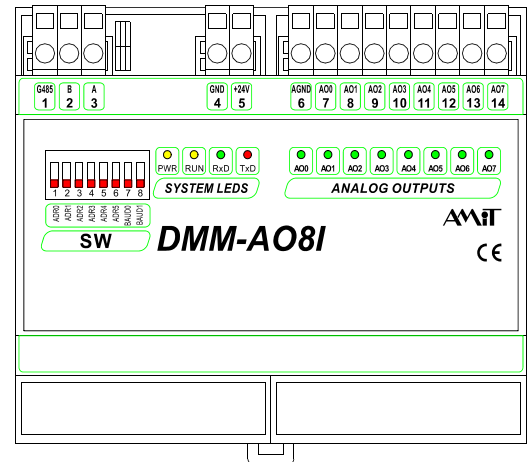


# DMM-AO8I

Analogue Outputs Module with MODBUS Protocol

- 8 current analogue outputs module
- Without galvanic separation
- Control over RS485 line, MODBUS RTU protocol



## TECHNICAL DATA

Outputs	8
Output current	0 to 20 mA DC
Max. load impedance	500 Ohm
Converter resolution	12 bits
Accuracy setting	±1 LSB
Absolute setting error	< 1 %
Common lead	Analogue ground
Galvanic separation of outputs	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 (without outputs)	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

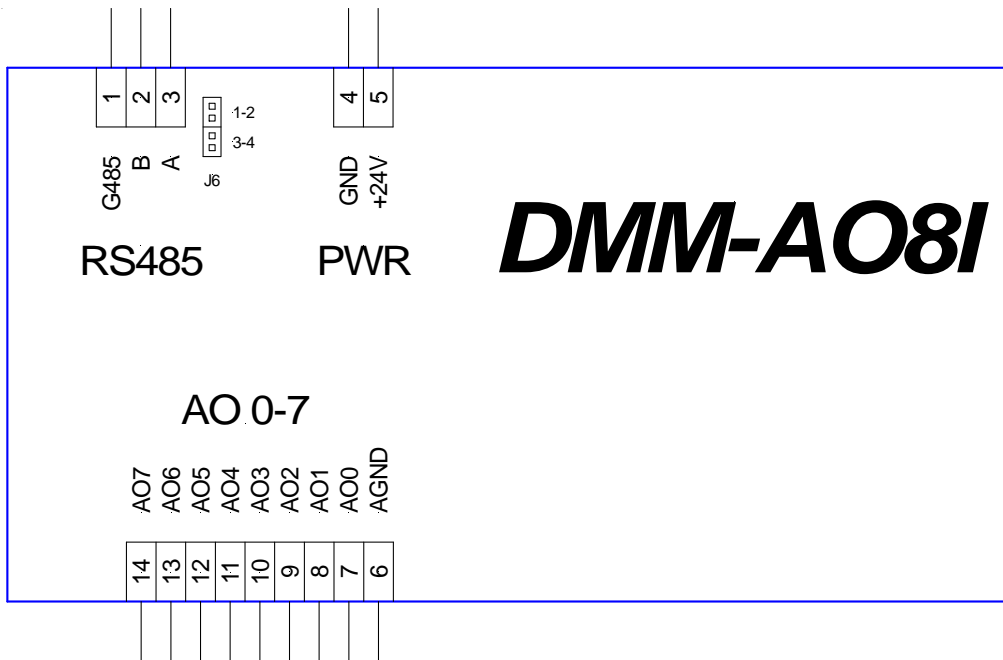
AGND terminal is internally connected with GND terminal of power supply connector.

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

## ORDERING INFORMATION

<b>DMM-AO8I</b>	Module of 8 current analogue outputs controlled over RS485 line, data sheet, warranty card
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## RECOMMENDED DIAGRAM SYMBOL



### DIP SWITCH SETTING

#### Jumpers – RS485 line

J6, 1-2	Line state definition + A line termination
J6, 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 = 38, switches 2, 3 and 6 are ON (2 + 4 + 32).

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

**Notice:** Unit has implemented SW **WATCHDOG**. If unit do not receive any valid frame during 10 sec (even for other unit on the network), than all outputs will be set up to 0 mA.

### 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	AO0	Output 0

Terminal	Label	Assignment
8	AO1	Output 1
9	AO2	Output 2
10	AO3	Output 3
11	AO4	Output 4
12	AO5	Output 5
13	AO6	Output 6
14	AO7	Output 7