Strain Gage
Load Cell
Pressure Sensor
Acceleration Sensor
Torque Sensor
Displacement Sensor
Component Force Sensor
Automotive Sensor
Civil Engineering Sensor

PHL-A

CE

Small-sized High/Low-temperature Pressure Transducer



Compact and lightweight, for high and low temperatures

- **Rated capacity: 1 to 50 MPa**
- **High/low temp (compensated: −196 to 200°C, PHL-A-B)**
- **Degree of protection: IP67 (PHL-A-A)**

Compact and lightweight semi-flush diaphragm type transducers with excellent stability, usable in everything from high-temperature to low-temperature environments.

■Models

Model		Rated Capacity	Natural Frequencies (Approx.)
Connector Type	Cable Integrated Type		
PHL-A-1MP-A	PHL-A-1MP-B	1 MPa	48 kHz
PHL-A-2MP-A	PHL-A-2MP-B	2 MPa	74 kHz
PHL-A-3MP-A	PHL-A-3MP-B	3 MPa	94 kHz
PHL-A-5MP-A	PHL-A-5MP-B	5 MPa	122 kHz
PHL-A-10MP-A	PHL-A-10MP-B	10 MPa	149 kHz
PHL-A-20MP-A	PHL-A-20MP-B	20 MPa	210 kHz
PHL-A-30MP-A	PHL-A-30MP-B	30 MPa	250 kHz
PHL-A-50MP-A	PHL-A-50MP-B	50 MPa	294 kHz

*TEDS-installed models are available. Please contact us.

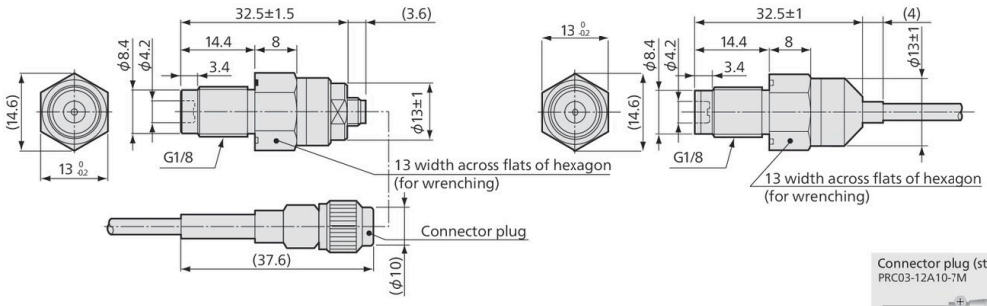
Specifications

Performance	
Rated Capacity	See table below.
Nonlinearity	Within ±0.3% RO (2 MPa or less: Within ±0.5% RO)
Hysteresis	Within ±0.2% RO (2 MPa or less: Within ±0.5% RO)
Repeatability	0.2% RO or less
Rated Output	2 mV/V ±20%
	(2 MPa or less: 2 mV/V ±30%)
Environmental Characteristics	
Safe Temperature	PHL-A-A : −40 to 150°C
	PHL-A-B : −196 to 210°C
	(Connector plug: −25 to 85°C)
Compensated Temperature	PHL-A-A : −20 to 150°C
	PHL-A-B : −196 to 200°C
	(Connector plug: −25 to 85°C)
Temperature Effect on Zero	Within ±0.03% RO/°C
	(3 MPa or less: Within ±0.05% RO/°C)
Temperature Effect on Output	Within ±0.03%/°C
Electrical Characteristics	
Safe Excitation	6 V AC or DC
Recommended Excitation	1 to 3 V AC or DC
Input Resistance	350 Ω ±2%
Output Resistance	350 Ω ±2%
Cable	PHL-A-A:
	4-conductor (0.08 mm²) fluoroplastic shielded
	cable, 3.1 mm diameter by 4 m long
	Sensor side: Terminated with a connector plug
	MR01-9008P4F
	Measuring instrument side:
	Terminated with a connector plug PRC03-12A10-7M
	(Shield wire is not connected to the case.)
	PHL-A-B:
	4-conductor (0.08 mm²) fluoroplastic shielded
	cable, 3.1 mm diameter by 30 cm 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	Liquid-contacting part: SUS630
	Screw part: Nickel plating
Weight	Approx. 20 g (Excluding cable)
Degree of Protection	PHL-A-A: IP67 (JIS C 0920/IEC 60529)
	PHL-A-B: IP64 (JIS C 0920/IEC 60529)
Mounting Screw	G1/8, male
Compliance	Directive 2011/65/EU,(EU)2015/863(10 restricted substances) (RoHS)

■Standard Accessories

Gasket (Mild copper) (SS-105 O-ring is also usable.
However, use the pressure and temperature range within the O-ring specification range.)

■Dimensions



PHL-A-A PHL-A-B

Connector plug (standard)
PRC03-12A10-7M

