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 silicone 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
(Note 2) If water or any other liquid enters the low side, the transducer gets out of order.

Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within ±0.5% RO
	(25GA: Within ±0.7% RO)
Hysteresis	Within ±0.3% RO
Rated Output	13 to 23 mV
	(10GA: 7 to 23 mV)
Rated Output Accuracy	Within ±1.0% RO
	(Sensitivity error due to load direction)
	(50GA: Within ±1.5% RO)
	(70GA: Within ±2.0% RO)

Environmental Characteristics

Safe Temperature	-20 to 70°C
Safe Humidity	20 to 85% (At 0 to 50°C)
Compensated Temperature	0 to 50°C
Temperature Effect on Zero	Within ±0.08% RO/°C
	(10GA: Within ±0.1% RO/°C)
Temperature Effect on Output	Within ±0.08%/°C
	(10GA: Within ±0.1%/°C)
Pressure Medium	General air (Non-corrosive gas)

Electrical Characteristics

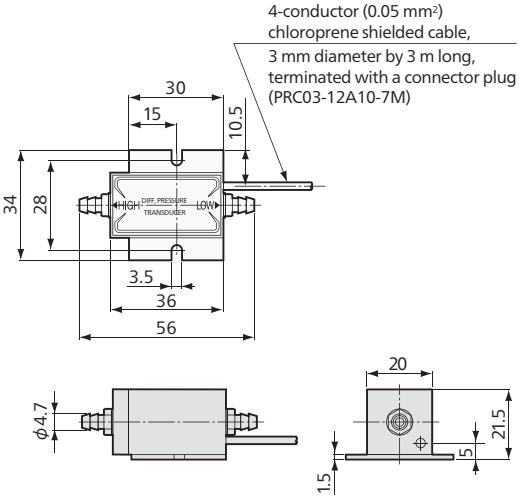
Initial Unbalance	Within ±10 mV
Bridge Output Resistance	2 to 6 kΩ
Power Supply	10 VDC (9.5 to 15 V), 5 mA or less
	(Bridge power supply of strain measuring
	instrument may be used.)
Cable	4-conductor (0.05 mm²) chloroprene shielded cable,
	3 mm diameter by 3 m long, terminated with a connector plug
	PRC03-12A10-7M (Shield wire is not connected to the case.)

Mechanical Properties

Safe Overloads	300% (10GA: 600%)
Maximum Line Pressure	100 kPa
Natural Frequencies	Approx. 1.7 kHz
Weight	Approx. 40 g (Excluding cable)
Posture Effect	Zero drift: Within ±0.3% RO (10GA: Within ±0.8% RO)
	when inclined by 90° referring to horizontal condition
Internal Volume	High side: Approx. 0.2×10^{-6} m³ (0.2 mL)
	Low side: Approx. 1×10^{-6} m³ (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

Dimensions



To Ensure Safe Usage

●Avoid dew condensation or freeze because the transducer is not drip-proof.
●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.
●When using the bridge power supply of a strain amplifier, use a model (CDV-900A, WGA-710C) which supports 10 VDC.
●The suitable power supply is a series regulator type which generates less noise than the switching type.

Connector plug
PRC03-12A10-7M

