

NPEIO-4DI-(HI-LOW) - Digital inputs expansion module with MODBUS RTU output

The NPEIO-4DI-(HI-LOW) module is used as an external device that extends digital inputs of the PLC programmable controllers or other devices in which data is exchanged via the RS-485 port with MODBUS RTU protocol.

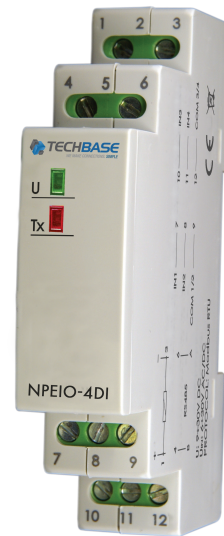
Features

- Four independent outputs
- Input designed to work with AC/DC signals
- State 1 trigger selection: with high or low voltage
- State 1 trigger selection: with closing or opening of the circuit input
- Time filter that allows you to set the minimum acceptable length of input signal (elimination of distortions at the input)

Operation

The NPEIO-4DI-(HI-LOW) module has four inputs. The module has configurable options for activating inputs (TRUE value) with low (0V) or high (V+) signal and with closing or opening the input signal circuit. Time filter is used for eliminating interference (false pulses) which may appear at the input. This is the setting of a minimum length of time of the input signal, which will be seen at the input and will be treated as a change of state. Shorter signals are ignored.

Reading of input states and adjustment of all communication and data exchange parameters is carried out via RS-485 port using MODBUS RTU communication protocol. Power is indicated by a green LED U light. Correct data exchange between the module and other device is indicated by the LED yellow Tx light.



NPEIO-4DI-(HI-LOW)

MODBUS RTU protocol parameters

- Operation mode: SLAVE
- Port settings :
Bits/s: 1200 / 2400 / 4800 / **9600** / 19200 / 38400 / 57600 / 115200
Data bits: **8**
Parity: **NONE** / EVEN / ODD
Start bits: **1**
Stop bits: 1 / 1.5 / **2**
- Range of network addresses: 1-245 (1)
- Command codes:
1: Input state reading
(0x01 - Read Coils)
3: Registers group reading
(0x03 - Read Holding Register)
6: Single register value setting
(0x06 - Write Single Register)
- Maximum frequency of queries: 15Hz

Technical data

INPUT PARAMETERS

Number of DI	4
Input voltage	6÷30V AC/DC (NPEIO-4DI-LOW) 160÷265V AC/DC (NPEIO-4DI-HI)
Max. counting frequency	100Hz
Circuit input impedance	≥10kΩ (NPEIO-4DI-LOW) ≥300kΩ (NPEIO-4DI-HI)
Port	RS-485
Communication protocol	Modbus RTU
Operation mode	SLAVE

COMMUNICATION PARAMETERS

Rate - to set	1200 - 115200 bit/s
Data bits	8
Stop bits	1 / 1.5 / 2
Parity bits	EVEN / ODD / NONE
Address	1 - 247

SUPPLY AND MECHANICAL PARAMETERS

Supply voltage	9÷30V DC
Power consumption	0,1W
Working temperature	-20 - 50 °C
Terminal	2,5mm screw terminals
Tightening torque	0,4 Nm
Dimensions	1 module (18mm)
Mounting	on TH-35 rail
Protection level	IP20

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