## 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<sup>®</sup> bus (free topology and long distance capability)
- Up to 60 fire dampers on one Dupline<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> protocol
- 230 VAC power supply
- Easy installation



## **Features**

**Power Supply** 



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

## Dupline<sup>®</sup> bus

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



## Inputs

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

## Outputs

Number of outputs	2	
Туре	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 2

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



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



## **Mechanics**



Туре	Standard junction box with 10 knockout openings for M12 or M16 cable	
Dimensions (HxWxD)	150 x 110 x 70 mm	

#### **Terminal block**

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

## **Dielectrical strength**

Power supply to Input	
Power supply to Dupline <sup>®</sup>	
Dupline <sup>®</sup> to input	
Dupline <sup>®</sup> to output	4 KVAC for 1 min., 6 KV impulse 1.2 / 50 μS
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 PCB and motors must be used.

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





Α	Bus OK	F	Dupline <sup>®</sup> OUT
В	Power OK	G External power to the motors <sup>1</sup>	
С	IN	Н	Green bridge <sup>2</sup>
D	OUT	I	Power supply 230 VAC
E	Dupline <sup>®</sup> IN	J	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	CE	
cRUus		According to UL 60950 <b>UL notes:</b> a readily accessible disconnect device shall be incorporated in the building installation wiring.

## Programming

The fire damper module is programmable by using the configuration tool

Input	N.O. (Default)		
input	N.C.		
Filter ON	From	То	
Input	0 ms*	1 s (step of 16 ms)	

\*(Default filter ON input 0 s)

Output	N.O.
Output	N.C.
Configuration state	N.O.
Configuration state	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<sup>®</sup> 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
В		Box (Housing)
41		4 inputs
20		2 outputs
230		Power supply



COPYRIGHT ©2015 Content subject to change. Download the PDF: www.productselection.net

## **Mouser Electronics**

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Carlo Gavazzi: SBB4I2O230