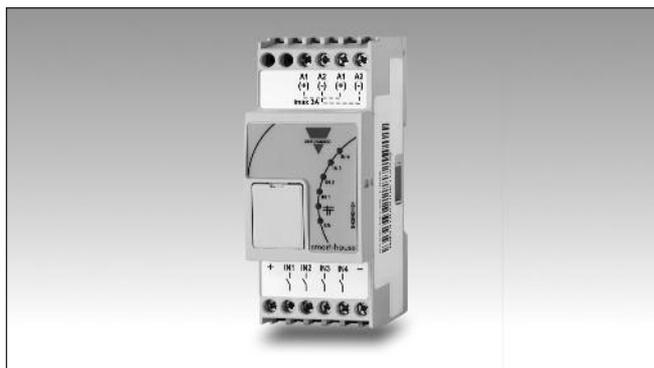


Smart Dupline® Cabinet module for digital input Type SH2INDI424

CARLO GAVAZZI



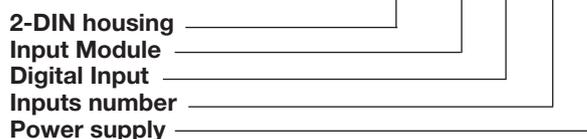
- 4 digital inputs NPN, PNP, voltage free
- The 4 inputs can be configured as contact or counter
- DC power supply
- 2-DIN housing
- LED indication for power supply, Dupline® bus, input activated
- Connection to other cabinet modules via local bus

Product Description

This is an input module for 4 NPN/PNP/voltage free configurable inputs that can also be used as counters of pulses. The configuration of the type of input, digital or counter, is done via the configuration tool and the counted values are stored in the flash memory. The status of every input is indicated by the relevant LED. The 4 inputs are galvanically insulated from the Dupline® bus.

Ordering Key

SH2 IN DI 4 24



Type Selection

Housing	Mounting	Input Number	Input Type	Supply: 15 to 30 VDC
2 DIN	DIN-rail	4	Voltage free, NPN, PNP, Counter	SH2INDI424

Supply Specifications

Power supply	Overvoltage cat. II (IEC 60664-1, par. 4.3.3.2) 15 to 24 VDC ±20%
Rated operational voltage	
Operational voltage range	10 to 30 VDC (ripple included)
Rated operational power	400 mW
Protection for reverse polarity	Yes
Connection	2xA1 (+) and 2xA2 (-) (2 pairs of terminals internally connected Max 3A)
Power on delay	Typ. 4 s
Power off delay	≤ 1 s

Dupline® Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	5.5 V
Maximum Dupline® current	1.1 mA

The Dupline® bus is present on the internal bus (connectors on the side of the housing).

Thanks to the internal bus, the modules can be connected one next to the other without the need of wiring the Dupline® bus. See "Wiring diagram".

Input Specifications

Input	4 configurable voltage free, NPN, or PNP inputs	Counting	Frequency (max) 0 to 1Khz
Cable length	50 meters @ 0.5m ² cable	Rated values	0 to 99999999 with roll over
Vmax	5 VDC	Max. resistance for the measurement of the close contact	50 Ω
I _{max}	1 mA		
Wiring	(+), I1, I2, I3, I4, (-)		

General Specifications

Installation category	Cat. II	Connection	
Dielectric strength Power supply to Dupline®	500V pulse 1.2/50µS 500V AC for 1 minute	Terminal	12 screw-type max. 1.5 mm ²
Power supply to input and Dupline® to input	6 kV pulse 1.2/50µs 4 kV AC for 1 minute	Cable cross-section area	0.4 Nm / 0.8 Nm
Address assignment	Automatic: the controller recognises the module through the SIN (Specific Identification Number) that has to be inserted in the SH tool	Tightening torque	
Environment		Housing	NORYL
Degree of protection		Dimensions	2 DIN module
Front	IP 50	Material	Noryl
Screw terminal	IP 20	Weight	150 g
Pollution degree	2 (IEC 60664-1, par. 4.6.2)	Approvals	cULus, according to UL60950
Operating temperature	-20° to +50°C (-4° to 122°F)	CE Marking	Yes
Storage temperature	-50° to +85°C (-58° to 185°F)	EMC	
Humidity (non-condensing)	20 to 80% RH	Immunity	EN 61000-6-2
LED's indication		- Electrostatic discharge	EN 61000-4-2
Power LED	1 green	- Radiated radiofrequency	EN 61000-4-3
Dupline® LED	1 yellow	- Burst immunity	EN 61000-4-4
Input status	4 red	- Surge	EN 61000-4-5
		- Conducted radio frequency	EN 61000-4-6
		- Power frequency magnetic fields	EN 61000-4-8
		- Voltage dips, variations, interruptions	EN 61000-4-11
		Emission	EN 61000-6-3
		- Conducted and radiated emissions	CISPR 22 (EN55022), cl. B
		- Conducted emissions	CISPR 16-2-1 (EN55016-2-1)
		- Radiated emissions	CISPR 16-2-3 (EN55016-2-3)

Mode of Operation

The SH2INDI424 has 4 inputs that can be used as digital inputs or as pulse counters. The selection between the two is done via the SH tool. Each input has

its own counting value that is stored into the flash memory of the module. This value is read by the controller SH2WEB24 and then used as defined in the SH tool.

Coding/Addressing

No addressing is needed since the module is provided with a specific identification number (SIN): the user has only to insert the SIN num-

ber in the configuration tool when creating the system configuration.

Used channels: 4 input channels.

LEDs Indication

Green LED: Power status.

ON: supply ON
OFF: supply OFF.

Yellow LED: Dupline LED

If the Dupline® bus is working properly, it is always ON. If there is a fault on the bus, it will be flashing. It is OFF, if the bus is OFF or not connected.

Red LEDs: Input status

In1: Input activated.

This LED is ON if input I1 is ON.

In2: Input activated.

This LED is ON if input I2 is ON.

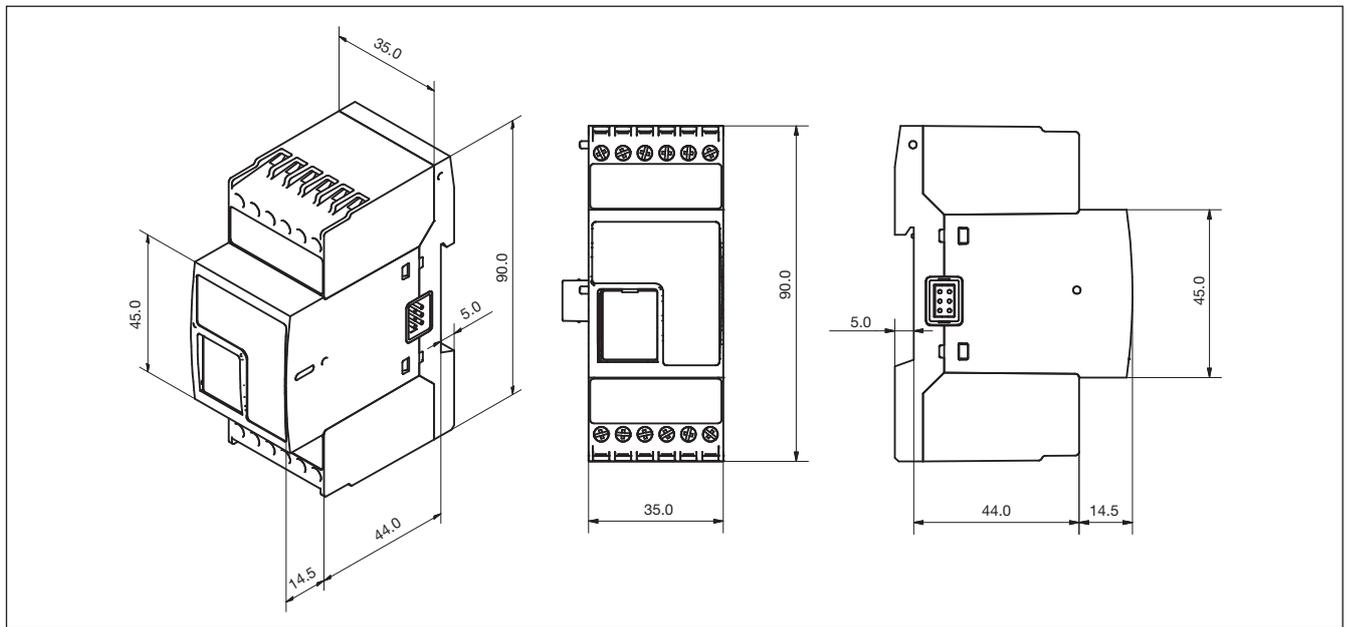
In3: Input activated.

This LED is ON if input I3 is ON.

In4: Input activated.

This LED is ON if input I4 is ON.

Dimensions



Wiring Diagrams

