Instruction for installation and use Electronic Thermostat with timer for individual rooms Concealed installation HRT-6020-50

with inner sensor for room heating from 5° to 30° C

HRT-6025-50

- with outer sensor for under floor heating 10° to 40° C / 10° to 60° C

Safety Advice

Only an authorised electrician should install the thermostat. All safety regulations must be followed.

Before installation turn off main power source.

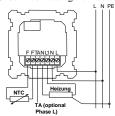
Attention

In case of system failure mains voltage may be connected to sensor cable.

Diagram 1A

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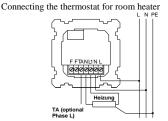
Connecting the Under Floor heating thermostat



. Alternatively a thermal actuator, or electrical heater fan

Diagram 1B

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Alternatively a thermal actuator, or electrical heater

Installation

The thermostats are built in standard flush-type mounting boxes of 55mm diameter with a retaining ring for use over wall covering. If the box is needed for any other wiring, a deep box is recommended.

Attach the wires with clamp-like terminal: no screws are necessary. The conductor ends must be even and stripped approximately 12 mm.

There are two plug possibilities for each connecting point. If wires have been incorrectly attached they can be detached by gently pulling them back and forth with a pliers. A few connection clamps will remain on some types of devices.

The protective contact need not be attached. The respective terminal can be used for loop-through purposes.

Assembly

- . After bolting the device to the box, put the caps on both slide switches.
- Carefully slide the lid on until it clicks into place. Screw it shut.
- Place the grooved dial onto its axle.

Under Floor Heating Thermostat

. The sensor must be placed separately in a protective tube at heating mat level between heating conductors.

Room Thermostats

. Install circa 1.5 m above the floor.

- . Avoid draughts from windows an doors.
- . Make sure the thermostat is not positioned under curtains or between shelves or other objects that block normal room circulation. . Heat from sources other than the heater can
- adversely affect the thermostat's precision.

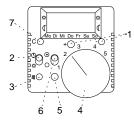
- . The electronic thermostats with inner sensors are used to regulate room heaters.
- . The electronic thermostats with outer sensors are used to regulate floor heating systems.
- . Electric heaters and warm water heaters (with thermal actuators normally closed) can be used.

With the thermostat's timer the temperature can be adjusted down once or twice each day with different time periods for work days and rest days. The low temperature is programmed while the high (or warm) temperature can be adjusted at any time by burning the dial.

The thermostats are pre-programmed with Monday through Friday designated as work days and Saturday and Sunday as rest days. The low temperature is pre-programmed at 15°C. The warm temperature is preprogrammed to run from 0600 h to 2200 h.

Figure 2

View of Device



Guide to Figure 2

- + and keys Set variables
- Slide Switch
- Change from time program to constant temperature
- 3. LED Indicator
 - If lit, heater is on
- 4 Dia1
 - Set warm temperature
- 5. Reset key
 - Deletes time and day, restarts microcontroller heating times remain unchanged
- Slide Switch
- Switch heater on and off
- Control key c
 - Starting programming, select variables

Getting started

The thermostats are pre-programmed with a single low temperature period per day. Pre-programmed setting are follows:

Work Days are Monday through Friday. Rest Days are Saturday and Sunday.

The thermostat is pre-programmed to monitor the temperature on both work and rest days at the following times:

- . from 0600 h to 2200 h: Warm-temperature period.
- (Set the desired temperature any time with the dial.)
- from 2200 h to 0600 h: Low temperature period
- . Low temperature 15 °C

If you want to use these pre-programmed settings you only need to set the correct time and day of the week (next page) and the thermostat is ready.

Getting Started

Setting the time and day of the week

- Press the Control key c. (The display will flash).
- Set the actual time by pressing the + and keys
- Press c again (A day will flash)
- . Set the day of the week by pressing the + and keys. The day will stop flashing after 3 minutes.

That's it. The device is now running.

To programme the timer to your individual needs, follow the instructions in the section "Programming" The principle is easy. Each time you press the control key c one variable flashes after another and can be changed with the + and - key.

Operation

Constant warm temperature option

If you want to run the heater without the time schedule, disengage the timer by flipping down the right slide switch (figure 2) to constant temperature (the sun icon). Choose the desired temperature with

To reinstate the timer, simply flip the slide switch back up. The thermostat is now operating in the defined time programme.

Turning off the heater

To turn the heater off, flip the left slide switch down. The clock will continue to function. To turn the heater back on, simply flip the slide switch back up.

The LED is lit only when the thermostat requires heat.

GB GB GB Programming Programming Programming Programming The time periods and low temperature level can be altered to your Begin by setting the time and day of the week as shown in the Press c again. Set the starting time for the second low temperature period as The programming for rest days is now complete. section Getting Started. Immediately after setting the time and day before with the + and - keys. The thermostat is now programmed for work Press c a last time. The current time and day of the individual needs. For example: To change the pre-programmed settings (as shown in the of the week, proceed as follows. days. Proceed to change the settings for rest days. week are shown and the thermostat is running. top diagram) to the plans shown in the bottom two diagrams, take the Press the control key c again. Set the starting time for the first warm following steps (both slide switches must be flipped up): Press the control key c (the pre-programmed 15°C low temperature period with the + and - keys. For example, to change from the Note: temperature will flash on the display) pre-programmed 0600 h to 0900 h, keep pressing the + key until 0900 You can stop the programming procedure at any time. Set the desired temperature by pressing the + and -keys. The changes you made to the settings will be assumed flashes. Fig. 3 Pre-programmed settings For example, to set the temperature to 17°C, press the Press c again. Set the starting time for the first low temperature period and any unchanged settings will remain intact. For + key until 17°C, press the + key until 17°C flashes. with the + and - keys. For example to change from the pre-programmed example, if you want to change only the low-Press c again. Set the desired starting time for the 2200 h to 2300 h press the + key until 2300 h flashes. temperature level, simply stop programming after first warm period for work days. For example, to **Press c again.** Set the starting time for the second warm-temperature time completing that step. The display will stop flashing change the pre-programmed 0600 h to the desired with the + and - keys. The thermostat is pre-programmed at 0000 h. For after about 3 minutes and the new low-temperature 0800 h, press the + key until 0800 h flashes. example, keep 0000 h and do not press + or -. setting is valid while the other settings remain Press c again. Set the desired starting time for the **Press c again.** Set the starting time for the second low-temperature time unchanged. The current time and day of the week are 0 2 4 6 8 10 11 12 14 16 18 20 22 24 first low temperature period by pressing the + and - keys. with the + and - keys. The thermostat is pre-programmed at 0000 h. For indicated For example, to change the pre-programmed 2200 h to example, keep 0000 h and do not press + or -. By setting 0000 h a second 1200 h, keep pressing the – key until 1200 h flashes. time you have programmed the thermostat to warm temperatures from Note . Press c again. Set the starting time for the second warm 0900 h to 2300 h on rest days without a second low-temperature period. You can quickly reinstate the pre-programmed period. For example, to change the pre-programmed settings by simultaneously pressing the c. + and -0000 h to 1400 h, keep pressing the + or - key until key. After this you need only reset the correct time and day of the week as shown in section Getting 1400 flashes. Started. Display Indicators **Programming** Technical Data Figures 4 Changing the work and rest day settings Mains voltage 230 V $\sim +/-10\%$, 50 Hz Display indicators The current functioning condition of the thermostat Breaking current 6025 can always be clearly seen on the display. 12 (4) A Breaking current 6020 Work days have been pre-programmed as Monday through Friday and 12 (4) A Differential gap rest days as Saturday and Sunday. 07K On work days A is lit up. Temperature Sensor NTC, 2kΩ 25°C On rest days R is lit up. Sensor cable length To change this: 4 m - Simultaneously press the + and - keys. Position 1...6 Setting range . During the first warm-temperature period Then press the control key c. All the days of the week - room heating 5...30°C the sun icon is lit on the left side of the display are now on the display. "Mo" for Monday is flashing. 10...40° C - under floor heating (b in figure 4) and "A" for work day is lit up. . During the first low-temperature period the Press either the + or - key to change Monday from Ambient temperature rating - 10 .to +40° C moon icon is lit on the left side of the display a work day, "A" to a rest day, "R". Connection cable 1.5 mm², max. (c in figure 4) a: Type of day. $\mathbf{A} = \text{work day and } \mathbf{R} = \text{rest day}$ Press the c key again to go down the list of days. During the second warm-temperature period Actuators for warm water normally closed b: First warm-temperature period When the day is flashing, it can be changed from A heaters the sun icon is lit on the right side of the c: First low-temperature period to R or vice versa with the + or - keys. Energy class IV = 2.0%display (d in figure 4). d: Second warm-temperature period When finished, again press the + and - keys . During the second low-temperature period e: Second low-temperature period simultaneously: the thermostat is now set to your the moon icon is lit on the right side of the f: Days of the week. wishes. If you don't press the keys again, the display (e in figure 4). changes will automatically be assumed after 3 minutes. The current time and day of the week is indicated. Restricting the Temperature Range Power Failure Troubleshooting Warranty You can mechanically restrict the range of temperatures by limiting the After a power failure, power interruption or sensor short circuit the Problem/Solution dial movement. heater will turn off. Heater isn't working Check power supply The display will flash. The time will still be indicated for about 2 Check heater . Carefully unscrew the dial with a screwdriver. (3 in figure 2) days. After the disruption, check the time and reset if necessary as Check sensors With a small pliers, pull out the arresting pin on the device lid. shown in section Getting Started. Check and, if necessary, reset temperature settings

- . Turn the small cog wheel to the desired restriction.
- . Reverse your steps to refasten the dial.

Note

To restrict the temperature range the power source does not need to be turned off.

The programmed settings will remain intact.

Attentio

In case of malfunction mains voltage may be in contact with sensor cable.

No indicators on Display Check power supply

Thermostat switches too soon/too late

Check and, if necessary, reset Work and Rest day settings press RESET key and re-programme the device.