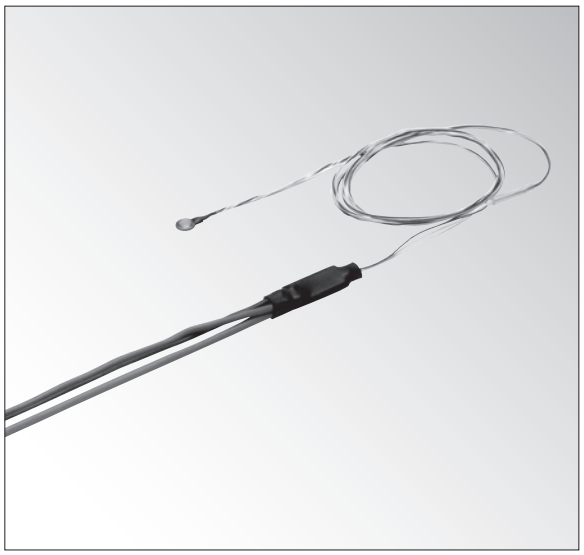
# PSM-AB

## Miniature Pressure Sensor

●Kyowa's smallest pressure sensors
●100 & 200 kPa



## Ultra-small sized pressure transducers with strong fluoroplastic coated cable

●The bridge adapter is provided.

PSM-AB series are the smallest pressure sensors in Kyowa's products designed based on integration of sensor element and diaphragm. This sensor adopts quarter-bridge 3-wire system and configures a full bridge in a bridge adapter. In addition, this sensor is installed by adhesives. Developed mainly for gas pressure measurement, PSM-AB series allow denser points than conventional transducers to be measured.

(Note 1) Copper alloy is used for liquid-contacting part. Avoid measuring corrosive liquid or gas.
(Note 2) The mainframe has been assembled using an epoxy adhesive. Do not therefore use the transducer to measure organic solvent. (e.g. Toluene, ketone and others)

## Specifications

### Performance

| | |
|---|---|
| **Rated Capacity** | See table below. |
| **Nonlinearity** | Within ±1% RO |
| **Hysteresis** | Within ±1% RO |
| **Rated Output** | PSM-1KAB: 0.275 mV/V ±25% |
| | PSM-2KAB: 0.38 mV/V ±25% |
| Note: Rated output is sorted to one of the classes divided by every 0.007 mV/V 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 ±0.0035 mV/V. | |

### Environmental Characteristics

| | |
|---|---|
| **Safe Temperature** | -20 to 70°C |
| **Compensated Temperature** | 0 to 50°C |
| **Temperature Effect on Zero** | Within ±0.5% RO/°C |
| | (PSM-1KAB: Within ±1% RO/°C) |
| **Temperature Effect on Output** | Within ±0.3%/°C |

### Electrical Characteristics

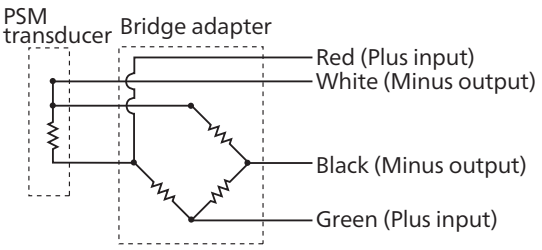
| | |
|---|---|
| **Safe Excitation** | 5 V AC or DC |
| **Recommended Excitation** | 1 to 2 V AC or DC |
| **Input Resistance** | 350 Ω ±1% |
| **Output Resistance** | 350 Ω ±1% |
| **Cable** | Sensor side: 3-conductor fluoroplastic coated cable, 0.25 mm diameter by 50 cm long |
| | Measuring instrument side: 4-conductor vinyl coated cable, 1.3 mm diameter by 15 cm long, bared at the tip |

### Mechanical Properties

| | |
|---|---|
| **Safe Overloads** | 150% |
| **Weight** | Approx. 0.5 g (Including cable. Not including bridge adapter and measuring side cable.) |
| **Degree of Protection** | IP61 (IEC 60529) (Excluding bridge adapter) |
| **Dedicated Adhesive** | RC-19 (Request the RC-19 when ordering the transducer.) |

| Models | Rated Capacity | Natural Frequencies (Approx.) | Remarks |
|---|---|---|---|
| **PSM-1KAB** | 100 kPa | 3 kHz | Bridge adapter Attached standard |
| **PSM-2KAB** | 200 kPa | | |

### Circuit Diagram




PSM-AB (Full bridge system)

### Dimensions

