

# DIFFERENTIAL PRESSURE TRANSMITTERS

## DPT-DUAL-MOD SERIES



Differential pressure transmitter with two pressure sensors for air and an Input terminal for two analog inputs for external signal conversion into Modbus

DPT-Dual-MOD combines two differential pressure transmitters into one device. It offers a possibility to measure pressure from two different points. It has a Modbus interface and an Input terminal. When using the Input terminal, temperature transmitters can be replaced with temperature sensors. As a result you will save in costs of the devices and in the installation costs. The AHU model that includes an air flow transmitter has been designed especially for ventilation units.



### SIMILAR PRODUCTS

- DPT-2W series differential pressure transmitters with 4-20 mA 2-wire configuration
- DPT-R8 series 8-range differential pressure transmitters
- DPI series electronic differential pressure switches
- PS series mechanical differential pressure switches
- DPT-FLOW series airflow transmitters

### APPLICATIONS

DPT-Dual-MOD series devices are commonly used in HVAC/R systems for:

- fan, blower and filter monitoring
- pressure and flow monitoring
- valve and damper control
- pressure monitoring in cleanrooms

DPT-Dual-MOD-AHU can also be used for:

- air flow monitoring across centrifugal fans and blowers
- in-duct air flow monitoring
- VAV applications

### MODEL SUMMARY

	DPT-Dual-MOD-2500		DPT-Dual-MOD-7000		DPT-Dual-MOD-AHU	
<b>Measurement ranges (Pa)</b>	-250...2500		-250...7000		-250...2500 and -250...7000	
<b>Description</b>	<b>Model</b>	<b>Product code</b>	<b>Model</b>	<b>Product code</b>	<b>Model</b>	<b>Product code</b>
Differential pressure transmitter with two pressure sensors, Modbus configuration and display	DPT-Dual-MOD-2500-D	120.007.006	DPT-Dual-MOD-7000-D	120.016.006		
Differential pressure transmitter with two pressure sensors, flow measurement, Modbus configuration and display					DPT-Dual-MOD-AHU-D	120.016.013

# DIFFERENTIAL PRESSURE TRANSMITTERS

## DPT-DUAL-MOD SERIES

### SPECIFICATIONS

#### Performance

##### Accuracy (from applied pressure):

Model 2500:

Pressure < 125 Pa = 1 % + ±2 Pa

Pressure > 125 Pa = 1 % + ±1 Pa

Model 7000:

Pressure < 125 Pa = 1.5 % + ±2 Pa

Pressure > 125 Pa = 1.5 % + ±1 Pa

(Including: general accuracy, temperature drift, linearity, hysteresis, long term stability and repetition error)

##### Response time:

1...20 s selectable via menu

##### Overpressure:

Proof pressure: 25 kPa

Burst pressure: 30 kPa

#### Communication

Protocol: MODBUS over Serial Line

Transmission Mode: RTU

Interface: RS485

Byte format (11 bits) in RTU mode:

Coding System: 8-bit binary

Bits per Byte:

1 start bit

8 data bits, least significant bit sent first

1 bit for parity

1 stop bit

Baud rate: selectable in configuration

Modbus address: 1-247 addresses selectable in configuration menu

##### Zero point calibration options:

- Manual pushbutton autozero
- Via Modbus write coil

#### Technical Specifications

##### Media compatibility:

Dry air or non-aggressive gases

##### Measuring units on display (Selectable via menu):

Pressure: Pa, kPa, mbar, inchWC, mmWC, psi

Flow (AHU model): m3/s, m3/hr, cfm, l/s, m/s, ft/min

##### Measuring element:

MEMS

##### Environment:

Operating temperature: -10...+50 °C

Storage temperature: -20...+70 °C

Humidity: 0 to 95 % rH

#### Physical

##### Dimensions:

Case: 102.0 x 71.5 x 36.0 mm

##### Weight:

150 g, with accessories 290 g

##### Mounting:

2 each 4.3 mm screw holes, one slotted

##### Materials:

Case: ABS

Lid: PC

Pressure inlets: Brass

Duct connectors: ABS

Tubing: PVC

##### Protection standard:

IP54

##### Display:

2-line display (12 characters/line)

Line 1: active measurement, inlet A

Line 2: active measurement, inlet B

If inputs are selected, the lines show also input information (for example temperature)

##### Electrical Connections:

4+4 spring load terminals, max 1.5 mm<sup>2</sup>

Cable Entry: M20

##### Pressure connections:

Male ø 5,0 mm and 6,3 mm

#### Electrical

##### Supply voltage:

24 VAC or VDC ± 10 %

##### Power consumption:

< 1.3 W

##### Output signal:

via Modbus

#### Conformance

Meets requirements for CE marking:

EMC directive 2014/30/EU

RoHS Directive 2011/65/EU

WEEE Directive 2012/19/EU

**COMPANY WITH  
MANAGEMENT SYSTEM  
CERTIFIED BY DNV GL**  
= ISO 9001 = ISO 14001 =



### HOW TO GENERATE A MODEL?

Example:	Product Series		
DPT-Dual-MOD-2500-D	DPT-Dual-MOD	Differential pressure transmitter with two pressure sensors and Modbus configuration	
		<b>Highest available measurement range</b>	
	-2500	-250...2500 Pa	
	-7000	-250...7000 Pa	
	-AHU	both 2500 and 7000 sensors, with flow measurement	
		<b>Display</b>	
	-D	With display	
Model	DPT-Dual-MOD	-2500	-D