seconds and then release, the LED lights up.
2. Briefly press the right button *AUTO/**

5 times, the LED flashes very excitedly.

3. Enable encryption of the sensor within 120 seconds. The LED goes out.
   Attention! The power supply should not be turned off.
4. Now teach-in the encrypted sensor as described among teaching-in sensors.

If further encrypted sensors should be taught-in, go back to point 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.

Switch on/off AUTO:
Briefly press the right button *AUTO/**. Normal mode is switched off. Frost protection is activated.

The LED lights up for 0.5 seconds to signal the state.

Briefly press the right button *AUTO/**. Normal mode is switched back on (as-delivered state).

To signal the state, the relay and the LED are switched on for 2 seconds.

Switch on/off repeater:
Press and hold the right button AUTO/* and plug the FSHA-230V into the socket.

The repeater is switched on and off.

The LED lights up for 2 seconds to indicate the status = repeater off (as-delivered state) or for 5 seconds = repeater on.

Switch on/off confirmation telegrams:
Press and hold down the left button *LRN/CLR* and the right button *AUTO/** together and plug the FSHA-230V in the socket. Confirmation telegrams are switched on and off.

The LED lights up for 0.5 seconds = confirmation telegrams OFF (as-delivered state) or for 2 seconds = confirmation telegrams ON to indicate the status.

Confirmation telegrams:
The FSHA-230V sends a feedback message containing its own ID to the Eltako wireless network.
0x70 is sent when the relay is switched on.
0x50 is sent when the relay is switched off.

In addition, the data telegrams of taught-in temperature sensors are sent.

In defect mode, 0x00 is also sent every 5 minutes.

Teach in confirmation telegrams in other actuators or in the GFVS:
Press the right button *AUTO/** to change the switch position and send the confirmation telegram at the same time.

May only be used in closed dry rooms.

The socket must be easily accessible.

Don't insert in a row.

EnOcean wireless	
Frequency	868,3 MHz
Transmit power	max. 10 mW

Hereby, Eltako GmbH declares that the radio equipment type FSHA-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

WEEE registration number DE 30298319

Must be kept for later use!

Eltako GmbH

D-70736 Fellbach

Technical Support English:

☎ Michael Thünte +49 176 13582514
✉ thuente@eltako.de

☎ Marc Peter +49 173 3180368
✉ marc.peter@eltako.de

eltako.com

49/2017 Subject to change without notice.