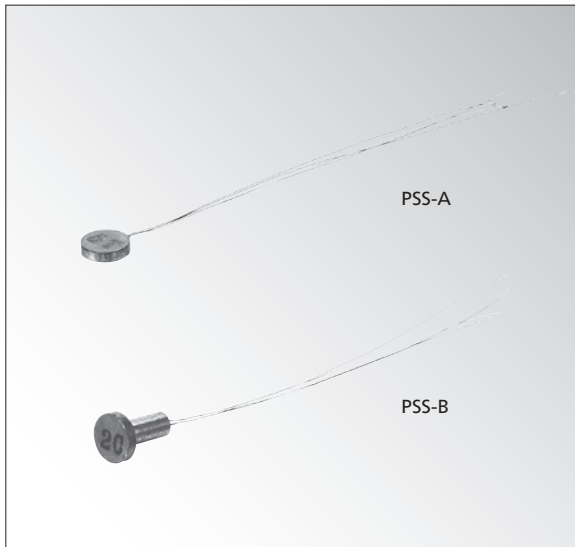


Miniature Pressure Sensor



Ultra-small & lightweight design with small rated capacities

PSS series pressure transducers have a bridge of strain gages inside, achieving ultra-thin compact structure. A thin-film strain gage is directly formed on a diaphragm by sputtering and photo lithography. PSS transducers are installed by adhesives and developed mainly for gas pressure measurement.

- (Note 1) Copper alloy is used for sensing element. Avoid measuring corrosive liquid or gas.
- (Note 2) An epoxy adhesive is used to assemble the sensing element. Therefore, avoid using the sensor to measure organic solvents (Toluene, ketone, etc.)
- (Note 3) It should not be used under high temperature and high humidity environments for a long time.
- (Note 4) It should not be used under water.

Specifications

Performance

Rated Capacity	See table below.
Nonlinearity	Within $\pm 3\%$ RO (02K), $\pm 1\%$ RO (05K, 1K)
Hysteresis	Within $\pm 3\%$ RO (02K), $\pm 1\%$ RO (05K, 1K)
Rated Output	1 mV/V (2000×10^{-6} strain) or more 02KAF, BF: 0.75 mV/V (1500×10^{-6} strain) or more

Note: Rated output is sorted to one of the classes divided by every 2% difference in output value. Since the rated output stated in the Test Data Sheet is the center value of the class, it may have a maximum error of $\pm 1\%$.

Environmental Characteristics

Safe Temperature	-20 to 70°C
Compensated Temperature	0 to 50°C (AF, BF: Non-condensing)
Temperature Effect on Zero	Within $\pm 0.8\%$ RO/°C (05K, 1K) Within $\pm 0.6\%$ RO/°C (02K)
Temperature Effect on Output	Within $\pm 0.3\%$ /°C (02KAF, BF: Within $\pm 0.5\%$ /°C)

Electrical Characteristics

Safe Excitation	4 V AC or DC
Recommended Excitation	1 to 2 V AC or DC
Input Resistance	350 to 1000 Ω
Output Resistance	350 to 1000 Ω
Cable	Polyurethane coated copper wires, 0.08 mm diameter by 5 cm long, bared at the tip

Mechanical Properties

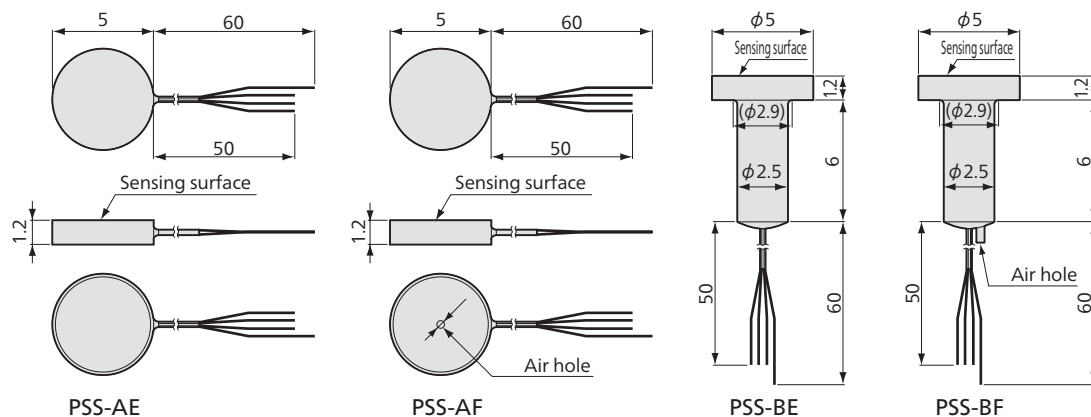
Safe Overloads	150%
Natural Frequencies	See table below.
Weight	PSS-A: Approx. 0.15 g (Excluding cable) PSS-B: Approx. 0.3 g (Excluding cable)
Dedicated Adhesive	RC-19 (Request the RC-19 when ordering the transducer. Free of charge.)

Models		Rated Capacity	Natural Frequencies	Remarks
Cable Direction to Sensing Surface				
Horizontal	Vertical			
PSS-05KAE	PSS-05KBE	50 kPa	≈ 18 kHz	Sealed type
PSS-1KAE	PSS-1KBE	100 kPa	≈ 31 kHz	
PSS-02KAF	PSS-02KBF	20 kPa	≈ 6 kHz	Atmospheric

To Ensure Safe Usage

High-carrier-based dynamic strain amplifier DPM-912, 913 or 952 may not satisfy the specified rated output in some rare case. Request us to calibrate the transducer in combination with the strain amplifier. Or, if possible, use dynamic strain amplifier DPM-911 or 951 or signal conditioner CDV-900A.

Dimensions



● Static measurement ● Dynamic measurement

