

PRESSURE TRANSDUCERS

P-8305



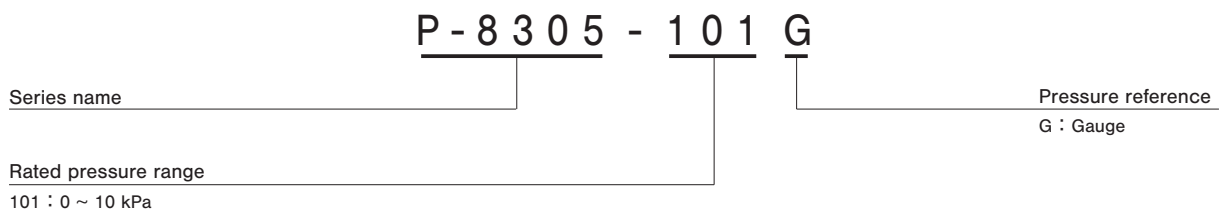
FEATURES

- SUS diaphragm type low pressure transducer (10 kPa)
- Double diaphragm structure
- Built-in temperature compensation function (0 ~ 50 °C)

INTERNAL STRUCTURE

Part name	Material
① Sensor chip	Silicone
② Sealed liquid	Silicone oil
③ Stainless steel diaphragm	SUS 316L
④ Housing	
⑤ "O" ring	Fluoro-rubber
⑥ Terminal pin	Copper + gold-plated
⑦ Vent hole	Iron + gold-plated

MODEL NUMBER DESIGNATION



LIST OF MODEL NUMBERS

Pressure reference	Gauge
kPa Rated pressure range	0 ~ 10
Model number	P-8305-101G

※ Verify the above model numbers when placing orders.

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STANDARD SPECIFICATIONS

● Unless otherwise specified, the specs are defined at an ambient temperature of 25±5 °C and excitation current of 1.5 mA DC.

Item	Model number	P-8305	
		101G	
General specifications	Pressure reference	Gauge	
	Rated pressure range	kPa 10	
	Maximum pressure	kPa 30	
	Break-down pressure	kPa 100	
	Operating temp. range	°C -20 ~ 70	
	Compensated temp. range	°C 0 ~ 50	
	Operating humidity	%RH 35 ~ 85 (No condensation)	
	Storage temp.	°C -20 ~ 70 (Atmospheric pressure, humidity 65 %RH maximum)	
	Bridge resistance	Ω 4700 ± 30 %	
	Pressure medium	SUS316L Corrosive gases/liquids compatible with SUS316L	
	Insulation resistance	MΩ minimum 100 (500 VDC)	
	Dielectric strength	500 VAC, 60 s (Leakage current 1 mA maximum)	
	Sealed liquid	Silicone oil	
	Net weight	g Approx. 25	
Power	Excitation current	mA DC 1.5 (Constant current)	
Analog output	Offset voltage	mV ± 3	
	Span voltage	mV 25 ± 10	
	Linearity/Hysteresis	%F.S. ± 0.3	
	Thermal error (Reference temp.: 25 °C)	ZERO %F.S./°C	± 0.06
		SPAN %F.S./°C	± 0.04
	Response	ms Approx. 2	
Gravitational effect (From vertical position to horizontal position)	%F.S. max. Approx. 0.5		

ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions (At 25 ± 5 °C)	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s ² , 3 directions for 2 hours each	Offset voltage/Span voltage: ± 2 %F.S. maximum each
Shock	490 m/s ² , 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure, 10 ⁶ cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

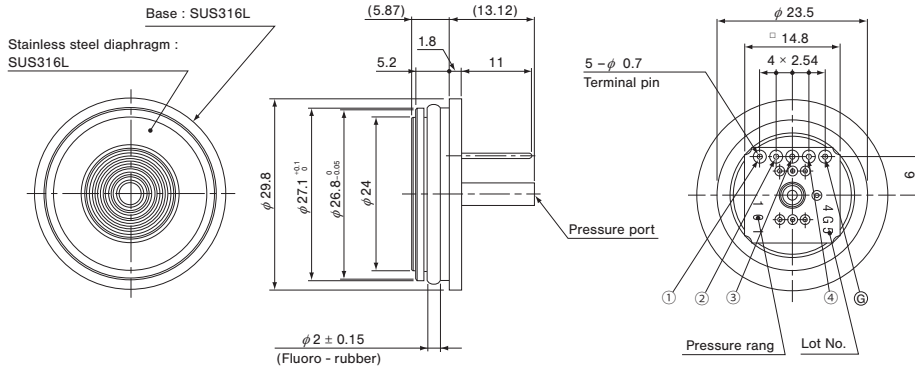
※ Can be operated at vacuum pressure.

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OUTLINE DIMENSIONS

Unless otherwise specified, tolerance : ± 0.5 (Unit: mm)



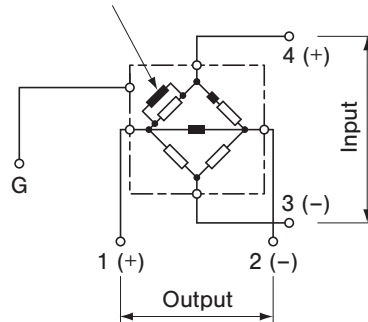
! Extra care should be taken with the diaphragm part.
Do not touch the diaphragm directly to avoid damaging the diaphragm.

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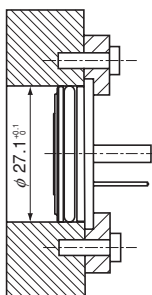
PIN	CONNECTION
1	Output \oplus
2	Output \ominus
3	Input \ominus
4	Input \oplus
G	Housing

INTERNAL ELECTRICAL SCHEMATICS

Thick film resistors for temp. compensation



INSTALLATION EXAMPLES



- An "O" ring S24 is supplied as accessory.
Make the mounting bore diameter $\phi 27.1_{-0}^{+0.1}$ and the surface-roughness as 6.3 S ($\nabla\nabla\nabla$).
- Do not make the connector terminal side be airtight completely, as the vent hole is at this side.