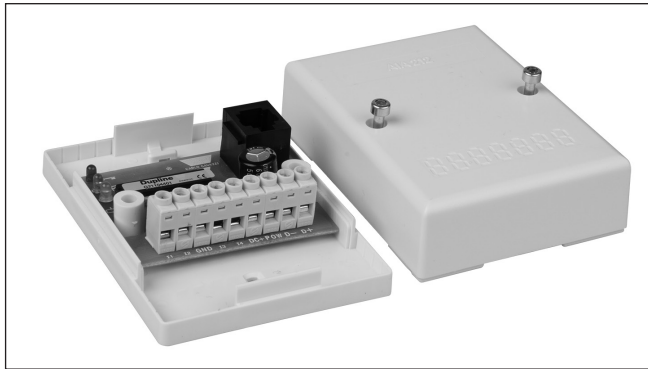# Dupline®
Input module
Type G 2110 4401

CARLO GAVAZZI

- 4-channel transmitter + 1-ch. Receiver (Built-in red LED output)
- 4 contact or NPN transistor inputs
- LED-indications for supply and Dupline® carrier
- LED-indication for armed when using Dupline® supply
- 3-wire system with Dupline® and supply of module through G 3485 0000, G 3496 000X or G 2196 000X
- Channel coding by GAP 1605
- Open PCB with terminal connection
- Bracket for DIN-rail mounting available

Product Description

Dupline® input module with 4 contact/NPN transistor inputs, specially designed as a part of the Dupline® alarm concept for contact monitoring. The module can be used in connection with G 2196 000X, G3496 000X or G 3485 0000, which have

Dupline® pulse controlled output. The module offers installer-friendly mounting and reliable operation and can be installed and maintained without the need for special tools or programming knowledge.

Ordering Key   G 2110 4401 700

Type: Dupline®
Open PCB
Input Module
Number of Inputs
Input Type
DC Supply

Type Selection

Supply	Ordering no. Contacts/NPN transistors
10-30 VDC or supplied by Dupline®	G 2110 4401 700

Input Specifications

Inputs	4 contact or NPN-transistor
Open loop voltage	8.0 VDC
Open loop voltage	Dupline® supplied 5,3-7,6 VDC
Short-circuit current	≤ 100 µA
Input voltage signal "1"	≤ 1 V
Input voltage signal "0"	≥ 1.6 V
Contact resistance	< 1 kΩ
Cable length	< 3 m
Response time	1 pulse train (156 ms @ 128 channels)

Supply Specifications

3-wire supply specifications	
Power supply DC types	Overvoltage cat III (IEC 60664)
Rated operational voltage (VDD$_{in}$)	10-30 VDC (ripple included)
Ripple	≤ 3 V
Reverse polarity protection	Yes
Current consumption	≤ 15 mA + load on DC+
Max. load on DC+	≤ 250 mA
Inrush current	≤ 1 A
Power dissipation	≤ 0.5 W
Transient protection voltage	800 V
Dieelectric voltage:	
Supply – Dupline®	None
Supply – Inputs	None
Dupline® supply specifications	
Current consumption	≤ 2 mA

General Specifications

Power ON delay	Typ. 2 s
Indication for	
(only 3-wire applications)	(No indication when supplied by Dupline®)
Supply ON	LED, green
Dupline® carrier	LED, yellow
Armed	LED, red

Environment	
Operating temperature	-20 to +50°C (-4 to +122°F)
Storage temperature	-50 to +85°C (-58 to +185°F)
Humidity (non-condensing)	20 – 80%
Mechanical resistance	
Shock	15 G (11 ms)
Vibration	2 G (6 to 55 Hz)
Dimensions (BxHxD)	65.5 x 88.5 x 29 mm
Weight	75 g

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Mode of Operation

The module uses only 2 (when Dupline®-supplied) or 3 wires for the communication and the DC supply, i.e. the "common" of the communication signal is the same as the "minus" of the supply. In order to achieve the noise immunity stated in the datasheet, the DC-supply must be applied to the system through the Master Modules G 2196 000X 700, G 3496 000X 700 or the G 3485 0000 700. The Master Module also contains the functions of a channel generator and an RS 485 communication interface (please refer to the datasheet for G 2196/G 3496 … for details) to the alarm controller.

Each signal input has its individual address assigned to it by means of the coding unit GAP 1605 (please refer to the datasheet for GAP 1605 for details). The ON/OFF-signal that is applied to the input is associated to the address given to that input. Any output of an output-unit that is given the identical address will now follow that input-signal and switch its output-signal ON or OFF. This means that a signal which is input at one location may be output wherever required and as many times as required.

If the input-unit is connected only to Dupline® (no 3-wire) it still works, but DC out and the line and power LED are disabled. The built-in "Alarm Armed" red LED is set by the channel coded on I/O5. The channel is typically set when turning on the alarm surveillance.

Pin Allocation

Terminal	Input/Output
Dup	Dupline® Signal
Gnd	GND
Pow	Supply In
DC+	DC Out
I4	Input 4
I3	Input 3
GND	GND
I2	Input 2
I1	Input 1

Wiring Diagram

Specifications are subject to change without notice (29.01.2015)