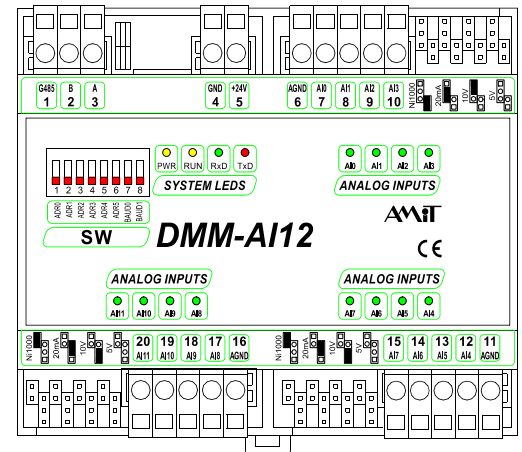


# DMM-AI12

Analogue Inputs Module with MODBUS Protocol

- 12 analogue inputs module, Ni1000 / 5 V DC / 10 V DC / 20 mA DC
- Without galvanic separation
- Control over RS485 line, MODBUS RTU protocol



## TECHNICAL DATA

Inputs	12
Input measuring ranges	0 to 5 V DC / 0 to 10 V DC / 0 to 20.08 mA DC / Ni1000
Measuring range selection	By jumpers on the module
Converter resolution	12 bits
Accuracy at U, I range	0.2 %
Accuracy at Ni1000 range	T = -50 °C 0.6 °C
Depends on measured value	T = 0 °C 0.8 °C
Interpolation needs to be performed	T = 150 °C 1.5 °C
Thermal dependence	70 ppm/°C
Common lead	Analogue ground
Input overvoltage protection	Diodes
Max. input voltage	50 V DC permanently (ranges 0 to 5 V DC, 0 to 10 V DC, Ni1000)
Max. input current	30 mA DC (range 20 mA DC)
Galvanic separation of inputs	No
Serial interface	RS485
Galvanic separation of RS485	Yes *)
Serial interface overvoltage protection	Transil 600 W
Communication rates	9600 to 57600 Bd
Max. number of modules on RS485 line	63
Max. number of modules on RS485 segment	31
Power supply	24 V DC ±20 %
Power consumption	Max. 150 mA at 24 V DC
Signal connection	WAGO 231 cage clamp connectors
Cover protection rate	IP20
Operating temperature	0 to 50 °C
Max. ambient humidity	< 95 % non-condensing
Weight	250 g
Dimensions (w x h x d)	105 x 90 x 74 mm

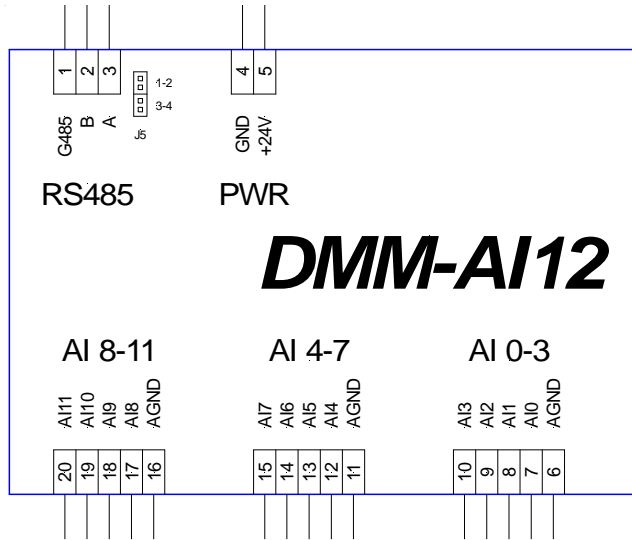
AGND terminals are internally connected with GND terminal of power supply connector.

\*) Insulation strength 500 V AC / 1 minute, galvanic separation may not be used for safe and unsafe parts separation.

## ORDERING INFORMATION

<b>DMM-AI12</b>	Module of 12 analogue inputs controlled over RS485 line, data sheet, warranty card
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## RECOMMENDED DIAGRAM SYMBOL



## DIP SWITCH SETTING

### Jumpers – RS485 line

J5, 1-2	Line state definition + A line termination
J5, 3-4	Line state definition + B line termination

### Transmission rates

9600 Bd	BAUD0 = OFF, BAUD1 = OFF
19200 Bd	BAUD0 = ON, BAUD1 = OFF
38400 Bd	BAUD0 = OFF, BAUD1 = ON
57600 Bd	BAUD0 = ON, BAUD1 = ON

### DIP SW8

SW8.1	Address, binary weight of 1
SW8.2	Address, binary weight of 2
SW8.3	Address, binary weight of 4
SW8.4	Address, binary weight of 8
SW8.5	Address, binary weight of 16
SW8.6	Address, binary weight of 32
SW8.7	BAUD0, transmission rate
SW8.8	BAUD1, transmission rate

An example of address construction: Addr = 35, switches 1, 2 and 6 are ON (1 + 2 + 32).

Implemented MODBUS protocol functions are described at application note AP0008 - Communication in MODBUS network.

## TERMINALS ASSIGNMENT

Terminal	Label	Assignment
1	G485	RS485, shielding
2	B	RS485, B line
3	A	RS485, A line
4	GND	Power supply, ground
5	+24V	Power supply 24 V DC
6	AGND	Analogue GND
7	AI0	Input 0
8	AI1	Input 1
9	AI2	Input 2
10	AI3	Input 3

Terminal	Label	Assignment
11	AGND	Analogue GND
12	AI4	Input 4
13	AI5	Input 5
14	AI6	Input 6
15	AI7	Input 7
16	AGND	Analogue GND
17	AI8	Input 8
18	AI9	Input 9
19	AI10	Input 10
20	AI11	Input 11

## CONFIGURATION JUMPERS LOCATION

