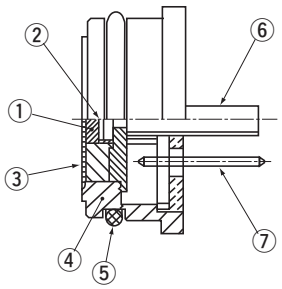
PRESSURE TRANSDUCERS

P-8505



INTERNAL STRUCTURE



	Part name	Material
①	Sealed liquid	Silicone oil
②	Sensor chip	Silicone
③	Stainless steel diaphragm	SUS 316L
④	Housing	
⑤	“O” ring (S16)	Fluoro-rubber
⑥	Vent hole	Iron + gold-plated
⑦	Terminal pin	Copper + gold-plated

FEATURES

- Double diaphragm structure
- Built-in temperature compensation function (0 ~ 50 °C)

MODEL NUMBER DESIGNATION

P-8505 - 102 G

Series name

Rated pressure range
501 : 0 ~ 50 kPa
102 : 0 ~ 100 kPa
352 : 0 ~ 350 kPa
103 : 0 ~ 1000 kPa

Pressure reference
G : Gauge

LIST OF MODEL NUMBERS

Pressure reference	Gauge			
Rated pressure range	0 ~ 50	0 ~ 100	0 ~ 350	0 ~ 1000
Model number	P-8505-501G	P-8505-102G	P-8505-352G	P-8505-103G

※ Verify the above model numbers when placing orders.

P-8505
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-8505			
			501G	102G	352G	103G
General specifications	Pressure reference		Gauge			
	Rated pressure range	kPa	50	100	350	1000
	Maximum pressure	kPa	100	200	700	2000
	Break-down pressure	kPa	150	300	1050	3000
	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	3300 ± 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. 10			
Power	Excitation current	mA DC	1.5 (Constant current)			
Analog output	Offset voltage	mV	± 3			
	Span voltage	mV	90 ± 30			
	Linearity/Hysteresis	%F.S.	± 0.3		± 0.5	
	Thermal error (Reference temp.: 25 °C)	ZERO %F.S./°C	± 0.05			
		SPAN %F.S./°C	± 0.05			
	Response	ms	Approx. 2			
	Gravitational effect (From vertical position to horizontal position)	%F.S. max.	Approx. 0.5		Approx. 0.1	Approx. 0.05

ENVIRONMENTAL CHARACTERISTICS

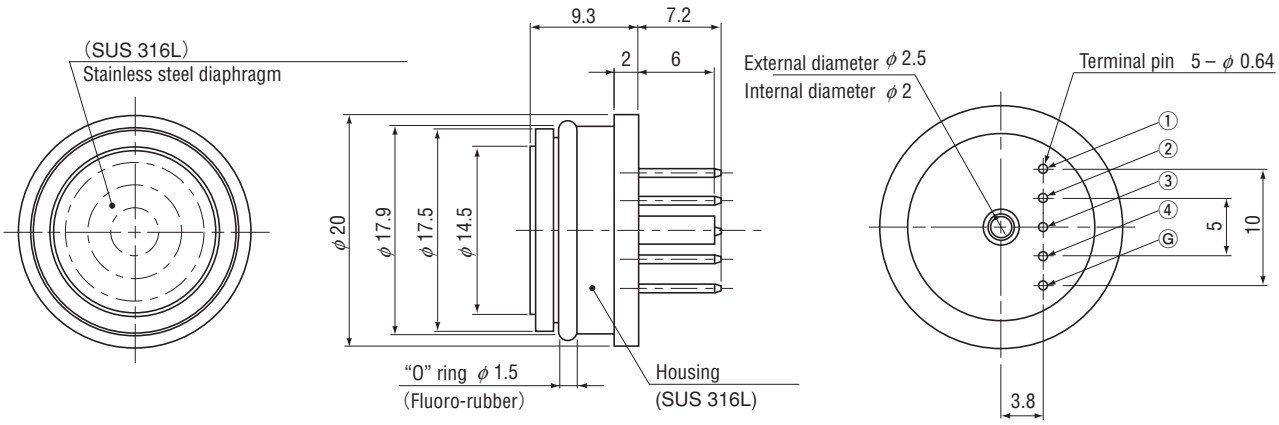
Test item	Test conditions (At 25 ± 5 °C)	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s², 3 directions for 2 hours each	Offset voltage/Span voltage: ± 1 %F.S. maximum each
Shock	490 m/s², 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure, 10^6 cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

※Can be operated at vacuum pressure.

P-8505
PRESSURE TRANSDUCERS

■ OUTLINE DIMENSIONS

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

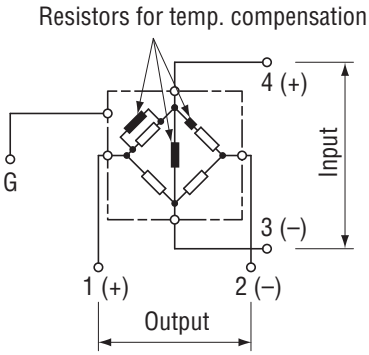


⚠ Extra care should be taken with the diaphragm part.
Do not touch the diaphragm directly to avoid damaging the diaphragm.

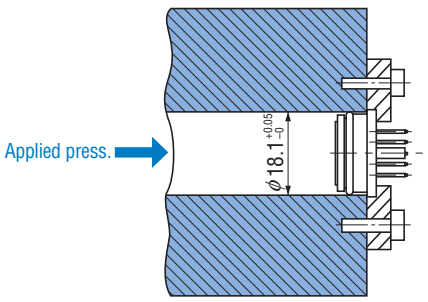
P-8505

PIN	CONNECTION
①	Output ⊕
②	Output ⊖
③	Input ⊖
④	Input ⊕
Ⓖ	Housing

■ INTERNAL ELECTRICAL SCHEMATICS



■ INSTALLATION EXAMPLES



- An "O" ring S16 is supplied as accessory.
  Make the mounting bore diameter $\phi 18.1^{+0.05}_{-0}$ and the surface-roughness as 6.3 S (▽▽▽).
- Do not make the connector terminal side be airtight completely, as the vent hole is at this side.