



NPEIO-4AI - Analog inputs module with MODBUS RTU output

NPEIO-4AI module serves as an external analog input device extending PLCs or other devices in which data exchange is via the RS-485 according to the MODBUS RTU protocol.

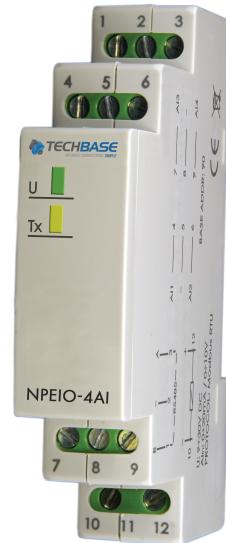
MODBUS RTU protocol parameters

- Work mode: SLAVE
- Port settings:
Bits number on sec: 1200 / 2400 / 4800 / **9600** / 19200 / 38400 / 57600 / 115200
- Data bits: **8**
- Parity: **NONE** / EVEN / ODD
- Start bits: **1**
- Stop bits: **1** / **2**
- Range of network addresses: 1-247 (**1**)
- Range of base addresses: 1-238
- The maximum frequency of queries: 15Hz

Functioning

The module has 4 universal analog inputs. Input type compatible 0-10V (voltage U) or 4-20mA (current I) is determined using internal jumpers. The module measures the value of input current and voltage on all inputs regardless of the hardware configurations of input types (location of jumpers). However, they will be properly measured input values for which this entry is configured.

Reading values of the input currents or voltages and setting communication parameters is realized through the RS-485 port using MODBUS RTU communication protocol. Switching voltage is indicated by a green LED U. Correct data exchange between the module and the second device unit is indicated by a yellow LED Tx.



Command codes

- 1: Read states of all outputs
(0x01 - Read Coils)
- 2: Read states of all inputs
(0x02 - Read Discrete Inputs)
- 3: Read value of outputs registry
(0x03 - Read Holding Register)
- 5: The setting of a single output
(0x05 - Write Single Coil)
- 6: The setting of a single output
(0x06 - Write Single Register)
- 15: The setting of multiple outputs
(0x0F - Write Multiple Coil)
- 16: The setting of multiple outputs
(0x10 - Write Multiple Registers)
- 17: Read ID
(0x11 - Report Slave ID)

Technical data

NPEIO-4AI

INPUT PARAMETERS

Supply	9÷30V DC
Max. current consumption	30mA
Number of inputs	4
Type of inputs/range	
current	0÷20mA
voltage	0÷10V
Input resistance	
current	110kΩ
voltage	47kΩ
Mistake precision	0,5%
Port	RS-485
Communication protocol	MODBUS RTU

WORK PARAMETERS

Working temperature	-40°C ÷ +50°C
Storage temperature	-40°C ÷ +70°C
Relative humidity	85% for +30°C
Connection	screw terminals 2,5mm
Dimesions	1 module (18mm)
Fixing	on rail TH-35
Protection level	IP20