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DATA SHEET

DPT-Flow-MOD

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DPT-Flow-MOD - Modbus air flow transmitter



DPT-Flow-MOD Modbus air flow transmitters are designed for building automation systems. These technologically advanced transmitters can measure volume flow, velocity, and static and differential pressure.

The transmitters can be connected directly to the pressure measurement points of a centrifugal fan, providing accurate flow measurement. The user interface enables easy selection of settings according to the selected fan or measurement probe.

The devices include several properties and selectable functions:

- Measuring and monitoring in-duct volume flow, velocity or differential pressure
- Measuring and monitoring air flow across centrifugal fans
- Multiple selectable measurement units
- Modbus RTU (RS-485) connection
- Automatic zeroing as an option (-AZ models)
- Low temperature resistance as an option (-40C models)

-AZ models include automatic zeroing function, which zeroes the pressure measurement every 10 minutes. With automatic zeroing, the transmitter zero point is kept accurate by automatically eliminating the possible zero point drifting. The function also helps the device maintenance by removing the need of periodical manual zeroing by a service person.

Technical specifications

Property	Value
Supply	24 Vac/dc (22...26 V)
Power consumption	< 1 VA
Power consumption (-40C models)	< 4 VA (when temperature is below 0 °C)
Pressure measurement	
Range	
-2500 models	*0...2500 Pa / custom setting
-7000 models	*0...7000 Pa / custom setting
Accuracy (25 °C)	
-2500 models	• pressure < 125 Pa = ±1 % ±2 Pa • pressure > 125 Pa = ±1 % ±1 Pa

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Property	Value
-7000 models	• pressure < 125 Pa = ±1.5 % ±2 Pa • pressure > 125 Pa = ±1.5 % ±1 Pa
Time constant	1...20 s
Zero point calibration	manual with push button
Zero point calibration (-AZ models)	automatic
Max. over pressure	30 kPa
Connection	Ø5 mm / Ø6.3 mm
Medium	dry air or non-aggressive gas
Communication	Modbus RTU (RS-485)
Bus speed	9600/19200/38400/57600 bit/s
Data bits	8
Parity	*none/odd/even
Stop bits	1
Unit load	1/4 UL
Display	backlit dot matrix display
Wiring terminals	1.5 mm^2
Operating conditions	
Temperature	-20...50 °C
Temperature (-AZ models)	-5...50 °C
Temperature (-40C models)	-40...50 °C
Humidity	0...95 %rH (non condensing)
Housing	
Material	ABS and PC plastic
Protection class	IP54
Cable gland	M16
Mounting	2 x Ø4.3 mm screw holes, one slotted
Dimensions (w x h x d)	90 x 95 x 36 mm
Weight	150 g
	* factory default

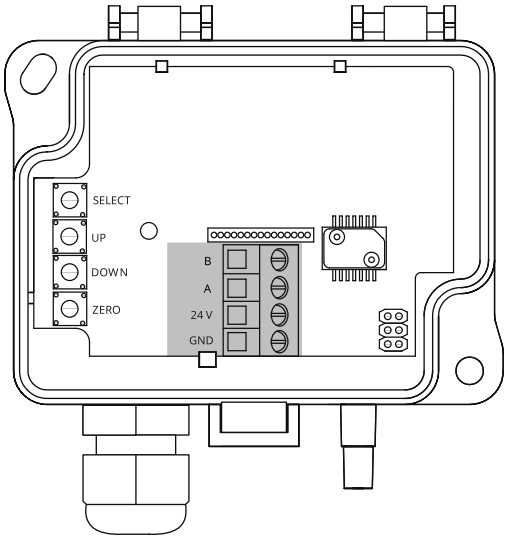
Wiring

Warning: Device wiring and commissioning can only be carried out by qualified professionals. Always make the device wirings in de-energised electricity network.

Warning: This product is appliance class III product according to IEC 60664-1. The product may only be connected to SELV (safety extra low voltage) electricity network

CAUTION: The product may only be connected to overvoltage category III electricity network according to IEC 60664-1.

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B	Modbus RTU (RS-485)
A	
24V	24 Vac/dc supply
GND	0 V

The nominal wire terminal screw tightening torque is 0.6 Nm

Important: Don't use excessive force when tightening the wiring terminal screws.

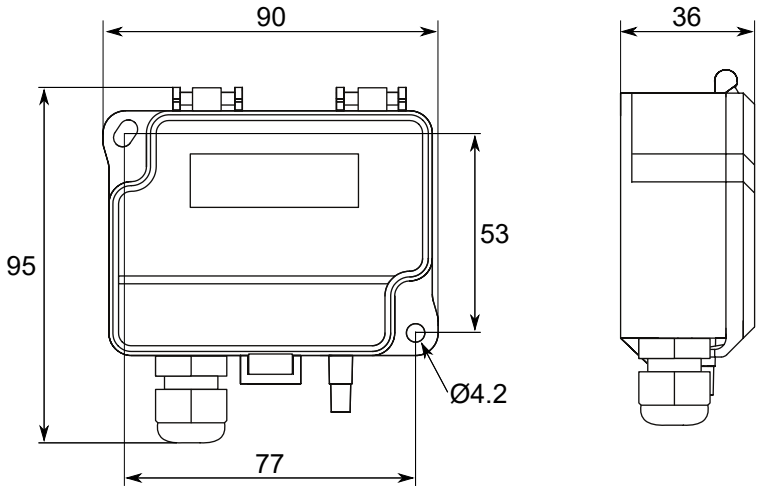
CAUTION: Ensure that all covers are closed before connecting supply voltage to the product. Don't remove the covers when the supply voltage is connected.

Ordering information

	Type	Product number	Description
	DPT-Flow-MOD-2500-D	102.011.033	Air flow transmitter, Modbus, range 0...2500 Pa, manual zeroing
	DPT-Flow-MOD-2500-AZ-D	102.011.034	Air flow transmitter, Modbus, range 0...2500 Pa, automatic zeroing
	DPT-Flow-MOD-2500-D-40C	102.011.035	Air flow transmitter, Modbus, range 0...2500 Pa, manual zeroing, extended ambient temperature range (-40...50 °C)
	DPT-Flow-MOD-7000-D	102.006.072	Air flow transmitter, Modbus, range 0...7000 Pa, manual zeroing
	DPT-Flow-MOD-7000-AZ-D	102.006.073	Air flow transmitter, Modbus, range 0...7000 Pa, automatic zeroing
	DPT-Flow-MOD-7000-D-40C	102.006.074	Air flow transmitter, Modbus, range 0...7000 Pa, manual zeroing, extended ambient temperature range (-40...50 °C)

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Dimensions



Supported standards and directives

Standard	Description
2014/30/EU	Electromagnetic Compatibility (EMC).
2011/65/EU	Restriction of Hazardous Substances (RoHS2) Directive.
(EU) 2015/863	Commission Delegated Directive, amending Annex II to Directive 2011/65/EU.
2012/19/EU	Waste electrical and electronic equipment (WEEE)
2001/95/EC	General product safety
EN 61326-1:2006	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
EN 61326-2-3:2006	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
IEC 61000-6-2:2005	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments.
EN 61000-4-2:2001	Electromagnetic compatibility (EMC). Testing and measuring techniques - Electrostatic discharge immunity test.
EN 61000-4-3:2002	Electromagnetic compatibility (EMC). Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test.
EN 61000-4-4:2004	Electromagnetic compatibility (EMC). Testing and measurement techniques - Electrical fast transient/burst immunity test.
EN 61000-4-5:2001	Electromagnetic compatibility (EMC). Testing and measurement techniques - Surge immunity test.
EN 61000-4-6:2007	Electromagnetic compatibility (EMC). Testing and measurement techniques. Immunity to conducted disturbances, induced by radio-frequency fields.
EN 55011:1998	Industrial, scientific and medical (ISM) radio-frequency equipment - Radio disturbance characteristics - Limits and methods of measurement

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