

# The JA-110TP BUS indoor thermostat

The JA-110TP is a component of the **JABLOTRON 100** system. It serves for the measuring and regulation of temperature by controlling an assigned PG output of the control panel. The thermostat is fully supported by the MyJABLOTRON application, which allows to control the temperature and change its settings remotely. There is a graph of the currently measured temperature and its history in MyJABLOTRON application. Pre-set limits can be set for every thermostat notification about overshooting or undershooting a temperature. It also has a weekly program where it can switch between comfort and economical temperatures, manual mode and Standby mode. In total (including wireless and BUS versions) up to 4 thermostats can be used in the system. Thermostat can control only one PG output. The product should be installed by a trained technician with a valid certificate issued by an authorized distributor.

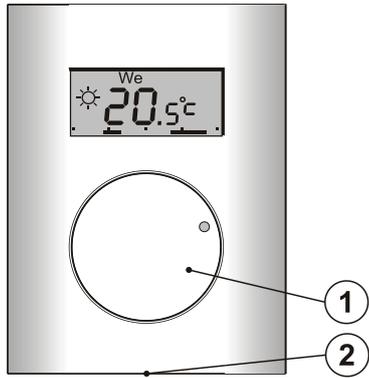


Figure 1: 1 – Knob combined with a button; 2 – Cover tab

## Description

The thermostat measures temperature based on which it switches a selected PG output on/off in the control panel. The currently measured temperature is displayed on the LCD display where the user can find additional information, see Figure 3. When the currently measured temperature is out of the pre-set temperature range (-10 °C to +70 °C) then it displays **Hi °C** or **Lo °C**.

The individual temperature levels of the thermostat are shown on Figure 2. All temperature levels can be set in MyCOMPANY. Values (levels) from **Lo (D)** to **Hi (E)**, are editable also directly on the thermostat, see *Control / operation*.

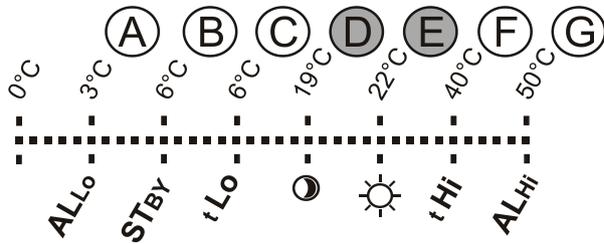


Figure 2: A – Low temperature, B – Temperature in Standby mode, C – Lower temperature limit pre-settable by user, D – Economical temperature, E – Comfort temperature, F – Upper temperature limit pre-settable by user, G – High temperature

## Control/operation:

Operation is very simple. Setting (changing) the temperature is performed by turning the knob (1) and performing confirmation by pressing it (or automatically after 5 sec).

To see the **current time and day of the week** on the LCD display perform a double press (2x /1 sec) of the knob (1).

In the **Program** and **Manual** modes it is possible to **show the required temperature** by pressing the knob (1).

The **Economical** and **Comfort** temperature setting can be done in the thermostat internal menu. Enter the internal menu by pressing the knob (1) longer – approx. 6 sec. The first option to be set is the **Comfort temperature** (☼ symbol is ON and °C flashes). Turning the knob (1) performs selection of the required temperature. By pressing the knob (1) confirm the pre-set value and continue with settings of the **Economical temperature** (☾ symbol is ON and °C flashes). By pressing the knob (1), store all the pre-set values and return to the main screen. If the thermostat internal menu is open for 10 sec with no activity (pressing or turning the knob), it will automatically quit the internal settings without saving the pre-set values.

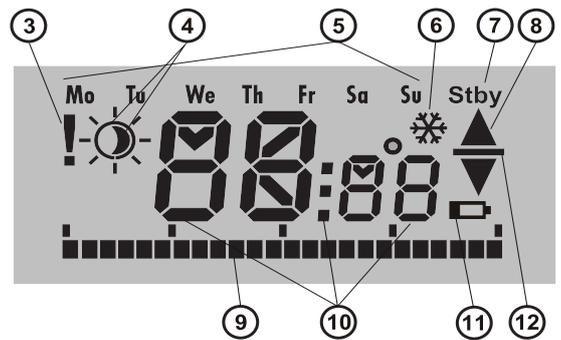


Figure 3: 3 – Internal settings entry by F-Link SW/ communication fault; 4 – Symbols of comfort ☼ and economical ☾ temperatures; 5 – Days of the week; 6 – heating activated when thermostat is blocked; 7 – Standby mode activated; 8 – Heating, flashing ▲ – thermostat blocked by open window for example; 9 – Axis of heating periods; 10 – Symbols for showing the temperature, time and text; 11 – Not used; 12 – Showing the pre-set / required temperature

## Thermostat operation modes:

The thermostat suits various premises types, therefore it offers a few operating modes. By pressing the knob (1) for approx. 3 sec it can switch between its individual modes. The thermostat can be pre-set via the MyJABLOTRON application very comfortably, see the MyJABLOTRON chapter.

## Program:



The thermostat has a weekly program. It switches between the Economical and Comfort (4) temperature in pre-set intervals. This temperature is compared with the currently measured temperature and based on the difference between the temperatures it switches the heating via a PG output (the heating symbol ▲ is ON when the PG output is switched on). The user can simply change the heating temperature, see *Temporary manual temperature*.

The heating plan can be set individually for every day. Each day can have up to 4 heating intervals for the Comfort temperature. The minimum heating period is 15 minutes. Setting of the **Program** mode is possible only using the MyJABLOTRON or MyCOMPANY.

## Temporary manual temperature (TMT):



It serves for a fast temperature change when the **Program** mode is activated. To trigger TMT mode turn the knob (1). All elements indicating **Program** mode remain the same, only the ☼/☾ (4) symbol disappears. The thermostat remains in this mode until the next manual temperature correction or until the moment when the pre-set program initiates next change between Comfort and Economical temperature.

## Manual:



In **Manual mode** set required temperature by turning the knob (1) which is then constantly maintained. The measured temperature is only visible on the LCD. When the PG output is switched on then the ▲ symbol appears.

## Standby:



This mode can only be activated and deactivated from MyJABLOTRON. The thermostat maintains the temperature that was pre-set for the Standby mode. The currently measured temperature is displayed on the LCD and the „Stby“ symbol appears in the upper right corner. The **Standby** mode temperature can be set in MyJABLOTRON or MyCOMPANY. This mode is meant to keep the temperature level to protect the premises against freezing when there is nobody inside for longer time.

## Other functions:

**Blocking:** The PG output switching can be blocked by a status mode detector such as a magnetic detector, by another PG output or by the status of a section. It ensures that the thermostat won't heat when a window or a door is open or any other blocking condition is fulfilled. Blocking of the PG output is indicated by Heating (8) symbol flashing. When blocking is activated and the currently measured temperature drops below the **Standby** mode pre-set temperature, then blocking is overcome and the PG output is switched on – anti-freeze protection (signalled by the ☼ symbol (6)). For situations when the temperature would tend to still drop, the thermostat reaction to a low temperature can be set, see chapter *Setting the thermostat properties in the F-Link software*.

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**Switching to the economical temperature when the system is set:** The thermostat in the *Program* mode can react to setting / unsetting the section, to which it is assigned. When the section is set, it switches at once to the *Economical temperature* ☉ (if the thermostat has already heated to the *Economical temperature*, nothing changes). The thermostat still follows a pre-set timed heating plan and the PG output switches on when it goes from the *Economical* ☉ to *Comfort temperature* ☆ even if the section is already set. So the heating can be activated earlier than when the users come back home and unset the system. It is valid for a fully and partially set sections. All settings can be performed in the MyCOMPANY.

## Installation

The product can only be used in an indoor environment. Install the thermostat 1.5 m above the floor in a place where there is good natural air circulation. Don't install the thermostat where the measuring can be influenced by drafts, sunlight, heaters or any other undesirable effects.

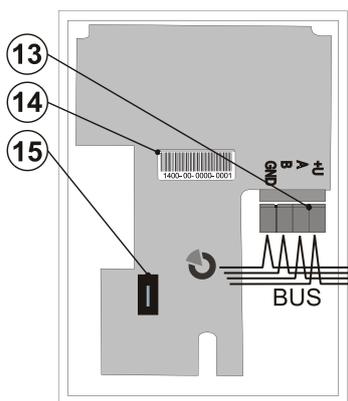


Figure 4: 13 – Terminals for BUS to be connected; 14 – production code; 15 – Tamper contact

### Installation procedure:

1. Release the front thermostat housing by pressing the tab (2), by screwdriver for instance.
2. Punch the hole for cables.
3. Install the rear part of the thermostat at the chosen place (tab facing down).
4. Connect the BUS cables to the terminals (13), it can be removed from the PCB for a more comfortable installation and plug it back in afterwards.



**When connecting the module to the system, always switch the power off.**

5. Put back the front thermostat part and close it.
  - a. Follow the control panel installation manual. Basic procedure:
    - i. When the power is turned on, the thermostat indicates by flashing the exclamation symbol (3) that it has not been enrolled to the system yet.
    - ii. Go to the *F-Link* software, select the required position in the *Devices* tab window and launch enrollment mode by clicking on the *Enroll* option.
    - iii. Click on the option **Scan/Add new BUS device** and by double clicking select the required thermostat or press the knob (1) on the thermostat – the device is thus enrolled and the exclamation mark goes off.
6. Using F-Link SW and the option **Internal setting** at the required thermostat, select the PG output which will be controlled and other system settings. See more details in the chapter *Setting the thermostat properties*.
7. Other settings can be done by the MyJABLOTRON application in the MyCOMPANY module. When the system is not registered yet, it must be registered first (if needed ask your authorised distributor for help). If the system is already registered, and only the thermostat has been added then leave the service mode to upload new system configuration to MyJABLOTRON (usually within 15 minutes).
8. When registration is finished, pre-set the thermostat via the MyCOMPANY application, see the chapter *Setting the thermostat properties in MyCOMPANY*.

### Notes:

- The thermostat can also be enrolled to the system by entering its production code (14) in the F-Link software. All digits of the production code are required. (Example: 1400-00-0000-0001).

## Setting the thermostat properties in the F-Link software

Basic settings can be done in the F-Link SW in the internal settings of the specific thermostat. Where the following parameters can be set:

**Controls PG:** (\*No) Select which PG output will be controlled by the thermostat. The reaction of the PG has to be set to ON / OFF and must not be inverted. **Thermostat can control only one PG output.**

**Reaction to high temperature:** (\*None) The selection of the offered options determines the reaction when a *high temperature* is reached. *Fire alarm, Fire instant, Report A, Report B, Report C, Report D, Overheating or None.*

**Reaction to low temperature:** (\*None) The selection of the offered options determines the reaction when a *low temperature* is reached. *Report A, Report B, Report C, Report D, Freezing or None.*

**High temperature:** (\*60 °C) The temperature can be set in the range of -9.9 °C to +70 °C. When a pre-set temperature is exceeded, the selected reaction is triggered. The value of the high temperature always has to be higher than the low temperature.

**Low temperature:** (\*3 °C) The temperature can be set in the range of -10 °C to +70 °C. When the pre-set temperature is undershot, the selected reaction is triggered.

## Setting the thermostat properties in MyCOMPANY

For the settings of all thermostat parameters it is necessary to have the Jablotron 100 system registered – see the *Installation* chapter to get the details. A service technician pre-sets the thermostat in the MyCOMPANY (it is supported web and mobile applications).

In the MyCOMPANY, open **Installation management**. At the selected system on the **Devices** tab select the cogwheel symbol at the required thermostat position. The setting window with following parameters is open:

**Highest and lowest temperature configurable by the user** (-10 °C to +40 °C).

**Comfort and Economical temperatures:** are pre-settable by the user in the range of the *lowest temperature limit* to the *highest temperature limit*.

**Heating plan:** can be the same for the whole week, different for week days and the weekend or individual for every day. Using the + button add individual intervals when the thermostat should heat to the *Comfort temperature*. If an interval should be erased, click on it and when the - symbol appears, by clicking on it the selected interval can be erased.

**Activate economical temperature when:** None / Partially set / fully set section to which the thermostat has been assigned.

**Temperature in Standby mode:** (from -10 °C to +15 °C) this determines the temperature which is going to be maintained in *Standby* mode or when *Blocking* is activated.

**High temperature** (from -9.9 °C to +70 °C), see the chapter called *Setting the thermostat properties in the F-Link software*.

**Low temperature** (from -10 °C to +70 °C), see the chapter called *Setting the thermostat properties in the F-Link software*.

**Hysteresis** (from 0 °C to 5 °C) For example, if it is set 1 °C hysteresis and the required temperature is 30 °C, then the PG output is switched on when the temperature drops below 29 °C and the PG output is switched off when it exceeds 30 °C.

**Temperature correction:** (from -12.8 °C to +12.7 °C) This option can fix any possible thermostat measurement deviation from the real temperature in the premises.

**Tamper contact:** – This option enables / disables the functioning of the built-in tamper contact.

## MyJABLOTRON

In the MyJABLOTRON application thermostats are shown at **Thermostats and thermometers**, where all the measured values of all thermostats and thermometers enrolled to the system are saved. This data is stored and available for future use. Reading the temperatures is done automatically at a 5 minute interval.

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## For every thermostat:

- The current status is displayed (Name, Heating / Temperature reached, Current temperature, Required temperature, Mode, Graph of measured temperature)
- The temperature can be temporarily changed
- The operation mode can be changed (Program, Manual, Standby)

Temperatures are shown in a graph in the selected time period and can be exported in various formats for future processing.

The user has authorization to edit some settings directly in the MyJABLOTRON application. Select **Settings** → **Thermostats** to open settings window with following parameters:

## Basic settings:

### Comfort and Economical temperatures

#### Heating plan

## Advanced settings:

### Temperature in Standby mode

**Hysteresis** (0 – 5 °C)

### Temperature correction

For description of every single option see the chapter called *Setting the thermostat properties in MyCOMPANY*.

In **Settings** → **Temperatures** for a selected thermostat the higher and lower limits and the time period in which the temperature is monitored can be set. When the temperature overshoots or undershoots the pre-set limit, a notification is sent by SMS, e-mail or as a PUSH notification for the smart application.

## FW upgrade

The thermostat supports the firmware upgrading. It can be performed by **F-Link** software in **Service** mode.

1. Go to **F-Link: Control panel – Update firmware**. In the offered list the JA-110TP should appear. If the F-Link SW detects the existence of newer firmware than that in the thermostat, it is automatically checked (ticked) for upgrading.
2. Press the OK button to perform the update of the selected devices.
3. When the update is finished, check the internal settings of the thermostat on the **Devices tab – Internal settings**.
4. Test the thermostat's functions.

## Technical specifications

Power	from control panel BUS 12 V (9...15 V)
Current consumption in standby mode	1,5 mA
Current consumption for cable choice	1,5 mA
Dimensions	66 x 90 x 22 mm
Weight	60 g
Operational temperature range	-10 to +70 °C
Measuring range	-10 to +70 °C
Temperature regulator class	I. (according to (EU) no. 813/2013)
Contribution of regulator for seasonal efficiency	$\eta_s = 1\%$ (according to (EU) no. 813/2013)
Operational environment according to	EN 50131-1 II. Indoor general
Temperature measuring sensitivity	$\pm 0.1$ °C
Also complies with	EN 50130-4, EN 55022



JABLOTRON ALARMS a.s. hereby declares that the JA-110TP is in a compliance with the relevant Union harmonisation legislation: Directives No: 2014/30/EU, 2009/125/ES, 2011/65/EU. The original of the conformity assessment can be found at [www.jablotron.com](http://www.jablotron.com) - Section Downloads.



**Note:** Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the producer after use.