

# SM2 MODULE OF ANALOG INPUTS

**FEATURES:**
**MOD**  
**BUS**
**eCon**  
software


- Conversion of standard signals and temperature into RS-485 / MODBUS in 4 channels
- Programmable measurement characteristic
- Fixing on a TS35 rail
- Mathematical functions realized between channels and on channels
- 2 programmable OC outputs
- Full galvanic separation between inputs.

**INPUTS:**

0...20 mA

4...20 mA

0...10 V

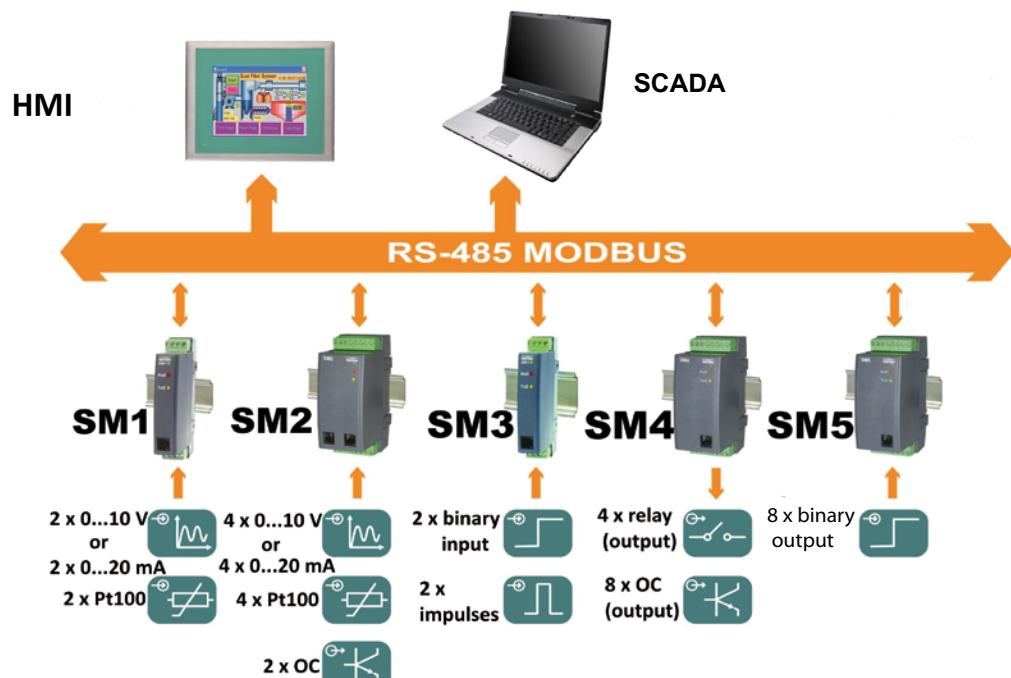

**OUTPUTS:**

RS 485


**GALVANIC ISOLATION:**


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**EXAMPLE OF APPLICATION**

**EXTERNAL FEATURES**

Overall dimensions	45 x 120 x 100 mm	
Weight	< 0.3 kg	
Protection grade	IP40	from terminal side: IP20

**DIGITAL INTERFACE**

Interface type	Transmission protocol	Modes	Baud rate
RS-485	Modbus RTU	8N2,8E1,8O1,8N1	2400; 4800; 9600; 19.2 k;
	Modbus ASCII	8N1, 7E1, 7O1	38.4 k; 57.6 k; 115 k bit/s

**INPUTS**

Input type	Range	Error
Temperature	-200...850 °C	0.1%
Current	0/4...20 mA	0.1%
Voltage	0...10 V	0.1%
Resistance	0...400 Ω	0.1%

**OUTPUTS**

Output type	Properties	Remarks
Digital interface	RS-485	Modbus ASCII/RTU

## RATED OPERATING CONDITIONS

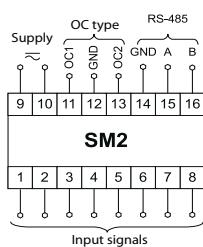
Supply voltage	85...253 V a.c./d.c. (40...400 Hz) or d.c. 20...50 V a.c./d.c. (40...400 Hz) or d.c.	Input power: ≤ 4 VA
Temperature	ambient: -10...+55°C	
Relative humidity	< 95%	
Operating position	on a TS35 rail	
External magnetic field	< 400 A/m	

## SAFETY AND COMPABILITY REQUIREMENTS

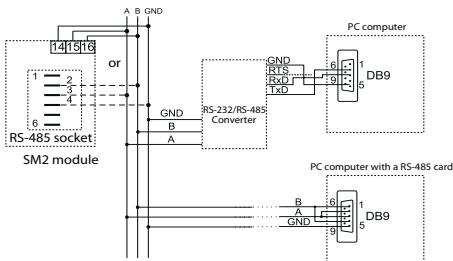
Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emissions	acc. to EN 61000-6-4
Isolation between circuits		acc. to EN 61010-1
Pollution level	2	
Installation category	III	
Maximum phase-to-earth operating voltage	Supply: 300 V, input 50 V, Output: 50 V	
Altitude a.s.l.	2000 m	

## CONNECTION DIAGRAMS

### Connection way of external signals



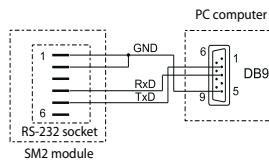
### Connection way of the RS-485 interface



### Connection way of input signals

Connection way	Measured signal	
	4 voltage inputs	4 current inputs
4 voltage inputs	4 x 0...10 V 	4 x 0/4...20 mA 
2 voltage inputs + 2 current inputs	2 x 0...10 V 	2 x 0/4...20 mA 
4 RTD inputs in a 2-wire system or resistance measurement		

### Connection way of the RS-232 interface



## ORDERING

### Module of analog inputs - SM2

XX X X

#### Input signal :

4 voltage inputs	0...10 V	00
4 current inputs	0/4...20 mA	01
2 voltage inputs + 2 current inputs	0...10 V+0/4...20 mA	02
4 resistance inputs 0...400 Ω or Pt100		03

#### Supply:

85...253 V a.c./d.c.	1
20...50 V a.c./d.c.	2

#### Acceptance tests:

without additional quality inspection requirements	8
with an extra quality inspection certificate	7
other quality requirements *	X

\* after agreeing with the manufacturer

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[www.lumel.com.pl](http://www.lumel.com.pl)

#### Ordering example:

The code **SM2 - 01 1 8** means:  
**SM2** - module of SM2 type

**01** - 4 current inputs:  
0/4...20 mA

**1** - supply: 85...253 V a.c./d.c.

**8** - without additional quality inspection requirements

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