

# Smart Dupline® Smoke Detector Type BSG-SMOx-U

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- Smoke detector using Tyndall effect
- Detection of smouldering fires and flaming fires with smoke development
- Without radioactive sources
- Detection of areas up to 60 m<sup>2</sup>
- Transmission of alarms and Alive signals via Dupline®
- Operating voltage supplied by Dupline® bus
- Optional use of the smoke detector as alarm device for other detections such as gas, water and burglary via Dupline®
- Battery backup if the Dupline® connection is interrupted
- Acoustic alarm > 85 dB
- Constant monitoring of sensor sensitivity via Dupline®
- For ceiling mounting

## Product Description

BSG-SMOx-U is a detector for home/building applications which transmits the alarm event to the smart-house controller. It is part of

the smart-house concept and it can be used in all the functions where alarm signals are needed.

## Ordering Key

**BSG SMO A U**

Decentral

Smoke Detector

No battery back-up

Smart Dupline®

## Type Selection

Battery back-up

YES  
NO

Supply by Dupline®

BSG-SMO-U  
BSG-SMOA-U

## Input Specifications

Detector	Optical (Tyndall effect)
Response level	According to EN 12239 (95)

## Dupline® Output Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	5.5 V
Maximum Dupline® current When the alarm is active	10 mA

## Supply Specifications

Power supply	Supplied by Dupline®
Current consumption typ.	2.5 mA
Battery current consumption	20 µA, BSG-SMO-U only
Supply voltage	9 VDC, BSG-SMO-U only

## General Specifications

<b>Address assignments / channel programming</b>	<p>If it is used with the SH2WEB24 the address assignment is automatic: the controller recognises the module through the SIN (Specific Identification Number) that has to be inserted in the SH tool.</p> <p>If it is used with the BH8-CTRLX-230, the channels have to be programmed by the BGP-COD-BAT</p>	<b>Indication</b>	<p>Red LED.</p> <p>Short flash once every 42 sec. (alive signal): the smoke detector is OK.</p> <p>Short flash every 0.5 sec.: Alarm.</p> <p>Red flash (42 sec.) and asynchronous beep = Dirty</p> <p>Red flash (42 sec.) and simultaneous beep = Low battery voltage.</p>
<b>Channel assignment</b>		<b>BSG-SMO-U only</b>	
I/O number 1	Alarm signal. The status of the signal can be programmed (see below).	<b>Environment</b>	<p>Degree of protection IP 43</p> <p>Operating temperature 0° to +50°C</p> <p>Storage temperature -5° to +85°C</p>
I/O number 2	Monitoring of sensor (tamper/presence). The signal is always active if OK, otherwise inactive.	<b>Meets the requirements of</b>	ISO 12239
I/O number 3	Monitoring of battery voltage. The signal is active if the voltage is low.	<b>Connection</b>	<p>Screwless detachable</p> <p>0.2 to 1.5 mm<sup>2</sup></p> <p>D+ Signal</p> <p>D- GND</p>
I/O number 4	<b>Only BSG-SMO-U</b> Monitoring of sensor sensitivity. The signal is active if the sensor becomes dirty.	<b>Housing</b>	<p>For installation on ceilings</p> <p>Dimensions Ø 100 x 54 mm</p> <p>Material ABS</p> <p>Colour White</p>
I/O number 5	Forced alarm. The smoke sensor can be used as an alarm device for e.g. water, gas and burglar alarms.	<b>Weight</b>	160 g
<b>Fail-Safe mode</b>		<b>Sound level</b>	> 85 dB(A) / 3 m (10 ft)
<b>BSG-SMO-U</b>	If the Dupline® connection is interrupted, the smoke sensor will still work, but as a normal individual smoke detector.	<b>Battery</b>	IEC 6LR 61
<b>BSG-SMOA-U</b>	If the Dupline® connection is interrupted, the smoke sensor will also be interrupted.	<b>Average life, battery</b>	2 years
		<b>Alarm signalling</b>	Acoustic and optical
		<b>CE Marking</b>	Yes
		<b>EMC</b>	<p>Immunity</p> <p>- Electrostatic discharge EN 61000-6-2</p> <p>- Radiated radiofrequency EN 61000-4-2</p> <p>- Burst immunity EN 61000-4-3</p> <p>- Surge EN 61000-4-4</p> <p>- Conducted radio frequency EN 61000-4-5</p> <p>- Power frequency magnetic fields EN 61000-4-6</p> <p>- Voltage dips, variations, interruptions EN 61000-4-11</p> <p>Emission</p> <p>- Conducted and radiated emissions EN 61000-6-3</p> <p>- Conducted emissions CISPR 22 (EN55022), cl. B</p> <p>- Radiated emissions CISPR 16-2-1 (EN55016-2-1)</p> <p>CISPR 16-2-3 (EN55016-2-3)</p>

## Mode of Operation

### BSG-SMOx-U connected to the SH2WEB24

#### Coding/Addressing

If the device module is connected to the SH2WEB24 controller, no addressing is needed since the module is provided with a specific identification number (SIN): the user has only to insert the SIN in

the SH tool when creating the system configuration.  
Used channels: 1 input channel, 4 output channels.

### BSG-SMOx-U connected to BH8-CTRLX-230

#### Coding/Addressing

If the input module is connected to the BH8-CTRLX-

230 controller, the user has to program the channels using the BGP-COD-BAT: this module has:

- 4 output channels (I/O 1-4)
- 1 input channel (I/O 5)

CH1 is pre-programmed on N1, CH5 on N2.  
The alarm signal on CH1 can be programmed to be active

when the alarm is ON or when the alarm is OFF.

Fail/safe bit = 0  
Signal active when the alarm is ON.

Fail/safe bit = 1  
Signal active when the alarm is not active.

## Mode of Operation

### Mounting

To achieve minimum protection, one BSG-SMOx-U should be installed in front of each sleeping area or each floor. Higher protection will be achieved if one smoke detector is present in every room (except for the kitchen and the bath - here, false alarms may occur due to steam development).

When using the BSG-SMOx-u, the following issues must be observed:

- Rooms may have a floor area of up to 60 m<sup>2</sup> and a

height of up to 6 m

- Hallways and narrow corridors may have a width of up to 3 m (10 ft) and a length of up to 15 m (50 ft)

- The mounting location must be as close as possible to the centre of the room

- A minimum distance of 0.5 m (1.5 ft) must be maintained from walls and furniture

The BSG-SMO-U must NOT be mounted in the following locations:

- Near ventilation ducts or strong draughts
- Directly in the apex of

pitched roofs (a minimum distance of 30 cm (1 ft) from the apex must be maintained)

- In rooms which are usually very steam-, dust- or smoke-filled (for example in workshops, bathrooms and laundry rooms)

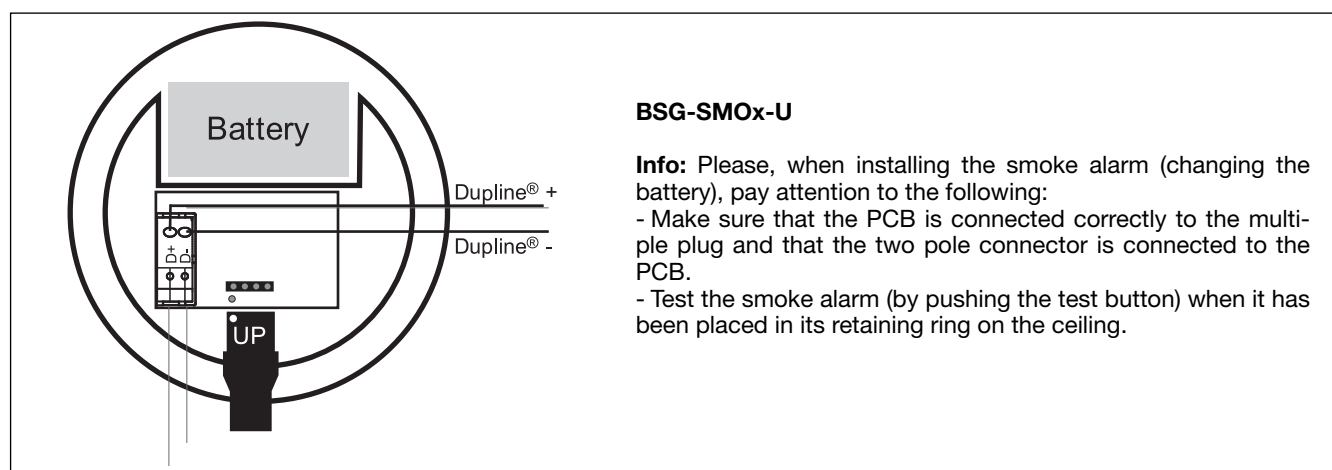
### Connection of multiple smoke alarms

It is possible to interconnect several smoke alarms so that the alarm signal from one alarm is transmitted to all other connected alarms.

The smoke alarms are connected in parallel using a 2-wire cable.

**Note: Make sure that the total power consumption does not exceed the Dupline® controller's output when interconnecting the smoke alarms. Use a back-up battery to avoid voltage drop in the Dupline® bus when using interconnection.**

## Wiring Layout and Description



## Dimensions

