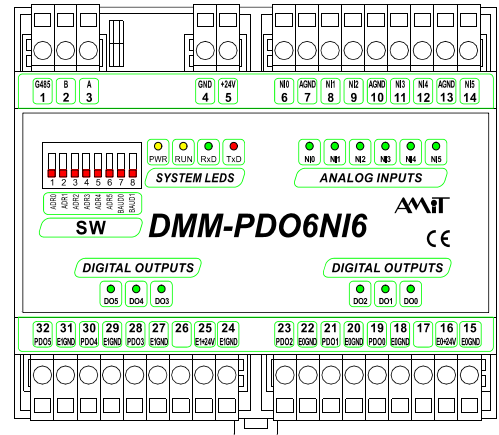


DMM-PDO6NI6

Combined I/O Extension Module with MODBUS Protocol

- 6 × digital output 24 V DC
- 6 × input Ni1000
- Control over RS485 line, MODBUS RTU protocol



TECHNICAL DATA

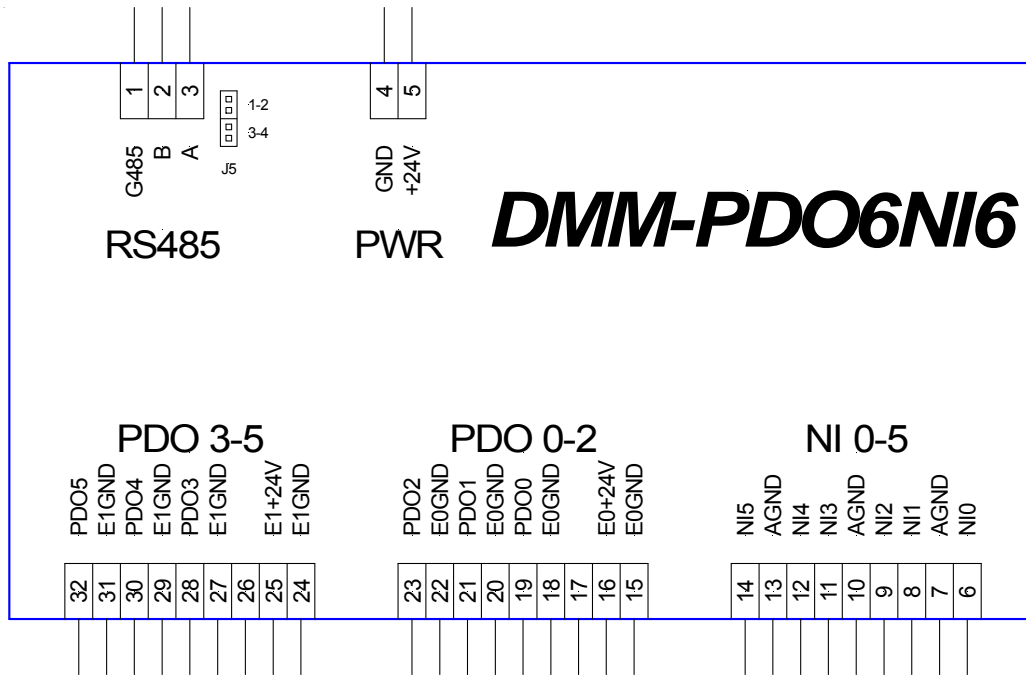
Inputs	6 × Ni1000
Accuracy, Ni1000/6180	T = -50 °C 0.6 °C
Depends on measured value, for others value is necessary to interpolate	T = 0 °C 0.8 °C
	T = 150 °C 1.5 °C
A/D converter resolution	12 bits
Thermal dependence	70 ppm/°C
Common lead	Analogue ground
Input overvoltage protection	Diodes
Outputs	6 × 24 V DC
Switched voltage tolerance	24 V DC ±20 %
Switch type	Switch Ex+24V
Switching element	MOS
User's defined save state	Not supported
Galvanic separation of outputs	Yes *)
Max. current of current protection circuit	2.5 A DC
Switched current (permanently)	1 A DC
Switch on time	40 µs
Switch off time	100 µs
Short circuit protection	Electronic
Inductive load protection	Transil 600 W
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

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

ORDERING INFORMATION

DMM-PDO6NI6	Combined I/O expansion module, data sheet, warranty card
--------------------	--

RECOMMENDED DIAGRAM SYMBOL



DIP SWITCH SETTING

Jumpers – RS485 line

J5, 1-2	Idle state definition + A line termination
J5, 3-4	Idle 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 = 37, switches 1, 3 and 6 are ON (1 + 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 logical 0.

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	NI0	Input NI0
7	AGND	Analogue ground
8	NI1	Input NI1
9	NI2	Input NI2
10	AGND	Analogue ground
11	NI3	Input NI3
12	NI4	Input NI4
13	AGND	Analogue ground
14	NI5	Input NI5
15	E0GND	External GND
16	E0+24V	Switched voltage PDO0..2

Terminal	Label	Assignment
17	-	
18	E0GND	External GND
19	PDO0	Output 0
20	E0GND	External GND
21	PDO1	Output 1
22	E0GND	External GND
23	PDO2	Output 2
24	E1GND	External GND
25	E1+24V	Switched voltage PDO3..5
26	-	
27	E1GND	External GND
28	PDO3	Output 3
29	E1GND	External GND
30	PDO4	Output 4
31	E1GND	External GND
32	PDO5	Output 5

DMM-PDO6NI6

Combined I/O Extension Module with MODBUS Protocol

WIRING EXAMPLE

