



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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New

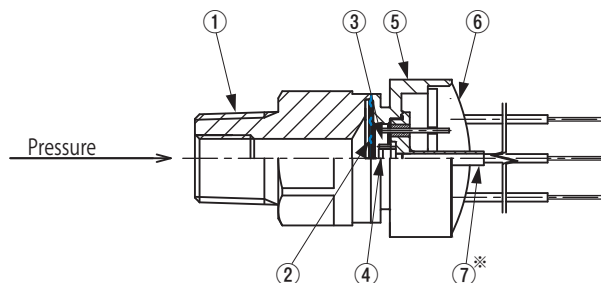
Ultra-miniature pressure sensors P-7100



FEATURES

- Suitable for installing inside the narrow space of the equipment thanks to its small size and light weight outline dimensions $\phi 17 \times 18.7\text{mm}$, Net weight: Approx 19 g (M5 type)
- High reliability (SUS316L diaphragm, oil-filled) by using double diaphragm structure
- Supply voltage and analog output is $5 \pm 0.5\text{V}$ and the 0.5 ~ 4.5V(ratiometric output)
- High accuracy by using a digital compensation circuit employing the COB (chip on board) mounting
- Variety pressure range: 0 ~ 100kPa, -100 ~ 100kPa, 0 ~ 1MPa, 0 ~ 133.3kPa abs

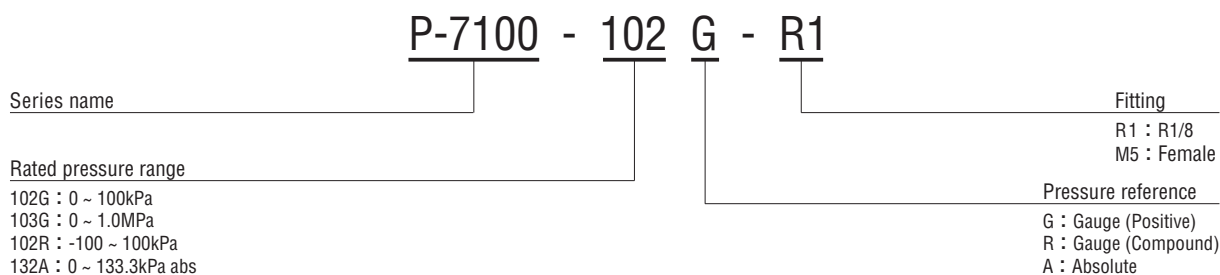
INTERNAL STRUCTURE



Part name	Material
① Fitting	SUS304
② Stainless steel diaphragm	SUS316L
③ Sealed liquid	Silicone oil
④ Sensor chip	Silicon
⑤ Housing	SUS 304
⑥ Resin compound	Epoxy resin
⑦ Vent hole	Iron + gold-plated

※ ⑦ is applicable to gauge type only.

MODEL NUMBER DESIGNATION



LIST OF MODEL NUMBERS

Fitting	Rated pressure range			
	102G	102R	103G	132A
R1/8	P-7100-102G-R1	P-7100-102R-R1	P-7100-103G-R1	P-7100-132A-R1
M5	P-7100-102G-M5	P-7100-102R-M5	P-7100-103G-M5	P-7100-132A-M5

※ Verify the above model numbers when placing orders.

P-7100

PRESSURE TRANSDUCERS

STANDARD SPECIFICATIONS

Item		Model number	P-7100				
			102G	103G	102R	132A	
General specifications	Pressure reference		Gauge			Absolute	
	Rated pressure range		0 ~ 100kPa	0 ~ 1.0MPa	-100 ~ 100kPa	0 ~ 133.3kPa abs	
	Maximum pressure		200kPa	2.0MPa	200kPa	200kPa abs	
	Break-down pressure		300kPa	3.0MPa	300kPa	300kPa abs	
	Operating temp. range	°C	- 20 ~ 70				
	Compensated temp. range	°C	0 ~ 50				
	Operating humidity range	%RH	35 ~ 85 (No condensation)				
	Storage temp. range	°C	- 20 ~ 80 (Atmospheric pressure, humidity 65 %RH maximum)				
	Media		Corrosive gases/liquids compatible with SUS316L and SUS304				
	Insulation resistance	MΩ minimum	100 (500V DC)				
	Dielectric strength		500V AC 60 s (Leakage current 1mA maximum)				
	Sealed liquid		Silicone oil				
	Pressure port		R1/8, M5 (SUS304)				
	Net weight	g	R1 : Approx.22, M5 : Approx.19				
Voltage	Operating voltage	V DC	5±0.5				
	Current consumption	mA Maximum	3				
Analog output	Output voltage ※	V	0.5 ~ 4.5				
	Output limit		16.5mV ~ 95% Vopr				
	Zero voltage ※	V	0.5±0.04		2.5±0.04	0.5±0.1	
	Span voltage ※	V	4.0±0.04			4.0±0.1	
	Output current	mA Maximum	1 (Load resistance 5kΩ minimum)				
	Linearity / Hysteresis	%F.S.	±0.5				
	Thermal error (Reference temp.25°C)	Zero	%F.S./°C	±0.05			±0.06
		Span	%F.S./°C	±0.05			±0.06
	Response time	ms	Approx.2				
Gravitational (From horizontal position to vertical position)	%F.S.	±0.3	±0.05	±0.3	±0.3		

※Output voltage is proportional to the operating voltage.(ratiometric output) The resolving power of the analog output is 11 Bits (about 0.002V/0.05%F.S).

ENVIRONMENTAL CHARACTERISTICS

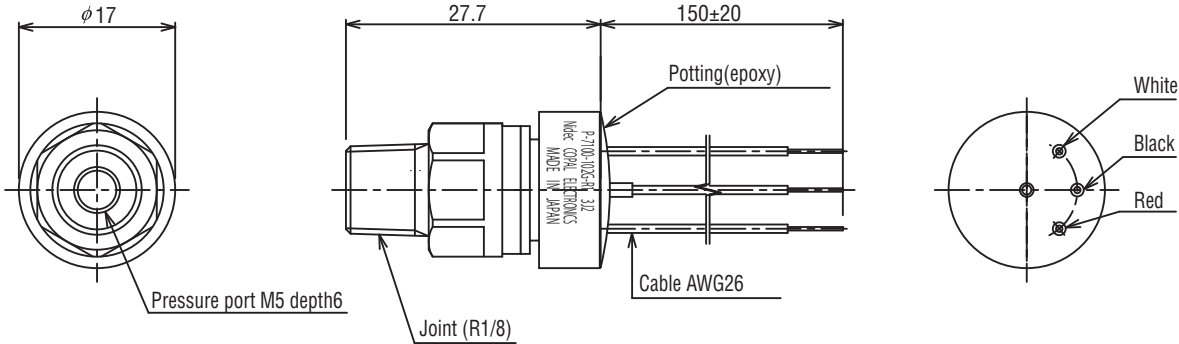
Test item	Test conditions	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s ² , 3 directions for 2 hours each	Analog output (Vzero, Vspan) ± 1 %F.S. maximum each after test
Shock	490 m/s ² , 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure, 10 ⁶ cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

P-7100 PRESSURE TRANSDUCERS

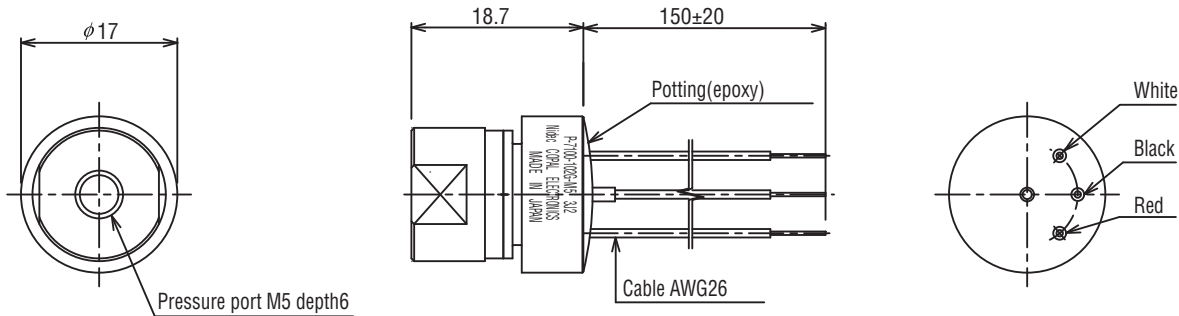
OUTLINE DIMENSIONS

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

● P-7100-102G-R1



● P-7100-102G-M5



Wire color	Connection
Red	Power ⊕
White	Output
Black	Common ⊖

INTERNAL ELECTRICAL SCHEMATICS

