

# SBB4I2O230T6



## Fire damper I/O module



### Benefits

- Ready-to-use junction box housing with transparent lid for fast and easy decentralized installation
- One I/O module can monitor and control up to two fire dampers
- Fast and easy wiring to the main controller via the Dupline® bus (free topology and long distance capability)
- Up to 30 fire damper modules can be connected to one Dupline® network
- The system can be interfaced to the BMS via BACnet or Modbus

### Description

The SBB4I2O230T6 is a 4-input and 2-output module designed to monitor and control the blade position of up to two fire dampers.

It is also possible to use the inputs and the outputs as standard digital inputs and outputs for any type of application.

The module is implemented in a robust junction box for a decentralized installation close to the two fire dampers.

The module is part of the smart building products range.

Several modules can be connected to the same Dupline® 2-wire bus and thus the wiring to the controller can be significantly simplified.

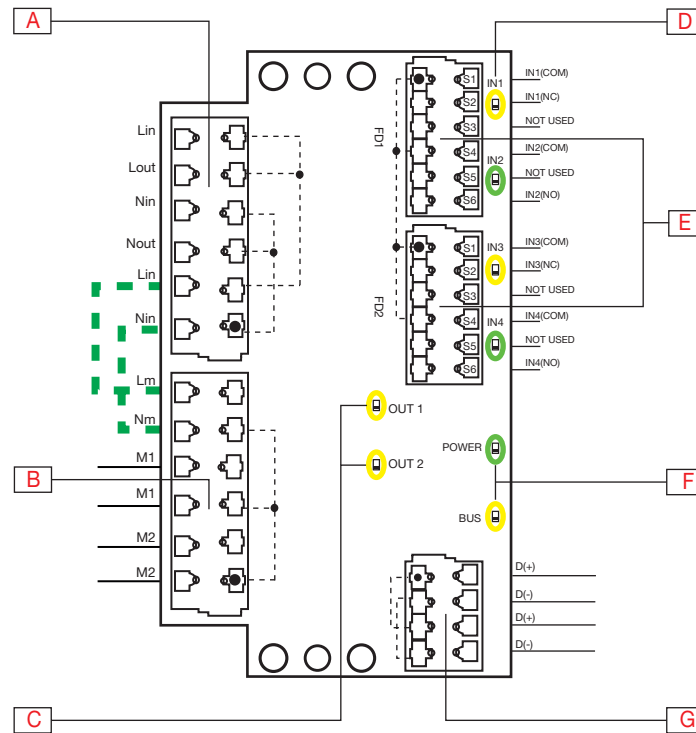
### Applications

- Control and monitoring of fire dampers

### Main features

- 4 x contact inputs (voltage free)
- 2x SPST relay outputs (230VAC/3A)
- Smart Dupline® protocol
- 230 VAC power supply

**Structure**

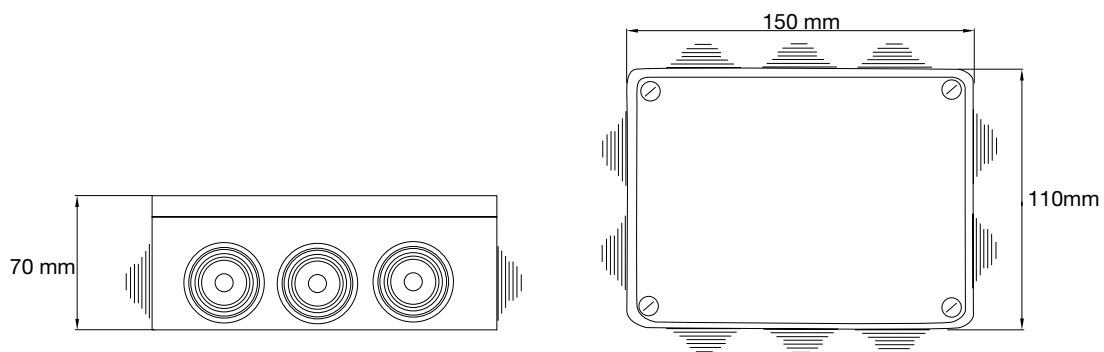


| Element | Component                                   | Function   |
|---------|---|--|
| A       | Power supply terminals                      | Power supply   |
| B       | Output terminals                            | Power supply for load 1 and load 2   |
| C       | Yellow LED (OUT1,OUT2)                      | Output contact status<br>ON: Output closed<br>OFF: Output open                     |
| D       | Yellow LED (IN1,IN3)<br>Green LED (IN2,IN4) | Input contact status<br>ON: Input closed<br>OFF: Input open                        |
| E       | Input terminals                             | Fire damper terminals connection   |
| F       | Green LED (POWER)                           | ON: Power supply ON<br>OFF: Power supply OFF                                       |
|         | Yellow LED (BUS)                            | ON: Communication on the Dupline® bus<br>OFF: No communication on the Dupline® bus |
| G       | Dupline® terminals                          | Dupline® terminals connection  |

## Features

### General


|                           |   |
|---------------------------|---|
| <b>Housing</b>            | Standard junction box with transparent lid.<br>10 knockout openings for M12 or M16 cable. |
| <b>Material</b>           | Box (PC/ABS) / Transparent lid (PC)   |
| <b>Dimensions (HxWxD)</b> | 150 x 110 x 70 mm   |
| <b>Weight</b>             | 420 g   |
| <b>Protection grade</b>   | IP55  |
| <b>Pollution degree</b>   | 2 (IEC 60664-1. Par. 4.6.2)   |



### Environmental

|                                  |                               |
|----------------------------------|-------------------------------|
| <b>Operating temperature</b>     | 0° to 50°C (-4°F to 122°F)    |
| <b>Storage temperature</b>       | -50° to 85°C (-58°F to 185°F) |
| <b>Humidity (not condensing)</b> | 20 to 90%                     |

### Compatibility and conformity

|  |   |
|--|---|
| <b>Electromagnetic compatibility (EMC) - immunity</b>  | EN 61000-6-2  |
| <b>Electromagnetic compatibility (EMC) - emissions</b> | EN 61000-6-3  |
| <b>Approvals</b>                                       |  |

### Power Supply

|  |              |
|--|--------------|
| <b>Power supply</b>                              | 230 VAC ±15% |
| <b>Max current consumption</b>                   | 3.2 VA       |
| <b>Max current on Lin-Lout / Nin-Nout bridge</b> | 10 Amp       |

## Dupline®

|                          |       |
|--------------------------|-------|
| Voltage                  | 8.2 V |
| Maximum Dupline® voltage | 10 V  |
| Minimum Dupline® voltage | 5.5 V |
| Maximum Dupline® current | 4 mA  |

## Input specifications

|                                      |                      |
|--------------------------------------|----------------------|
| Number of inputs                     | 4                    |
| Type                                 | Voltage-free contact |
| Input current                        | < 100 $\mu$ A        |
| Max. resistance of the close contact | 200 $\Omega$         |
| Cable length                         | < 20 m               |

## Outputs

|                        |  |
|------------------------|--|
| Number of outputs      | 2  |
| Type                   | SPST                                     |
| Max. switching voltage | AC: 250 VAC; DC: 30 VDC                  |
| Max. current load      | AC: 5 Amp (1250 VA); DC: 3 Amp (90 watt) |

## Terminal block

|                             |                               |
|-----------------------------|-------------------------------|
| Power supply in / out       | 4 spring terminals            |
| Dupline® bus                | 4 spring terminals            |
| Relay outputs               | 4 spring terminals            |
| Contact inputs              | 12 spring terminals           |
| Cross-section area          | Terminal: 2.5 mm <sup>2</sup> |
| Power for Load 1 and Load 2 | 4 spring terminals            |

## Dielectrical strength

|                                      |  |
|--------------------------------------|--|
| Power supply to Input                | 4 KVAC for 1 min., 6 KV impulse 1.2 / 50 $\mu$ S |
| Power supply to Dupline®             |  |
| Dupline® to input                    |  |
| Dupline® to output                   |  |
| Input to output                      |  |
| Power supply to output               |  |
| Inputs not insulated from each other |  |

## Insulation

### Insulation between power supply and output.

If the installer uses the external bridge Lin - Lm / Nin - Nm, the same power supply for module and loads must be used. However, in this case the insulation (power supply to output) is lost.

## Mode of operation

The SBB4I2O230T6 monitors the contact status giving the indication of the damper blade position. The module is programmable by using the UWP 3.0 configuration tool and the inputs can be individually set as NO or NC, according to the specifications of the fire damper unit. The user can also program the status of the output relays (NO or NC) when the Dupline bus is faulty or missing. Please refer to the UWP 3.0 Tool manual for further details about the configuration.

## Connection Diagrams

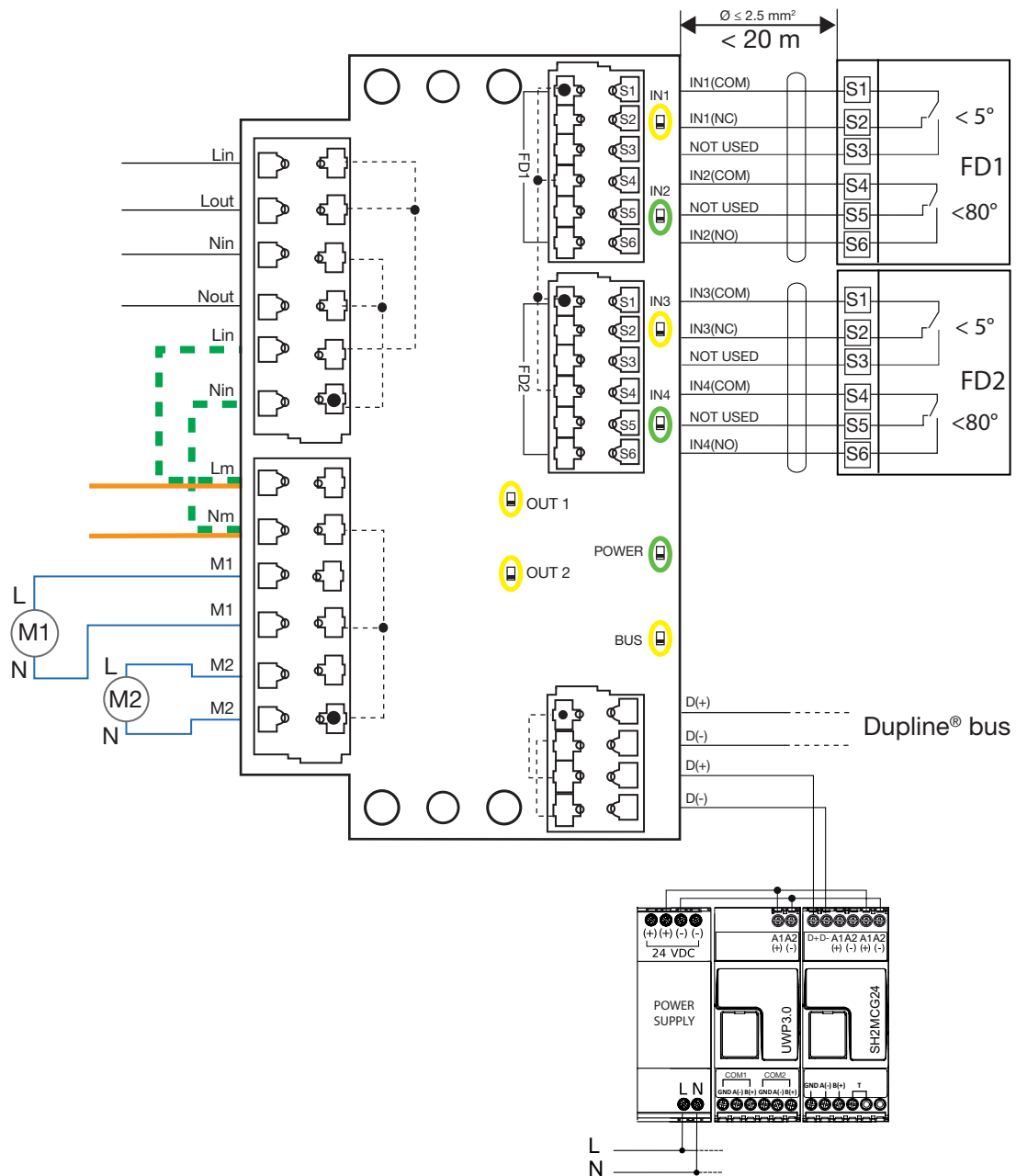


Fig. 1 Example of two fire dampers connection

The terminals S1 & S2 (NC) are used to monitor the contact for the CLOSED position of the fire damper blade. The terminals S4 & S6 (NO) are used to monitor the contact for the OPEN position of the fire damper blade. The terminals S3 and S5 are available for connecting the unused wires.



## References

### Further reading

| Information               | Document           | Where to find it   |
|---------------------------|--------------------|--|
| UWP3.0 installation guide | System manual      | <a href="http://www.productselection.net/MANUALS/UK/uwp3.0_system.pdf">www.productselection.net/MANUALS/UK/uwp3.0_system.pdf</a> |
| UWP3.0 software manual    | UWP3.0 tool manual | <a href="http://www.productselection.net/MANUALS/UK/uwp3.0_tool.pdf">www.productselection.net/MANUALS/UK/uwp3.0_tool.pdf</a>     |

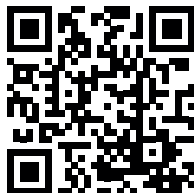
### Order code



**SBB4I2O230T6**

### CARLO GAVAZZI compatible components

| Purpose       | Component name/code  | Notes |
|---------------|----------------------|-------|
| Controller    | Sx2WEB24 / UWP 3.0   |       |
| Bus generator | SH2MCG24 /SBP2MCG324 |       |



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