



Electronic thermostat

IB – Tron 3 100HT

to operate two and three-point devices

PRODUCT IS 

MARKED AND HAS BEEN PRODUCED IN ACCORDANCE WITH ISO 9001 STANDARD

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IB-TRON 3100HT

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BASIC INFORMATION

IB-Tron 3100HT thermostat is independent microprocessor thermostat with large LCD display. The thermostat is designed to control work of valves, air dampers, electric air heaters, pumps, fans and other two- and three-point controlled appliances.

IB-Tron 3100HT thermostat allows to control process of heating and cooling. It allows to maintain the desired temperature in building/room according to fixed weekly work scheduler.

IB - Tron 3100HT thermostat allows to save energy costs. Thermostat contributes to protect environment. IB-Tron 3100HT thermostats can be commonly used in: hotels, offices, supermarkets, factories, hospitals, houses and other buildings.

FEATURES

- ☞ Large, blue backlit LCD display which shows current temperature, a day of the week and other information.
- ☞ Esthetic and modern design.
- ☞ Blue backlight (backlight is activated by pressing any button and deactivated after set period of inactivity).
- ☞ Easy, intuitive operating and programming.
- ☞ Power supply from network 230V with battery memory backup.
- ☞ Comprehensive programming process in a weekly cycle with an accuracy of 1 minute and with possibility of programming four time periods each day.
- ☞ Manual or automatic work mode.
- ☞ Support of two temperature sensor:
 - » **RT** - buit-in room temperature sensor.
 - » **FT** - additional external temperature

FEATURES

- ☞ sensor e.g. floor area, hot water tank.
- ☞ Three modes of thermostat operating:
 - » **A** - Device control is based only on built-in temperature sensor (**RT**)
 - » **F** - Device control is based only on connected external sensor(**FT**).
 - » **AF** - This mode is specially recommended to floor heating. Device control is based on built-in sensor (**RT**) and connected external sensor (**FT**). Thermostat is trying to keep desired air temperature (**RT**) and simultaneously prevents the floor reaching higher temperature than limit of FT temperature.
- ☞ Displayed temperature with 0,1 °C accuracy
- ☞ The possibility of calibrate device (external sensors on long wires, independent calibration of FT and RT).
- ☞ Adjustable hysteresis.
- ☞ **FROST PROTECTION** function - protection of installation against freezing.
- ☞ Large load - to 2 kW for each output - allows to direct connection most of electrical appliances without the use of contactor.
- ☞ Wide range of temperature settings.
- ☞ **GUARD** function - protection devices from damage.
- ☞ **TEST** function - Forced turning on and turning off device.

SCOPE OF DELIVERY

- ☞ 1x Thermostat (the main panel)
- ☞ 1x Power module
- ☞ 1x Built-in temperature sensor
- ☞ 1x Operating manual

TECHNICAL DATA

- ☞ Energy consumption: < 2 W
- ☞ Storage temperature: -5 ÷ 50 °C
- ☞ Displayed temperature: -20 ÷ 140 °C every 0,1 °C
- ☞ Setting range: -15 ÷ 100 °C every 0,5 °C
- ☞ Limit FT in mode AF: 20 ÷ 90 °C
- ☞ Accuracy: 1 °C
- ☞ Hysteresis: 0,1 ÷ 0,5 °C every 1°C
1 ÷ 5 °C every 1°C
- ☞ Maximum load: 2kW
- ☞ Power supply: 230V AC
- ☞ Casing: ABS
- ☞ Display: LCD (3,2")
- ☞ Control: Electronic
- ☞ Protection rating: IP30
- ☞ Memory of settings: 36 months
- ☞ Dimensions [mm]:
(height x width x depth):
 - » Control panel: 86 x 86 x 15 mm
 - » Power module: 62 x 45 x 27mm

OPERATING PRINCIPLE

Thermostat measures the temperature. If this temperature is below the current desired value, the thermostat wants to run heating device to raise temperature to the desired level.

Thermostat may be used in refrigeration by connection cooling device to the contacts **OFF** of thermostat instead to the contacts **ON**. Remember, if thermostat is turned off, cooling device will be turned on.

TEMPERATURE SENSORS

- ⚠ The sensors can be extended to any length but we should remember that extension above 10m may cause a deviation of measurement with each meter and falsifying results. Therefore, for distance above 10m device has to be calibrated. Sensors have to be extend of wires: 2x 0,75 mm².
- ☞ The thermostat is compatible with NTC 10kΩ sensors having the following characteristics:

Temperature [°C]	Resistance [Ω]
-40	346 405
-30	181 628
-20	99 084
-10	56 140
0	32 960
10	20 000
20	12 510
25	10 000
30	8 047
40	5 310
50	3 588
60	2 476
70	1 743
80	1 249
90	911
100	647

GENERAL CONSIDERATIONS

⚠ During installation of thermostat, the supply of electricity should be turned off. It's recommended to entrust the installation a specialized institution.

⚠ The thermostat gives 230V voltage on the output (support of pump, valve, air damper, heating mat etc.). It's possible to modify the output - during switching the output terminals can be potential-free shorted (cooperation with a typical gas stove).

EXAMPLE OF APPLICATIONS

👉 Room thermostat - controlling of temperature in room or entire building (using built-in temperature sensor).

👉 Tank thermostat - controlling of temperature in the hot water tank (external temperature sensor).

👉 Room thermostat for floor heating - controlling of floor temperature by **RT** sensor, with a protection against overheating the floor (**FT** sensor).

👉 Pump controller - switching on the pump after exceeding desired temperature by the boiler (cooling, external temperature sensor).

STRUCTURE

IB-Tron 3100HT thermostat consists of two parts: main panel with LCD display, keyboard and power module, with input terminals and output terminals.

Control panel is adapted to surface-mounting or to mounting on a standard wiring box (spacing of holes- about 60mm). Power module is predicted to be placed inside this box.

Both of modules are connected with each other by five wire cable, with a length of several centimeters.

POWER MODULE (WITH OUTPUT 230V)



- 👉 **1, 2** - external **FT** sensor.
- 👉 **3, 4** - power of thermostat 230V AC (**3** - wire phase, **4** - wire neutral)
- 👉 **5** - output **OFF** - on this output will appear phase (short-circuit with terminal **3**), if:
 - » heating process isn't implemented;
 - » thermostat is turned off;
 - » limit of **FT** sensor is active;
- 👉 **6** - output **ON** - on this output will appear phase, if heating process is implemented.

POWER MODULE (WITH NORMALLY-OPEN CONTACT)



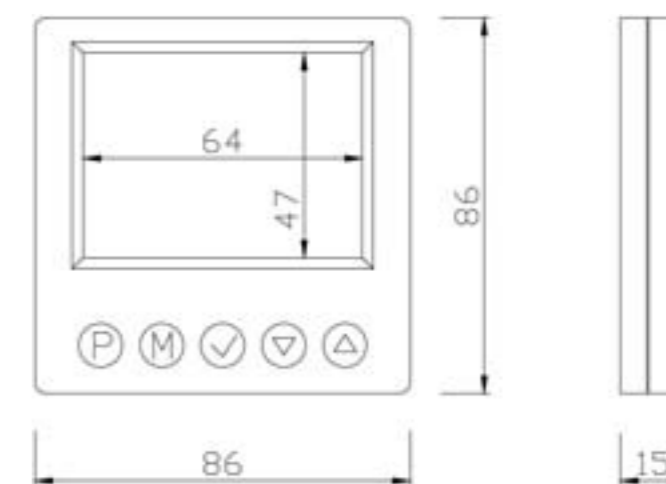
Connection:

- » **1, 2** - external **FT** sensor
- » **3, 4** - power of thermostat 230V AC (**3** - wire phase, **4** - wire neutral)
- » **5, 6** - these two terminals are shorted when heating process is implemented.

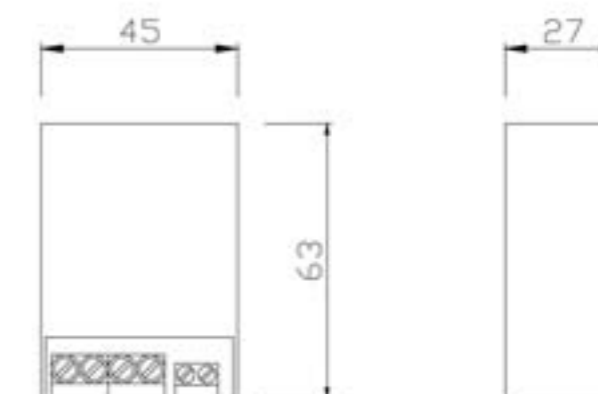
⚠ **ATTENTION!** If you wish to get module with normally-open contact, please indicate about this in the order. The module with output 230V is default supplied.

DIMENSIONS

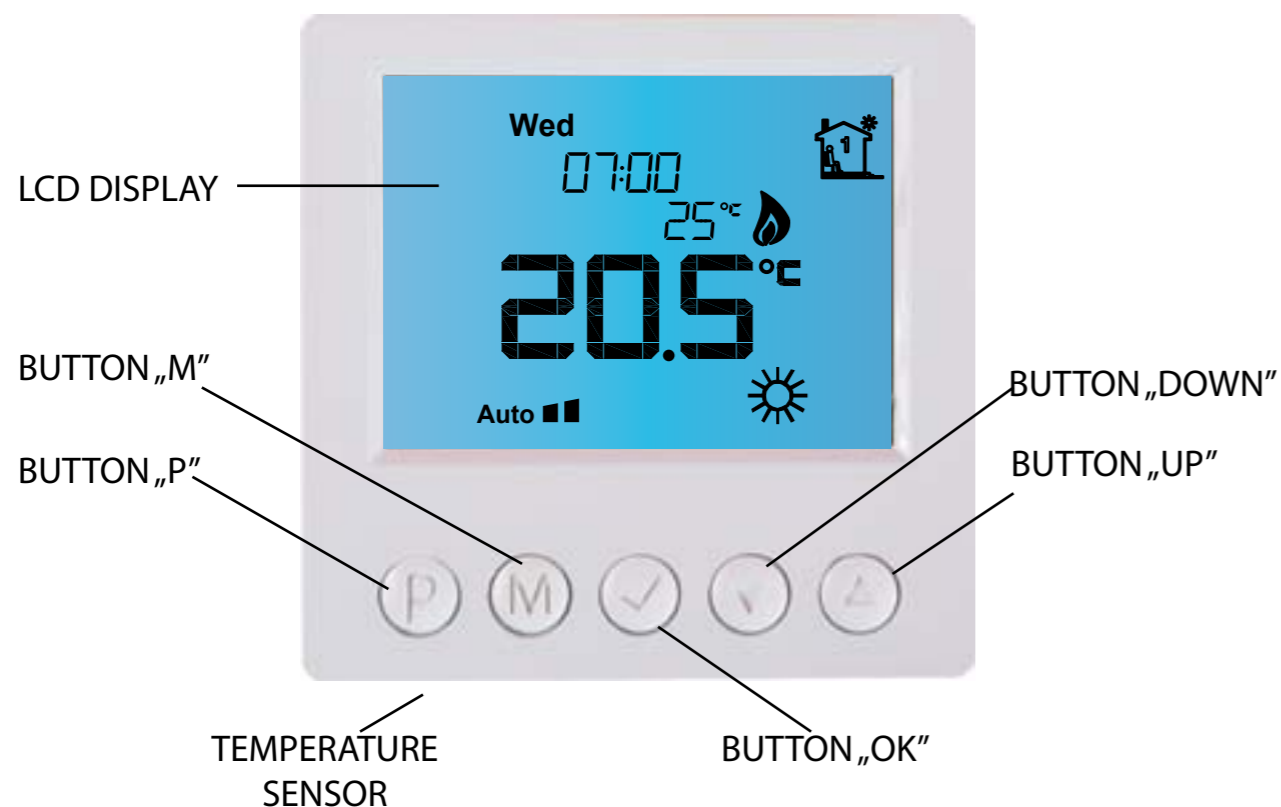
Dimensions of main panel (mm):



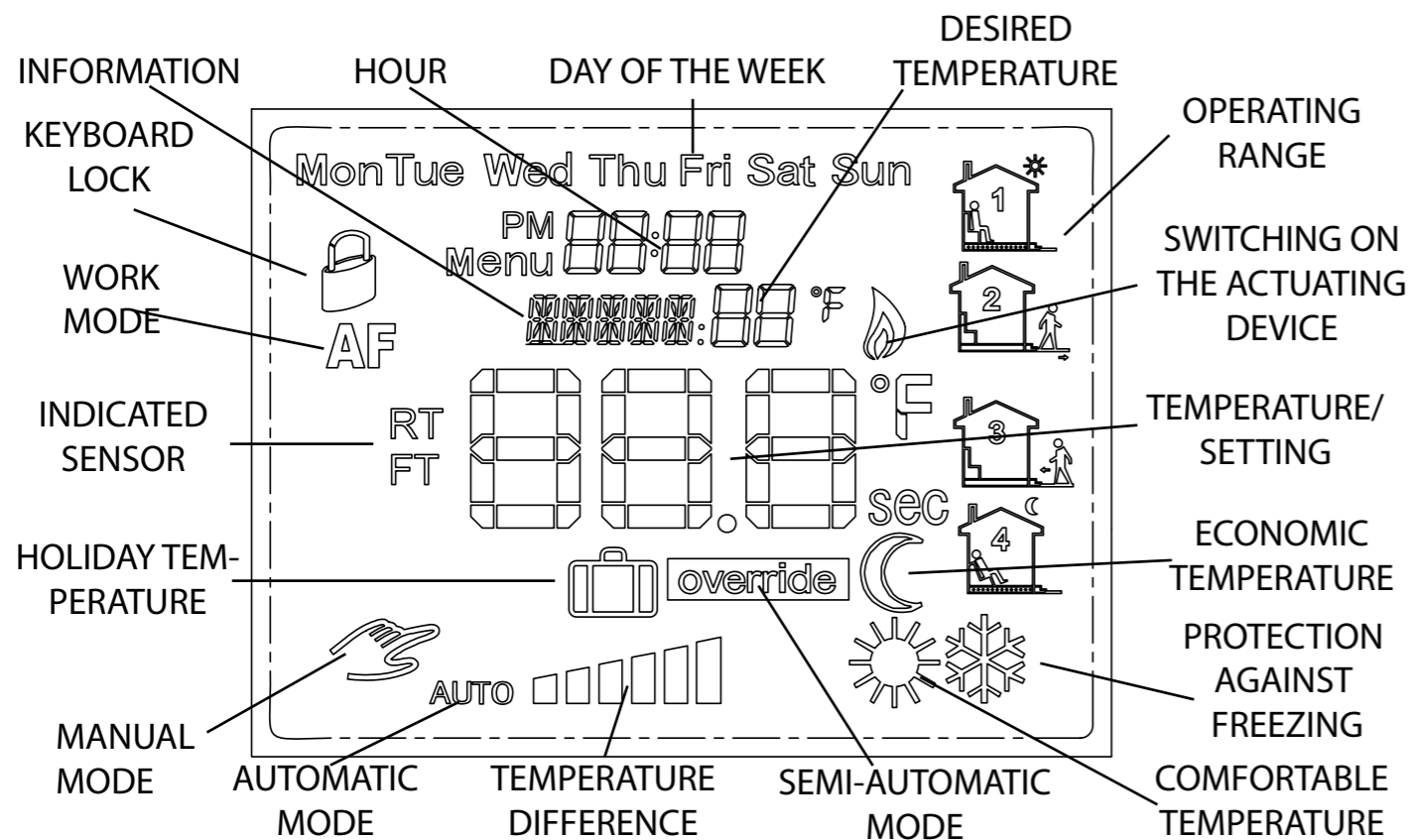
Dimensions of power module (mm):



CONTROL PANEL OF THERMOSTAT

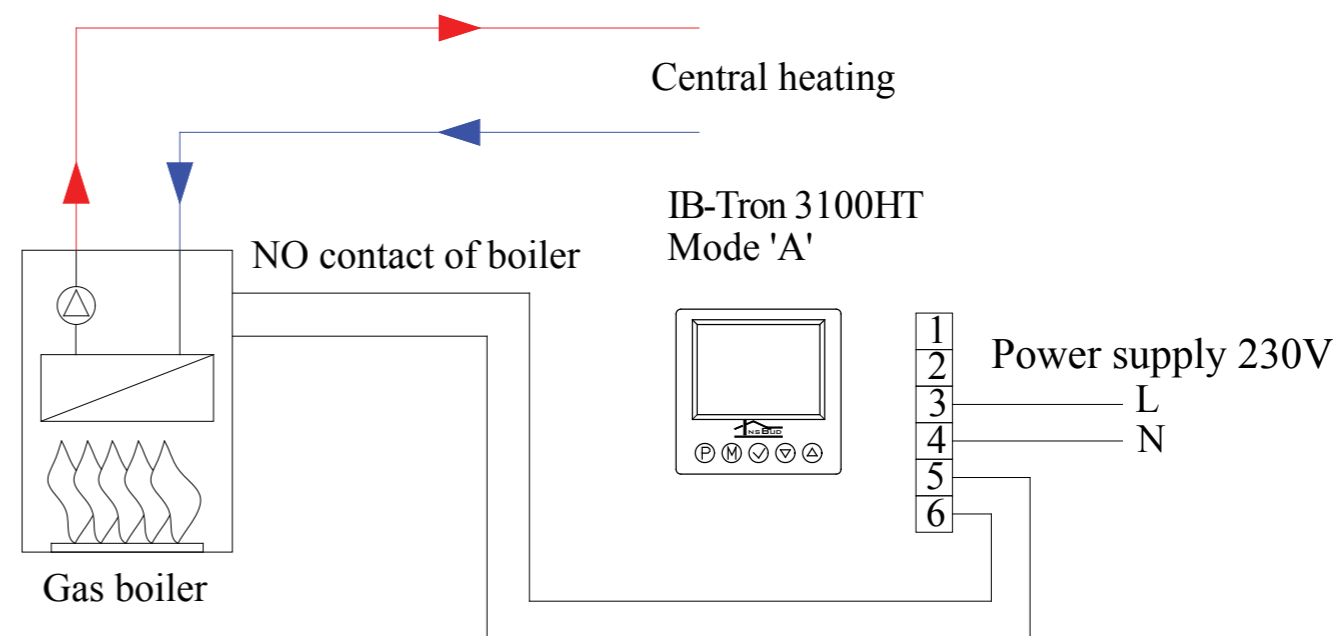


LCD DISPLAY



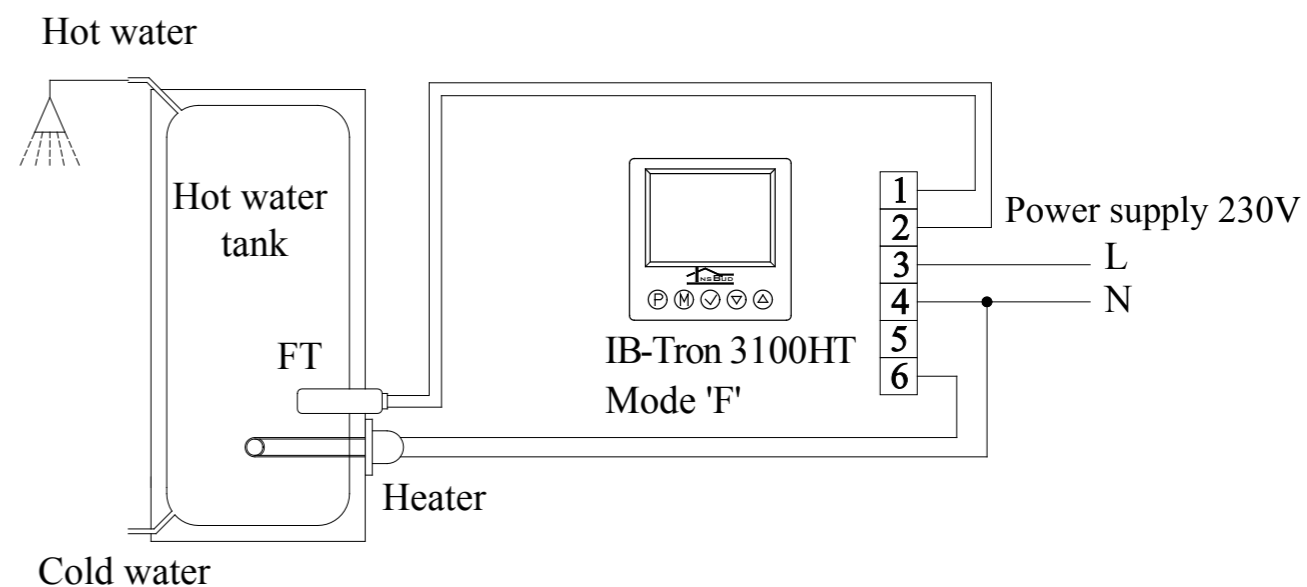
EXAMPLE OF APPLICATIONS

IN WORK MODE A AND WITH NO CONTACT



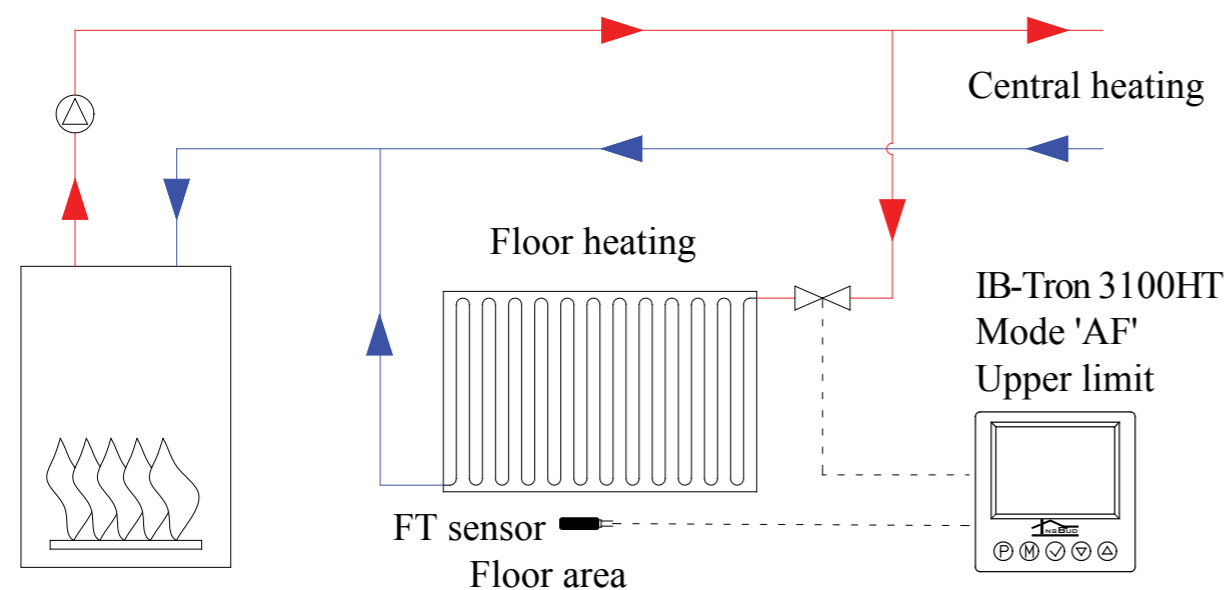
Thermostat measures temperature in the representative room by built-in **RT** sensor. If this temperature is lower than the desired temperature on the thermostat, terminals number **5** and **6** are shorted, which is a signal of switching gas boiler.

IN WORK MODE F AND WITH VOLTAGE OUTPUT

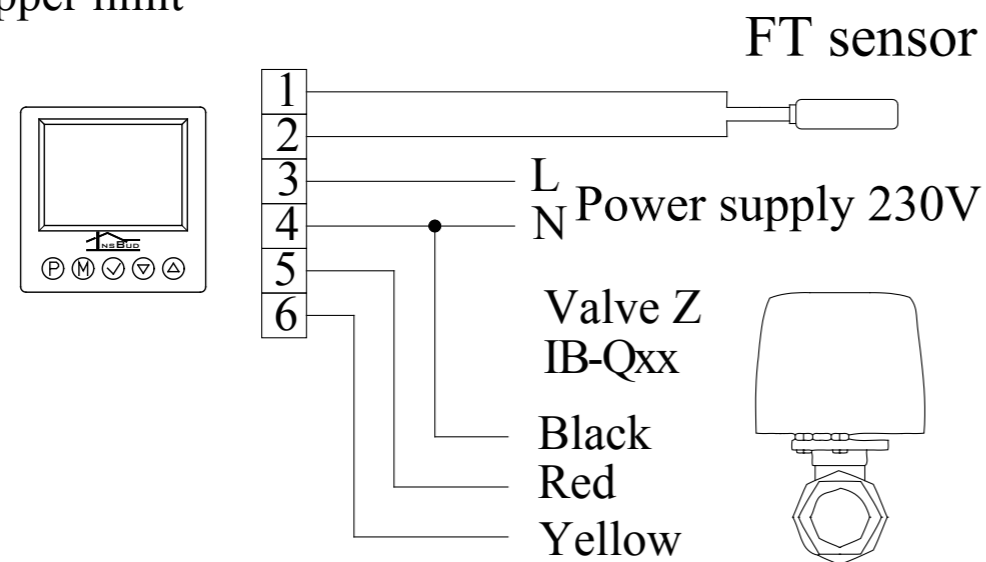


Thermostat measures temperature in the hot water tank by **FT** sensor. If this temperature is lower than the desired temperature on the thermostat, the terminal number **6** is shorted which allows to switching on an electric heater of tank.

IN WORK MODE AF AND LIMIT OF FT TEMPERATURE



IB-Tron 3100HT
Mode 'AF'
Upper limit



Thermostat measures temperature in the representative room by built-in **RT** sensor. It controls floor heating by opening and closing the valve with actuator. If **RT** temperature is lower than the desired temperature on the thermostat, the phase is given on terminal number **6** (opening the valve). When temperature in the room reaches the desired value, the valve is closing (phase is given on terminal number **5**).

Additional, during opening the valve, thermostat controls temperature of floor area (FT sensor). If this temperature exceeds the desired limit (e.g. 30 °C), the valve is unconditionally closing - even if temperature in the room (RT sensor) hasn't reached the desired value yet. The valve will open again after cooling down floor to lower temperature than limit's temperature.

TURNING ON THERMOSTAT

P To turn on or turn off thermostat, you have to press button **,P'**.

When the thermostat is turned off, on display is shown only current temperature and symbol of sensor (**RT** and **FT**). Temperature isn't regulated, relay is set in **OFF** position..

CONFIGURATIONAL MENU

In configurational menu are set parameters of thermostat work. To enter to the configurational menu, please:

P If thermostat is turned on, please turn it off by pressing button **,P'**.

M When the thermostat is turned off, press and hold for about 3 seconds button **,M'**.

Thermostat is in configurational mode. Displayed are: inscription **,Menu'**, setting number (from 01 to 17), code shortcut of setting (e.g. **,LANG'**), value and unit of setting.

▽ To change value of indicated setting, press button **,DOWN'** or **,UP'**. New value of setting is immediately approved.



M To move to the next setting, press button **,M'**. After reaching the last (17) setting, pressing the button **,M'** again causes return to the first setting.

Thermostat comes out of the configurational menu after a set time of inactivity or after pressing the buttons **,P'**.

LANGUAGE

Menu can be in English or Polish language. To select language, please:

M Enter to the configurational menu. Press button **,M'** until you see on display setting number 01, marked as **,LANG'**.



Select **PL** to set Polish language or **En** to set English language. Exit the configurational menu or move to other setting.

WORK MODE

Thermostat can work in three modes:

A - Device control is based only on built-in temperature sensor (**RT**).

F - Device control is based only on connected external sensor (**FT**).

AF - Device control is based on built-in sensor (**RT**) and connected additional external sensor (**FT**). Thermostat is trying to keep desired temperature (**RT**) but when **FT** temperature exceeds the set limit, heating device is disabled.

To set work mode of thermostat, please:

M Enter to the configurational menu. Press button **,M'** until you see on display setting number 02, marked as **,TRYb'**.






Select work mode. Exit the configurational menu or move to other setting.

HYSTERESIS

Hysteresis means a difference (in °C or °F) between threshold of switching on and switching off the actuating device. For example: If set temperature is 20°C and hysteresis is set on 0,5°C, the actuating (heating) device will be switched on when the temperature falls below 19,5°C and device will be switched off when the temperature increases above 20,5°C. Next switching on of actuating device will be again after temperature decrease below 19,5°C.

Higher value of hysteresis reduces number of cycles switch on/switch off of actuating device (saving device), but it causes greater temperature fluctuations.

To change value of hysteresis, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 03, marked as **,HISTE'**.
-  Set desired value. Hysteresis may be set from the range 0.1÷5°C. Exit the configurational menu or move to other setting.
- 




CALIBRATION

After proper connection the thermostat is ready to work. The thermostat is factory calibrated to work with standard sensor. However, with long wires, displayed temperature may be different from real temperature.




In this case you have to calibrate the device by yourself.

CALIBRATION

To calibrate **RT** sensor, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 04, marked as **,KALib'** and indication **,RT'**.
-  Set value indicating, how many degrees we have to change current indication of temperature to get correct measurement. Value may be set from the range -5÷5°C, with step 1°C. Exit the configurational menu or move to other setting.
- 

To calibrate **FT** sensor, please:




-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 05, marked as **,KALib'** and indication **,FT'**.
-  Set value indicating, how many degrees we have to change current indication of temperature to get correct measurement. Value may be set from the range -5÷5°C, with step 1°C. Exit the configurational menu or move to other setting.
- 

TIME OF INACTIVITY

It is the time, counted from the last press of any button, after which the thermostat comes out from the settings mode of parameters to default mode. Higher value gives the user more time to enter settings.

TIME OF INACTIVITY




To set time of inactivity, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 06, marked as **,ZWLOK'**.
-  Set desired value. Value may be from the range 5÷30s with step 5s. Exit the configurational menu or move to other setting.
- 

DISPLAYING TEMPERATURE IN MODE AF




Gdy termostat pracuje w trybie **AF** (pomiar dwóch temperatur), użytkownik może zdecydować, która temperatura ma być wyświetlana na ekranie (**RT**, **FT** lub obydwie na przemian).

To set how temperatures should be displayed please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 07, marked as **,TR-AF'**.
-  Select desired mode of values:
 - A** - displayed is only temperature of sensor **RT**;
 - F** - displayed is only temperature of sensor **FT**;
 - A-F** - both of temperatures are displayed alternately;
-  Exit the configurational menu or move to other setting.

FT TEMPERATURE LIMIT IN AF MODE




To set limit of **FT** temperature in mode **AF** (when the limit is exceeded, heating is disabled), please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 08, marked as **,LIMIT'**.
-  Set value of limit. Exit the configurational menu or move to other setting.
- 




TIME OF BACKLIGHT

This is a time, after which is fading of LCD backlight, counted from the last press of a button.

The following settings are available:




-  **OFF** - backlight always turned off;
-  **ON** - backlight always turned on;
-  value from the range 10 ÷ 60 with step 10 - time of backlight is in seconds..

To set time of backlight, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 09, marked as **,POdSW'**.
-  Set desired value. Exit the configurational menu or move to other setting.
- 




TEMPERATURE UNITS

User has ability to choose if the temperature must be in °C or °F. To change temperature format, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 10, marked as **,JEdNO'**.
-  Select temperature unit. Exit the configurational menu or move to other setting.
- 

TIME FORMAT

User has ability to choose if the time must be displayed in 12-hour format or 24-hour. To change time format, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 11, marked as **,ZEgAR'**.
-  Select format 12-hour or 24-hour. Exit the configurational menu or move to other setting.
- 

FROST PROTECTION FUNCTION




FROST PROTECTION function protects installation against freezing.



When measured temperature falls below 5°C, actuating device is activated.

FROST PROTECTION FUNCTION

When **FROST PROTECTION** function is activated, on display is shown snowflake symbol (when thermostat is turned on). To turn on **FROST PROTECTION** function, please:




-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 12, marked as **,FP'**.
-  Select value **,On'** (function is turned on) or value **,OFF'** (function is turned off). Exit the configurational menu or move to other setting.
- 

NUMBER OF TEMPERATURE SETTINGS

Thermostat, in automatic mode, has the ability to program four different time segments during the day, each of them with assigned temperature setting. There are two ways of selection the temperature settings:

- » Each segment has independent temperature setting (there are **four different** temperature settings)
- » There are two **different** temperature settings: comfortable setting (for segments 1 and 3) and economic setting (for segments 2 and 4);

To set number of independent values of temperature settings, please:




-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 13, marked as **,SC'**.
-  Select number of different temperature settings: **2** or **4**. Exit the configurational menu or move to other setting.
- 

RANGE OF SETTINGS

User can choose range of temperature setting from among three settings:

- » **1** - range 5 ÷ 35 °C
- » **2** - range 5 ÷ 90 °C
- » **3** - 2 - range 5 ÷ 90 °C




Range defines a minimum and maximum temperature, which the user can set in the thermostat. We can't set lower temperature than minimum temperature and we can't set higher temperature than maximum temperature for the range. To select range of temperature settings, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 14, marked as **,ZAKRE'**.
-  Select desired range of settings: 1, 2 or 3 as described above. Exit the configurational menu or move to other setting.
- 

GUARD FUNCTION

GUARD function protects actuating elements (valve, pump, fan) from damage. If this function is activated, the thermostat once every two weeks change for a while the output state, even if it isn't required. It prevents damage of actuating elements.




To activate GUARD function, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 15, marked as **,gUARd'**.
-  Select value **,On'** (function is turned on) or value **,OFF'** (function is turned off). Exit the configurational menu or move to other setting.
- 

TEST OF RELAY


Test function allows to manual extortion of relay state, which switches actuating device. We can check a correctness of relay operation as well as connected actuating device without disconnection an electric circuit.

To manually extort state of actuating relay, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 16, marked as **,TEST'**.
-  Pressing the buttons: **,UP'** or **,DOWN'** we can change relay state. Exit the configurational menu or move to other setting after finishing test.
- 

SOFTWARE VERSION

In response to suggestions and opinions our customers, we try to increase systematically functionality of thermostats, so from time to time may appear newer software version. To check installed software version, please:

-  Enter to the configurational menu. Press button **,M'** until you see on display setting number 17, marked as **,VER'**.







This setting cannot be modified. Exit the configurational menu or move to other setting

HERE ENDS DESCRIPTION OF CONFIGURATIONAL MENU SETTINGS.

DEPENDING ON WORK MODE (A, F OR AF), SOME OF THE SETTINGS CAN BE NOT AVAILABLE.




AN HOUR AND A DAY OF THE WEEK

To set current hour and a day of the week, please:

-  Turn on thermostat.
-  Press and hold for about 5 seconds button **,OK'**. Displayed hour starts flashing.
-  Set current hour.
-  Press button **,OK'** again. A day of the week starts flashing.
-  Set day of the week:
 - Mon - Monday
 - Tue - Tuesday
 - Wed - Wednesday
 - Thu - Thursday
 - Fri - Friday
 - Sat - Saturday
 - Sun - Sunday
-  Confirm settings.

FACTORY SETTINGS

To reset thermostat and go back to factory settings, please:



-  Turn off thermostat.
-  Press and hold for about 3 seconds both buttons: **,M'** and **,OK'** simultaneously. On display will show for about 5 seconds inscription **,RESET'**.
- 

KEYBOARD LOCK

To protect thermostat from unwanted change settings, you can lock thermostat keyboard.

When keyboard lock is activated, on display is visible a padlock symbol and keyboard doesn't respond to pressing keys.

To activate/deactivate keyboard lock, please:

-  Press and hold for about 3 seconds both buttons: **,DOWN'** and **,UP'** simultaneously.
- 

WORK SCHEDULER

In automatic mode we can set a work scheduler. It means setting suitable temperature at concrete hour.

With scheduler you can set lower temperature (economic temperature) in periods when e.g. building/room is not used or in nocturnal periods, and higher temperature (comfortable temperature) when building/room is used.

You can program four time segments each day of the week, which were symbolically presented on display:

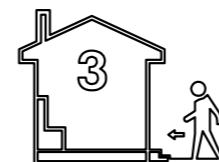
WORK SCHEDULER



Comfortable temperature
e.g. 7:00 a.m - reveille



Economic temperature
e.g. 9:00 a.m.-outgo the house

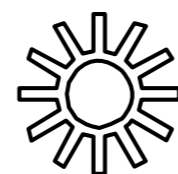


Comfortable temperature
e.g. 3:00 p.m.- return to house

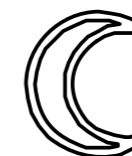


Economic temperature
e.g. 9:00 p.m.- sleep


A temperature symbol is visible together with the time segment symbol to know what type of temperature the time range concerns:




Comfortable












Economic

 **ATTENTION!** These symbols are displayed only when the thermostat is set in work mode with two different values of temperature (comfortable and economic - setting **SC** with value **2**).


 If thermostat works in mode with individual value of temperature for each time segment (with four different values - setting **SC** with value **4**), these symbols are not visible.

WORK SCHEDULER


To make your own work scheduler, please:


-  Turn on the thermostat. Make sure, that thermostat is set in automatic work mode (on display is shown inscription **,AUTO'**).
-  If instead inscription **,AUTO'** on display is hand symbol (manual mode), press button **,M'**. Pressing this button when thermostat is turned on, causes switching between manual mode and automatic mode.
-  Press and hold for about 5 seconds button **,M'**. On display will show inscription **,PROG'** and current day of the week starts flashing.
-  Select a day of the week by buttons **,DOWN'** and **,UP'**, which concerns setting. To select all days of the week, press and hold for about 5 seconds button **,DOWN'**.
-  Confirm choice with the button **,M'**.
-  The following steps describe programming one of time segments. You have to repeat these steps for all four time segments. On the right on display is shown segment symbol, which concerns the setting.
-  On display starts flashing an hour, about which work segment will start. Set the hour.
- 
-  Confirm choice with the button **,P'**.


WORK SCHEDULER


 On display starts flashing an hour, about which work segment will start. Set the hour.




 Confirm choice with the button **,P'**.


 After programming all four time segments the thermostat returns to standard displaying mode.

 The fourth time segment lasts until the beginning of the first time segment the next day (e.g. from 9:00 p.m. on Monday to 7:00 a.m. on Tuesday).

 If there is no need to use all four time segments, you can set short time segments for example:


- » 1. 7:00 a.m.
- » 2. 7:01 a.m.
- » 3. 7:02 a.m.
- » 4. 15:00 a.m.


 Comfortable temperature (or economic) in one day can be different than analogical temperature in other day.

 **ATTENTION!** If you work with two different values of temperature (comfortable and economic) and for the time segment number 3 we will program different value than for the time segment number 1 (both of these time segments concern comfortable temperature), to the time segment number 1 will be automatically assigned the same value as to the time segment number 3. Analogically is with the economic temperature and with time segments number 2 and 4.


MANUAL MODE

In manual mode the thermostat constantly keeps desired temperature (without work timetable).


 If thermostat works in manual mode, on display is visible hand symbol and time segment symbol is not visible.

 Thermostat is in the manual mode until user doesn't change it to automatic mode.


To change mode to manual/automatic, please:

 When thermostat is turned on, press button **,M'**.

To set desired temperature in manual mode, which the thermostat has to keep, please:


 Press button **,DOWN'** or **,UP'**. On display will appear current temperature setting. Enter a new value.



 Confirm choice with the button **,OK'**.


SEMI-AUTOMATIC MODE

In semi-automatic mode is manual correction of desired temperature in current time segment. After the end of the current time segment, thermostat returns to the automatic mode and works with the timetable.


 You can move to semi-automatic mode only from automatic mode.


To enter manual temperature correction for current time segment, please:

SEMI-AUTOMATIC MODE


 When thermostat is in the automatic mode, press button **,DOWN'** or **,UP'**. On display will appear current temperature setting. Enter a new value.



 Confirm choice with the button **,OK'**.


 When thermostat is in the semi-automatic mode, on display is inscription **,override'**. Symbol of the current time segment disappears.

To cancel temperature correction before the end of current time segment and return to the timetable, please:


 Press and hold for about **3** seconds button **,M'**.

HOLIDAY MODE


In holiday mode the thermostat constantly keeps desired holiday temperature.

 If thermostat works in holiday mode, on display is visible suitcase symbol.


To turn on/turn off holiday mode, please:

 When thermostat is turned on, press and hold for about **3** seconds button **,DOWN'**.

To change desired value of temperature for holiday mode, please:

 When thermostat is in the holiday mode, press button **,DOWN'** or **,UP'**. On display will appear current temperature setting. Enter a new value.



 Confirm choice with the button **,OK'**.




STATE OF WORKING


When the thermostat is working, on display is visible a flame symbol.

Additionally, bar ratio symbolically presents difference between prevailing temperature (indicated temperature) and desired temperature (it shows how much heat is missing).

ERRORS

On display may appear symbols that signify:

-  **LO** - temperature is lower than -20°C.
-  **HI** - temperature is higher than 140°C
-  **ERR** - temperature sensor is not connected or is damaged.

 In cases above, for safety, actuating devices are turned off (phase is given on clamp **OFF**).

SHORTENED MANUAL

P **Turning on thermostat.** To turn on or turn off the thermostat, press the button.

Configurational menu.


P To enter to the configurational menu, turn off the thermostat.


M Press and hold button for about 3 seconds.


Numbers of settings in the menu:

- 01 - Language;
- 02 - Work mode;
- 03 - Hysteresis;
- 04 - Calibration of RT sensor;
- 05 - Calibration of FT sensor;
- 06 - Time of inactivity;
- 07- Displaying temperature in mode AF;
- 08 - Limit of FT temperature in mode AF;
- 09 - Time of Backlight;
- 10 - Temperature units;
- 11 - Time format;
- 12 - ,FROST PROTECTION' function;
- 13 - Number of temperature settings;
- 14 - Range of settings;
- 15 - ,GUARD' function;
- 16 - Test of relay;
- 17 - Software versiona;

An Hour and A Day of the Week.

 Press and hold button for about 5 seconds. Set a clock.

 Press button again. Set a day of the week.

 Press button to confirm settings.

SHORTENED MANUAL

P **Factory settings.** Turn off thermostat.

M Press and hold for about 3 seconds both buttons.



▽ **Keyboard lock.** Press and hold for about 3 seconds both buttons.



M **Work scheduler.** In the automatic mode press and hold for about 5 seconds the button. Select suitable day of the week.

M Press button and enter start time and temperatures values for each time segments.

M **Manual mode.** To change work mode, press button.

▽ To change temperature value in the manual mode, press one of the buttons.




▽ **Semi-automatic mode.** In the automatic mode press one of the buttons and enter temperature.





M Press and hold button to exit earlier from the mode..


▽ **Holiday mode.** Press and hold for about 3 seconds button to enter or exit the mode.


WARRANTY


 Warranty is granted on 24 months from the date of purchase of goods.


 Any defect disclosed during the warranty period will be removed within 21 working days, from the date of adoption of goods for service.


 In case of necessity of import goods or components from abroad, repair time is extended by the time needed to bring them.


 Customer provides product to service at his own cost. If the product is shipped at the expense of the service, it won't be received.


 At time repair service has no obligation to provide substitute product.

 Warranty repair will be made upon presentation of properly and legibly filled your warranty card, signed by guarantor and with sales document.

 Warranty covers only defects arising from causes inherent in goods. Damage resulting from external causes such as: mechanical damage, pollution, flooding, weather, improper installation or improper wiring and operations. Warranty does not apply in case unauthorized repair by customer, changes in software (firmware) and device formatting.


 Due to the natural consumption of consumables, some of them are not covered by warranty (for example: cables, battery, loader, micro contacts, buttons).


 In the event of unjustified claim for warranty repair, all additional cost are on customer's side.


 Service has right to refuse to perform warranty repairs for following: differences between documents and goods


WARRANTY

marks, make repairs on their own by customer, changes in product construction without authorization.

 Warranty repair refusal is equivalent to loss your warranty.

 If it is not possible to test product before its purchase (distance selling), it is possible to return goods within 10 days. Returned goods cannot bear signs of exploitation, it must contain all elements with which it was delivered.

 In the case of return of purchased goods all shipping costs are on buyer side. For shipment please enclose purchase document and give precise details of the buyer with account number on which will be refunded an amount equal to the value of the returned goods, no later than 21 days from the date of delivery of the goods. This amount is reduced by shipping costs if these costs were incurred by the seller. Delivery of copy of document correction is necessary to a refund. Before return of goods please contact with seller.

 Warranty terms may be changed by local InsBud company partner.

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