PDS-A

●For Wind Pressure Measurement ●1 to 7 kPa

Minute Differential Pressure Transducer

*TEDS installation not possible.

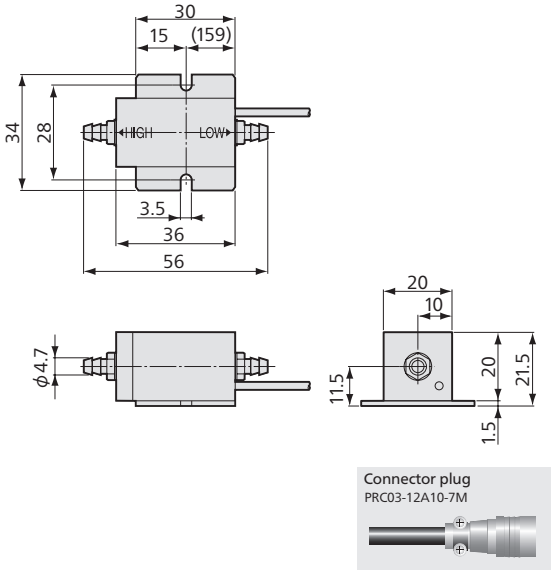
For Wind Pressure Measurement

- ●High frequency response
- ●Highly accurate
- ●High sensitivity
- ●Noise resistant
- ●Compact & lightweight

PDS-A series pressure transducers have diffusional semiconductor strain gages on a silicon diaphragm. PDS-A transducers detect pressures as resistance variation and then convert this variation to electrical signals. These signals are indicated by Kyowa's signal conditioners.

Note
(1) Use the transducer with general air
(2) If water or any other liquid enters the low side, the transducer gets out of order.

■Dimensions



Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within ±0.5% RO but ±0.7% for 2.5 kPa
Hysteresis	Within ±0.3% RO
Rated Output	±7 to 23 mV for 1 kPa
	±13 to 23 mV for 2.5 to 7 kPa
Rated Output Accuracy	±1.0% RO for 1, 2.5 kPa
	±1.5% RO for 5 kPa, ±2.0% RO for 7 kPa

Environmental Characteristics

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

Electrical Characteristics

Initial Unbalance	Within ±10 mV
Bridge Output Resistance	2 to 6 kΩ
Recommended Excitation	10 VDC (9.5 to 15 V), 5 mA or less
	(Bridge power supply of signal conditioner may be used.)
Cable	PDS-A: 4-conductor (0.05 mm^2) chloroprene shielded cable,
	3 mm diameter by 3 m long, terminated with connector plug
	PRC03-12A10-7M (Shield wire is not connected to the case.)

Mechanical Properties

Safe Overloads	300% but 600% for 1 kPa
Maximum Line Pressure	100 kPa
Natural Frequencies	Approx. 1.7 kHz
Weight	Approx. 40 g (Excluding cable)
Posture Effect	Zero drift within ±0.3% , but ±0.8% for 1 kPa,
	when inclined by 90° referring to horizontal condition
Internal Volume	High side: Approx. 0.2 x 10^{-6} m^3 (0.2 ml)
	Low side: Approx. 1 x 10^{-6} m^3 (1 ml)
Pressure Connection	4.7 mm diameter barb fitting

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

To Ensure Safe Usage

- ●Avoid dew condensation or freeze, because these transducers are designed for general indoor use.
- ●If using as a gage 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.
- ●Signal conditioners CDV-900A and instrumentation amplifiers WGA-900A,650B/710C with built-in bridge power supply of 10 VDC are available for PDS-A series. In the case of WGA-650B or 710C, connection cable N-70 is required.
- ●Use a series type power supply.

*If dimensions of the pressure connection are desired to change, contact us.

●Dynamic measurement

PDS-A Recommended products for combination

Signal Conditioner CDV/CDA-900A

→ 3-9