tempsensor

temperature sensor
with the µWiFi technology

MINIATURE TEMPERATURE SENSOR

TOPP tecnologie del movimento

user manual

SAFETY RULES

⚠ Improper connections may be dangerous, it can damage the controller, and loss of the warranty.

⚡ DANGER! Risk of electric shock! Even with the device turned off, the outputs may be live. All assembly work should be ALWAYS performed with the disconnected power circuit.

⚠ The installation of the device to a power mains that does not meet the quality requirements defined by the laws in force in the country of installation, will result in the loss of the warranty.

1 INSTALLATION - BASICS

- Disconnect supply voltage circuit before installing the controller. Remember that any mounting works should be carried out when the main voltage is disconnected (switch off the mains fuse or disconnect the power supply from the socket).

- The device should be mounted in a place protected from direct adverse environmental conditions, in particular atmospheric precipitation. The measurement probe is waterproof. It is not allowed to install the probe in a place exposed to contact with oils, liquid fuels, solvents and caustic substances, as well as in places exposed to the direct action of high temperatures. Remember that metallic elements (wires, elevation elements, window frames, barriers) negatively influence the range of the radio system of the device and, therefore, the comfort of use. It is recommended that the device be mounted in a stable and fixed position.

- Connect the 5V DC power cable to the micro USB connector.

- Run the device by switching on the power supply (switch on the mains fuse or connect the power supply to the socket). The correct operation of the device is signaled every time by the blink of a green LED. The red LED indicates a sensor error, the appropriate message is also visible in the wBox software (more information about the wBox application later in the manual). In this situation it will be necessary to check whether the probe or connection cable has been damaged.

2 FIRST START

- Download the **free wBox application.** If you have an Android mobile device, you will find the application in the Play Store. For iOS devices the application is in the App Store.

- By using your mobile phone or tablet, connect it to the device wireless network. To do this, enter to your smartphone or tablet settings, then go to setting of the WiFi network and find the network name „tempSensor--xxxxxxxxxx" where xxxxxxxxxx is the serial number of the device. Connect to this network.

- Turn on the wBox application. A device will appear at the top of the screen. To add it to the application, click on "plus" on the right side of the name. To pre-configure the controller, click on the default device name.

ℹ You can also set the configuration using the web browser of your phone / tablet. After connecting to the wireless network of the controller, turn on the browser and go website www.blebox.eu

3 MEASURING DATA

- The main screen of the controller shows the reading of the current temperature, below show a trend indicator for its changes.

- Historical measurement data is available by clicking on the diagram icon in the upper right corner of the screen.

4 DEVICE SETTINGS

- Go to the configuration ("Settings" icon in the upper right corner of the screen). In the "Main configuration" section, you can change the name of the device that is displayed in the wBox application. The "Status LED enabled" option allows you to turn off the built-in LED on the device.

- To communicate with the device from outside the local Wi-Fi network, from anyplace in the world, through the wBox application, the option "Enable remote access" must be set to "Yes". Selecting the option "Yes" also means accepting to send measurement data to blebox.eu server in order to process them and archive them together with the location. Setting this option to "No", will cause no access to the controller from outside the internal network or access to the historical data; it will only be possible to obtain a visualization of the current values.

5 ACCESS POINT AND WIFI NETWORK SETTINGS

- Go to "Connect to WiFi network" section, where you can connect the device to the WiFi home network to be able to connect to it via it or from anyplace in the world. To do this, select the network name from the list and press "Connect". If required, enter the WiFi network password. When connecting the device to the home network, the phone / tablet may be disconnected from the device's network.

- After completing the WiFi network configuration, you can disconnect from the device network and connect the phone / tablet directly to your home WiFi network. Control from the wBox application will work in the same way as when the phone / tablet is connected to the device's network. If as a user you leave the local network, eg leaving your home or enclosing mobile data, the wBox application will signal this status as "Remote mode". In this case, you will have access to the device data, but for security reasons settings options will not be available.

- In the "Access point settings" section, you can change the name and give the password of the WiFi network emitted by the device. Remember that changing the network name or password can cause disconnection with the device immediately after clicking the "Save" button, so you should reconnect to the WiFi network.

5 TEMPERATURE REGULATOR

- The controller allows you to send control commands to other controllers of the wBox series through the home WiFi network, through the so-called API, which allows you to build a temperature control system. Go to the "Action" section, where you can program up to 10 actions that will be carried out after reaching a certain temperature.

▶

- Editing actions:
  "Action name" : give a name to identify the action;
  "Action type": select "Control other devices" or alternatively "Get URL" ;
  "Trigger" select "Temperature bigger than" or "Temperature smaller than". In the "Temperature" field, enter the temperature limit value, expressed in degrees Celsius, by which, after being reached, the action will be triggered, e.g. "20".
  - Command inhibition time: enter a time in minutes, during which the action will persist with the inhibition of any other external command;
  - "Select the device": select a device of the wBox series of the home WiFi network;
  - Enter the API command (example: s / 1)
  Caution! All the controllers must be in the same subnet, usually the subnet of a home router.

- Alternatively to "Control other devices" on the "Action type", in the "URL" field, enter the API command preceded by the http protocol prefix (http//) and the IP address of the wBox device which will be controlled. The IP address is available in the device settigs.
  The most popular API commands for switchBox and shutterBox are presented below. It was assumed that the IP address of the device which will be controlled is: 192.168.1.123

  Switching on the radiator via switchBox: http://192.168.1.123/s/1
  Switching off the radiator via switchBox: http://192.168.1.123/s/0
  Opening the roller shutter via shutterBox: http://192.168.1.123/s/u
  Closing the roller shutter via shutterBox: np. http://192.168.1.123/s/d

  > The temperature regulator requires a hysteresis configuration, it means, a certain difference between the switch on temperature and the switch off temperature. In the case of the radiator control, the switch on temperature must be lower than the switch off temperature, e.g. "Temperature lower than: 19℃, action: turn on", "Temperature higher than 21℃, action: turn off".

- A detailed description of how to control other controllers of the wBox series is available in the "Extended instructions for wBox devices", while all the technical documentation API of the wBox controllers is available at: http://technical.blebox.eu

TECHNICAL SPECIFICATIONS

power supply	5V by microUSB connector
energy consumption	< 1W
measurement range	from -55℃ to 125℃
measurement accuracy	± 0,5℃ in the range of -10℃ to 85℃
controller operating temperature	from -20℃ to 50℃
type of probe	wired, waterproof, cable length 1m
housing	high quality ABS plastic
protection level	IP32
dimensions	31 x 45 x 15 mm
transmission type	bi-directional, encrypted
radio frequency	2.4 GHz

communication standard	μWiFi, compatible with WiFi, 802.11g
mode	direct connection (as Access Point), Wi-Fi connection via a standard router, connection with access from any location in the world (requires only access to the Internet)
compatible devices and systems	Apple iPhone, Apple iPad, iPad Mini, Android, computers and mobile devices supporting HTML5

ADDITIONAL INFORMATION

LOCATION AND TIME OF THE DEVICE, SCHEDULE

To be able to use the device data, it is necessary to set the clock and location of the device. Go to the "Device time" section of the settings and then click "Change zone". Select your region and locations from the list, confirming your selection with the "Save" button. The device will synchronize its time with the time server (if the controller is in a WiFi network with Internet access) or it will download time from the phone/tablet.

Next, in the "Device location" section, click "Set locations". The application/browser will ask whether to share locations - allow. In the "Coordinates" field, the approximate coordinates of your location should appear. If the "Set locations" button blinks red with the word "error" or the "Coordinates" field did not change the value from "Not set" to numeric data, a failure occurred in the location download. You should then make sure that the phone / tablet has a GPS module and that the location sharing support is enabled on the phone.

SOFTWARE UPDATE

To update the software in the controller, connect it to your home WiFi network (see "Access Point and WiFi settings" section) which is connected to the Internet. Go to "Settings" (icon at the top-right corner of the screen) and click the "Get new firmware" button in the final section on settings. Wait about 1 minute, do not close the interface and don't perform other actions. The device will download the latest software. The software version number, hardware version and device identifier can be read at the bottom of the settings screen.

for more information
visit our website

www.blebox.eu

or send us an email to:
info@blebox.eu

support is available at
support@blebox.eu

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RoHS

We declare under sole responsibility that the following products:
Name: BleBox control devices

Models:

- **LightBox** - LED controller for lighting appliances;
- **wLightBox** - LED controller for lighting appliances;
- **wLightBoxS** - single channel LED controller for lighting appliances;
- **dimmerBox** - dimmer controller for lighting appliances;
- **ampBox** - LED amplifier;
- **proximityDimmer** - LED dimmer with proximity control;
- **twilightSwitch** - LED twilight switch;
- **reflectiveSwitch** - optical LED switch;
- **gateBox** - gate controller;
- **shutterBox** - roller shutter controller;
- **shutterBox DC** - low voltage roller shutter controller;
- **switchBoxD** double electric appliance controller;
- **switchBox** - electric appliance controller;
- **switchbox DC** - low voltage electric appliance controller;
- **parkingSensor** - ultrasonic light controller;
- **uRemote** - uWiFi remote control;
- **inBox** - universal input module;
- **airSensor** - air quality sensor;
- **tempSensor** - temperature sensor;
- **squareLight** RGBW Master 85mm, **rectLight** 60x40mm, **squareLight** RGBW Master 140mm;
- **rollerGate** - roller gate smart control panel;
- **saunaBox** – sauna control panel;
- **RwBox** – rain and wind sensor;

Complies to requirements of the following directives:

- Low voltage Directive (LVD) 2014/35/EU
- Electromagnetic compatibility Directive (EMC) 2014/30/EU
- RoHS II 2011/65/EU
- RED 2014/53/EU
- WEEE 2012/19/EU

The following standards have been applied:

- IEC 60335-1: 2010
- EN 62368-1: 2014
- EN 61000-6-2: 2005
- EN 61000-6-3: 2007

The products carry following marking:

$$C\,E \quad RoHS$$

I, the undersigned, hereby declare that the equipment specified above conforms to the listed directives and standards.

MSc., Eng. Patryk Arlamowski, CEO

www.blebox.eu