

# PHC-B

● Excellent heat resistance ● 2 to 20 MPa

## Flush Diaphragm Type High-temperature Pressure Transducer



\*TEDS-installed models are available. Inquiries are welcome.

### Heat-resistant sputter gages achieve pressure measurement at high-temperature

- Safe temperature: -30 to 240°C
- Heat-resistant sputter gages
- Flush diaphragm ensuring high frequency response
- Compact, flexible, and heat-resistant cable ensuring ease of use

To enable pressure measurement at high temperature, PHC-B series pressure transducers adopt thin-film strain gage formed by sputtering.

The sensor part is a flush diaphragm detecting pressure directly on a flat surface without pressure medium, thus enabling pressure measurement without missing momentary pressure changes.

In addition, the flush diaphragm makes these transducers suitable for measuring not only liquid or gas pressure but also pressure of highly viscous medium.

The small-sized design and flexible cable make them easy to use even in limited space.

### Specifications

#### Performance

Rated Capacity	See table below.
Nonlinearity	Within ±0.5% RO
Hysteresis	Within ±0.3% RO
Repeatability	0.2% RO or less
Rated Output	0.6 mV/V (1200 × 10 <sup>-6</sup> strain) or more

#### Environmental Characteristics

Safe Temperature	-30 to 240°C (200°C with cable, -25 to 85°C with connector plug)
Compensated Temperature	23 to 230°C (200°C with cable, -25 to 85°C with connector plug)
Temperature Effect on Zero	Within ±0.03% RO/°C
Temperature Effect on Output	Within ±0.03%/°C

#### Electrical Characteristics

Safe Excitation	12 V AC or DC
Recommended Excitation	1 to 10 V AC or DC
Input Resistance	380 to 650 Ω
Output Resistance	380 to 650 Ω
Cable	4-conductor (0.08 mm <sup>2</sup> ) fluoroplastic shielded cable, 3.1 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	150%
Natural Frequencies	See table below.
Material	Case: SUS (Metallic finish) Liquid-contacting part: SUS 630
Weight	Approx. 70 g (Excluding cable)
Degree of Protection	IP62 (IEC 60529)
Mounting Screw	G1/8, male

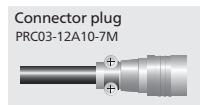
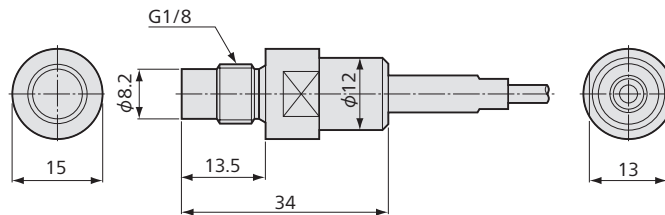
Standard Accessories | Gasket (Mild copper)

Models	Rated Capacity	Natural Frequencies
PHC-B-2MP	2 MPa	≈ 45 kHz
PHC-B-5MP	5 MPa	≈ 75 kHz
PHC-B-10MP	10 MPa	≈ 85 kHz
PHC-B-20MP	20 MPa	≈ 85 kHz

### 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



- Physical quantity indication
- Dynamic measurement

PHC-B Recommended products for combination

Instrumentation Amplifier WGA-680A  
→ 3-97

Strain Amplifier DPM-900 series  
→ 3-5

Signal Conditioner CDV-900A  
→ 3-9

Universal Recorder EDX-100A  
→ 3-65

Memory Recorder/Analyzer EDX-5000A  
→ 3-70

