



Instructions for Use

SMSB121TH







SMSB121TH V1.0 05/12//2017



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Technical safety instructions

This manual contains warnings that must be observed for personal safety and prevention of material damage. Personal safety notes are marked with a triangle of danger, while warnings for property damage are not marked with a triangle of danger. The danger warnings are shown as follows and indicate the different levels of danger in descending order.





HAZARD

This means that failure to observe the relevant safety measures will result in death or serious personal injury.



AVVERTENZA

Means that non-observance of the relevant safety measures can result in death or serious personal injury.

If there are more than one level of risk, the hazard warning always indicates the highest level. If you draw attention in a warning to the risk of personal injury by using the triangle, the risk of possible material damage may also be indicated at the same time.

Qualified staff

The device or system in question may only be installed and put into service in the context of this manual. The startup and operation of an instrument/system may only be carried out by qualified personnel. With reference to the safety notes in this document, "qualified personnel" means persons authorized to start up, ground and identify electrical equipment, systems and circuits in accordance with safety technology standards.

Disclaimer of liability

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Email service

Elbro does not guarantee the successful sending of e-mails, nor does it guarantee the constant functioning of the service for which it declines any responsibility from now on, the user is informed of the possibility that Elbro may terminate or unilaterally suspend this service free of charge at any time and without prior notice.

The use of GPRS/UMTS data can lead to high telephone costs. Therefore, we recommend that you consult your telephone service provider in order to check the most suitable telephone plan. In no event shall Elbro AG or its suppliers be held liable for any loss of revenue or profits or for indirect, consequential or incidental reasons, whether for reasons (including negligence) arising out of or in connection with the use or inability to use the product, even if El-bro AG has been advised of the possibility of such damages. Elbro AG, its subsidiaries or affiliates or group companies or distributors and resellers Elbro AG does not guarantee that the functions will fulfill your expectations faithfully and that the SMSB121TH, its firmware and software is error-free or that it will operate continuously.



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Installation

In order to safeguard the safety and safety of the operator and the correct functioning of the device, the SMSB121TH device must be installed only and exclusively by a qualified person. The following standards must also be observed.

Safety information

- The SMSB121TH incorporates a low power radio transceiver. When in operation by road and receives radio frequency energy. Operation in the vicinity of radios, televisions, telephones or electronic devices in general may cause interference. It may also be subject to interference that may affect its performance.
- Do not install the SMSB121TH near pacemakers, prostheses or medial equipment in general, as interference with proper operation of these devices may occur.
- SMSB121TH shall not be installed on board aircraft.
- Do not install the SMSB121TH in the presence of flammable gases or fumes.
- The SMSB121TH operates using a radio signal: no mobile operator can provide a connection at any time.

Environmental conditions

he SMSB121TH device (the device and all the cables connected to it) must be installed in places without, or away from, the device:

- Dust, humidity, high heat;
- Direct exposure to sunlight;
- Objects radiating heat;
- Objects producing a strong electromagnetic field;
- Liquids or corrosive chemicals.
- The SMSB121TH has been designed to work at a temperature between -5° C and $+45^{\circ}$ C (standard operating temperature).
- Avoid any rapid change in temperature and/or humidity.

Degree of protection

When installing the SMSB121TH device, the following degree of protection must be ensured:

- IP40: minimum degree of protection, must always be guaranteed;
- IP54: degree of protection to be provided for use in outdoor applications.

Power supply 1



Observe the following standards:

- Do not use cables longer than 2.9m;
- The external power supply unit must be class 2 (LPS) certified SMPS (not included)
- Do not reverse the polarity of the power supply cables.

Digital and analog inputs

Observe the following standards:

- Connect only clean contact switches, switches and contactors.
- if analog only suitable and certified sensors should be connected;
- Do not use cables longer than 2.9m;
- Do not connect inputs to power sources.
- Do not reverse the polarity of cables in analog inputs.

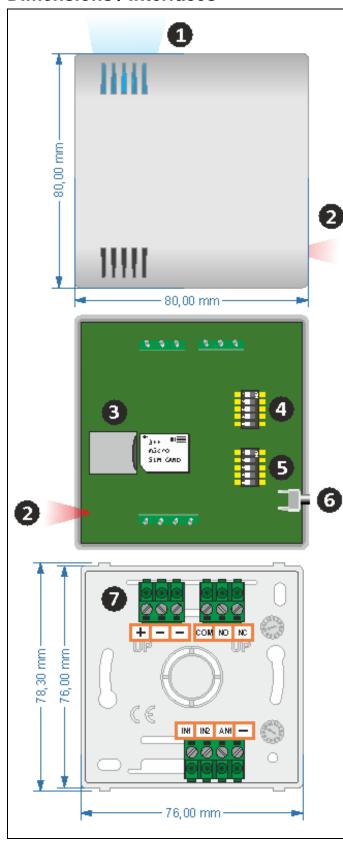
Relay outputs A



- Refer to the chapter on nameplate data.
- Do not use cables longer than 2.9m;
- Connect only one voltage level for all relays: If the load is subjected to pe-recycle voltage, use only the phase cable.



Dimensions / Interfaces



1. Stand-by RGB LED

This LED indicates if device is running. In standby is flashing BLUE. When relay switching, it changes from GREEN (OFF) and (RED ON).

2. GSM/3G LED

Indicates the status of the GSM/3G network.

| Status | Meaning |
|----------------------|---------------------|
| Off | no service |
| | no network coverage |
| Red 100ms, off 2s | Registered 2G |
| Red 50ms, off 50ms, | Registered 3G |
| Red 50ms, off 2s | |
| Red 100ms, off 100ms | Roaming |
| Red 100ms, off 2s | |
| Red 50ms, off 50ms, | Roaming 3G |
| Red 50ms, off 100ms | |
| Red On fixed | Voice call or |
| | startup |

3. SIM CARD holder

Micro SIM CARD compatible. Push/push type.

4. Ignition switches

Switches on and off the device. (see section $\mbox{"Start-up"})\;.$

5. Analog Sensor Switches

Permits sensor configuration (see section "Analog input").

6. Switch/reset button

Button for manual switching, reset and factory reset.

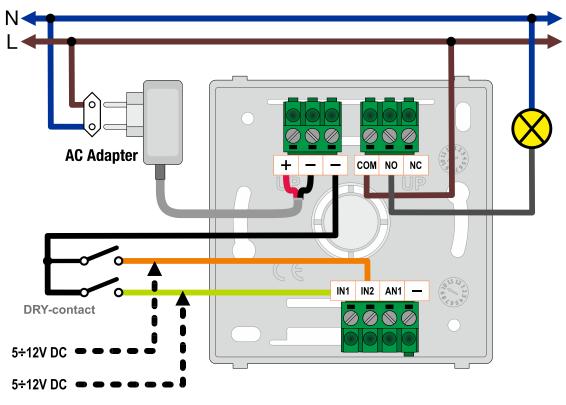
7. Wiring Terminal Block

Connecting terminals.

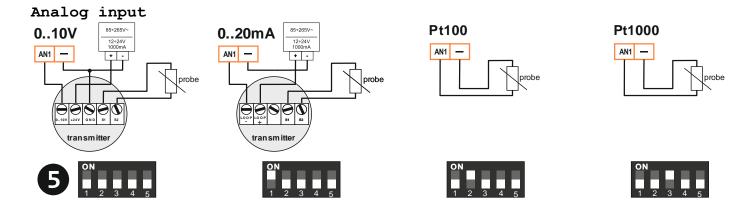


Installation diagram

Power supply, relay outputs and digital inputs



WET-contact



Connecting digital inputs

Connect the inputs (as shown in the installation diagram) to contactors, contactors, and/or electromechanical switches, in as-without electrical potential (clean contact) and following the regulations in force.

Connecting relay outputs

The installation regulations must be strictly observed, referring to the nameplate data (see relevant chapter).

The maximum relay load is:

▲ 5A 250V~ - 2A 30V=

Do not exceed the specified limits.



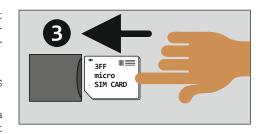
Inserting the SIM Card

Before you insert the SIM Card into your device, you must deactivate the PIN code with a mobile phone. It is also recommended that the telephone answering machine and all additional functions of the telephone operator are deactivated. Also make sure that your SIM card has credit and, if new, verify that it is correctly activated by trying to send SMS messages.

SMSB121TH works with prepaid SIM cards or both voice and data subscription. However, having many inputs, it is possible that the credit will quickly run out and this would cause the normal operating logic of the device to be blocked. Therefore, it is recommended to use SIM Card subscription, in particular SIM DATA since they have a preferential channel for data transmission, and also these are exempt from government concession fees.

Insert the SIM card into the device slot with the contacts facing downwards (see figure).

If you choose to use a prepaid SIM Card, the SMSB121TH has a credit check function: we recommend that you activate it to keep the remaining credit under control.



Start-up

Before turning on the device, make sure that you have made the wiring and fastened the support base to the wall, and insert the SIM card into the special compartment.

Ignition

To turn on the SMSB121TH remote control, follow the procedure below:

- 1. Shift up the 2th switch on power supply connector (4)
- 2. Shift up the ${\bf 1}$ th switch on power supply connector (4) Observe the sequence.

The 4th and 5th switch must be always ON.

Switch 3 must always be set to OFF (service only)

Shutdown

To turn on the SMSB121TH remote control, follow the procedure below:

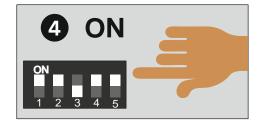
Shift up the 2th switch off power supply connector (4)

Shift up the 1th switch off power supply connector (4)

Observe the sequence.

The 4th and 5th switch must be always ON.

Switch 3 must always be set to OFF (service only)







Programming

Web-server link

The SMSB121TH has a web server contained in the device itself. To connect to it, you must use a smartphone or an electronic device capable of connecting to the Wi-Fi network. Each SMSB121TH has a unique SSID name (Wi-Fi network name).

- 1. Search for Wi-Fi network
- 2. Make the connection
- 3. Open the app or browser to the address http://192.168.4.1



`smartButler'

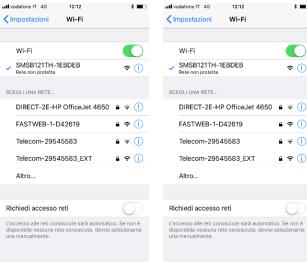
is available on Apple Store



The web browser is compatible with the latest browsers: Edge, Chrome e Safari.

The "smartButler" app works only with direct Wi-Fi (AP) connection.





Functionality

SMSB121TH smartbutler is a versatile device with many features to meet in countless applications.

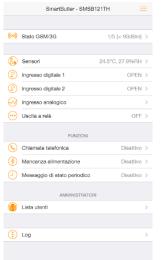
Thanks to the integrated relay, any electrical device can be remotely activated with a simple SMS.

Equipped with two digital and one analog inputs, SMSB12TH is able to warn

Ada for equipment and systems that require remote supervision.

With its innovative web interface, SMB121TH is able to connect to all modern devices equipped with Wi-Fi technology.

In fact, the platform is presented as "IOS LIKE", simulating the settings of an IOS mobile device.

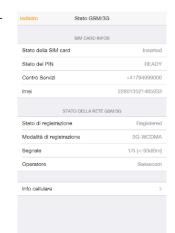




Status GSM/3G

This panel displays the status and all the informations of the GSM/3G module as:

- SIM card insertion status
- PIN status
- Number of the Service Centre
- IMEI code
- Network registration status
- Registration type
- Signal level
- GSM operator







Sensors

SMSB121TH integrates a sensor able to keep under control the temperature and humidity of the room in which it is installed. Thanks to the "thermostat" and "hygrostat" functions, it is possible to program the threshold at which the relay is activated automatically. In addition, up to 4 temperature alarm thresholds can be configured.

Note: The thermostat and hygrostat functions cannot be activated simultaneously.

The sensor measurement is to be considered "indicative" as the internal temperature of the product can be influenced by the following factors:

- Relay load
- Use of SMS or DATA
- Signal level
- Installation

Sensor can be calibrated using the sensor section. Before calibrating, we recommend that you keep the device in a safe place for at least one hour after installation.

Digital inputs

Digital inputs allow the user to send specific events of the system to which the appliance is connected, such as, for example, a boiler block or power failure, as well as opening a valve, etc.

SMSB121TH has two alarm inputs, each of which allows you to send users an SMS both when opening and closing the contact. The text of each event can be customized; it is also possible to delay the event in order to avoid false alarms. Although Authoration Authoration Authoration Authoration <math>Authoration Authoration Authoration <math>Authoration Authoration Authoration <math>Authoration Authoration Authoration <math>Authoration Authoration <math>Authoration Authoration Authoration <math>Authoration Authoration Authoration <math>Authoration Authoration Authoration Authoration <math>Authoration Authoration Authoration Authoration <math>Authoration Authoration Authoration

Contact type

You can set the type of contact you use in the installation:

- Dry contact: to generate an alarm, connect to a potential-free contact (e.g. a switch) and shortcircuit it to ground (GND).
- Wet contact: to generate an alarm, connect a voltage from 3 to 24V to the desired input.

Alarm Event

You can set whether the alarm event is generated when the contact is closed (to ground) or opened.

If the contact is "clean", or high or low level if "live".

Analog input

SMSB121TH has an analog alarm input configurable with probes of type 0-10V; 0-20mA; 4-20mA, PT100 and PT1000. Up to four distinct thresholds can be configured.

Note: Refer to the installation diagram to set the configuration switches correctly for the chosen probe.

Probe type

Select the type of probe you want to use.

Measure unit

Unit of measurement of the connected probe.

Probe maximum value

This is the maximum value that the probe can reach.

Probe minimum value

This is the minimum value that the probe can reach.

Threshold alarms

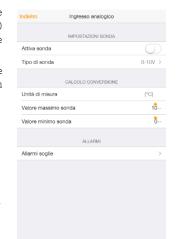
Up to four separate alarms can be configured.















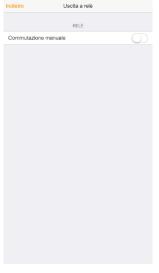


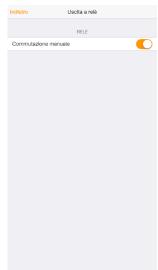
Relay output

Response Message

The relay can be operated from a console or via SMS (see chapter 'SMS commands').

When sending a power on or power off command, the SMSB121TH responds with a standard notification SMS ('ON' for 'COM-NO' status, 'OFF' for 'COM-NC')





Telephone call

The device is able to store a list of telephone numbers with the relative names (max 1000) enabled to activate and/or deactivate the selected relay output with a simple telephone ring at no cost. The device recognizes the incoming call and immediately abates it, while activating the system to which it is connected. This function can be configured in the following ways:

Exchange: the simple relay exchange (ON/OFF) is carried out

Pulse: A programmable pulse of 1-65535 seconds is performed

The user also has the option of activating the SMS reply option, which allows an SMS confirming the command.



Power supply failure

This feature allows selected users to receive a notification message when power failure and/or power reset occurs. The device is equipped with a lithium battery to perform this function.

N.B. If the power supply should be interrupted for a long time and the battery is completely discharged; before accessing the device, it is necessary to wait at least 30 minutes before being able to send the SMS.

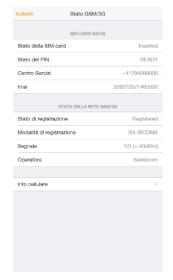






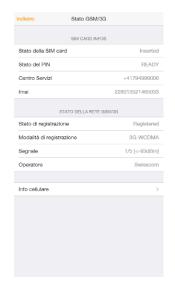
Periodic status message

This function allows you to send the enabled users a system status SMS periodically (daily, weekly or monthly). This mode is useful for monitoring a system or for preventing SIM cards from expiring (Switzerland).



Users list

This list contains the telephone numbers of users (up to 1000) authorized to receive alarm messages and SMS and email notification.



Log

The log displays the last 50 system events.







Settings

Wi-Fi

Access Point(AP) Mode

AP mode allows a device with Wi-Fi connectivity to connect to the SMSB121TH directly via its IP address of 192.168.4.1. By default, access is unprotected. Enter a password to protect the product.

Station Mode(STA)

This mode allows the device to connect directly to a personal Wi-Fi router. DHCP is activated by default. To set a fixed IP address, it is mandatory to enter all the network parameters [requires an expert].

Web Protection

This is the protection of the web server during STA mode. When trying to log in using the IP address, the browser requires authentication. Enter a username and password.

Mobile Phone

SIM Security

You can enter the SIM Card PIN code if prompted

Cellular data

The DATA function allows SMSB121TH to send EMAIL through a service provided free of charge by ELBRO AG. This service allows the forwarding of emails from the remote control to the emails of the users entered. N.B. See 'Email service clauses' chapter.

SIM Credit

This function allows you to display the remaining credit of the SIM card via USSD command (example *130# for the Swisscom network).

Indietro Wi-Fi Reaves Wi-Fi ACCESS POINT (AP) Password WPA-PSK Abilita protezione Attenzione: se dimentichi la password, non potrai più accedere al dispositivo. Per ripristriare futte le impostazioni begingate tene premuto il tasto di risest per 10tec. Wi-Fi STATION (STA) SSID > Hostname Static IP Wi-Fi Station WEB SERVER PROTECTION Nome utente admin Password admin







System

System name

Enter a system name. It will be displayed in the subject line of the email.

Password

Enter a system password for using SMS commands. The default password is four zeros (0000). Please refer to the SMS commands section for an overview of all available commands.

Plant photo

Saves a photo of the system in memory. It appears when you open the application.

Settings

This section allows you to export/import data or perform a factory reset. Data export/import only works with Chrome desktop browsers.







SMS commands

SMSB121TH has a set of configuration and control commands that can be sent via text message. The command message is protected by a password (see system password chapter). The command message format is as follows:

[PASSWORD] # [COMMAND]

Password is always 4 characters and #: hash is a mandatory separator. You can replace it with the 'dot' character.

The following table shows a list of SMS commands, with their description and example:

| Comando | Descrizione | Esempio |
|--------------|----------------------------|----------|
| [PW]#0 | Turns off relay | 0000#0 |
| [PW]#1 | Turns on the relay | 0000#1 |
| [PW]#? | Status request | 0000#? |
| [PW]#A[8-30] | Activates the thermostat | 0000#A23 |
| [PW]#A0 | Deactivates the thermostat | 0000#A0 |
| [PW]#H[1-99] | Activates the hygrostat | 0000#H50 |
| [PW]#H0 | Deactivates the thermostat | 0000#н0 |

Alarm activation/deactivation

With this command you can activate/deactivate the alarms via SMS.

[PASSWORD] # [START/STOP] # [COMMAND]

Following table shows a list of SMS commands, with their description and example:

| Comando | Descrizione | Esempio |
|--------------|--|---------------|
| TA[1-4] | Activates / deactivates the selected temperature alarm | 0000#STOP#TA1 |
| DA[1-2] | Activates / deactivates the alarm of the digital input | 0000#STOP#DA1 |
| AA | Activates / deactivates the alarm of the analog input | 0000#STOP#AA |
| [PW]#A[8-30] | SMS on/off of power failure | 0000#STOP#PFA |
| [PW]#A0 | Activates / deactivates SMS magazines | 0000#STOP#PEA |
| [PW]#H[1-99] | Activates / deactivates all alarms | 0000#STOP#ALL |
| [PW]#H0 | Requesting alarm status | 0000#STOP#? |

Push button

Switching the relay in manual mode

To switch the relay manually, press the [6] button (see 'interfaces') and release immediately.

Manual resea

To restart SMSB121TH without losing the settings press and hold the [6] button (see 'interfaces') for at least 2 seconds and release. Note: Do not exceed 10 seconds, otherwise all settings will be deleted.

Factory reset

To clear and return to all factory settings, press and hold the [6] button (see 'interfaces') for at least 10 seconds and release. LED [1] will flash red for confirmation.



| chnical data | | |
|------------------------------|--|--|
| GSM section | UMTS/HSPA/GSM Trial-band mode 900Mhz ,1800, 2100MHz | |
| Wi-Fi section | 802.11 b/g/n, 2.4 Ghz~2.5Ghz, SoftAP + Station, Security WPA/WPA2 | |
| SIM card | SIM Micro | |
| Power supply | Rated supply voltage: 5.5VDC Current: IMAX = 1500mA Power supply terminals: maximum conductor cross-section 2.5mm2 Power supply protected against polarity reversal | |
| Outputs | 1 Relay SPDT 5A,250V AC (Resistivi) - 2A,30V DC. | |
| Inputs | 2 programmable digital inputs (live/clean) 1 Analog Input: 0-10V; 0-20mA; 4-20mA; PT100; PT1000 | |
| General characteri- stics | Flammability rating: UL94V-0 Degree of protection: IP20 Standard operating temperature: -15°C to +65°C Indicative weight: 93g Maximum conductor cross-section that can be inserted in the terminals:2,5mm ² | |
| Absorption (typical values) | Power supply: 5.5V Standby: 200mA Sending SMS: 500mA Switching relays: 800mA GPRS/UMTS 1500mA | |

Declaration of Conformity

Elbro AG hereby declares that the product SMSB121TH complies with the essential requirements and other relevant provisions of the RED directive, in particular:

2014/53/EU (RED)

2014/30/UE (EMV)

2014/35/UE (LVD)

FCC/CE/TELEC/KCC/SRRC/IC/NCC