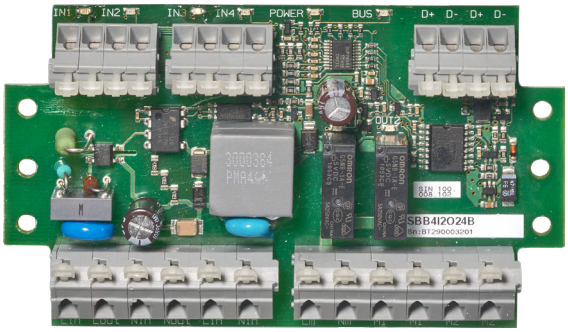
SBB4I2O24B

Fire damper I/O module



Benefits

- Ready-to-use open printed circuit board with brackets for DIN-rail mounting
- 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 SBB4I2O24B 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 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

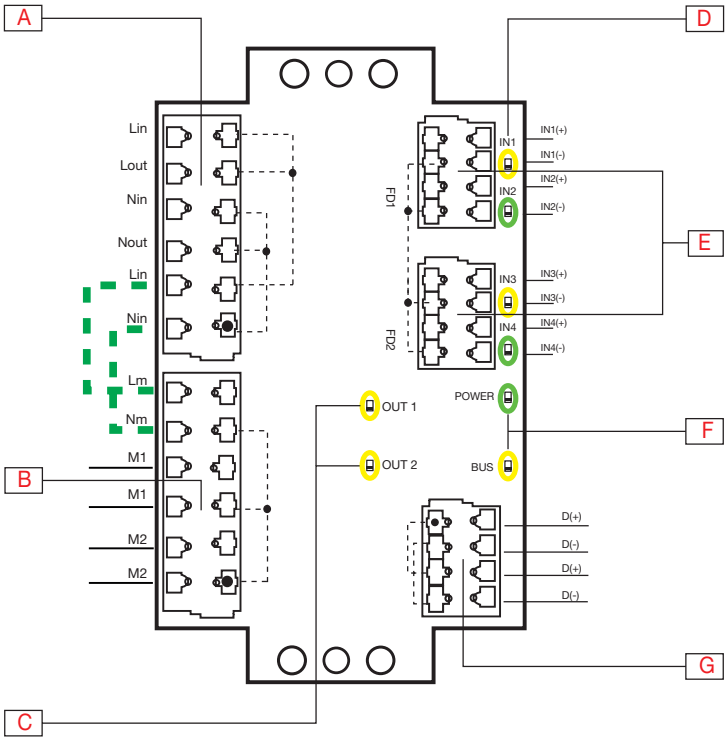
- Control and monitoring of fire dampers

Main features

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

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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 ON: Output closed OFF: Output open
D	Yellow LED (IN1,IN3) Green LED (IN2,IN4)	Input contact status ON: Input closed OFF: Input open
E	Input terminals	Fire damper terminals connection
F	Green LED (POWER)	ON: Power supply ON OFF: Power supply OFF
	Yellow LED (BUS)	ON: Communication on the Dupline® bus OFF: No communication on the Dupline® bus
G	Dupline® terminals	Dupline® terminals connection

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Features

General

Housing	Open printed circuit board with brackets for DIN-rail mounting
Dimensions (HxWxD)	120 x 70 x 39 mm
Weight	120 g
Pollution degree	2 (IEC 60664-1. Par. 4.6.2)

Environmental

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

Compatibility and conformity

Electromagnetic compatibility (EMC) - immunity	EN 61000-6-2
Electromagnetic compatibility (EMC) - emissions	EN 61000-6-3
Approvals	CE

Power Supply

Power supply	AC: 24 VAC ±15% DC: 24 VDC ±20%
Max current consumption	AC: 3.2 VA DC: 3.2 W
Max current on Lin-Lout / Nin-Nout bridge	10 Amp

Dupline®

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

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Input specifications

Number of inputs	4
Type	Voltage-free contact
Input current	< 100 µA
Max. resistance of the close contact	200 Ω
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	8 spring terminals
Cross-section area	Terminal: 2.5 mm^2
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 µS
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.

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Mode of operation

The SBB4I2O24B 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.

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Connection Diagrams

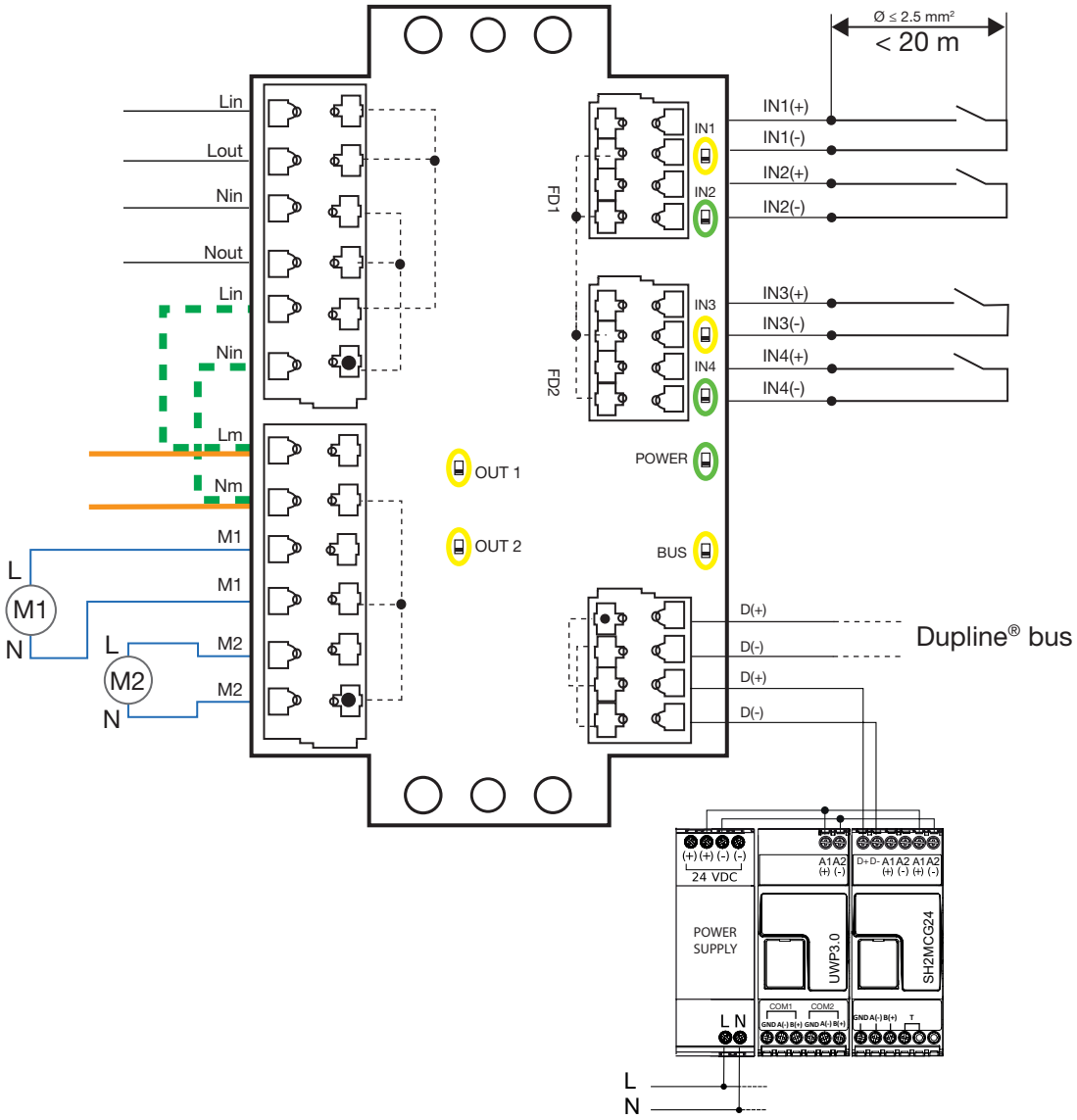


Fig. 1 *Example of two fire dampers connection*

Note: External bridge Lin - Lm / Nin - Nm
The external bridge can be used ONLY if the same power supply is used for module and loads (24 VAC or 24 VDC).
Do not use it if the loads are powered by 230 VAC.

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References

Further reading

Information	Document	Where to find it
UWP3.0 installation guide	System manual	www.productselection.net/MANUALS/UK/uwp3.0_system.pdf
UWP3.0 software manual	UWP3.0 tool manual	www.productselection.net/MANUALS/UK/uwp3.0_tool.pdf

Order code

SBB4I2O24B

CARLO GAVAZZI compatible components

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

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