



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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



PRESSURE TRANSDUCERS WITH AMP.

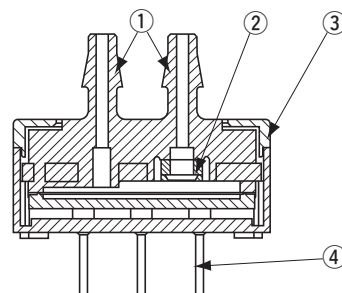
PA-100



FEATURES

- Covers low pressure range
- Built-in a compact amplifier circuit
- Measures differential pressure

INTERNAL STRUCTURE



	Part name	Material
①	Pressure Port	LCP (Liquid crystal polymer)
②	Sensor chip	Silicone
③	Housing	POM (Polyoxymethylene) PPS (Polyphenylene sulphide)
④	Terminal pin	Brass + Tin-plated

MODEL NUMBER DESIGNATION

PA-100-100D-S

Series name

Rated pressure range

100D-S : 0 ~ 1 kPa {102 mmH₂O}
 200D-S : 0 ~ 2 kPa {204 mmH₂O}
 500D-S : 0 ~ 5 kPa {510 mmH₂O}
 100D-W : -1 ~ 1 kPa {± 102 mmH₂O}
 200D-W : -2 ~ 2 kPa {± 204 mmH₂O}
 500D-W : -5 ~ 5 kPa {± 510 mmH₂O}

LIST OF MODEL NUMBERS

Pressure reference kPa Rated pressure range	Differential					
	0 ~ 1	0 ~ 2	0 ~ 5	- 1 ~ 1	- 2 ~ 2	- 5 ~ 5
Model number	PA-100-100D-S	PA-100-200D-S	PA-100-500D-S	PA-100-100D-W	PA-100-200D-W	PA-100-500D-W

※Verify the above model numbers when placing orders.

PA-100

PRESSURE TRANSDUCERS WITH AMP.

STANDARD SPECIFICATIONS

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

Item		Model number	PA-100						
			100D-S	200D-S	500D-S	100D-W	200D-W	500D-W	
General specifications	Pressure reference		Differential					※1	
	Rated pressure range	kPa	1	2	5	± 1	± 2	± 5	
	Maximum pressure	kPa	5	10	25	± 5	± 10	± 25	
	Break-down pressure	kPa	50						
	Line pressure	kPa	50						
	Operating temp. range	°C	- 20 ~ 70						
	Compensated temp. range	°C	0 ~ 50						
	Operating humidity	%RH	35 ~ 85 (No condensation)						
	Storage temp.	°C	- 20 ~ 80 (Atmospheric pressure, humidity 65 %RH maximum)						
	Pressure medium		Non-corrosive gases						
	Insulation resistance	MΩ minimum	100 (50 V DC)						
	Dielectric strength		50 V AC, 60 s (Leakage current 1 mA maximum)						
	Pressure port	mm	φ 2.5						
	Net weight	g	Approx. 8						
Power	Supply voltage	V DC	5 ± 10 %						
	Consumption current	maximum	5 mA						
Analog output	Output voltage	V	0.5 ~ 4.5						
	Zero voltage	※3 V	0.5 ± 0.08			2.5 ± 0.08			
	Span voltage	※3 V	4.0 ± 0.08			2.0 ± 0.08			
	Output current	mA maximum	0.5 (Load resistance 10 kΩ minimum)						
	Linearity/Hysteresis	%F.S.	± 0.5						
	Thermal error 0 ~ 50 °C (Reference temp.: 25 °C)	ZERO %F.S.	± 5	± 3	± 2	± 5	± 3	± 2	
		SPAN %F.S.	± 2						
※2 Response	ms	5							
Gravitational effect (From vertical position to horizontal position)	%F.S. max.	- 2	- 1	- 0.4	- 2	- 1	- 0.4		

- ※1 PA-100- □□□ D-S pressure range Pressure A port – B port = 0 ~ Rated pressure range
 PA-100- □□□ D-W pressure range Pressure A port – B port = – Rated pressure range ~ Rated pressure range
- ※2 Defined at 5 V of supply voltage.
- ※3 The zero and span voltages vary in proportion to the supply voltage.

PA-100 PRESSURE TRANSDUCERS WITH AMP.

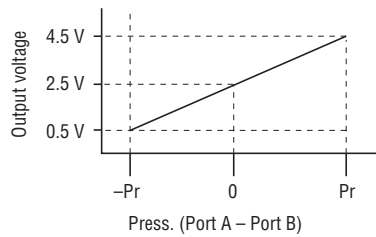
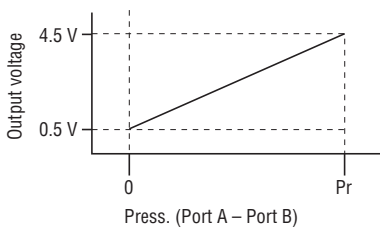
ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions (At 25 ± 5 °C)	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/49 m/s ² , 3 directions for 2 hours each	Zero voltage/Span voltage: ± 2 %F.S. (100D/200D) maximum and ± 1 %F.S. (500D) 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.	

OUTPUT VOLTAGE VS PRESSURE

PA-100- □□□ D-S type

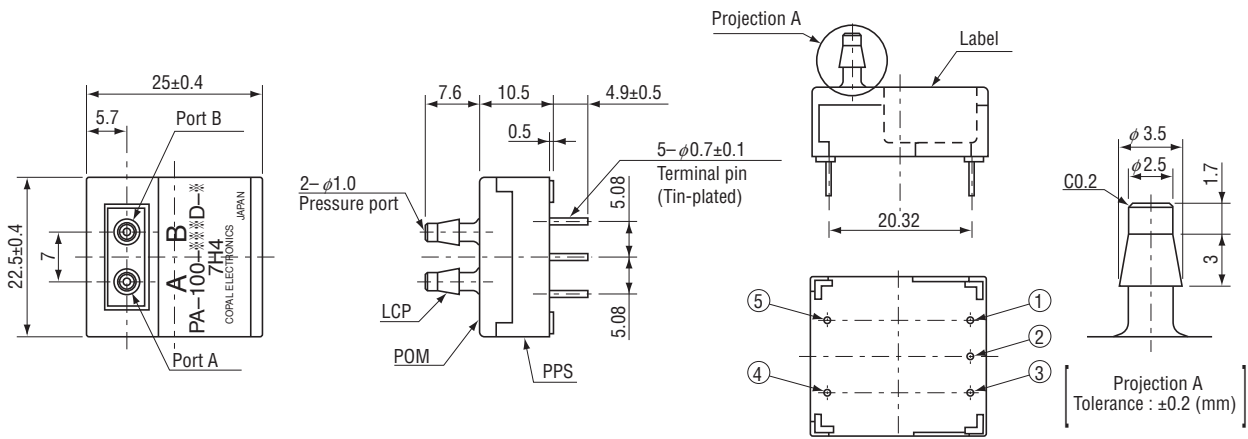
PA-100- □□□ D-W type



Pin	Connection
①	Power ⊕
②	Output
③	Common
④	N.C.
⑤	N.C.

OUTLINE DIMENSIONS

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



INTERNAL ELECTRICAL SCHEMATICS

