

# SIN-8



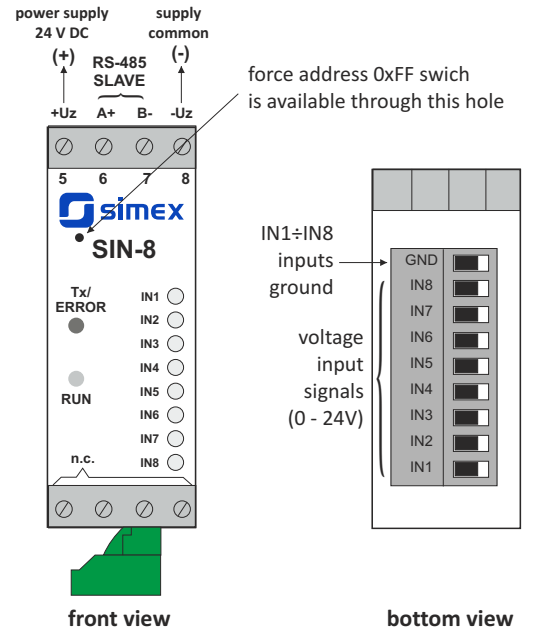
- binary inputs module
- 8 independent voltage inputs
- RS-485 / Modbus RTU
- galvanic separation of the digital inputs from the module supply voltages
- internal digital filter
- signalling of inputs logic status and RS-485
- LEDs for module operation and Modbus transmission signalling
- input signals connected by means of the socket-plug connectors

Module type **SIN-8** allows to monitor 8 binary voltage inputs via the RS-485 connection. It finds application in distributed control and visualization systems. Standard Modbus protocol transmission functions make device registers (address, state of inputs, device ID). All **SIN-8** operating functions, available via the RS-485, can be implemented with any typical visualization software or, for instance, with a suitably **MultiCon** controller. Registers state actualisation occurs only if input signal have fulfil some time restrictions. These restrictions depend on settings of internal digital filter implemented in firmware. Filter allows to eliminate signal oscillations corresponding to contacts bouncing (of mechanical sensors). Filter is factory switched off.

## TECHNICAL DATA

Power supply	10V ÷ 30V DC; external fuse (required): T - type, max. 1 A
Current consumption	20 mA typical
Inputs	8 independent voltage inputs
Input levels	low state: 0V (0 ÷ 3V); high state: 24V (15 ÷ 24V)
Galvanic separation	all 8 inputs are galvanically isolated from module supply and RS-485 interface
Communication interface	RS-485, 1200 ÷ 115200 bit/s, 8N1, Modbus RTU
Number of modules	max. 128 in a single network
Data memory	non-volatile memory, EEPROM type
Operating temperature	0°C ÷ +50°C (standard), -20°C ÷ +50°C (option)
Storage temperature	-10°C ÷ +70°C (standard), -20°C ÷ +70°C (with option <b>08</b> )
Humidity	max. 90%, non-condensing
Protection class	IP 20 (housing and connection clips)
Case	on the 35 mm strip; material: ABS
Dimensions	101 x 22,5 x 80 mm
Weight	120 g max.

## TERMINALS CONNECTION



## CONNECTION AND PRINCIPLE OF OPERATION

Connect the supply voltage to the module (+Uz, -Uz, typically 24V DC) and two wires RS-485 (A+, B-) communication interface. Voltage Inputs are placed on bottom side of the module (look: bottom view).

Directly after power on the device is signalling its normal operation flashing green LED, marked „RUN“ (about 2 times/sec.). Short flashes of LED marked “TX/ERROR” signalize activity of RS-485 interface (data flow between module and Master device) and permanent light of this LED means malfunction of the device.

Green LEDs marked “IN1” - “IN8” signalize active state on particular binary inputs (logic HIGH state). When particular input is in active state then corresponding register value is 01h, otherwise its value is 00h.

## ORDERING

### SIN-8-XX1

**options:**

- 00** : no options
- 08** : operating temp. -20°C ÷ +50°C

