

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	
Measurement ranges (Pa)	-250...2500		-250...7000		-250...2500 and -250...7000	
Description	Model	Product code	Model	Product code	Model	Product code
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, linearity, hysteresis, long term stability and repetition error)

Input accuracy:

< 0,5 %

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, no flow-through

Environment:

- Operating temperature: -20...+50 °C
- Temperature compensated range: 0...+50 °C
- Storage temperature: -40...+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 mm²
- 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

Input signals:

- 2x input (0–10 V, NTC10k, Pt1000, Ni1000/(-LG), or BIN IN)

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	Differential pressure transmitter with two pressure sensors and Modbus configuration	
DPT-Dual-MOD-2500-D		Highest available measurement range	
		-2500	-250...2500 Pa
		-7000	-250...7000 Pa
		-AHU	both 2500 and 7000 sensors, with flow measurement
		Display	
Model	DPT-Dual-MOD	-2500	-D With display
			-D