

Input module for differential pressure transmitter with Modbus interface (-IN)



Summary of devices that support the input module

| Type name* (-IN for Input module) (-AZ for autozero) | Accuracy for pressure -10...+50°C** | Long term stability <i>typical 1 year</i> |
|--|--|--|
| DPT-MOD-2000-IN (-AZ) | ±1,5% or (±6Pa <250 Pa) from range | ≤ ± 8 Pa (with AZ ≤ ± 1 Pa) |
| DPT-MOD-5000-IN (-AZ) | ±1,5% from range | ≤ ± 24 Pa (with AZ ≤ ± 1 Pa) |

*For the technical details of the differential pressure transmitter with Modbus interface, please see the relevant datasheet.

**Each device is individually temperature compensated.

Input module:

Input module is fixed assembled expansion board for external signal conversion into modbus.

The input module is a plug-in module that can be assembled into DPT-MOD afterwards, even in the field and on site.

The input module is compatible with DPT-MOD version REV05 or later

Technical data

Communication

MODBUS RTU, over RS485
8 data bits, none parity, 1 stop bit, baud rate: selectable

Electrical terminals

3 x Screw terminal for wires max 1.5mm²

Number of input terminals

2 (both terminals can be used simultaneously and/or separately)

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Input signals can be read over MODBUS via DPT MOD RS484 interface.

| Input | Signals | Accuracy for measurement | Resolution (Modbus signal) |
|----------------------|---------------------------------|--------------------------|----------------------------|
| Input 1 and 2 | 0...10V | <0,5 % | 0,1 % |
| | ntc10k | <0,5 % | 0,1 % |
| | Pt1000 | <0,5 % | 0,1 % |
| | Ni1000/(-LG) | <0,5 % | 0,1 % |
| | BIN IN (potential free contact) | | |

Electrical terminals

3 x Screw terminal for wires
 Push button
 Cable entry

max 1.5mm²
 for pressure zero point calibration
 M20

Modbus functions and registers

FUNCTION 02 – Read Input status

| Register | Parameter Description | Data type | Value | Range |
|----------|-----------------------|-----------|-------|----------|
| 1x0001 | Input 1 BIN IN | Bit 0 | 0...1 | On – Off |
| 1x0002 | Input 2 BIN IN | Bit 0 | 0...1 | On – Off |

FUNCTION 04 – Read input Register

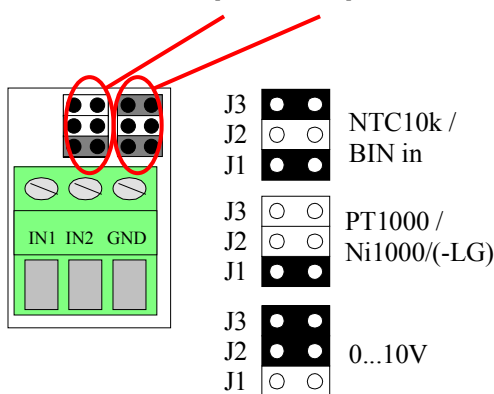
| Register | Parameter Description | Data type | Value | Range |
|----------|----------------------------|-----------|------------|------------|
| 3x0004 | Input 1 0...10V | 16 bit | 0...100 | 0...100(%) |
| 3x0005 | Input 1 Pt1000 temperature | 16 bit | -500...500 | -50...+50C |
| 3x0006 | Input 1 Ni1000 | 16 bit | -500...500 | -50...+50C |
| 3x0007 | Input 1 NTC10k | 16 bit | -500...500 | -50...+50C |
| 3x0008 | Input 2 0...10V | 16 bit | 0...100 | 0...100(%) |
| 3x0009 | Input 2 Pt1000 temperature | 16 bit | -500...500 | -50...+50C |
| 3x0010 | Input 2 Ni1000 | 16 bit | -500...500 | -50...+50C |
| 3x0011 | Input 2 NTC10k | 16 bit | -500...500 | -50...+50C |
| 3x0012 | Input 1 Ni1000-LG | 16-bit | -500...500 | -50...+50C |
| 3x0013 | Input 2 Ni1000-LG | 16-bit | -500...500 | -50...+50C |

Configuration

The jumpers should be set according to the instructions below and the value should be read from the right register. Both inputs can be configured independently.

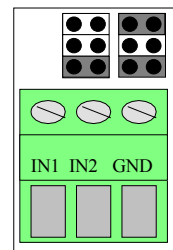
Jumpers

Input 1 / Input 2



Example:

Pt1000 is connected to Input 1
Ntc10k is connected to input 2



Input 1 Pt1000 temperature:

FUNCTION 04 – Read input Register
3x0005

Input 2 ntc10k temperature:

FUNCTION 04 – Read input Register
3x0011

