

IN STAT⁺ 3R
Room temperature Controller

GB



The adjusted values (while programming) will be accepted automatically after ~5 sec.

3. How to change the temperature for a short period of time (override)

While in temperature override the pointer indicates both AUTO and MAN (Fig. 2).

In this mode, a constant temperature can be set and the pre-set program is ignored.

Press the < button until the pointer indicates MAN (Fig. 3).
Set the temperature by pressing the +- button

by pressing the > button

Press the < button until the pointer indicates the suitcase icon (Fig. 4)

| | |
|---------------------|---------------------------|
| Set the temperature | by pressing the +- button |
| Select the time | by pressing the < button |
| Set the time | by pressing the +- button |

To exit this mode, press < or >.

When days have been set, the controller will return to AUTO mode at midnight of the last day.

Note: the current day (today) must be included in the setting.
e.g. 1 day is set; the controller returns to AUTO today at midnight.



To select an other program see 8.3

| | |
|-------------------------|---|
| Select the day function | by pressing the > button up to position "Day" |
| Select the day | by pressing the +- button |

| | |
|--------------------------|--------------------------|
| Select the event (1...6) | by pressing the > button |
| Set the time | by pressing the + button |
| Select the temperature | by pressing the > button |
| Set the temperature | by pressing the + button |

The > button must be pressed to accept a setting.

If you wish to change other events or days, repeat the actions described above. To return to the auto mode, press the < button.

Note: The last event of the current day can be extended up to the first event of the following day.

If operating mode "7 days" is chosen (see installer options, option 1), the days can be selected as blocks or individual days (Fig. 5 to 8).

The blocks are selected by repeatedly pressing the > button.

Note: To facilitate programming, blocks of days with the same times/temperatures can be formed before starting.

| User options | Description | Select between | | Default |
|--------------|--|----------------|-----|---------|
| 1 | Change 12 h or 24 h clock | 12 | 24 | 24 |
| 2 | Change the manual set point temperature | 7 | 32 | 20 |
| 3 | Change to another pre-set program | 1 | 3 | 1 |
| 4 | Change the number of program events per day | 2, 4 or 6 | | 6 |
| 5 | Switch on/off automatic daylight savings time/standard time change | ON | OFF | ON |
| 6 | Change temperature display | -5.0 | 5.0 | 0.0 |
| 7 | Restore the built in time temperature programs | ON | OFF | OFF |
| 8 | Switch off the thermostat | ON | OFF | OFF |

II. Installation Guide

Warning!

Switch off mains supply before removing an existing room thermostat or installing this controller.

Caution!

The device may only be opened and installed according to the circuit diagram on the device or these instructions by a qualified electrician. The existing safety regulations must be observed.

Appropriate installation measures must be taken to achieve the requirements of protection class II.

This independently mountable electronic device is de-signed for controlling the temperature in dry and en-closed rooms only under normal conditions. The device confirms to EN 60730, it works according operating principle 1C.

1. Applications:

The electronic thermostat *I N STAT + 3R* can be used for temperature controls together with:

- Actuators of floor heating systems or radiators
- Oil and gas warm water heating
- Circulating pumps
- Heat pumps
- Electric radiators

2. Installation:

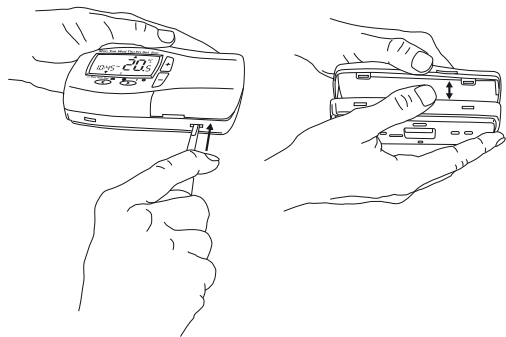
Installation location:

The device should be installed in a location in the room which:

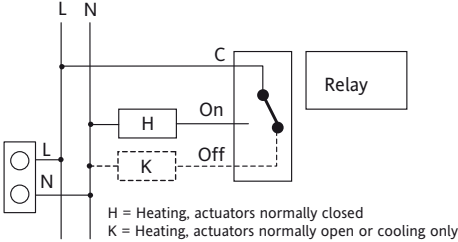
- is easily accessible for operation
- is free of curtains, cabinets, shelves, etc.
- allows for free air circulation
- is not subject to direct sunlight
- is not subject to draught (e.g. when windows/doors are opened)
- is not subject to direct influence from the heating sources
- is not on an outside wall
- is about 1.5 m above the floor

The controller must be installed directly onto the wall or on a flush-mounting socket.

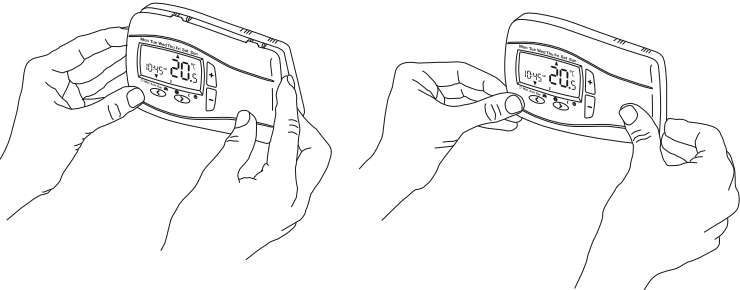
1. Remove the front cover using a flat screwdriver and separate from back plate.



2. Attach the back plate to a flush-mounting socket using suitable wall plugs and screws.
3. Complete the wiring to the heating source according to the wiring diagram inside the product or below.



4. Replace the front cover by pushing it fully onto the back plate.



The controller is now installed and will automatically start to control the room temperature according to the pre-set program 1 (refer to User Guide).

All important functions are set ex-factory. If you wish to change any of the settings, please refer to the options in the User Guide.

According to the heating type, refer to item 3.10 (option 11)

3. Installer options

Attention: The settings should only be carried out by the installer only, as settings may affect the functions and security of the heating system. List of Installer options see Table 2.

To activate the menu, press the < and + buttons simultaneously for 5 seconds
Select an option by pressing the < or > button
Change an option by pressing the +- button

Press < or > to accept each change.

To exit the menu, press the < and + buttons simultaneously for 5 seconds.

If no button is pressed within 2 minutes, the controller will return to the auto mode.

3.1 Kind of program (option 1, table 2)

The operating mode of the controller is set via this function.

7 days (7d):
Different time/temperature settings can be chosen for each day individually.

5/2 days (5:2):
Different time/temperature settings can be chosen for the weekdays (Monday to Friday) and the weekend (Saturday and Sunday) in this mode.

24 hours (24h):
The same time/temperature settings are used for all days of the week in this mode.

3.2 Access protection lock / child lock (option 2, table 2)

When this function is activated, all buttons will be locked.

To switch off the protection lock, enter the installer options and set option 2 to OFF.

3.3 Frost protection (option 3, table 2)

The frost protection of the controller can be activated via this option.

Frost protection will switch on the heating if the room temperature falls to 5°C and will then control the temperature at 7°C.

When in Off mode frost protection will still be active.

3.4 Low and high limit set points (option 4, 5, table 2)

These limits can be used to prevent temperatures from being set too high or too low.

The set point default values are 32°C (high limit) and 7°C (low limit).

3.5 Optimum start (option 6, table 2)

If this function is activated, the controller will automatically calculate the warm up time for the heating system in order to achieve the desired temperature for each event.

This function is a major energy saving factor.

Note: This function is only possible in the AUTO mode.

After commissioning, it takes a couple of days for the controller to gather enough information to correctly calculate this function.

3.6 Heating/cooling (option 7, table 2)

Use this function to select whether the controller is used exclusively for either heating or cooling applications.

HEATING: The relay will switch on when the temperature falls below the set point.

COOLING: The relay will switch on when the temperature rises above the set point.

3.7 Valve protection (option 8, table 2)

If valve protection is selected, the controller's relay will be switched on once a day at 10 o'clock.

This function is designed to prevent the valves and pumps from getting stuck during the summer months.

If this is required, select ON in the installer options.

The operating period can be chosen via option 9.

3.8 Valve protection time (option 9, table 2)

The valve protection time can be set between 1 and 5 minutes (default: 3 minutes).

3.9 Emergency heating in case of sensor failures (option 10, table 2)

The following message is shown in case of sensor failures:

E1 for an internal sensor failure

A sensor failure can have the following effects:

1. If this function is activated, the heating is switched on for 30% of the time (this prevents the room from being too cold or overheating)
2. When this function is not activated, the heating is switched off

3.10 Application type (option 11, table 2)

This function is used to select the application type of the controller.

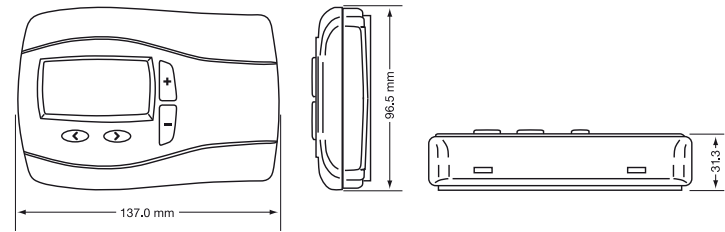
0 = Radiator control or Electric Heat (= default)

1 = Water Floor heating

4. Technical data

| | | |
|---|---|----------------|
| Order Type | <i>IN STAT + 3R</i> | |
| Supply voltage | 230 V AC 50 HZ (195 ... 253 V) | |
| Temperature setting range | 7°C to 32°C | |
| Temperature resolution | 0,1°C | |
| Switching current | 10mA 16(2)A AC 230 V~ | |
| Output | Relay change over contact, voltage free | |
| Output signal | Pulse width modulation (PWM) | |
| Timing resolution | 1 minute | |
| Accuracy of clock | < 4 Min / year | |
| Ambient temperature | Operating | 0°C bis 40°C |
| | Storage | –20°C bis 85°C |
| Ambient humidity | Operating | 25% to 85% |
| | (without condensation) | |
| | Storage | 15% to 95% |
| Rated impulse voltage | 4 kV | |
| Ball pressure test temperature | 75 ± 2 °C | |
| Voltage and Current for the for purposes of interference measurements | 230V, 0,1A | |
| Pollution degree | 2 | |
| Degree of protection | IP 30 | |
| Software class | A | |
| Safety class | II (see Caution!) | |
| Weight | ~ 200 g | |
| Energy class | IV = 2 % | |
| (acc. EU 811/2013, 812/2013, 813/2013, 814/2013) | | |

Dimensions



5. Troubleshooting:

1. It is getting warm too late

- a. Are clock and program events set correctly?
- b. Is the Optimum Start switched on (see 3.5)?
- c. Did the thermostat have enough time (some days) to determine the room data?

2. The thermostat does not accept any changes

Is the access protection lock switched on (see 3.2)?

3. E1 is shown in the display:

Sensor failure (see 3.9)

6. Recycling

Batteries, rechargeable or not, should not to be disposed of into ordinary household waste. Instead, they must be recycled properly to protect the environment and cut down the waste of precious resources.

Your local waste management authority can supply details concerning the proper disposal of batteries.

This product should not be disposed of with household waste. Please recycle the products where facilities for electronic waste exist. Check with your local authorities for recycling advice.

Table 2 Installer Options

| Installer-Options | Descriptions | Select between | | | Default |
|-------------------|-------------------------------------|----------------|-------------------------|----------------|----------------|
| 1 | Kind of program | 5:2 days (5:2) | 7 days (7d) | 24 hours (24h) | 5:2 days (5:2) |
| 2 | Access protection lock (child lock) | ON | OFF | | OFF |
| 3 | Frost protection | ON | OFF | | ON |
| 4 | Low limit set point °C | 7 | High limit | | 7 |
| 5 | High limit set point °C | Low limit | 32 | | 32 |
| 6 | Optimum start | ON | OFF | | ON |
| 7 | Heating/Cooling | Heat | Cool | | Heat |
| 8 | Valve protection | ON | OFF | | ON |
| 9 | Valve protection time | 1 ... 5 | | | 3 |
| 10 | Emergency heating (sensor failure) | ON | OFF | | OFF |
| 11 | Application type | Radiator (0) | Water Floor heating (1) | | 0 |