

DIFFERENTIAL PRESSURE TRANSMITTERS DPT-PRIIMA-MOD



Multifunctional high accuracy differential pressure transmitters

DPT-Priima-MOD is a multifunctional high accuracy transmitter for measuring volume flow, velocity, and static and differential pressure. It is designed for cleanrooms and other demanding applications. The measurements can be read and the configuration done via Modbus communication. DPT-Priima-MOD can also be used with several different measurement probes such as FloXact™ or pitot tube, and air dampers.

DPT-Priima-MOD has a new, extremely accurate sensor and automatic zero point calibration, and optional calibration certificate.

DPT-Priima-MOD series devices include:

- Two selectable functions:
 - o Measure and monitor in-duct volume flow, velocity or differential pressure
 - o Measure and monitor air flow across centrifugal fans
- Multiple selectable measurement units:
 - o Volume flow: m³/s, m³/h, cfm, l/s
 - o Velocity: m/s, ft/min
 - o Pressure: Pa, inWC, mmWC, kPa, mbar, psi
- Backlit display
- AZ (autozero) function for automatic zero point calibration, eliminating the need for periodic manual autozeroing to ensure long term accuracy
- Modbus communication protocol

DPT-Priima-MOD series device options offer:

- Calibration certificate



SIMILAR PRODUCTS

- DPT-Priima series high accuracy differential pressure transmitters
- DPT-R8 series 8-range differential pressure transmitters
- DPT-MOD series differential pressure transmitters with Modbus configuration
- DPT-Flow series air flow transmitters
- AVT series air velocity transmitters

APPLICATIONS

DPT-Priima-MOD is commonly used in applications requiring high measurement accuracy:

- monitoring pressure in cleanrooms
- monitoring pressure difference across the building envelope
- monitoring pressure and flow

MODEL SUMMARY

	DPT-Priima-MOD-AZ-D	
Measurement ranges (Pa)	±120 Pa, ±240 Pa, ±620 Pa, ±1240 Pa, ±2490 Pa	
Description	Model	Product code
High accuracy differential pressure transmitter with air flow measurement and Modbus communication		
- with display and autozero	DPT-Priima-MOD-AZ-D	102.012.004_62

DIFFERENTIAL PRESSURE TRANSMITTERS

DPT-PRIIMA-MOD

SPECIFICATIONS

Performance Measurement ranges: ±120 Pa*, ±240 Pa, ±620 Pa, ±1240 Pa, ±2490 Pa (selectable via menu or modbus) *default range Accuracy (at applied pressure): 0.4 % ±0.4 Pa (Including: general accuracy, linearity, hysteresis, long term stability, and repetition error) Overpressure: Proof pressure: 10 kPa Burst pressure: 30 kPa Zero point calibration: Automatic autozero, manual pushbutton or via Modbus register Response time: 0.4–20 s, selectable via menu or via Modbus register (63 % of the change)	Technical Specifications Media compatibility: Dry air or non-aggressive gases Pressure units (select via menu): Pa, kPa, mbar, inWC, mmWC, psi Flow units (select via menu): Volume: m3/s, m3/hr, cfm, l/s Velocity: m/s, ft/min Measuring element: MEMS, no flow-through Environment: Operating temperature: -5...50 °C, Temperature compensated range 0...50 °C Storage temperature: -40...70 °C Humidity: 0 to 95 % rH, non condensing	Display 2-line display (12 characters/line) Line 1: Volume or velocity measurement Line 2: Pressure measurement Size: 46.0 x 14.5 mm Electrical connections: 4-screw terminal block Wire: 0.2–1.5 mm ² (16–24 AWG) Cable entry: Strain relief: M16 Knockout : 16 mm Pressure fittings Male ø 5.2 mm + High pressure - Low pressure
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	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 fittings: Brass Tubing: Silicone Protection standard: IP54	Electrical Supply voltage: 24 VAC or VDC ± 10 % Power consumption: < 1 W < 2,2 W during AZ-calibration Output signal: via Modbus 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



AZ-CALIBRATION

AZ-calibration is an autozero function in the form of an automatic zeroing circuit built into the PCB board. The AZ-calibration electronically adjusts the transmitter zero at predetermined time intervals (every 10 minutes). The AZ-calibration eliminates measurement drift due to thermal, electronic or mechanical effects, as well as the need for technicians to remove high and low pressure tubes when performing initial or periodic transmitter zero point calibration.

The AZ adjustment takes 4 seconds. To avoid conflict with the BAS system, the output and display values will freeze to the latest measured value, after which the device returns to its normal measuring mode. Transmitters equipped with the AZ-calibration are virtually maintenance free.

HOW TO GENERATE A MODEL?

Example: DPT-Priima-MOD-AZ-D	Product series				
	DPT	Differential pressure transmitter			
		Model type			
		-Priima-MOD	High accuracy, with Modbus communication		
			Zero Point Calibration		
			-AZ	With autozero calibration	
				Display	
				-D	With display
Model	DPT	-Priima-MOD	-AZ	-D	