

# PRESSURE TRANSDUCERS

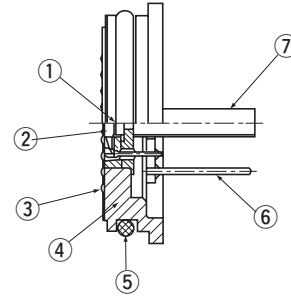
# P-8305



## FEATURES

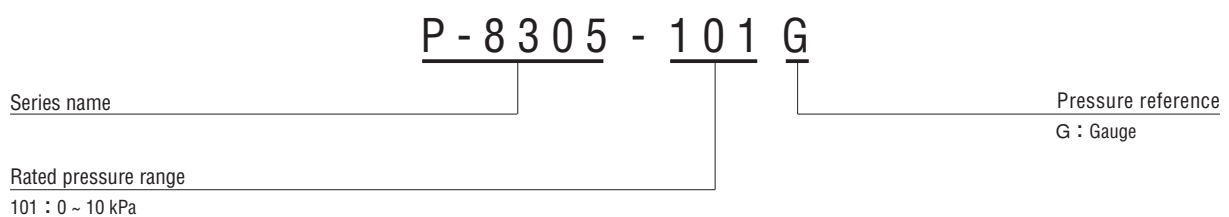
- SUS diaphragm type low pressure transducer (10 kPa)
- Double diaphragm structure
- Built-in temperature compensation function (0 ~ 50 °C)

## INTERNAL STRUCTURE



Part name	Material
① Sensor chip	Silicone
② Sealed liquid	Silicone oil
③ Stainless steel diaphragm	SUS 316L
④ Housing	
⑤ (S24) "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.

# P-8305

## PRESSURE TRANSDUCERS

### 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		Corrosive gases/liquids compatible with SUS316L	
	Insulation resistance	MΩ minimum	100 (500 V DC)	
	Dielectric strength		500 V AC, 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

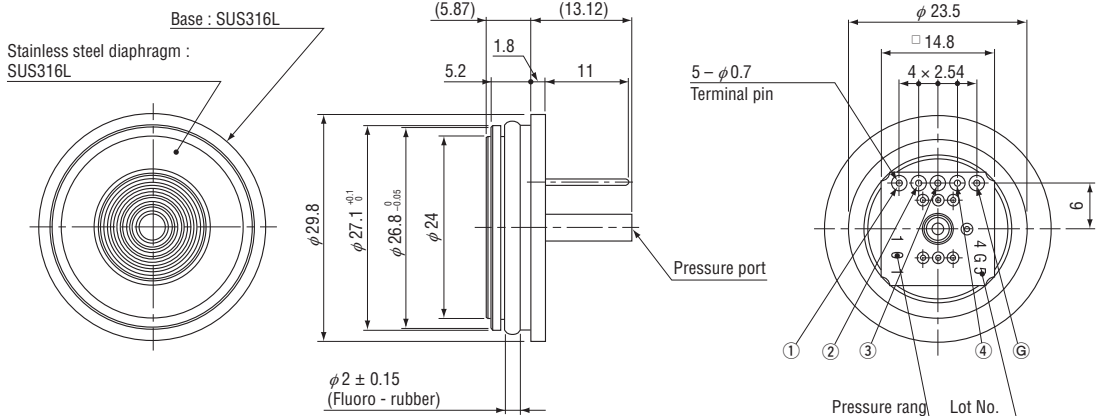
Test item	Test conditions (At 25 ± 5 °C)	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s <sup>2</sup> , 3 directions for 2 hours each	Offset voltage/Span voltage: ± 2 %F.S. maximum each
Shock	490 m/s <sup>2</sup> , 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure,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

※ Can be operated at vacuum pressure.

# P-8305 PRESSURE TRANSDUCERS

## OUTLINE DIMENSIONS

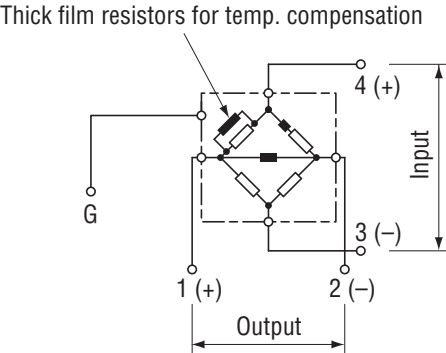
Unless otherwise specified, tolerance :  $\pm 0.5$  (Unit: mm)



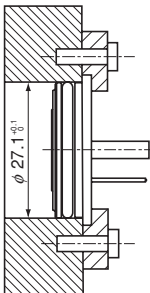
**!** Extra care should be taken with the diaphragm part.  
Do not touch the diaphragm directly to avoid damaging the diaphragm.

P-8305	
PIN	CONNECTION
①	Output +
②	Output -
③	Input -
④	Input +
ⓐ	Housing

## INTERNAL ELECTRICAL SCHEMATICS



## INSTALLATION EXAMPLES



- An "O" ring S24 is supplied as accessory.  
Make the mounting bore diameter  $\phi 27.1^{+0.1/0}$  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.