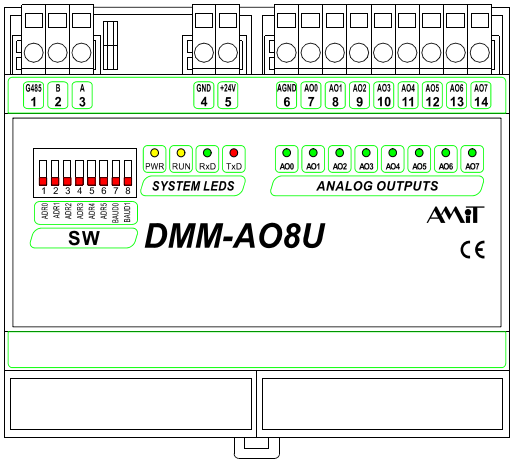
DMM-AO8U

Analogue Outputs Module with MODBUS Protocol

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



TECHNICAL DATA

Outputs	8
Output voltage	0 to 10 V DC
Max. output current	10 mA DC
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 × h × d)	105 × 90 × 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

DMM-AO8U	Module of 8 voltage analogue outputs controlled over RS485 line, data sheet, warranty card

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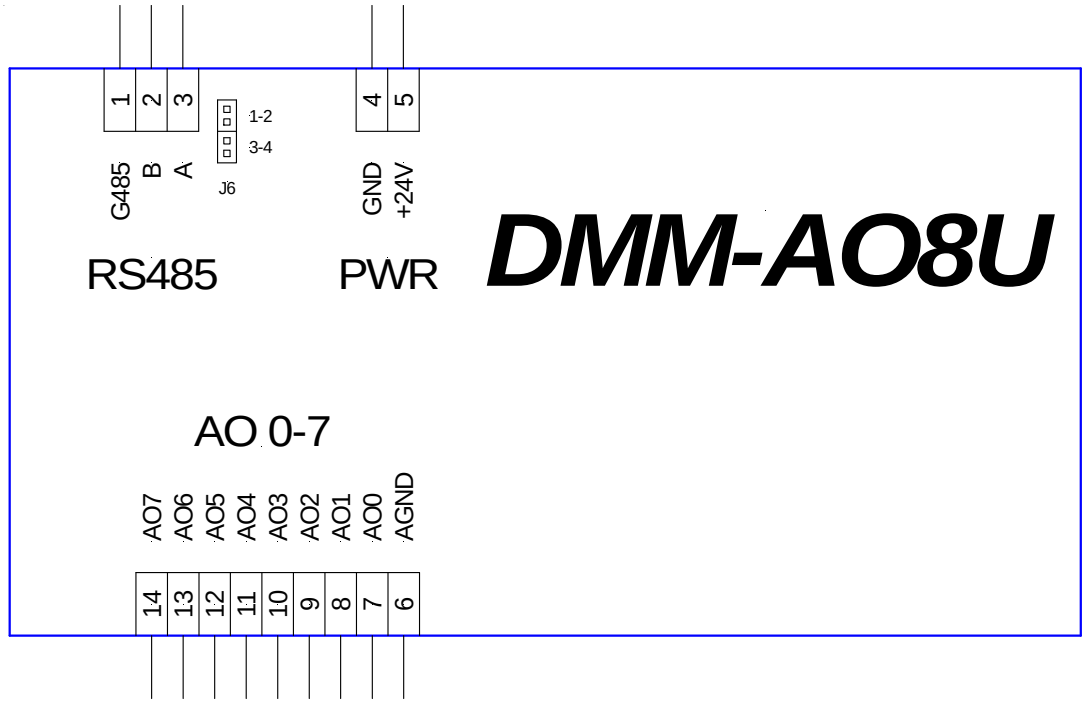
RECOMMENDED DIAGRAM SYMBOL



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 V.

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