

# SBB4I2O230



## Fire damper I/O Module



### Benefits

- Ready-to-use junction box housing for fast and easy decentral installation
- One I/O-module can control and monitor two fire dampers
- Fast and easy wiring to the main controller through the Dupline® bus (free topology and long distance capability)
- Up to 60 fire dampers on one Dupline® bus segment
- The system can be interfaced to the main controller via BACnet or Modbus

### Description

The module SBB4I2O230 is an I/O module for monitoring and control of two fire dampers.

The module has 4 contact inputs for position feedback and 2 relay outputs for control of fire damper actuators.

The I/O module is implemented in a robust junction box for a decentralized installation near the two fire dampers.

The I/O module is part of the Smart building product range.

Several I/O modules can be multi-dropped via the same Dupline® 2-wire bus and thus the wiring to the controller can be significantly simplified.

### Applications

- Control and monitoring of fire damper

### Main functions

- Robust I/O module in junction box housing
- 4 x contact inputs (voltage free)
- 2+SPST relay output (230VAC/3A)
- Smart Dupline® protocol
- 230 VAC power supply
- Easy installation

## Features

### Power Supply

<b>Power supply</b>	230 VAC $\pm$ 15%	
<b>Max current consumption</b>	3.2 VA	
<b>Max current on Lin-Lout / Nin-Nout Bridge</b>	10 Amp	(Internal bridge on PCB) See fig. 1

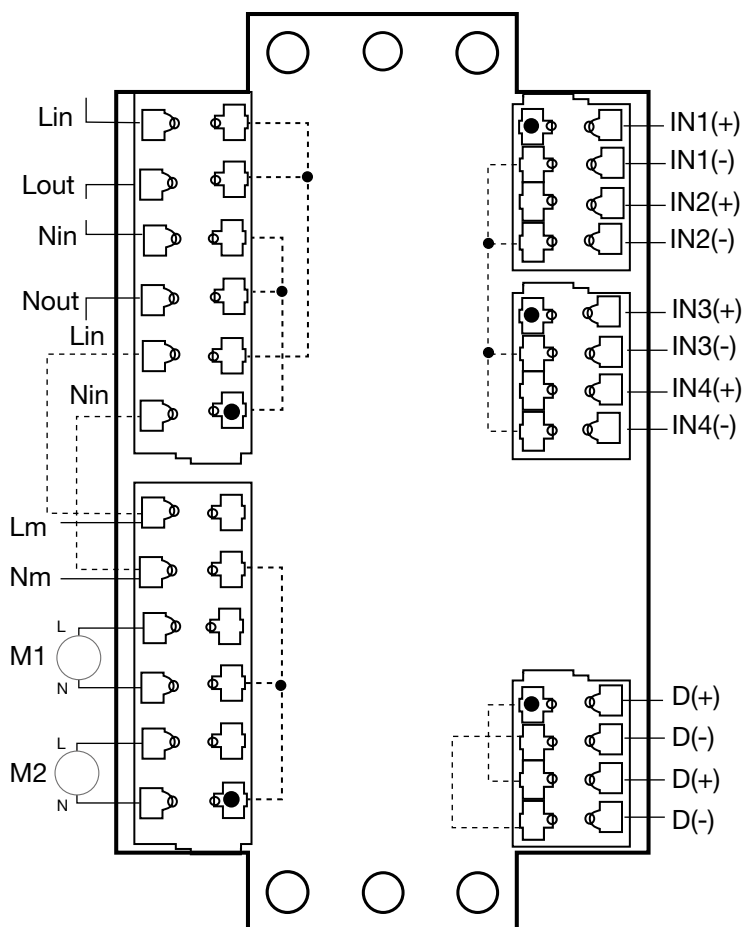


Fig. 1 Dashed lines indicate internal connection on the PCB. Max. 10 Amp is allowed.

### Dupline® bus

<b>Dupline® voltage rated</b>	8.2 V
<b>Min. Dupline® peak voltage</b>	4.5 V
<b>Dupline® Current consumption</b>	1.1 mA

## Inputs

Number of inputs	4
Type	Voltage-free contact
Cable length	< 20 m

## Outputs

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

## Indication

Power supply	Green LED
Bus OK	Yellow LED
Input OK	Yellow LED x 4
Output OK	Yellow LED x 4

The input LEDs indicate when the input is active (taking care of the NO/NC configuration)

The output LEDs indicate when the relay is active and closed (NC) (According to the NO/NC configuration)

## Environmental

Pollution degree	2 (IEC 60664-1. Par. 4.6.2)
Operating temperature	0° to 50°C (-4°F to 122°F)
Storage temperature	-50° to 85°C (-58°F to 185°F)
Humidity	20 to 90% (not condensing)
Degree of protection	IP55

## EMC

Immunity	EN61000-6-2
Emission	EN61000-6-3

# Mechanics

## Housing

<b>Type</b>	Standard junction box with 10 knockout openings for M12 or M16 cable
<b>Dimensions (HxWxD)</b>	150 x 110 x 70 mm

## Terminal block

<b>Power supply in / out</b>	4 x Spring terminal
<b>Dupline® bus in / out</b>	4 x Spring terminal
<b>Relay inputs</b>	4 x Spring terminal
<b>Contact inputs</b>	8 x Spring terminal
<b>Cross-section area</b>	Terminal: 2.5 mm <sup>2</sup>
<b>Power for Motor 1 and Motor 2</b>	4 x Spring terminal

## Dielectrical strength

<b>Power supply to Input</b>	4 KVAC for 1 min., 6 KV impulse 1.2 / 50 µS
<b>Power supply to Dupline®</b>	
<b>Dupline® to input</b>	
<b>Dupline® to output</b>	
<b>Input to output</b>	
<b>Power supply to output</b>	
<b>Inputs not insulated from each other</b>	

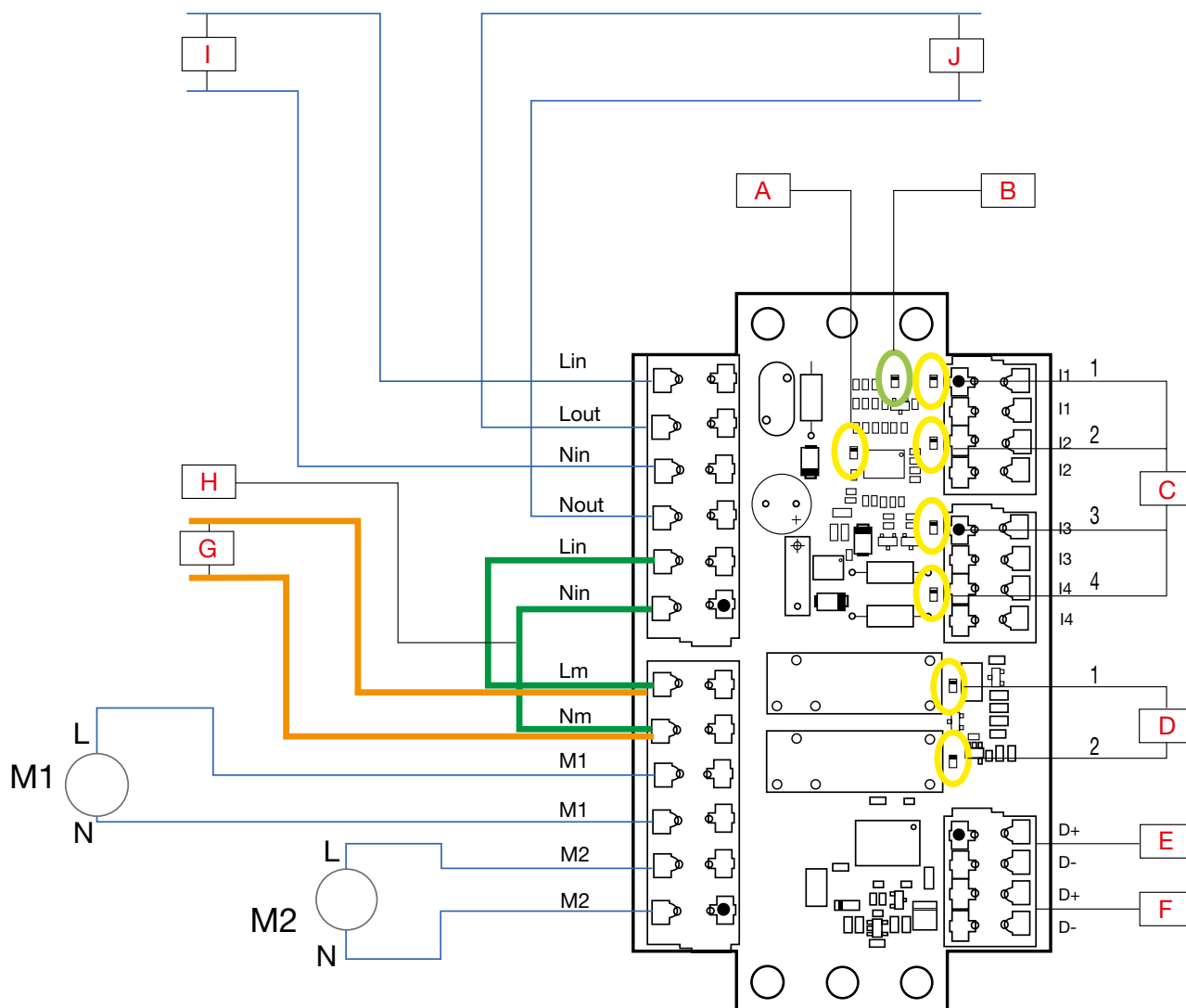
## Isolation

Isolation between Power supply and output

If the installer uses the external bridge Lin – Lm / Nin – Nm, the same power supply for PCB and motors must be used.

However, in this case the isolation (Power supply to output) is lost.

## Wiring

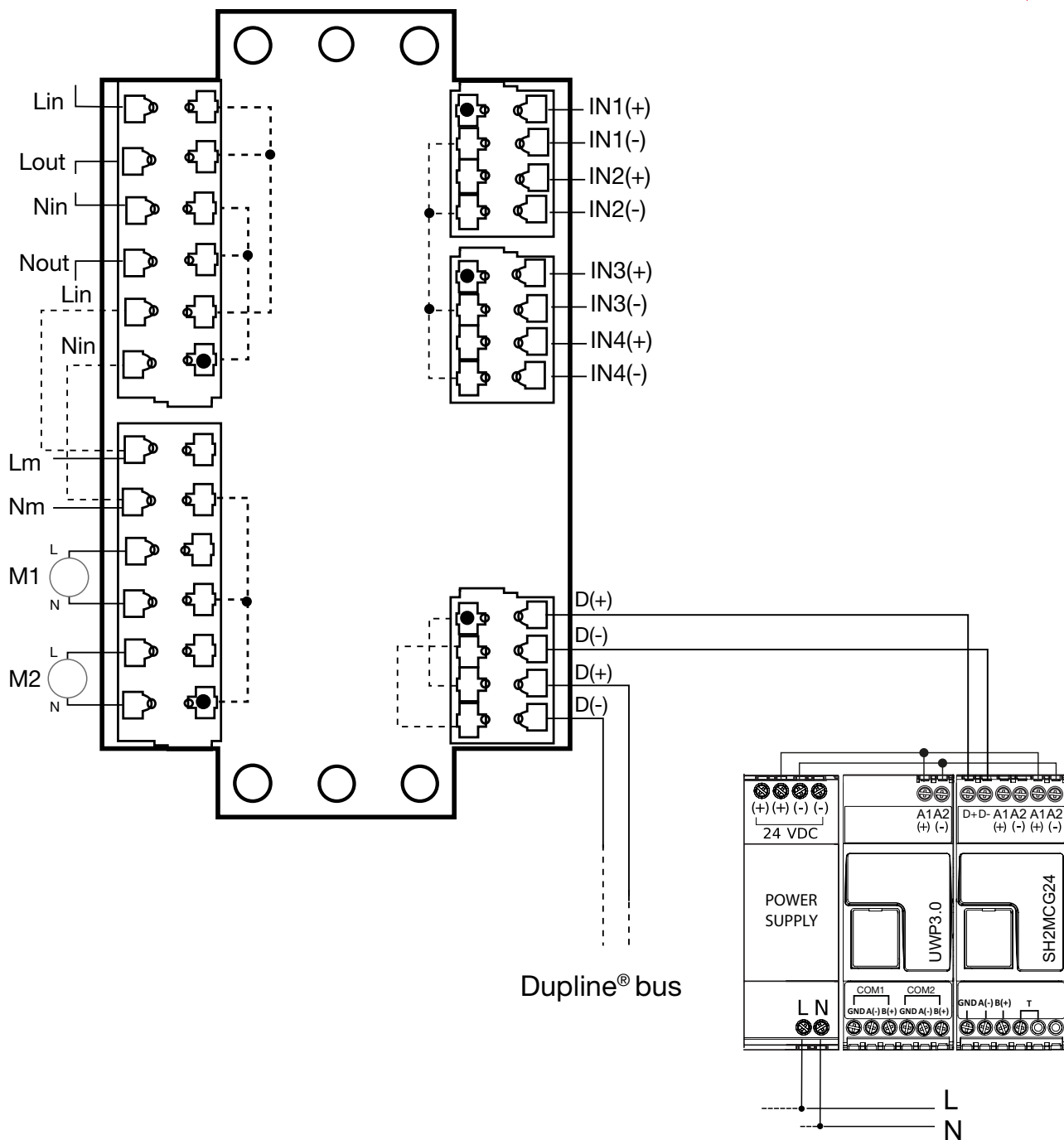


<b>A</b>	Bus OK	<b>F</b>	Dupline® OUT
<b>B</b>	Power OK	<b>G</b>	External power to the motors <sup>1</sup>
<b>C</b>	IN	<b>H</b>	Green bridge <sup>2</sup>
<b>D</b>	OUT	<b>I</b>	Power supply 230 VAC
<b>E</b>	Dupline® IN	<b>J</b>	230 VAC OUT

## Note:

<sup>1</sup> Do not use if green bridge is used.

<sup>2</sup> If the green bridge is used, the motors are powered from the module.



## Compatibility and conformity

### Approvals

CE-marking		
cULus		According to UL 60950

## Programming

The fire damper module is programmable by using the configuration tool

Input	N.O. (Default)
	N.C.

Filter ON	From	To
Input	0 ms*	1 s (step of 16 ms)

\*(Default filter ON input 0 s)

Output	N.O.
	N.C.
Configuration state	N.O.
	N.C.

## Mode of operation

The SBB4I2O230 is a 4 inputs and 2 SPST outputs module designed for monitoring and controlling of two fire dampers.

The I/O module is part of the Smart Building product range, and several I/O modules can be multi-dropped via the same Dupline® 2-wire bus whereby the wiring to the controller is significantly simplified.

The module must be programmed before use by means of the UWP 3.0 tool.

The output relays can be powered with 230 VAC by the module itself or by external power supply.

See relay specification.

## References

### Product selection key



### SBB4I2O230

Code	Options	Description
SB	-	Smart building
B	-	Box (Housing)
4I	-	4 inputs
2O	-	2 outputs
230	-	Power supply



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