

### NUBI 4.0

Model: **NB40S1**  
Power supply: 12VDC  
PIR: NO

Thank you for purchasing NUBI 4.0, the intelligent smoke screen security device able to be connected to any burglar alarm system in new or existing systems.

### OPERATIONAL OVERVIEW

The device is powered from 10VDC to 15VDC, usually supplied by the alarm control panel, the consumption is less than 1mW. NUBI 4.0 does not require any additional energy from the external power supply when the smoke cartridge is ignited, as this energy has already been stored on the motherboard. This ensures the ignition of the cartridge in any power condition and the guarantee of not having any overload on the power supply even in case of simultaneous triggering of many NUBI 4.0 devices.

NUBI 4.0 efficiently protects volumes up to 100 m<sup>3</sup>. The smoke generated by NUBI 4.0 is based on incense and does not produce toxic atmosphere as tested according to the TLV-STEL directive EU 2017/164 and ACGIH. After use the room must be ventilated before staying there.

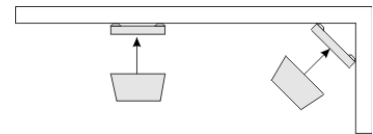
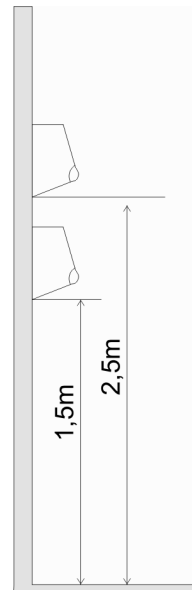
This version of NUBI 4.0 has no integrated PIR, it has only the input to trigger the immediate smoke delivery.

The polarity of this input and its logic can be easily configured using DIP switches to interface NUBI 4.0 with any burglar panel or command device.

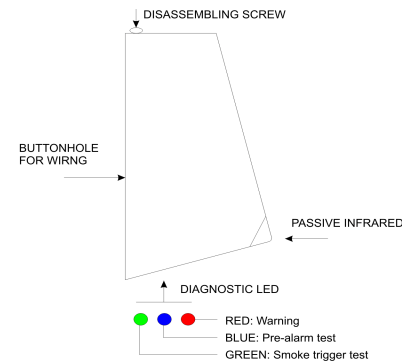
The box opening is detected with a tamper switch, its clean contact can be connected to the burglar panel.

The smoke cartridge works only once, the smoke emission, when triggered, can no longer be interrupted. The smoke cartridge replacement is very easy, each spare cartridge is provided with a special board soldered on its wires to be easily plugged on the proper motherboard connector.

### INSTALLATION

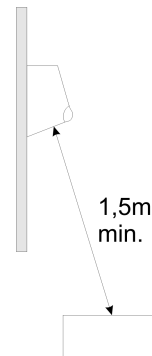


NUBI 4.0 can be easily installed on the wall or even in a corner at a height between 150 and 250 cm.



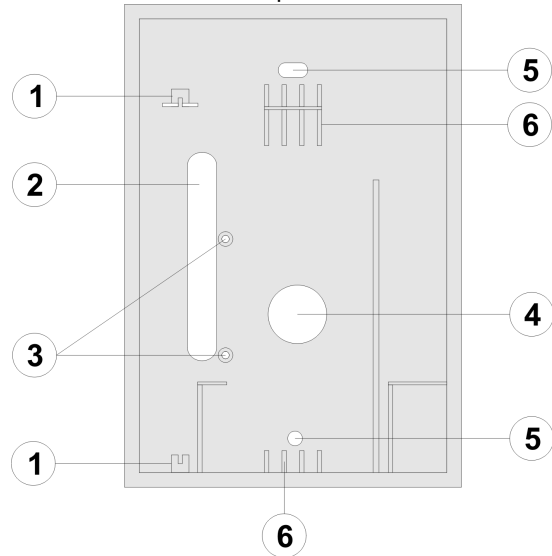
### WARNING

Do not insert any obstacle at a distance of less than 1.5 meters from the smoke outlet hole.

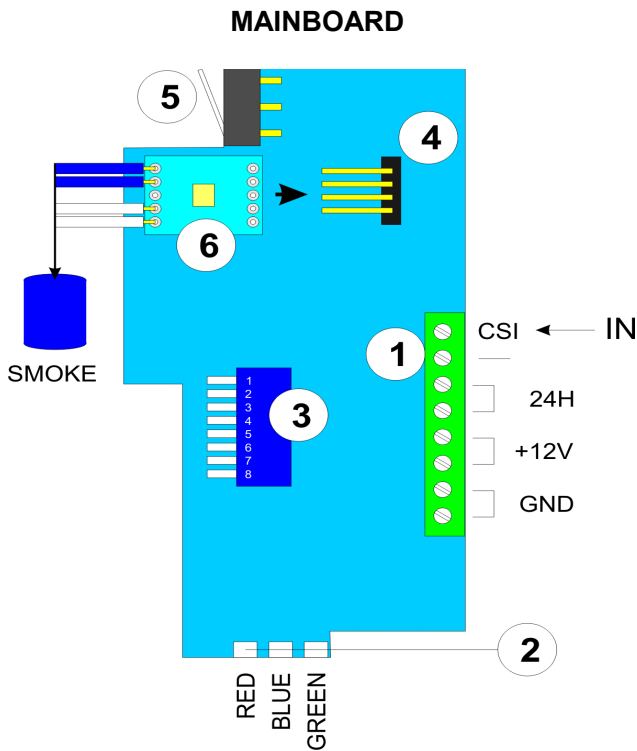


The best performance is achieved when the jet of smoke coming out from NUBI 4.0 directly hits the floor, in this way the smoke will cool and spread better.

After opening the top cover, remove the motherboard to fix the lower part of the box on the wall.



- 1 Motherboard rails
- 2 Cabling wire buttonhole
- 3 Internal siren fixing spacers
- 4 Internal siren sound outlet hole
- 5 Device fixing holes
- 6 Smoke cartridge supports



- 1) Main connector
- 2) Diagnostic LEDs
- 3) DIP Switch
- 4) Smoke cartridge connector
- 5) Tamper switch
- 6) Validation board provided with smoke cartridge

### MAIN CONNECTOR

GND: Ground power supply  
 +12V: +10..15VDC power supply  
 24H Tamper clear contact  
 CSI Immediate smoke delivery (INPUT)

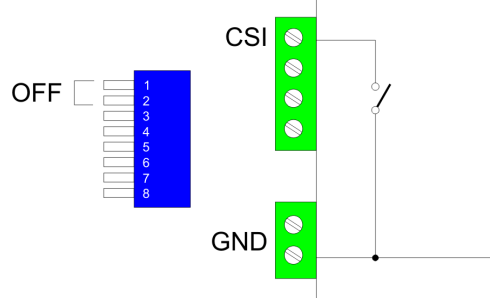
### UNDERVOLTAGE ROTECTION

NUBI 4.0 is protected against under voltage. When the power supply falls below the 10V threshold, the smoke emission will be inhibited.

This function prevents unwanted smoke emissions when NUBI 4.0 and the alarm panel use the same power supply and the alarm panel causes unwanted commands due to a low supply voltage.

This could happen during a power failure that lasts a long time and drains the battery below the 10V limit.

### INPUTS INTERFACE



When the DIP Switches 1 and 2 are set to OFF, NUBI inputs CSI will become active when switched to GND, in this case it will trigger the immediate smoke delivery.

With DIP SW1, the input reference can be changed from GND to + 12V (+ VCC). Using SW2, the input logic can be switched from normally open to normally closed, in this case the smoke emission will be activated when the input is opened.

In the event that the inputs are not driven with a clean contact to GND, **never apply a voltage higher than +VCC to the input** which would irreversibly damage the electronic circuit.

For any kind of interface, the inputs voltage thresholds are the followed:

	Min V	Max V
Level 0	GND	2,0V
Level 1	8,0V	+VCC

### DIP SWITCHES

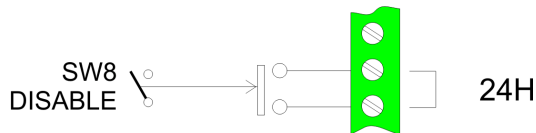
DIP	OFF	ON
1	Input driven to GND	Input driven to +12V (+VCC)
2	CSI input normally open	CSI input normally closed
3	Not used	
4	Not used	
5	Not used	
6	Not used	
7	Operating mode	Test mode
8	Tamper enabled	Tamper disabled

### DIAGNOSTIC LEDs

Diagnostic LEDs are active only in test mode.

BLUE	Flash when NUBI is in test mode.
GREEN	Flash when the smoke cartridge is triggered.
RED	Warnings.

### 24H OUTPUT



**24H** output is a clear contact normally closed when the NUBI 4.0 box is closed, it will open when the box will be opened. When the SW8 is set to ON, tamper output is disabled (output is always closed).

### TEST MODE

Set the DIP SW7 to ON to activate the test mode. As soon as the device enters test mode, all the LEDs and the buzzer will flash 8 times. If the voltage is below 10V, the red LED and the buzzer will remain ON, otherwise the green LED will flash one time, then the smoke cartridge will be tested. When it is empty the red LED and the buzzer will light up and the green LED on the validation board will be OFF. When the smoke cartridge is not empty the green LED on validation board will flash, the test will continue and the BLUE led will flash slowly, one time each second, to indicate the test mode is activated.

When, according to the programming mode of SW1 and SW2, the CSI input will trigger the smoke delivery, the GREEN LED will flash for 1 second to indicate the simulation of the activation of the smoke cartridge.

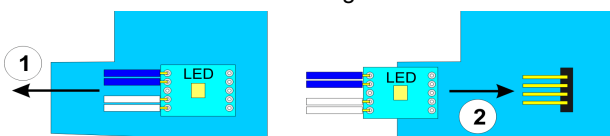
**Remember to activate the operating mode (DIP SW7 OFF) at the end of testing.**

### SMOKE CARTRIDGE REPLACEMENT

When a smoke cartridge is empty, it must be replaced with a new one. The smoke cartridge is supplied with the validation card welded to the ends of the wires. Only in test mode (SW7 ON) the green LED on validation board will flash when the cartridge is full, OFF when it is empty and needs to be replaced.

**Remove the power supply and wait at least 3 minutes before replacing the smoke cartridge.**

- 1) Remove from the motherboard the old validation card soldered onto the wires of the empty smoke cartridge.
- 2) Insert the new validation card soldered onto the wires of the new cartridge.



### COMMISSIONING

We advise to perform a test (see previous chapter Test mode) before perform a definitive commissioning of the device. Set the DIP SW7 to OFF to switch in operating mode. We advise to remove the adhesive that protects smoke exit hole of the smoke cartridge.

#### WARNING PROCEDURE TO PREVENT SMOKE EMISSION AT THE POWER UP

During the first 30 minutes after power the device, there is a special function to prevent unwanted smoke emissions, for example due to wiring errors.

When the smoke activation condition occurs during this time, instead of immediately emitting smoke, a warning procedure starts and the red LED flashes for 120 seconds.

It will be possible to stop the activation by opening the box and setting the DIP SW7 to ON or, in case of difficulty, it will also be possible to unplug the smoke cartridge validation card from the motherboard.

If this warning procedure is not interrupted, at the end of the 120 seconds we will have the emission of smoke.

Each time this warning procedure is activated, the 30-minute timer is regenerated to allow an additional 30 minutes of test time.

### MAINTENANCE

We recommend replacing the smoke capsule every 5 years using only the original replacement.

### WARRANTY

SMARTEK s.r.l. It guarantees its products against all manufacturing defects for a period of 30 months from the production date shown on the label.

### RECOMMENDATIONS

Before leaving, ventilate the rooms thoroughly after the smoke has been delivered.

### TECHNICAL SPECIFICATIONS

Power supply	From 10 to 15VDC < 1mW
Size	12cm x 17cm x 14cm
Saturable volume	100m <sup>3</sup>
Weight	760g
Smoke average delivery time	25sec
Operating temperature	From 0°C to +45°C
Storage temperature	From -20°C to +55°C
Maximum relative humidity	70%
Inputs	CSI – Immediate action
Outputs	24H – Tamper