DATA SHEET

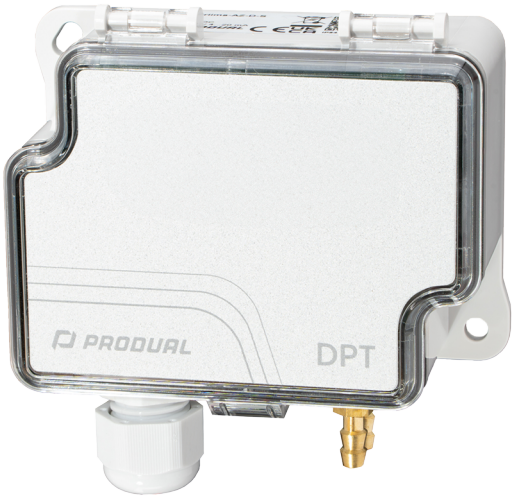
DPT-Priima

Produal

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DPT-Priima differential pressure transmitter





The DPT-Priima differential pressure transmitters are designed for cleanrooms and other high-accuracy applications. They measure static and differential pressure. Their standard features include an extremely accurate sensor and automatic zeroing. Automatic zeroing keeps the transmitter zero point accurate by automatically eliminating zero point drifting.

These transmitters provide eight pressure measurement ranges per model, and support six measurement units for the display. The DPT-Priima differential pressure transmitter has one voltage output and one current output. The voltage output is scalable (0...10 V / 2...10 V). The current output is not scalable.

The following options are available:

- Display (-D models)
- Span point adjustment (-S models)

The -D models have a backlit display that shows the pressure measurement value and the measurement unit.

The -S models have a span point adjustment function for cleanroom applications and other high-accuracy applications that require annual calibration of differential pressure transmitters.

These transmitters are easy to commission. You can select the measurement range, response time and voltage output scaling with jumpers. You can also select the measurement unit for the display with a jumper in *-D* models.

The DPT-Priima differential pressure transmitters are typically used in applications that require high measurement accuracy, including the following:

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

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Technical specifications

Property	Value
Power supply	24 Vac/dc ±10 %
Power consumption	< 1.2 W
Pressure measurement	* factory setting
Range	±25 / ±50* / ±100 / ±500 / 0...25 / 0...50 / 0...250 / 0...1000 Pa
Accuracy	0.4 % ±0.4 Pa (from applied pressure, including: general accuracy, linearity, hysteresis, long term stability, and repetition error)
Temperature compensation	Measurement is temperature compensated when ambient temperature is 0...50 °C.
Response time (T_{63})	*0.4 s / 8.0 s, selectable via jumper (typical, 63 % of the change)
Overpressure	
Proof pressure	10 kPa
Burst pressure	30 kPa
Measuring element	MEMS, no flow-through
Measurement units	*Pa
-D models	*Pa, kPa, mbar, inchWC, mmWC, psi
Zeroing	automatic zeroing or manually by pushbutton
Pressure fittings	
Type	barbed fitting, male
Size	Ø5.2 mm
Material	brass
Analogue outputs	The device has 1 voltage output connector and 1 current output connector.
Voltage output	* factory setting
Range	*0...10 V / 2...10 V, load > 1 kΩ
Accuracy	accuracy after a 30-minute warm-up time: ±0.025 V at 25 °C
Current output	
Range	4...20 mA, load 20...500 Ω
Accuracy	accuracy after a 30-minute warm-up time: typically ±0.04 mA at 25 °C, load 100 Ω max. ±0.1 mA at 25 °C, load 20...500 Ω
Display (-D models)	2-line, backlit display, 46.0 x 14.5 mm. Shows measured pressure value and measurement unit.
Wiring terminals	
Type	tilted screw terminals
Wire	0.2...1.5 mm^2 (24...16 AWG)
Tightening torque	0.4 Nm

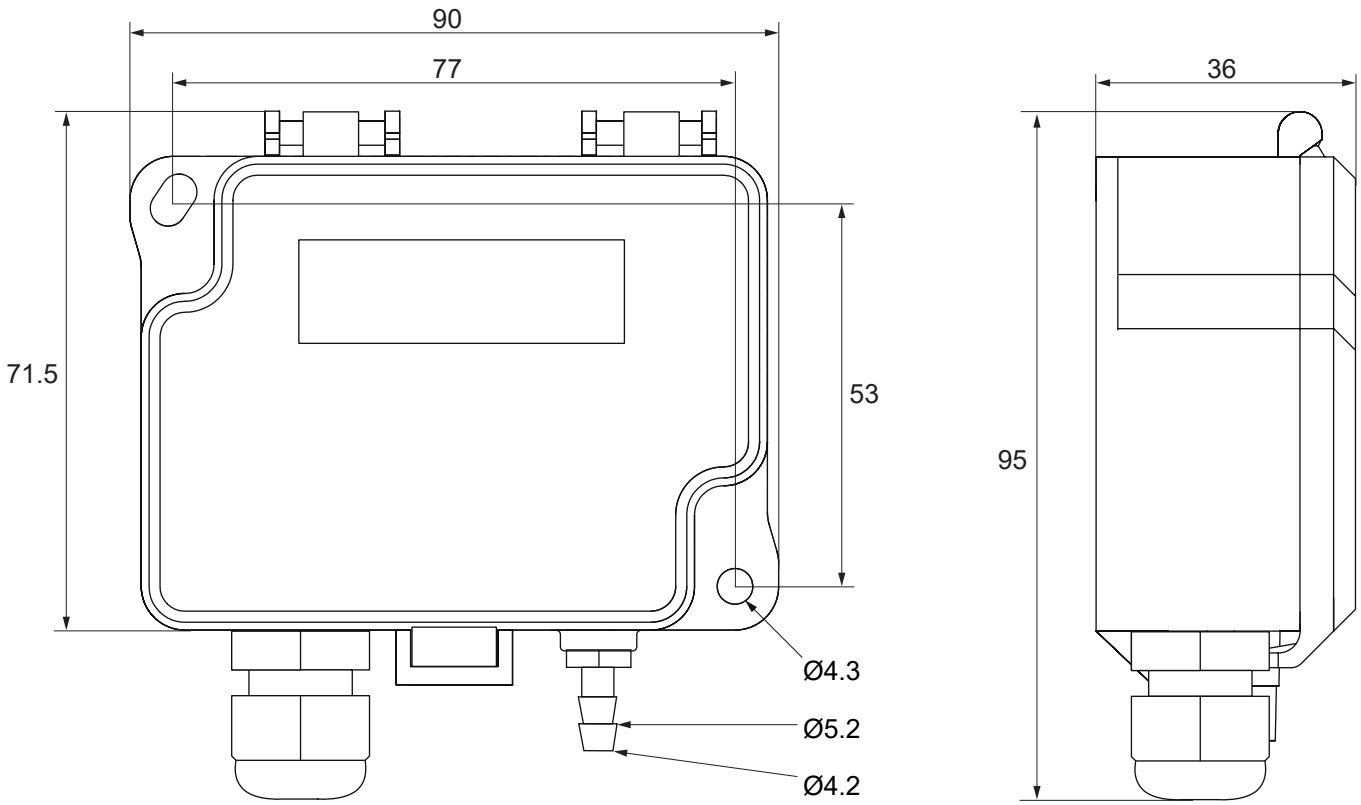
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Property	Value
Appliance class (IEC 60664-1)	III
Operating conditions	
Ambient temperature	-5...50 °C
Storage temperature	-40...70 °C
Ambient humidity	0...95 %rH (non-condensing)
Compatible media	dry air or non-aggressive gases
Housing	
Protection class	IP54, cable downwards
Cable gland	M16
Materials	ABS and PC plastic (housing), silicone (tubing)
Mounting	2 x Ø4.3 mm screw holes, one slotted
Dimensions (w x h x d)	90 x 95 x 36 mm
Weight	140 g
Warranty	5 years
CE UKCA	Refer to the EU Declaration of Conformity or the UK Declaration of Conformity for compliance information. You can find the declarations on this product's page at www.produal.com.
Company certificates	
Quality management	ISO 9001
Environmental management	ISO 14001

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Dimensions

All dimensions are in millimetres (mm).



Wiring

WARNING: Only connect wires and commission the device if you are qualified for electrical work and familiar with building automation products. Risk of electric shock and damage to the device.

WARNING: Always commission the device in a de-energised electricity network. Risk of electric shock.

WARNING: Connect this device to SELV (separated extra low voltage) electricity network only. This device is appliance class III product according to IEC 60664-1.

CAUTION: Use single-stranded wires if possible. If you use multi-stranded wires, always install wire end sleeves to the wires to prevent short circuits and ensure secure attachment.

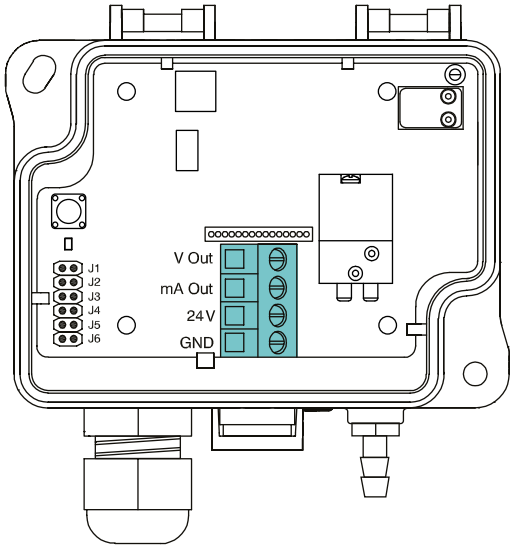
Important: For CE and UKCA compliance, use correctly grounded, shielded cable.

1. Open the cover.
2. Unscrew the strain relief on the cable gland.
3. Route the cable through the strain relief and the cable gland.

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4. Connect the wires to the terminal block according to the table below.

   Connect the signal wire to voltage output or current output according to system requirements.



V Out	Voltage output: 0...10 V / 2...10 V, load > 1 kΩ
mA Out	Current output: 4...20 mA, load 20...500 Ω
24 V	24 Vac/dc power supply
GND	0 V

   The nominal tightening torque for wiring terminal screws is 0.4 Nm.

   Important: Do not use excessive force when you tighten the wiring terminal screws.

5. Tighten the strain relief.
6. Close the cover.

Ordering information

	Model	Product number	Description
	DPT-Priima-AZ	103.039.001	High-accuracy differential pressure transmitter, automatic zeroing
	DPT-Priima-AZ-D	103.039.002	High-accuracy differential pressure transmitter with display, automatic zeroing
	DPT-Priima-AZ-S	103.039.003	High-accuracy differential pressure transmitter, automatic zeroing and span point calibration
	DPT-Priima-AZ-D-S	103.039.004	High-accuracy differential pressure transmitter with display, automatic zeroing and span point calibration
	DP-AK	1241000001	Differential pressure measurement accessory kit. Includes pressure measurement hose (2 m), 2 duct connectors and 4 connector mounting screws.

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	Model	Product number	Description
	SPP	1241000009	Static pressure port for pressure difference monitoring across the building envelope. Installed to the outer wall of the building.

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