

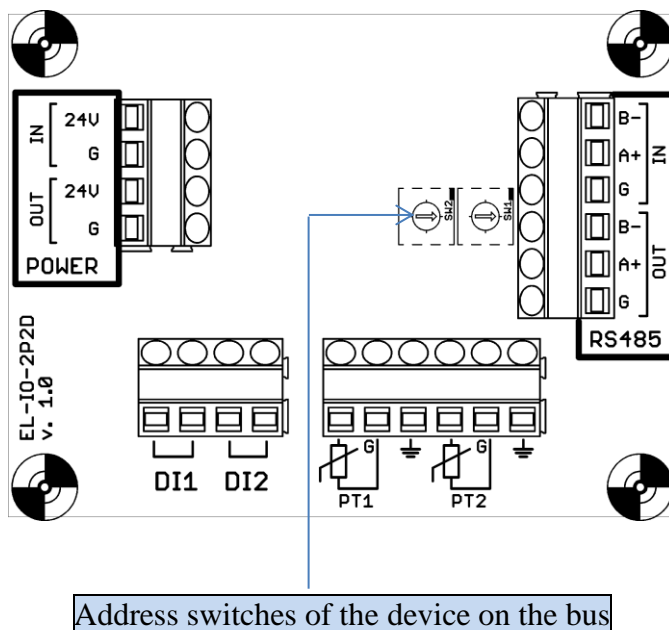
Inputs Module EL-IO-2P2D

1. Technical data



- Dimensions: 162 x 100 x 56 mm
- Supply voltage: 24 V AC/DC +/- 10%
- Communication ports: RS 485 - Modbus RTU protocol
- Cooperation with ELP series controllers
- 2 Digital Inputs
- 2 Inputs for PT1000 temperature sensors
- Storage temperature : -20 ... 70 °C
- IP protection: 55

1. Description of connectors



POWER (Power supply of the module)

24V – supply voltage 24V AC/DC
G – power supply ground

POWER OUT

Optional power supply for next module

RS485 (communication line Modbus RTU)

A+ - RS485 (+)

B- - RS485 (-)

G – power supply ground

RS485 OUT

Optional RS485 output for next module

DI1 i DI2

Digital inputs (NO) 1 and 2

PT1 i PT2

Temperature input 1 and 2 calibrated for PT1000 temperature sensors.

2. Description

Input Module EL-IO-2P2D is equipped with two digital inputs (normally open) and two temperature inputs for connection of PT1000 temperature sensors. Signal levels at the temperature inputs are scaled according to the respective settings stored in the module. The processed signals are transmitted via Modbus RTU communication protocol. For this purpose, a communication link RS-485 is used.

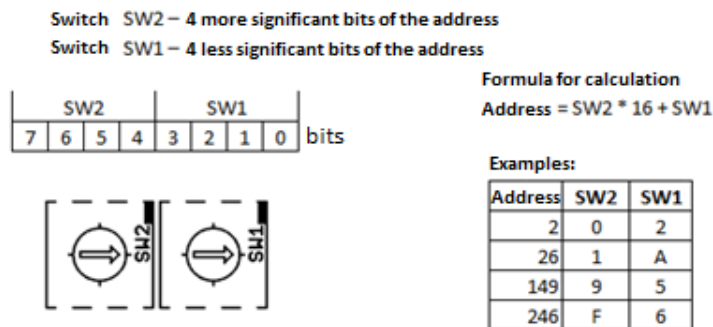
3. Modbus RTU protocol

In the Inputs Module EL-IO-2P2D support for Modbus RTU has been implemented.

The default transmission parameters:

- transmission speed: 9600
- parity bit: none
- stop bits: 2

Address of the device on the bus can be configured using two rotary switches according to scheme below.



4. Registers map

Address	Description	Numerical representation	Read / Write
Digital Inputs			
0x0000	Reading the Digital Inputs bit 0 – input DI1 bit 1 – input DI2		R
Analog Inputs			
0x001	Current measuring temperature on input PT1		R
0x002	Current measuring temperature on input PT2		R
0x003			R
0x004			R
Module settings			
0x005	Operating mode of the Digital Inputs 0 – AC sampling (default value) 1 – fast DC		R / W

5. Permitted Modbus RTU commands

Inputs Module EL-IO-2P2D supports only a few commands of Modbus RTU standard:

- read input registers 0x03,
- write of a single register 0x06 (only for register 0x0003)
- reading device descriptor 0x11 or 0x12
 - returned descriptor contains 16 bytes in the format:
 - firmware version (2 bytes): XX.YY
 - firmware date (3 bytes): DD, MM, YY
 - device name (11 bytes): 'IO2PT2DI', complemented with zeros to 11 bytes