

# Smart Dupline® Cabinet module for digital input Type SH2INDI424

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- 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 count-

ed 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**

2-DIN housing  
Input Module  
Digital Input  
Inputs number  
Power supply

## Type Selection

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

## Supply Specifications

<b>Power supply</b>	Overvoltage cat. II (IEC 60664-1, par. 4.3.3.2)
Rated operational voltage	15 to 24 VDC ±20%
<b>Operational voltage range</b>	10 to 30 VDC (ripple included)
<b>Rated operational power</b>	600 mW
<b>Protection for reverse polarity</b>	Yes
<b>Connection</b>	2xA1 (+) and 2xA2 (-) (2 pairs of terminals internally connected Max 3A)
<b>Power on delay</b>	Typ. 4 s
<b>Power off delay</b>	≤ 1 s

## Dupline® Specifications

<b>Voltage</b>	8.2 V
<b>Maximum Dupline® voltage</b>	10 V
<b>Minimum Dupline® voltage</b>	5.5 V
<b>Maximum Dupline® current</b>	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

<b>Input</b>	4 configurable voltage free, NPN, or PNP inputs	<b>Counting</b>	Frequency (max)	0 to 1Khz
Cable length	50 meters @ 0.5m <sup>2</sup> cable		Rated values	0 to 99999999 with roll over
V <sub>max</sub>	6 VDC	<b>Max. resistance for the measurement of the close contact</b>		50 Ω
I <sub>max</sub>	5 mA			
Wiring	(+), I1, I2, I3, I4, (-)			



## General Specifications

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

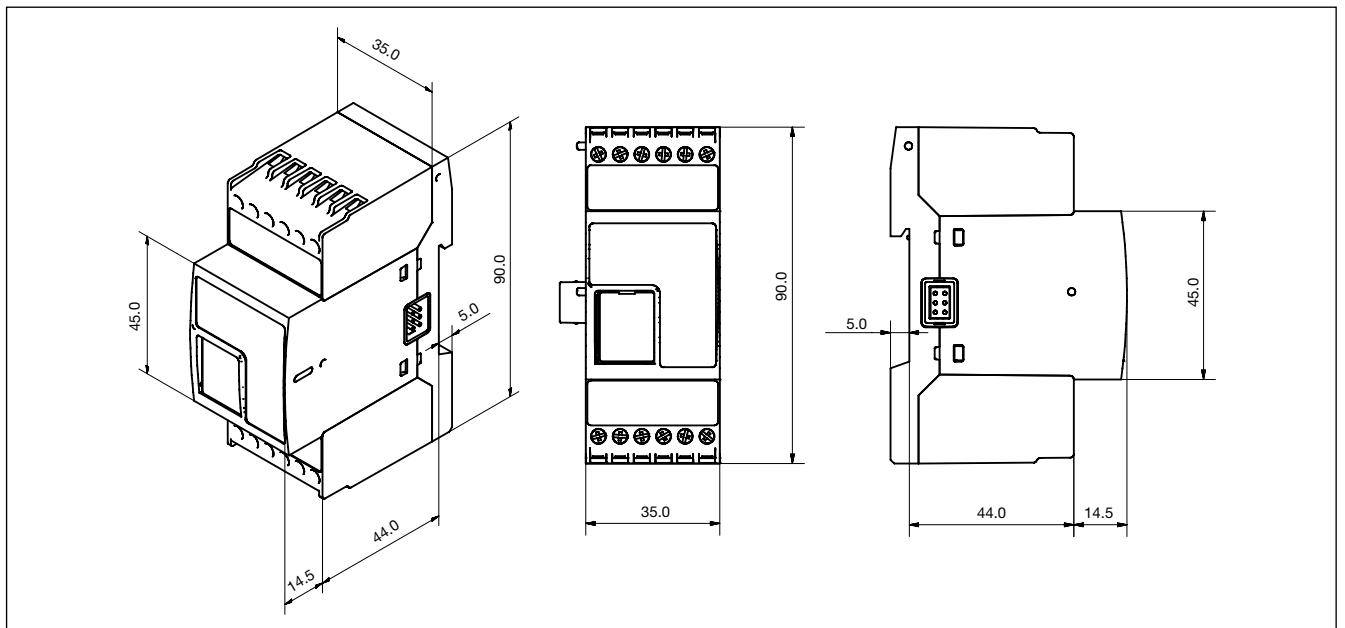
### In3: Input activated.

This LED is ON if input I3 is ON.

### In4: Input activated.

This LED is ON if input I4 is ON.

## Dimensions



## Wiring Diagrams

