Eltako ELECTRONICS

Wireless small actuator

FKS-E

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%.

Wireless small actuator for radiators.
No wires since it is battery powered.
Low standby losses.

Room temperature control for constant control in conjunction with the thermo clock/hygrostat FUTH65D.

Fitted to customary radiator valves made by numerous manufacturers.
The small actuator is powered by 2 alkaline Mignon Type AA batteries that have a service life of up to 3 years. Energy-saving technologies and sophisticated engineering ensure very low power consumption.

The reference temperature is set on the FUTH65D as well as the switching times **for heat reduction at night.**

Battery monitoring:
It can be displayed using GFVS 3.0. If the battery voltage drops below 10%, the actuator goes to safety position 50% open.

Wireless interface:
The wireless communication with the FUTH65D is cyclical (wireless cycle approximately every 10 minutes). At the same time the entire wireless protocol will be sent to the FUTH65D and values of the FUTH65D will be received.
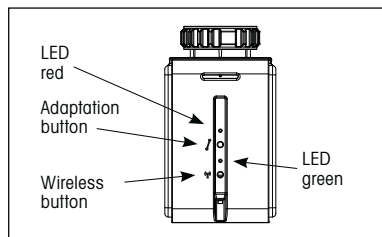
If window contacts FTK are taught-in in the FUTH65D, the temperature reduction is controlled by the FTK.

Without adapter on valves with M30x1.5 connection thread made by Heimeier, Honeywell-MNG, Junkers, TA, Honeywell-Bankmann, Oventrop

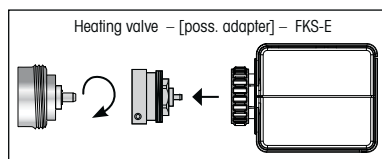**(2001 or later), Cazzaniga etc. Adapters for Danfoss RA, RAV and RAVL are enclosed.**

Controls

LED red
Adaptation button
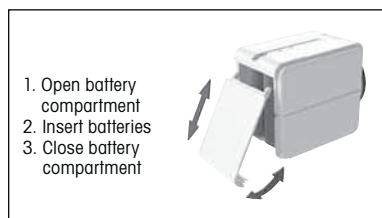Wireless button
LED green

Fitting
Fitting poses no problems on all known valves; no dirt or water stains since hot water circuit is not interrupted.
1. Turn the manual thermostat head up completely, loosen the fastening and pull the thermostat off of the valve.
2. Use an appropriate adapter, if required, and push it onto the valve.
3. Screw the connector on the valve or the adapter.

Heating valve – [poss. adapter] – FKS-E

First start-up (adaptation)

1. Open battery compartment
2. Insert batteries
3. Close battery compartment

After you have inserted the batteries, the tappet moves back and comes to rest in the fitting position.

If now, after the mounting, the adaption-button will be pushed, the actuator adapts and will remain after adaption in the closed valve.

Teach in and adaption
An LED flashing at a rate of one second means that the device expects you to carry out an operation for the related button, wireless or mechanism. As soon as you press the appropriate button, the LED lights up permanently, so signalling that teach-in and/or adaptation is being executed. If no LED lights up, everything is OK and executed. The lower button with the green LED is responsible for teaching in the wireless link. The adaptation button with the red LED is responsible for adaptation to the valve.

Parameterisation
To access parameterisation mode, press the adaptation button in idle state for approx. 3 seconds. The red LED then starts to flash as follows:
Parameter 1: The red LED flashes once briefly.
Parameter 2: The red LED flashes twice briefly with a pause in between.
Parameter 3: The red LED flashes three times briefly with a pause in between.
Every time you press the adaptation button briefly, the device selects the next parameter. When you go past the last parameter or, alternatively, press the adaptation button for approx. 2 seconds, teach-in ends and the settings are saved.

The wireless teach-in button is responsible for entering data
Do not press = no change
Press once = first lowest value.
Press twice = next value etc.
When the maximum value is reached, the display remains at maximum value.

Parameter 1 – window open recognition
Press once to switch off window open recognition (green LED flashes briefly once)
Press twice to switch on window open recognition at 1/3°C/min. (factory default) (green LED flashes twice briefly)

Parameter 2 – winter interval
Press once for winter interval 1min (green LED flashes once briefly)
Press twice for winter interval 2mins (green LED flashes twice briefly)
Press 3 times for winter interval 3mins (green LED flashes 3 times briefly)
Press 4 times for winter interval 4mins (green LED flashes 4 times briefly)
Press 5 times for winter interval 5mins (green LED flashes 5 times briefly)
Press 6 times for winter interval 10mins (factory default) (green LED flashes 6 times briefly)
Press 7 times for winter interval 15mins (green LED flashes 7 times briefly)
Press 8 times for winter interval 20mins (green LED flashes 8 times briefly)
Press 9 times for winter interval 25mins (green LED flashes 9 times briefly)
Press 10 times for winter interval 30mins (green LED flashes 10 times briefly)

Parameter 3 – Summer interval
Press once for summer interval 30min (factory default) (green LED flashes once briefly)
Press twice for summer interval 60mins (green LED flashes twice briefly)
Press 3 times for summer interval 90mins (green LED flashes 3 times briefly)
Press 4 times for summer interval 2x60mins (green LED flashes 4 times briefly)
Press 5 times for summer interval 3x60mins (green LED flashes 5 times briefly)
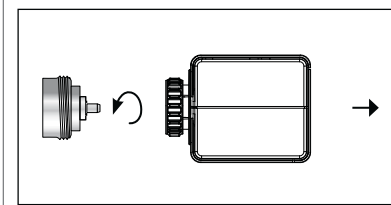Press 6 times for summer interval 4x60mins (green LED flashes 6 times briefly)
Press 7 times for summer interval 6x60mins (green LED flashes 7 times briefly)
Press 8 times for summer interval 8x60mins (green LED flashes 8 times briefly)
Press 9 times for summer interval 12x60mins (green LED flashes 9 times briefly)
Press 10 times for summer interval 24x60mins (green LED flashes 10 times briefly)

Removal

Turn the connector on the valve or the adapter and remove the FKS-E.

Request telegram

DatenByte.Bit	Description	Value
DB3.7… DB3.0	Current Value	0…100dez = 0…100%
DB2.7	Service On	1: on
DB2.6	not used	
DB2.5	not used	
DB2.4	Battery Capacity	0: Battery change 1: Batterie OK
DB2.3	not used	
DB2.2	Failure temp sensor	0: false/1: true
DB2.1	Detection Window Open	0: Window closed 1: Window open
DB2.0	not used	
DB1.7…DB1.0	measured Temperature	0…255dez = 0…+40°C
DB0.7…DB0.4	not used	
DB0.3	Learn Bit	0: Teach-In telegram 1: Data telegram
DB0.2…DB0.0	not used	

Response telegram

DatenByte.Bit	Description	Value
DB3.7… DB3.0	Temperature SetPoint/ Valve Position	0…255dez = 0…40°C 0…100dez = 0…100%
DB2.7… DB2.0	Temperature from RCU	255…0dez = 0…40°C
DB1.7	Run init sequence	0: false 1: true
DB1.6	not used	
DB1.5	Valve open/ maintenance	0: false 1: true
DB1.4	Valve closed	0: false 1: true
DB1.3	Summer bit	0: false 1: true
DB1.2	Set Point Selection	0: Valve position 1: Temperature set
DB1.1	Set Point inverse	0: false 1: true
DB1.0	Select function	0: RCU 1: service on
DB0.7	not used	
DB0.3	Learn Bit	0: Teach-In telegram 1: Data telegram
DB0.2	not used	

Applicable standards
CE conformity to: EN60730
Protection class: IP20
RT+T Directive

Technical data

Wireless controller	EnOcean Protocol: EEP A5 20-01
Power supply	3V (2 AA batteries)
Actuating force	max. 120 N
Ambient temperature	0-50°C
Media temperature	max. 100°C
Size (WxHxD)	65x65x48 mm
Actuating time	approx. 3 s/mm
Max. valve stroke	4.5 mm
Connection	M 30x1.5

The crossed-out waste container indicates that batteries may not be disposed with other household or commercial waste.
Batteries can be returned free of charge to the retail outlet after use.

⚠ **Attention:**
Danger of explosion if battery is replaced improperly.
Only replace it by an equivalent type!

EnOcean wireless

Frequency	868.3 MHz
Transmit power	max. 10 mW

Hereby, Eltako GmbH declares that the radio equipment type FKS-E 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!