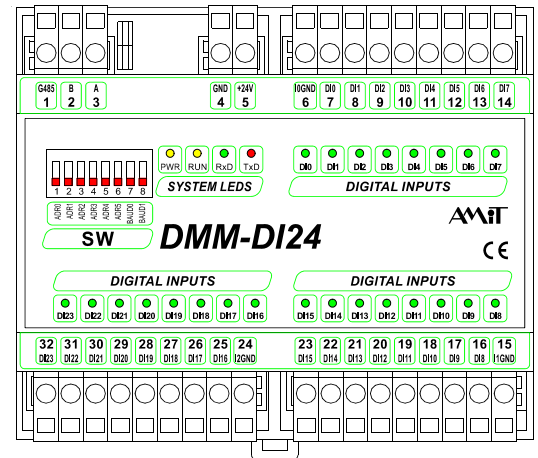


# DMM-DI24

Digital Inputs Module with MODBUS Protocol

- 24 digital inputs 24 V AC/DC module
- Common galvanic separation (3 groups per 8 inputs)
- Control over RS485 line, MODBUS RTU protocol



## TECHNICAL DATA

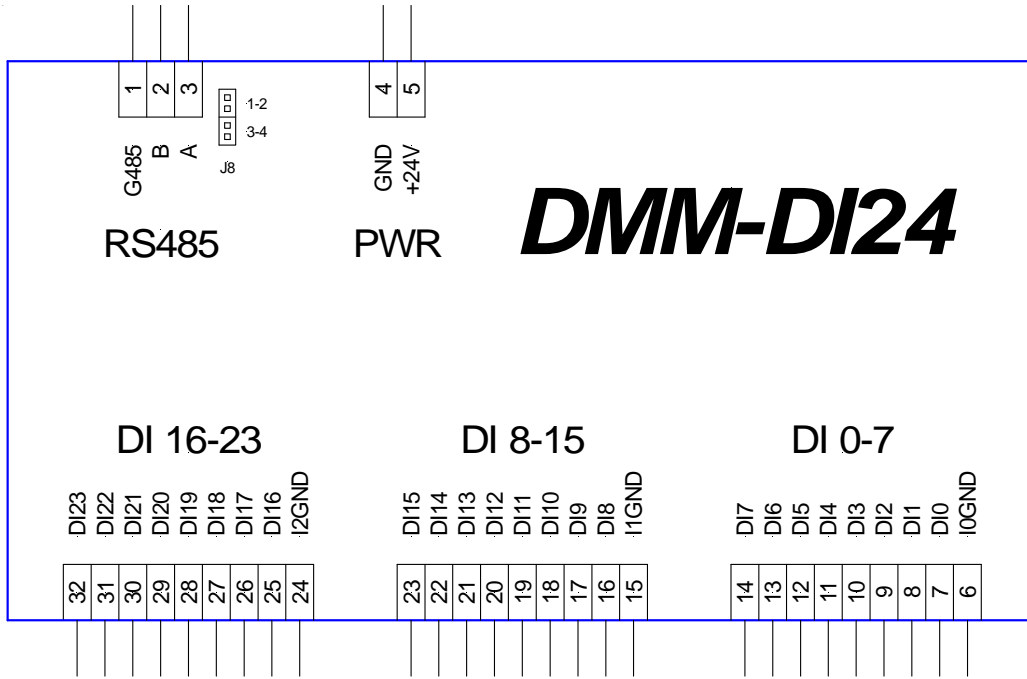
Inputs	3 × 8
Common lead	Minus
Logical 0	Min. -30 V AC/DC, max. 5 V AC/DC
Logical 1	Min. 16 V AC/DC, max. 30 V AC/DC
Input current	6 mA at 24 V AC/DC
Peak input current	Max. 10 mA at 30 V AC/DC
Max. frequency of counter	80 Hz, mark-space ratio 1:1
Overvoltage protection	Transil 600 W
Max. input voltage (1 s)	50 V AC/DC
Galvanic separation of inputs	Yes *)
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 × h × d)	105 × 90 × 74 mm

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

## ORDERING INFORMATION

<b>DMM-DI24</b>	Module of 24 digital inputs controlled over RS485 line, data sheet, warranty card
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## RECOMMENDED DIAGRAM SYMBOL



### DIP SWITCH SETTING

#### Jumpers – RS485 line

J8, 1-2	Line state definition + A line termination
J8, 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 = 34, second and sixth switch is ON (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	I0GND	External GND
7	DI0	Input 0
8	DI1	Input 1
9	DI2	Input 2
10	DI3	Input 3
11	DI4	Input 4
12	DI5	Input 5
13	DI6	Input 6
14	DI7	Input 7
15	I1GND	External GND
16	DI8	Input 8

Terminal	Label	Assignment
17	DI9	Input 9
18	DI10	Input 10
19	DI11	Input 11
20	DI12	Input 12
21	DI13	Input 13
22	DI14	Input 14
23	DI15	Input 15
24	I2GND	External GND
25	DI16	Input 16
26	DI17	Input 17
27	DI18	Input 18
28	DI19	Input 19
29	DI20	Input 20
30	DI21	Input 21
31	DI22	Input 22
32	DI23	Input 23