JB-EXT-TH-B Bus outdoor temperature detector

*The product is a bus component of the **JABLOTRON** system. It serves for outdoor temperature measurement using an internal or external sensor (not included). Measured data is sent to MyJABLOTRON where it is analysed and stored for further use, for instance activating an assigned PG output, the SMS reporting of exceeding temperature limits or to create graphs of measured temperatures. This product should be installed by a trained technician with a valid certificate issued by an authorised distributor.*

This product is compatible with JA-100K, JA-101K, JA-102K, JA-103K, JA-106K, JA-107K control panels.

Installation

Select the installation place according to the temperature measuring requirements. The thermometer automatically detects connection of the external sensor (*JB-TS-PT1000). If the external sensor is not connected, temperature is detected by the internal sensor placed on the PCB, therefore it is necessary to protect this unit from, for example, direct sunlight which may distort the results. Avoid installing the detector near any sources affecting temperature* (heaters, electric fans, air conditioning outlets, fireplaces, etc.). The detector can also be installed in an outdoor environment because it complies with the IP53 rating.

If the external thermometer bus cable is extended out of the guarded area, it is necessary to use a JA-110T bus short-circuit isolator module which separates an inner branch from an outer one. If the outer branch is damaged (i.e. an intruder short-circuits the cable), the inner branch will remain functional. The JA-110T isolator module always has to be placed in the guarded area.

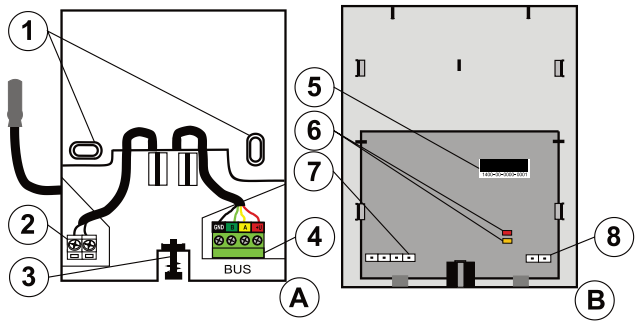


*Figure 1: **A** – base; **B** – front part of the case with electronics; **1** – mounting holes; **2** – JB-TS-PT1000 external sensor wire terminals; **3** – cover lock screw; **4** – bus terminals; **5** – production number; **6** – unused; **7** – connection pins for the bus terminals; **8** – connection pins for the external sensor terminals*

1. Loosen the screw (3) and detach the front part (B) from the base (A).
2. If you are using an external sensor push the external sensor wire and the bus cable through the hole in the base and mount the base onto the required place.
3. Connect the bus cable into the bus terminals (4). If you are using an external sensor, connect it to the external sensor wire terminals (2).

Always switch the power off before connecting the thermometer to the bus

4. Close the module cover which will connect all the pins with terminals.
5. Switch on the power supply (battery + mains power).
6. Follow the instructions in the control panel installation manual. Basic procedure:
   a. Go to the ***F-link*** software, select the required position in the ***Devices*** tab and launch the enrolment mode by clicking on the *Enrol* option.
   b. Click on the ***"Scan/add new bus devices",*** select the JB-EXT-TH-B thermometer and double-click on it to confirm the enrolment.

Notes:

- *Enrolling the detector to the system is also possible with active enrolment mode by entering the production code (5) via the F-Link software. All digits in the production code are required (1400-00-0000-0001).*
- *If you want to remove the detector from the control panel, erase it from its position.*
- *The connection polarity of the JB-TS-PT1000 external sensor is not relevant. The sensor is available with 3 m long conductors (see Table 1: JB-TS-PT1000 external sensor extension)*
- *The unit detects whether an external sensor is connected. The unit will automatically switch from using the internal sensor after connecting the external sensor.*
- *A fault will be reported if the external sensor is disconnected or forcefully removed while being operational. The fault lasts until the external sensor is connected again (sensor status is corrected). If the detector needs to be used without the external sensor then the bus must be restarted to reload the detector which will work without the connected sensor.*

Functions

The JA-114E and JA-154E series of keypads are able to display current temperatures from up to 8 thermometers on the keypad screen. See the JA-10xK installation manual.

The detector has a fixed antifreeze temperature of +0 °C with +1 °C hysteresis. Therefore, the detector has an activation temperature of 0 °C. The deactivation temperature is >+1 °C. The detector remains deactivated until the temperature drops again to under 0 °C.

Using the F-Link software, it is possible to configure the JA-10xK control panel's reaction (PG output, 24h alarm, etc.) to react to temperature detector activation. Thus, the selected PG output is controlled directly by the control panel.

All thermometer functions can be fully used in MyJABLOTRON. The registration procedure is described in the *Control panel installation manual.*

MyJABLOTRON

All thermometers and their measured values are stored and shown in the ***Thermostats and Thermometers*** tab in MyJABLOTRON. The temperatures are stored automatically every 5 minutes. The temperatures are displayed in a graph with an adjustable timeline. It is possible to export data from the graphs in various formats for further processing. The graph function enables you to compare temperatures from eight thermometers or different time periods (only available in the MyJABLOTRON mobile app).

The MyJABLOTRON app offers the following functions:

PG control by measured temperature

Using MyJABLOTRON, it is possible to configure activation of a PG output by a temperature measured by the thermometer. The selected PG output is controlled remotely from MyJABLOTRON therefore stable external communication is necessary for this function to work properly. If this function is selected, the user can use a slider to configure the desired temperature which will activate the PG output. These settings are located in the ***Thermostats and Thermometer*** tab.

Linking the thermometer with a PG output is done by a service technician in the ***Installation management*** section of the MyCOMPANY app. Select the control panel, enter the ***Devices*** tab, press the symbol of a gearwheel on the thermometer and select a PG output which should be controlled by the measured temperature. Use the slider to configure the desired activation temperature. This configured link is indicated by a PG symbol at the thermometer's position.

Warning! The controlled PG output must be configured to have *ON/OFF* or *Impulse* functions (configurable in the F-Link software). PG outputs with different functions cannot be controlled via MyJABLOTRON. The *Impulse* timer must be set to at least 1 hour.

Notes:

- *Setting a temperature which triggers a PG output can also be done in the MyCOMPANY and MyJABLOTRON mobile apps. Setting the link to a particular PG output is possible only in MyCOMPANY (mobile or web versions).*
- *This function can be configured for a maximum of 8 thermometers enrolled to the control panel (the sum of wireless and bus thermometers).*
- *Connection via GSM and LAN communicators is required in order to make sure that PG output control from MyJABLOTRON works properly.*
- *Due to the fact that PG outputs are controlled via an external app, **we cannot guarantee proper functioning under all circumstances**. When the connection with MyJABLOTRON is lost, the status of the PG output stays unchanged until the connection is re-established. This is why we recommend using*

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a controlled PG output along with the IMPULS function set to an activation time of 2:00:00. The PG output will be controlled by commands from MyJABLOTRON. If the connection is lost, activation of the PG output will be limited by the activation time of the IMPULS function.

- *The activation hysteresis of a PG output is - 1 °C. The PG output will be activated when the measured temperature is 1 °C lower than the activation temperature. Deactivation will occur when this temperature is exceeded by 1 °C.*

Notifying the user when the temperature exceeds the allowed range

You can set a higher and a lower temperature limit and a certain period of time of temperature monitoring for a selected thermometer in **Settings → Thermometer notification**. When one of these limits is exceeded or gone below then it is reported by an SMS, an e-mail or PUSH notifications if you use the MyJABLOTRON app.

The JB-TS-PT1000 external sensor

The external sensor is not included in the JB-EXT-TH-B package. The length of the conductors is 3 m and can be extended. However, the conductor extension can cause a measurement deviation. Follow the recommended wire gauges listed below when extending the conductors.

Wire length	10 m	20 m	30 m
Minimum wire gauge	0.5 mm^2	0.8 mm^2	0.8 mm^2
Measurement deviation	+ 0.1 °C	+ 0.15 °C	+ 0.2 °C

Table 1: JB-TS-PT1000 external sensor extension

Technical parameters

Power	*from the bus, 12 V DC (8…24 V)*
Low bus voltage warning	*at 8.5 V*
Nominal current consumption (in standby mode)	*1 mA*
Maximal current consumption (for cable choice)	*25 mA*
Dimensions	*90 x 110 x 35 mm*
Weight	*125 g*
Internal sensor temperature measurement range	*-25 °C to +60 °C*
Internal sensor temperature measurement range accuracy	*±0.6 °C*
External sensor temperature measurement range	*-50 °C to +200 °C*
External sensor temperature measurement range accuracy	*±1 °C*
Activation hysteresis of a PG output	*-1 °C*
Operational temperature	*-40 °C to +70 °C*
Average operating humidity	*75 % RH, non-condensation*
IP coverage	*IP53*
Also complies with	*EN 50130-4, EN 55032, EN IEC 63000*
Recommended screw	*2x ø 3.5 x 40 mm (countersunk head)*

JABLOTRON a.s. hereby declares that the JB-EXT-TH-B is in a compliance with the relevant European union harmonisation legislation: Directives No: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The original of the conformity assessment can be found at www.jablotron.com - Downloads Section.

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.