

SM1 MODULE OF ANALOG INPUTS

FEATURES:

MOD BUS eCon software



- Conversion of standard signals and temperature into RS485 / Modbus in 2 channels
- Programmable measurement characteristic
- Fixing on a TS35 rail
- Mathematical functions realized between channels and on channels.

INPUTS:

0...20 mA 4...20 mA

0...10 V



OUTPUTS:

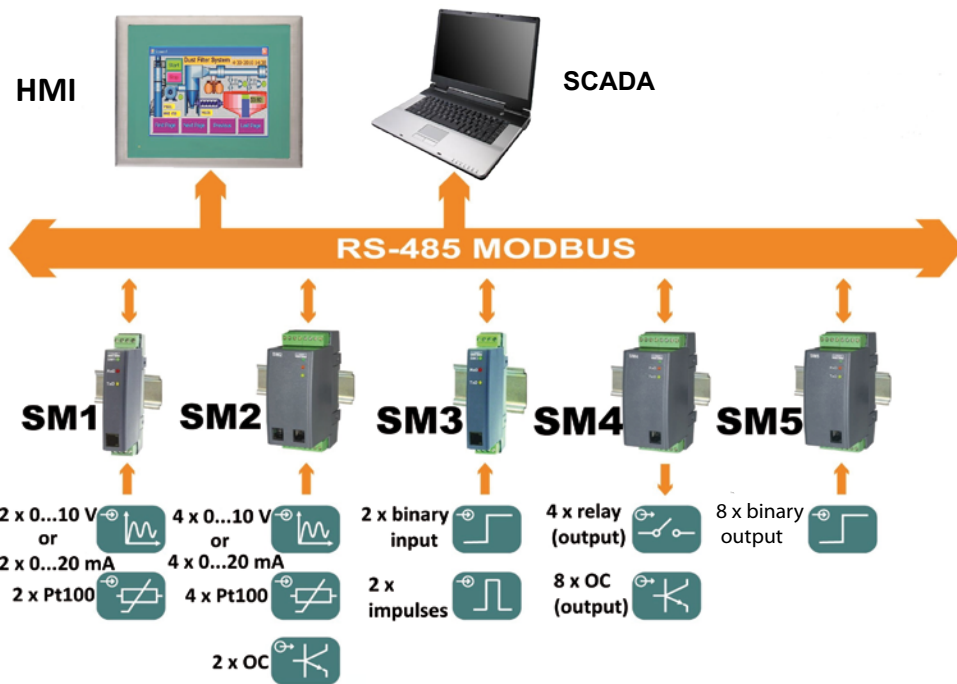
RS 485

GALVANIC ISOLATION:

RS 232

RS 485

EXAMPLE OF APPLICATION



EXTERNAL FEATURES

Overall dimensions	22.5 x 120 x 100 mm	
Weight	< 0.3 kg	with packing
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	0.2%
Current	0/4...20 mA	0.2%
Voltage	0...10 V	0.2%
Resistance	0...400 Ω	0.2%

OUTPUTS

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

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RATED OPERATING CONDITIONS

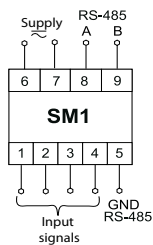
Supply voltage	85...253 V a.c./d.c. (40...400 Hz) or d.c. 20...50 V a.c./d.c. (40...400 Hz) or d.c.	Input power: ≤ 4 VA
Temperature	ambient: -10...23...55°C	
Relative humidity	< 95%	
Operating position	on a TS35 rail	
External magnetic field	< 400 A/m	

SAFETY AND COMPABILITY REQUIREMENTS

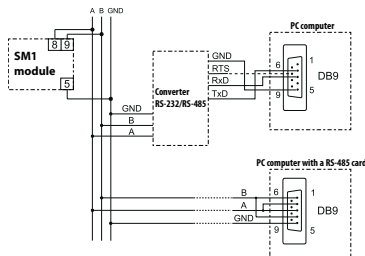
Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emissions	acc. to EN 61000-6-4
Isolation between circuits		acc. to EN 61010-1
Pollution level	2	
Installation category	III	
Maximum phase-to-earth operating voltage	Supply: 300 V, input 50 V, Output: 50 V	
Altitude a.s.l.	> 2000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

CONNECTION DIAGRAMS

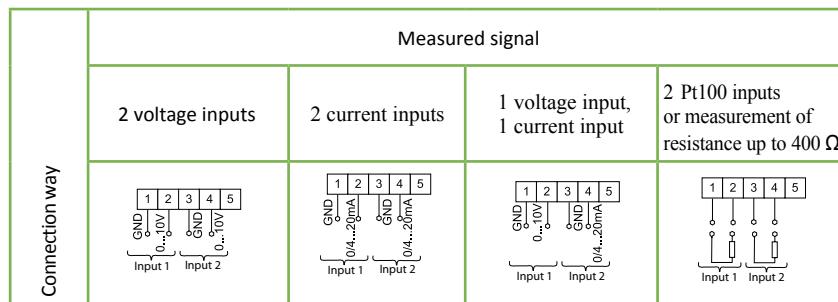
Connection way of external signals



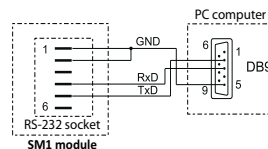
Connection way of the RS-485 interface



Connection way of input signals



Connection way of the RS-232 interface



ORDERING

Module of analog inputs - SM1	XX	X	X
Input signal :			
2 voltage inputs	0...10 V	00	
2 current inputs	0/4...20 mA	01	
1 voltage input + 1 current input	0...10 V+0/4...20 mA	02	
2 resistance inputs or Pt100	Pt100 or resistance < 400 Ω	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	
acc. to customer's requests *		X	

Ordering example:

The code **SM1 - 01 1 8** means:
SM1 - module of SM1 type

01 - 2 current inputs:
0/4...20 mA

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

8 - without additional quality inspection requirements

For more information about LUMEL's products please visit our website:
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* after agreeing with the manufacturer