

Wireless sensor



Thermo clock/hygrostat FUTH55D
with display

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 clock thermometer and -hygrostat with display for individual fitting and mounting in 55x55 mm or 63x63 mm switch system. Only 0.2 watt standby loss. With adjustable day and night reference temperatures and relative humidity. Preset ready to operate.

The scope of supply includes a frame R, an intermediate frame ZR in the same colour and a mounting plate. In addition, an intermediate frame ZRF in the same colour is supplied for installation in an existing frame R1F, R2F or R3F for flat pushbuttons.

Power supply 12V DC. A 20 cm long red/black connecting wire is routed to the rear.

Before screwing on, remove the frame and intermediate frame from the mounting plate. To do this, press out the catches on the mounting plate. Then screw on the mounting plate - with the catches at the top and bottom -, snap on the frame and the intermediate frame, and connect and snap on the clock thermostat-hygrostat.

We recommend sheet metal countersunk screws 2.9x25 mm, DIN 7982 C, for screw connections on 55 mm switch boxes.

Up to 60 timer memory locations are freely assigned to the channels. With date and automatic summer/winter time change-over. Ca. 7 days power reserve without battery. With slide switch for normal operation, night mode and control out.

The wireless clock thermostat sends a message to the Eltako wireless network every 50 seconds when there is an actual temperature change of minimum 0.3°C or a change in humidity of 5%. A change in reference temperature or relative humidity is sent immediately. If there is no change, a status report is sent every 10 minutes. **Queries of a wireless small actuator FKS which are received approximately every 10 minutes will be answered immediately.**

Settings are made with the buttons MODE and SET and can be locked.

A complete switching programme is preset and can be very easily changed: day reference temperature 22°C Monday to Thursday from 6:00 to 22:00, Friday from 6:00 to 23:00, Saturday from 7:00 to 23:00 and Sunday from 7:00 to 22:00. The preset night reference temperature is 18°C.

Set language: Every time the power supply is applied, press SET within 10 seconds to set the language german or english and press MODE to confirm. The **normal display** then appears: Weekday, date, time, actual temperature from 0°C to +40°C to one decimal point and relative humidity. Through self-heating, the correct actual temperature will only be displayed 30 minutes after connecting of the supply voltage. To adapt the sensor to the ambient conditions, the internal sensor can be adjusted to the actual room temperature and humidity. If the settings are locked, the reference temperature 'set-temp.' can be displayed and changed here from +8°C to +40°C in steps of 0.5°C by pressing MODE followed by SET.

Rapid scroll: In the following settings, the numerals scroll rapidly when you press and hold down Enter. Release then press and hold down to change the scroll direction.

Set clock: Press MODE then press SET to search for the **'clock' function**. Press MODE to set. Press SET to select the hour and press MODE to confirm. Proceed in the same way to set the minute.

Set date: Press MODE then press SET to search for the **'date' function**. Press MODE

to select. Press SET to select the year and press MODE to confirm. Proceed in the same way to set the month and the day. The last setting in the sequence the weekday is following. Press SET to set it. Small actuators FKS (Kieback&peter, Type MD15-FIL-HE) and FTR55 devices can be taught-in. Teaching in window/door contacts FTK and Hoppe window handles can be taught-in for FKS in this clock thermostat FUTH55D, otherwise in the actuators mentioned.

If window/door contacts FTK or Hoppe window handles were taught-in, the setting is lowered to frost protection temperature 8°C as long as one or several windows are open.

The FUTH can be taught-in in FHK (wireless heating/cooling relay) and FKS (wireless small actuator).

Programs

After you press MODE to confirm, PO1 appears in the display. Press SET to select the program you want to edit.

Press MODE to confirm and then press SET to select **'inactive'** or **'active'**.

After you press MODE to confirm 'inactive', the normal display appears.

After you press MODE to confirm 'active', press SET to select temperature or humidity.

After you press MODE to confirm **'temp.'** (setpoint temperature), press SET to select between 'night-tmp.', 'day-tmp.' and 'free-tmp.'. Then press MODE to confirm.

- The 'night-tmp.' and 'day-tmp.' entered are automatically adopted in all programs.

- 'free-tmp.' can be entered for each individual program

Press SET to set the setpoint temperature.

After you press MODE to confirm, press SET to set the hours.

After you press MODE to confirm, press SET to set the minutes.

After you press MODE to confirm, press SET to enable a whole week or single week days. Then press MODE to confirm. After you complete your input, the normal display reappears.

After you press MODE to confirm **'humidity'**, press SET to select between 'fixed-

val1', 'fixed-val2' or 'value'. Then press MODE to confirm.

- The 'fixed-val1' and 'fixed-val2' entered is automatically adopted in all programs.

- The value can be entered for each single program.

Press SET to set the air humidity.

After you press MODE to confirm, press SET to set the hours.

After you press MODE to confirm, press SET to set the minutes.

After you press MODE to confirm, press SET to enable a whole week or single week days. Then press MODE to confirm. After completing your input, the normal display reappears.

Press and hold down MODE (for longer than 2 s) to exit the menu at any point. Changed parameters are saved and the normal display reappears.

Learn

After you press MODE to confirm, press SET to select between **'heating'** and **'hygrostat'**.

After you press MODE to confirm 'heating', press SET to select 'room (1-8)' or 'Pump'.

After you press MODE to confirm **'room'**, press SET to select between 'FKS (1-5)', 'FHK', 'FTR' (only for Rooms 2-8) and 'FTK (1-4)'. Then press MODE to confirm.

- After you select 'FKS' and press MODE to confirm, 'save' appears in the display.

When you press MODE to confirm 'save', a teach-in telegram must be sent by an FKS. When the telegram is received, 'get telegram' appears in the display. Press MODE to confirm reception.

- After you select 'FHK', press SET to send a teach-in telegram which is then taught-in in an actuator that is ready to be taught-in.

- After you select 'FTR' and press MODE to confirm, 'save' appears in the display.

When you press MODE to confirm 'save', a teach-in telegram must be sent by an FTR. When the telegram is received, 'get telegram' appears in the display. Press MODE to confirm reception.

- After you select 'FTK' and press MODE to confirm, 'save' appears in the display.

When you press MODE to confirm 'save', a teach-in telegram must be sent by an FTK. When the telegram is received, 'get telegram' appears in the display. Press MODE to confirm reception.

- After you press MODE to confirm 'pump', press SET to select between ON and OFF. Then press MODE to confirm. Press SET to send the related button telegram and teach it in as a central button in an actuator which is ready to be taught-in
- After you press MODE to confirm 'hygrostat', press SET to select between 'sensor', 'on' or 'off'
- After you press MODE to confirm 'sensor', press SET to send a teach-in telegram which is then taught-in in an actuator that is ready to be taught-in.
- After you press MODE to confirm 'on' or 'off', press SET to send the related button telegram which is then taught-in as central button in an actuator that is ready to be taught-in.

A sensor ID cannot be taught-in in the FUTH several times.

You can only exit teach-in mode by pressing and holding down the MODE button for longer than 2 s. The normal display then reappears.

Clear

After you press MODE to confirm, press SET to select between '**all programs**', '**all ID's**', '**one room**' or '**one ID**'. Then press MODE to confirm.

- After you press MODE to confirm 'all programs' or 'all IDs', 'press SET to clear' appears in the display. After you press SET to clear, 'erasing finished' appears in the display after the clearing function is completed. Then press MODE to confirm. If you press MODE to confirm 'press SET to clear', 'erasing cancelled' appears in the display and the normal display reappears after 2 s.
- After you press MODE to confirm 'one room', press SET to select the room required. After you press MODE to confirm, 'press SET to clear' appears in the display. After you press SET to clear, 'erasing finished' appears in the display after the clearing function is completed. Then press MODE to confirm. If you press MODE to confirm 'press SET to clear', 'erasing cancelled' appears in

the display and the normal display reappears after 2 s.

- After you press MODE to confirm 'one ID', 'wait for telegram' appears in the display. A teach-in telegram must then be sent by the sensor to be cleared. After the telegram is received, 'get telegram' appears in the display. After you press MODE to confirm receipt, press SET to select between 'Don't erase ID' or 'erase ID'. After you press MODE to confirm, the normal display reappears.

You can exit clearing mode by pressing and holding down the MODE button for longer than 2 s. The normal display then reappears.

Summer/winter time changeover: Press MODE then press SET to search for the **automatic summer/winter time function** and press MODE to select. Now press SET to switch between 'activ' and 'inactive'. If you select activ, changeover is automatic.

Hygrostat hysteresis

After you press MODE to confirm, press SET to select the required hysteresis 5%, 10%, 15% or 20%. Press MODE to confirm.

Adapt sensor to the environmental conditions:

Press MODE and then search for the **function sensor adjustment** with SET and select with MODE. At **temp. adjustment**, the temperature measurement can be adjusted between $\pm 5.0\text{ K}$ in 0.5 K increments with SET. Confirm with MODE. At **humidity adjustment** the humidity measurement can be adjusted between $\pm 10\%$ in 1% increments with SET. After confirming with MODE the normal display appears.

Base ID

The Base ID of the FUTH55D is displayed.

Slide switch

Right: = normal mode (day).

Middle: 0 = temperature control OFF

Left: C = night reduction

- The FUTH slide switch acts identically for all rooms, i.e. night mode and on mode refer to all rooms, whereby off always has priority.

- If the night temperature is executed via the clock program, the other rooms go to night mode and to their particular night temperature setting.
- If one of maximum seven FTR55H devices is positioned to OFF or NIGHT, this setting is applied to the affected room.
- Data transfer in rooms 2 to 8 only functions if an appropriate FTR telegram is received.
- The data for room 1 is composed of the internal sensor (actual temperature) and the clock program (setpoint temperature).

Temperature values are sent as temperature data telegrams and button telegram (e.g. to switch a pump on/off by means of an FSR61 device).

Hygrostat values are sent as humidity data telegram and button telegram (e.g. to switch a fan on/off by means of an FSR61 device). Hysteresis is settable for the button telegram.

The designation 'room1' refers to the room control of the primary room in which the FUTH is fitted. For Rooms 2 to 8, the FUTH acts as a type of gateway. Here it links data between FTR55 /signal source, integrated in the room to be controlled), night reduction (time program), slide switch (operating mode), window/door contacts (FTK) and signal receivers in each case, such as FKS and FHK.

FHK data transfer

- Equivalent to the FTR telegram. Its function is to provide additional control for FHK devices.
 - FTK evaluation of the individual rooms (4 FTK devices in each room) is not considered.
 - FTK devices do not influence whether the pump is switched off since an open window is not a continuous state and the FTK devices are taught-in in the FHK in FHK mode.
 - In the event of night reduction, the setpoint is changed directly. Reduction data and reduction bit are not transferred.
- FKS data transfer** (wireless small actuator from Kieback&Peter)
- The window contacts are considered separately for each room.

- FKS devices send a telegram request and receive a reply telegram from the FUTH.

Lock settings: Briefly press MODE and SET together and at 'lock', press SET to lock. This is displayed by an arrow next to the lock symbol.

Unlock settings: Press MODE and SET together for 2 seconds and at 'unlock' press SET to unlock.

Must be kept for later use!

Eltako GmbH

D-70736 Fellbach

+49 711 94350000

www.eltako.com

02/2013 Subject to change without notice.