

PRESSURE TRANSDUCERS WITH AMP.

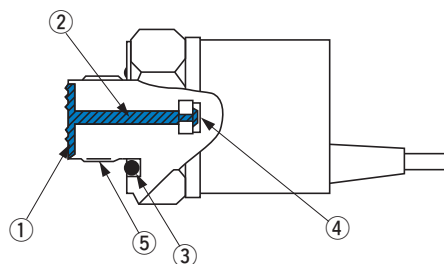
PA-800



FEATURES

- High corrosion resistance by double diaphragm structure
- Built-in amplifier circuit
- Built-in temperature compensation function (0 ~ 50 °C)
- Voltage output mode

INTERNAL STRUCTURE PA-800



Part name		Material
①	Stainless steel diaphragm	SUS 316L
②	Sealed liquid	Silicone oil
③	(P18) "O" ring	Fluoro-rubber
④	Sensor chip	Silicone
⑤	Fitting	SUS 316

MODEL NUMBER DESIGNATION

PA-800 - 102 G - 05

Series name

Rated pressure range

102 : 0 ~ 98.1 kPa {0 ~ 1 kgf/cm²}
 352 : 0 ~ 343 kPa {0 ~ 3.5 kgf/cm²}
 103 : 0 ~ 981 kPa {0 ~ 10 kgf/cm²}

Thermal error

05 : 0.05 % F.S./°C
 10 : 0.1 % F.S./°C

Pressure reference

G : Gauge
 V : Gauge (Vacuum)

LIST OF MODEL NUMBERS

Output	Pressure reference		Gauge			
	Thermal error	kPa {kgf/cm ² } Rated pressure range	0 ~ 98.1 {0 ~ 1}	0 ~ 343 {0 ~ 3.5}	0 ~ 981 {0 ~ 10}	0 ~ 98.1 {0 ~ 1}
Voltage output	± 0.05 % F.S./°C		PA-800-102G-05	PA-800-352G-05	PA-800-103G-05	PA-800-102V-05
	± 0.1 % F.S./°C		PA-800-102G-10	PA-800-352G-10	PA-800-103G-10	PA-800-102V-10

※ Verify the above model numbers when placing orders.

PA-800

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STANDARD SPECIFICATIONS

● Unless otherwise specified, the specs are defined at an ambient temperature of 25±5 °C and excitation voltage of 12 V DC.

Item		Model number	PA-800				
			102G	102V	352G	103G	
General specifications	Pressure reference		Gauge				
	Rated pressure range	kPa {kgf/cm²}	98.1 {1}	− 98.1 {−1}	343 {3.5}	981 {10}	
	Maximum pressure	kPa {kgf/cm²}	196 {2}		686 {7}	1961 {20}	
	Break-down pressure	kPa {kgf/cm²}	294 {3}		1030 {10.5}	2942 {30}	
	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		Corrosive gases/liquids compatible with SUS316L and SUS304				
	Insulation resistance	MΩ minimum	100 (500 V DC)				
	Dielectric strength		500 V AC, 60 s (Leakage current 1 mA maximum)				
	Sealed liquid		Silicone oil				
	Pressure port		G 3/8 (PF 3/8) ※ 1				
	Net weight		g Approx. 125				
Power	Supply voltage	V DC	12 ~ 24 ± 10 %				
	Ripple content	maximum	10 % (P-P)				
	Consumption current	mA maximum	20				
Analog output	Output voltage	V DC	1 ~ 5				
	Zero voltage	V	1 ± 0.04 (at 25 °C)				
	Span voltage	V	4 ± 0.04 (at 25 °C)				
	Output current	mA maximum	1 (Load resistance 5 kΩ minimum)				
	Linearity/Hysteresis		%F.S.	± 0.3	± 0.5		
	Thermal error 0 ~ 50 °C (Reference temp.: 25 °C)	ZERO %F.S./°C	± 0.05/± 0.1				
		SPAN %F.S./°C	± 0.05/± 0.1				
	Supply voltage effect		V maximum	± 0.1			
	Response		ms	Approx. 2			
	Gravitational effect (From vertical position to horizontal position)		%F.S. max.	Approx. 0.5		Approx. 0.15	Approx. 0.05

※ 1 An “O” ring is provided. (P18)

PA-800

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ENVIRONMENTAL CHARACTERISTICS

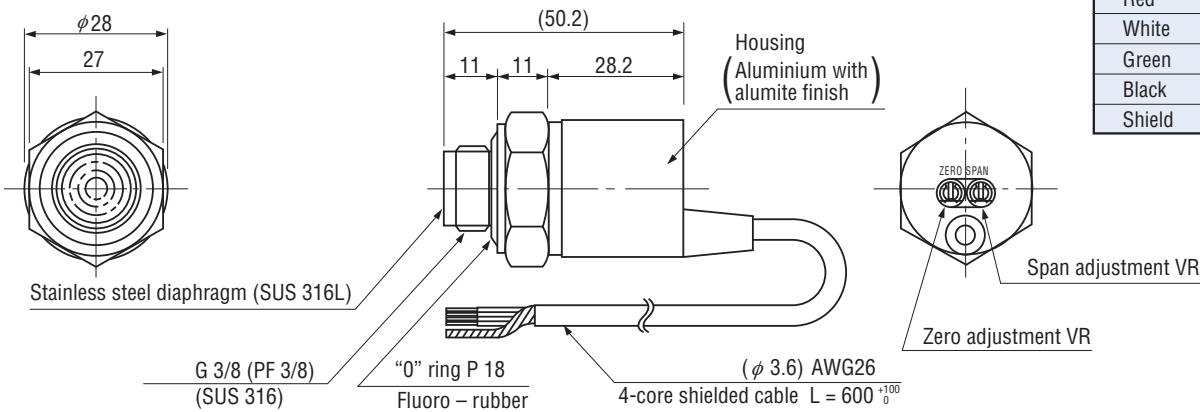
Test item	Test conditions (At 25 ± 5 °C)	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s ² , 3 directions for 2 hours each	Zero voltage, Span voltage: ± 1 %F.S. maximum each
Shock	981 m/s ² , 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure, 10 ⁶ cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

OUTLINE DIMENSIONS

●PA-800
Gauge type

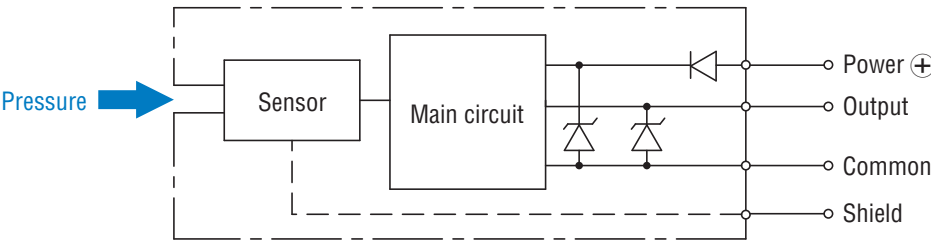
Unless otherwise specified, tolerance : ± 0.5 (Unit: mm)

PA-800	
Wire color	Connection
Red	Power ⊕
White	Output
Green	N.C.
Black	Common
Shield	Fitting



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

INTERNAL ELECTRICAL SCHEMATICS



Mouser Electronics

Authorized Distributor

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Nidec:

[PA-800-102V-10](#) [PA-800-102G-05](#) [PA-800-102G-10](#) [PA-800-102V-05](#) [PA-800-103G-05](#) [PA-800-103G-10](#) [PA-800-352G-05](#) [PA-800-352G-10](#)