

PDV-A

● For Wind Pressure Measurement
● 1 to 7 kPa

Minute Differential Pressure Transducer



Corrosion Resistance with Built-in Variable Damping Mechanism

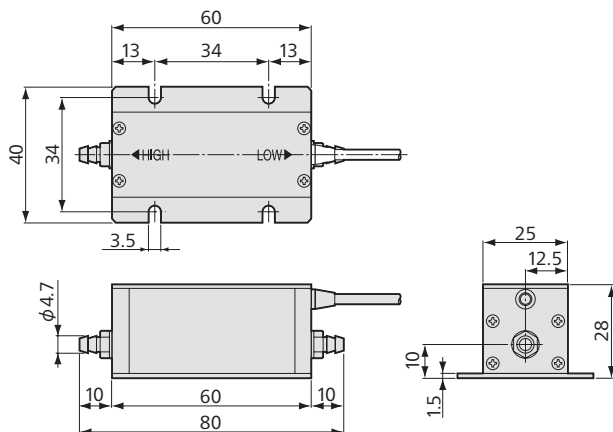
- High frequency response
- Highly accurate
- High sensitivity
- Noise resistant
- Voltage output of 5 V
- Compact & lightweight

PDV-A series pressure transducers have diffusional semiconductor strain gages on a silicon diaphragm. PDV-A transducers detect pressures as resistance variation and then amplify this signal by built-in amplifier.

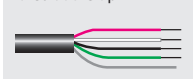
Note

- (1) Use the transducer with general air.
- (2) If water or any other liquid enters the low-pressure line the transducer gets out of order.

Dimensions



Bared at the tip



Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within $\pm 0.5\%$ RO but $\pm 0.7\%$ for 2.5 kPa
Hysteresis	Within $\pm 0.3\%$ RO
Rated Output	± 5 V
Rated Output Accuracy	$\pm 1.0\%$ RO for 1 to 2.5 kPa $\pm 1.5\%$ RO for 5 kPa $\pm 2.0\%$ RO for 7 kPa

Environmental Characteristics

Safe Temperature	-20 to 70°C
Safe Humidity	20 to 85% RH (0 to 50°C)
Compensated Temperature	0 to 50°C
Temperature Effect on Zero	Within $\pm 0.1\%$ RO/°C for 1 kPa Within $\pm 0.08\%$ RO/°C for 2.5 to 7 kPa
Temperature Effect on Output	Within $\pm 0.1\%$ °C for 1 kPa Within $\pm 0.08\%$ °C for 2.5 to 7 kPa
Pressure Medium	General air (Non-corrosive gas)

Electrical Characteristics

Load Resistance	5 k Ω or more
Bridge Output Resistance	2 to 6 k Ω
Power Supply	12 VDC (11 to 15 V), 30 mA or less
Cable	PDV-A: 4-conductor (0.05 mm ²) chloroprene shielded cable, 3 mm diameter by 3 m long, bared at the tip

Mechanical Properties

Safe Overloads	300% but 600% for 1 kPa
Maximum Line Pressure	100 kPa
Natural Frequencies	Approx. 1.7 kHz
Weight	Approx. 100 g (Excluding cable)
Posture Effect	Zero drift within $\pm 0.3\%$ but $\pm 0.8\%$ for 1 kPa when inclined by 90° referring to horizontal
Internal Volume High side	Approx. 0.2×10^{-6} m ³ (0.2 ml)
Low side	Approx. 1×10^{-6} m ³ (1 ml)
Pressure Connection	4.7 mm diameter barb fitting

Models	Rated Capacity
PDV-10GA	1 kPa
PDV-25GA	2.5 kPa
PDV-50GA	5 kPa
PDV-70GA	7 kPa

To Ensure Safe Usage

- Avoid dew condensation or freeze, because these transducers are designed for general indoor use.
 - When using for a pressure meter, apply pressure to the high side and open the low side to the atmosphere.
 - For atmospheric observation, prepare piping to prevent rainwater from entering the pressure inlet.
- *If dimensions of the pressure connection are desired to change, contact us.

● Static measurement

● Dynamic measurement

PDV-A Recommended products for combination

Data Logger UCAM-60B
→ 3-25

Sensor Interface PCD-430A
→ 3-77