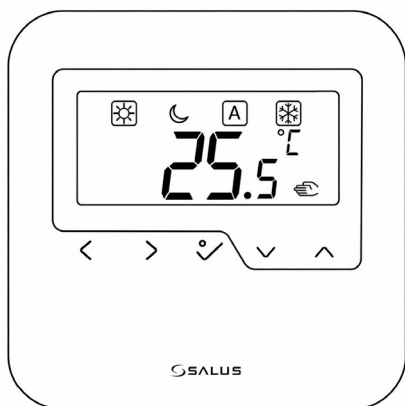




HTRS230  
**WIRED NON-PROGRAMMABLE  
THERMOSTAT**  
QUICK GUIDE



**Manufacturer:** SALUS Controls plc  
Units 8-10, Northfield Business Park, Forge Way,  
Parkgate Rotherham, S60 1SD, United Kingdom

**Importer:** Salus Controls European Distribution sp.z o.o.  
ul. Szamocka 8, piętro 6., 01 748 Warszawa, Poland

UK: tech@salus-tech.com  
DE / NL: info@salus-controls.de  
PL: poland@saluscontrols.com  
FR: technicalsupport@saluscontrols.fr  
RO: tehnic@saluscontrols.ro  
DK: Support@salus-controls.dk



[www.saluscontrols.com](http://www.saluscontrols.com)

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## Introduction

HTRS230 is a stylish and accurate 230V digital display room thermostat. This attractive, modern thermostat has been specifically designed to be used for underfloor heating applications. With silent switching, Triac technology, pulse width modulation (PWM) and a large, easy to read digital display it is the perfect choice for a digital display, underfloor heating control solution.

## Product Compliance

The product complies with the following EU directives: GPSR (EU) 2023/988, EMC 2014/30/EU, LVD 2014/35/EU, RoHS (EU) 2017/2102 and (EU) 2015/863, REACH (EC) No 1907/2006 (SVHC). The product is non-radio and not subject to RED 2014/53/EU. Full information is available on the website: [www.saluslegal.com](http://www.saluslegal.com)

## Safety Information

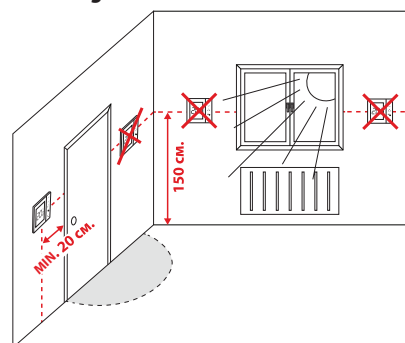
Use in accordance to national and EU regulations. Use the device as intended, keeping it in dry condition. Product for indoor use only. Installation must be carried out by a qualified person in accordance to national and EU regulations.

## Installation

Installation must be carried out by a qualified person with appropriate electrical qualifications, in accordance with standards and regulations applicable in the given country and within the EU. The manufacturer is not responsible for actions inconsistent with the instructions.

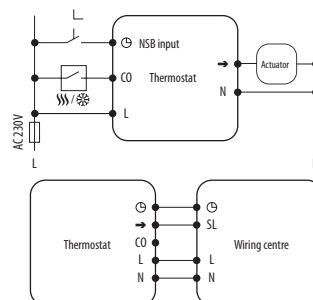
**Note:** For the entire installation, additional protection requirements may apply, compliance with which is the responsibility of the installer.

## Wall mounting



## Wiring diagram

**Note:** The thermostat can be connected to the following Salus wiring centre models: CB500, KLO8NSB 230V, KLO4NSB 230V, or directly to an actuator.



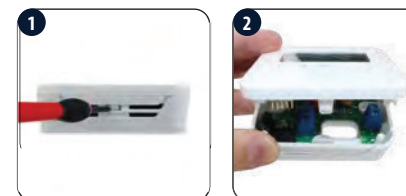
## Terminal description

| Terminal | Description                                        |
|----------|----------------------------------------------------|
| L, N     | Power supply (230V AC)                             |
| NSB      | Night setback reduction (230V AC input)            |
| SL       | Switch live (230V AC output signal)                |
| CO       | Changeover contact heating/cooling (230V AC input) |

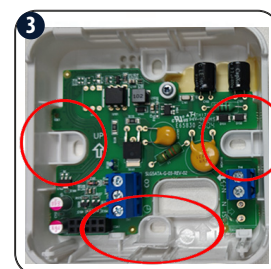
## Button functions

| Button | Function                                                           |
|--------|--------------------------------------------------------------------|
| ↑ / ↓  | Increases/decreases the set temperature, values                    |
| ← / →  | Selects the operating mode model, switching between values         |
| ✓      | Short press - confirm selection<br>Hold down - enter/exit the menu |

## Installation



Make sure that the thermostat is not connected to 230V AC. Then open the front cover using a screwdriver, as shown in the picture above.

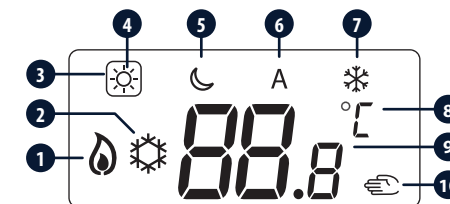


Connect the thermostat according to the diagram in the section "Wiring diagram". Then mount the controller using the mounting holes for screws.



Place the front part of the thermostat onto its rear part. The thermostat is now ready for operation. Using the buttons, you can set the desired temperature.

## Icons description

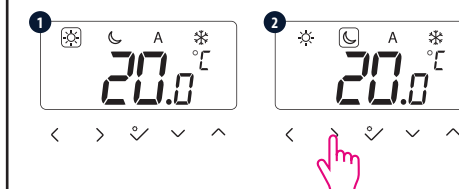


1. Heating
2. Cooling
3. Active operating mode
4. Comfort mode
5. Economy mode
6. Automatic mode
7. Frost protection mode
8. Temperature unit
9. Current / set temperature
10. Manual mode / temperature override

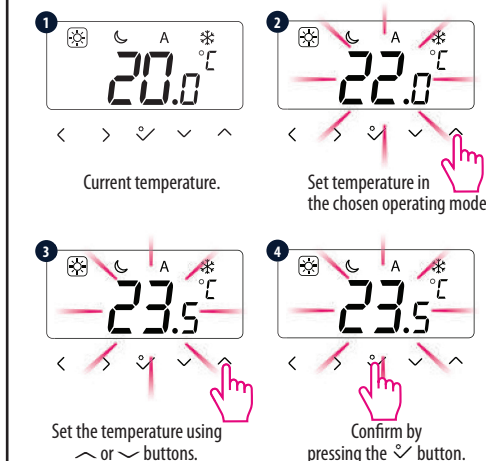
## Manual mode - temperature settings

There are 3 temperature levels available. In manual mode, only one temperature level is used around the clock. The ☐ icon indicates which mode is currently active. A different temperature can be set for each of the three levels.

- ☐ - Comfort mode
- ☐ - Economy mode
- ☐ - Frost protection mode. Usually used during longer periods of absence or during holidays (available only in heating mode).



## Setting the temperature



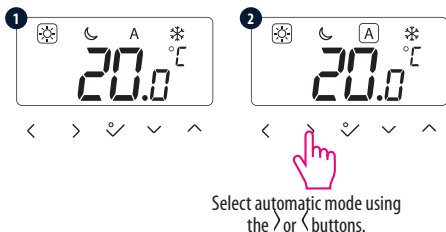
## Night Setback (NSB) function

The NSB (Night Setback) function allows you to automatically lower the set temperature on HTRS230 thermostats via HTRP230 thermostats connected to a control unit (or another unit). The temperature is changed between the comfort temperature and the economy temperature .

To activate automatic mode, select the icon.

The display shows the active temperature mode alongside the icon: or .

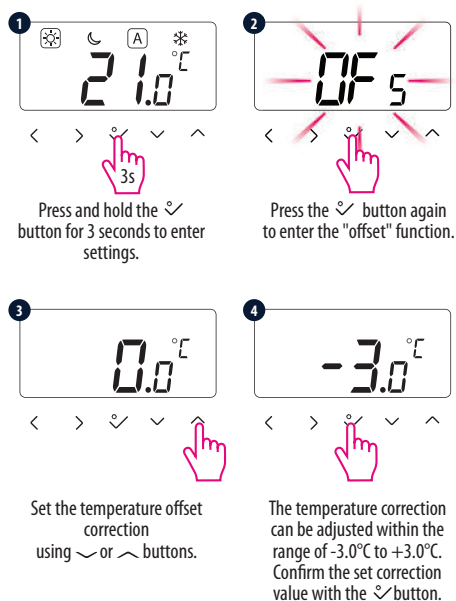
Proper wiring is required for the NSB function to work. Wiring diagrams are provided on the previous page.



## Temperature display calibration "offset" function

The controller allows correction of the displayed temperature by  $\pm 3.0^{\circ}\text{C}$ . Follow the steps below:

Press any button to illuminate the screen, then proceed as follows:



**Note:** Temperature display calibration can also be set using service parameter d02.

## Heating/Cooling mode

**Manual change:** The modes are indicated by the symbols .

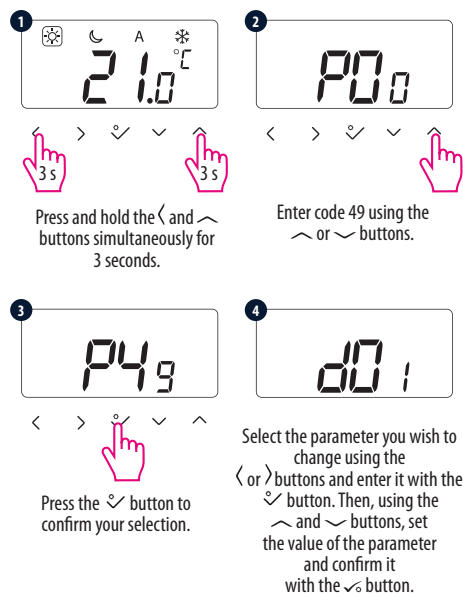
Press and hold the button to enter the settings menu, then use the button to select the heating/cooling setting. Confirm the change with the button. Then use the or buttons to set heating or cooling mode and confirm the change with the button.

**Automatic change (via CO contact):** The heating/cooling mode can be changed automatically by using the CO contact in the controller. If 230V is applied to the CO contact, the controller will automatically switch to cooling mode. To use this function, service parameter d18 must be set to "1".

**Cooling lock:** By setting service parameter D19 to "1", cooling can be locked for a specific room. During cooling lock, no message is displayed on the screen.

## Installer mode

Press any button to illuminate the screen, then proceed as follows:



## Thermostat functions

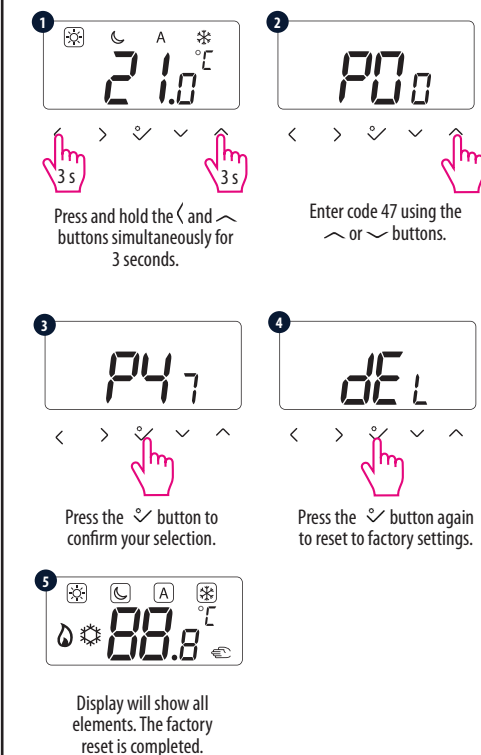
| dx  | Function                                        | Value                                             | Description                                                                | Default value        |
|-----|-------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------|----------------------|
| d01 | Temperature control method                      | 0                                                 | PWM algorithm                                                              | 0                    |
|     |                                                 | 1                                                 | Hysteresis $\pm 0.25^{\circ}\text{C}$                                      |                      |
|     |                                                 | 2                                                 | Hysteresis $\pm 0.5^{\circ}\text{C}$                                       |                      |
| d02 | Displayed temperature correction                | from $-3^{\circ}\text{C}$ to $+3^{\circ}\text{C}$ | Incorrect temperature, (it can be corrected by $\pm 3.0^{\circ}\text{C}$ ) | $0^{\circ}\text{C}$  |
| d05 | Cooling control method                          | 1                                                 | Hysteresis $0.5^{\circ}\text{C}$ ( $\pm 0.25^{\circ}\text{C}$ )            | 2                    |
|     |                                                 | 2                                                 | Hysteresis $1^{\circ}\text{C}$ ( $\pm 0.5^{\circ}\text{C}$ )               |                      |
| d07 | Valve protection function                       | 0                                                 | Disabled                                                                   | 1                    |
|     |                                                 | 1                                                 | Enabled                                                                    |                      |
| d08 | Anti-freeze temperature                         | $5^{\circ}\text{C}$ - $17^{\circ}\text{C}$        | Temperature protection against freezing (used e.g. during holiday mode)    | $5^{\circ}\text{C}$  |
| d12 | Heating temperature limit                       | $5^{\circ}\text{C}$ - $35^{\circ}\text{C}$        | Maximum heating temperature that can be set                                | $35^{\circ}\text{C}$ |
| d13 | Cooling temperature limit                       | $5^{\circ}\text{C}$ - $40^{\circ}\text{C}$        | Minimum cooling temperature that can be set                                | $5^{\circ}\text{C}$  |
| d18 | Heating/cooling mode change                     | 0                                                 | Manual using buttons                                                       | 0                    |
|     |                                                 | 1                                                 | Automatic using CO contact                                                 |                      |
| d19 | Cooling change lock                             | 0                                                 | Lock disabled                                                              | 0                    |
|     |                                                 | 1                                                 | Lock active                                                                |                      |
| d20 | Number of actuators connected to the controller | 0 - 5                                             | Number of actuators (0-5) connected directly to the controller             | 0                    |

## Factory reset

If you have made a mistake, wish to change the controller parameters or return to its factory settings, follow the steps below.

**Note:** This action will permanently delete your current settings.

Press any button to illuminate the screen, then follow these steps:



## Technical specifications

| Model                              | HTRS230                                                 |
|------------------------------------|---------------------------------------------------------|
| <b>Voltage</b>                     | 230 VAC, $\pm 10\%$ , 50/60 Hz                          |
| <b>Operating performance</b>       | 230 V: 1.8 W                                            |
| <b>Temperature setback</b>         | Adjustable                                              |
| <b>Temperature range</b>           | $5^{\circ}\text{C}$ - $35^{\circ}\text{C}$              |
| <b>Span</b>                        | $\pm 0.5^{\circ}\text{C}$ OR $\pm 0.25^{\circ}\text{C}$ |
| <b>Degree of protection</b>        | IP 30                                                   |
| <b>CE conformity</b>               | Class II (EN60730)                                      |
| <b>Housing material</b>            | PC, V2                                                  |
| <b>Colour</b>                      | RAL 9010 pure white                                     |
| <b>Connection</b>                  | Screw terminal                                          |
| <b>Weight</b>                      | 125 g net / 170 g gross                                 |
| <b>PWM (pulse wide modulation)</b> | Yes                                                     |
| <b>Profile modules</b>             | 3 (Sun, Moon, Automatic)                                |
| <b>Dimensions</b>                  | 85mm x 85mm x 25mm                                      |