

DIFFERENTIAL PRESSURE TRANSMITTERS DPT-DUAL-MOD-AHU

For air handling units



DPT-Dual-MOD-AHU is especially designed for air handling units, combining two differential pressure transmitters into one device. It offers a possibility to measure pressure from two different points. One of the measurements can be set to show the air flow rate. DPT-Dual-MOD-AHU 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.

DPT-Dual-MOD-AHU is designed for air handling units where one sensor monitors the air flow across the centrifugal fan while the other sensor monitors the filter cleanliness. The devices are suitable for air and non-combustible gases.



SIMILAR PRODUCTS

- DPT-Dual-MOD series differential pressure transmitters with two pressure sensors and Modbus communication
- 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-AHU series devices are commonly used in HVAC/R systems for:

- air flow monitoring across centrifugal fans and blowers
- in-duct air flow monitoring
- VAV applications
- fan, blower and filter monitoring
- pressure and flow monitoring
- valve and damper control
- pressure monitoring in cleanrooms

MODEL SUMMARY

	DPT-Dual-MOD-AHU	
Measurement ranges (Pa)	-700...7000 and -250...2500	
Description	Model	Product code
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-AHU

SPECIFICATIONS

Performance

Accuracy (from applied pressure):

Sensor A (-700...7000 Pa):

Pressure < 125 Pa = 1.5 % + ±2 Pa

Pressure > 125 Pa = 1.5 % + ±1 Pa

Sensor B (-250...2500 Pa):

Pressure < 125 Pa = 1 % + ±2 Pa

Pressure > 125 Pa = 1 % + ±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
- 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: 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, non-condensing

Physical

Dimensions:

Case: 102.0 x 71.5 x 36.0 mm

Weight:

150 g

Mounting:

2 each 4.3 mm screw holes, one slotted

Materials:

Case: ABS

Lid: PC

Pressure inlets: Brass

Tubing: Silicone

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 fittings:

Male \varnothing 5.2 mm

+ High pressure

- Low pressure

Electrical

Supply voltage:

24 VAC or VDC ± 10 %

Power consumption:

< 1.3 W

Output signal:

via Modbus

Input signals:

2 x input (0...10 V, NTC10k, Pt1000, NI1000/(-LG), or BIN IN)

Conformance

Meets requirements for:

	CE:	UKCA:
EMC:	2014/30/EU	S.I. 2016/1091
RoHS:	2011/65/EU	S.I. 2012/3032
WEEE:	2012/19/EU	S.I. 2013/3113

COMPANY WITH
MANAGEMENT SYSTEM
CERTIFIED BY DNV
ISO 9001 • ISO 14001



HOW TO GENERATE A MODEL?

Example:	Product Series		
	DPT-Dual-MOD-AHU-D	DPT	Differential pressure transmitter
		Model type	
		-Dual-MOD-AHU	For air handling units, both 2500 and 7000 sensors, flow measurement and Modbus communication
		Display	
	-D	With display	
Model	DPT	-Dual-MOD-AHU	-D