

# PRESSURE TRANSDUCERS WITH AMP.

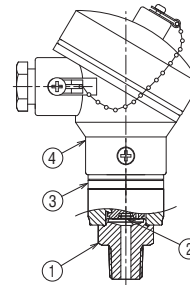
# PA-840/PA-848



## FEATURES

- Pressure sensors with IP67 degree of protection for outside-house applicants.
- Operation temperature up to 100 °C~ for pressure diaphragm.
- Voltage Output of 1 ~ 5 VDC with built-in amplifier (PA-840), Current output of 4 ~ 20 mA DC (PA-848).
- High reliability (SUS 316 L diaphragm, oil-filled) by using double diaphragm structure.
- The most miniaturized terminal-assembly-type pressure sensor for outside-house applicants.

## INTERNAL STRUCTURE



Part name		Material
①	Fitting	SUS316L
②	Stainless steel diaphragm	SUS316L
③	Housing	SUS316L
④	Closed terminal Box	Aluminum

## MODEL NUMBER DESIGNATION

PA-840 - 102 R - R2

### Series name

PA-840 : Output voltage (1 - 5 V)  
 PA-848 : Output current (4 ~ 20 mA)

### Rated pressure range

102R : -0.1 ~ 0.1 MPa  
 352R : -0.1 ~ 0.35 MPa  
 103G : 0 ~ 1.0 MPa  
 353G : 0 ~ 3.5 MPa  
 102A : 0 ~ 0.1 MPa abs.

### Fitting

R2 : R 1/4  
 G2 : G 1/4

### Pressure reference

G : Gauge  
 R : Gauge (Compound)  
 A : Absolute

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### LIST OF MODEL NUMBERS

Series name (Reference)	Fitting	Pressure range				
		-0.1~0.1MPa	-0.1~0.35MPa	0~1.0MPa	0~3.5MPa	0~0.1MPa abs.
PA-840 (Output voltage)	R1/4	PA-840-102R-R2	PA-840-352R-R2	PA-840-103G-R2	PA-840-353G-R2	PA-840-102A-R2
	G1/4	PA-840-102R-G2	PA-840-352R-G2	PA-840-103G-G2	PA-840-353G-G2	PA-840-102A-G2
PA-848 (Output current)	R1/4	PA-848-102R-R2	PA-848-352R-R2	PA-848-103G-R2	PA-848-353G-R2	PA-848-102A-R2
	G1/4	PA-848-102R-G2	PA-848-352R-G2	PA-848-103G-G2	PA-848-353G-G2	PA-848-102A-G2

※ Verify the above model numbers when placing orders.

### STANDARD SPECIFICATIONS

Item	Model number	PA-840					PA-848						
		102R	352R	103G	353G	102A	102R	352R	103G	353G	102A		
General specifications	Pressure reference	Gauge					Absolute	Gauge					Absolute
	Rated pressure range	MPa	-0.1 ~ 0.1	-0.1 ~ 0.35	0 ~ 1.0	0 ~ 3.5	0 ~ 0.1 (abs)	-0.1 ~ 0.1	-0.1 ~ 0.35	0 ~ 1.0	0 ~ 3.5	0 ~ 0.1 (abs)	
	Maximum pressure	MPa	0.2	0.7	2	4	0.2 (abs)	0.2	0.7	2	4	0.2 (abs)	
	Break-down pressure	MPa	0.3	1.05	3	4.5	0.3 (abs)	0.3	1.05	3	4.5	0.3 (abs)	
	Operating temp. range		Ta (No freezing) : -20 ~ 80 °C / Pressure port : -20 ~ 100 °C					Ta (No freezing) : -20 ~ 70 °C / Pressure port : -20 ~ 100 °C					
	Compensated temp. range	°C	0 ~ 50										
	Operating humidity	%RH	35 ~ 85 (No condensation)										
	Storage temp.	°C	-20 ~ 80										
	Pressure medium		Gas and liquid which does not corrode SUS 316L and Gas and liquid which does not corrode O-ring (Fluoro rubber) G2 Fitting										
	Pressure port		R 1/4, G 1/4										
	Net weight	g	Approx. 250										
	Protection grade		IP67										
Power	Operating voltage	VDC	10.8 ~ 26.4 (including ripple)					21.6 ~ 26.4 (including ripple)					
	Consumption current	maximum	20 mA					—					
Analog output	Output voltage/current		1 ~ 5 V					4 ~ 20 mA					
	Zero voltage/current		3 ± 0.05 V	1.89 ± 0.05 V	1 ± 0.05 V	1 ± 0.05 V	1 ± 0.05 V	12 ± 0.2 mA	7.56 ± 0.2 mA	4 ± 0.2 mA	4 ± 0.2 mA	4 ± 0.2 mA	
	Span voltage/current		4 ± 0.1 V					16 ± 0.4 mA					
	Linearity/Hysteresis	%F.S.	± 0.5										
	Thermal error	ZERO	%F.S./°C	± 0.06									
		SPAN	%F.S./°C	± 0.06									
	Load resistance	Ω maximum	—					500					
	Response	ms	Approx. 2										
Gravitational effect (From vertical position to horizontal position)	%F.S.	± 0.3	± 0.1	± 0.05	± 0.3	± 0.3	± 0.1	± 0.05	± 0.3	± 0.3	± 0.1		

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### ENVIRONMENTAL CHARACTERISTICS

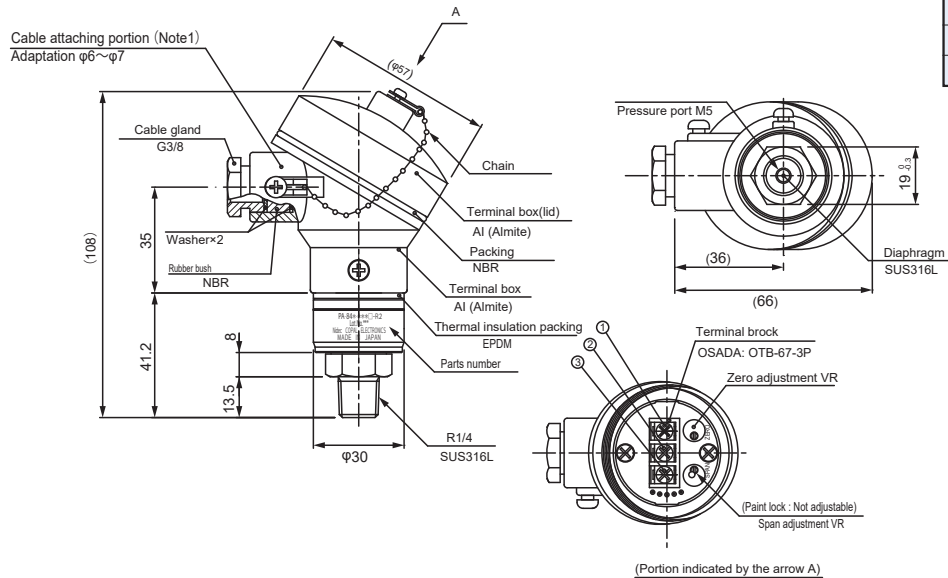
Test item	Test conditions (At 25 ± 5 °C)	Permissible change
Vibration	10 ~ 150 Hz, 1.5 mm maximum/98.1 m/s <sup>2</sup> , 3 directions for 2 hours each	Zero current, Span current: ± 2 %F.S. maximum each
Shock	490 m/s <sup>2</sup> , 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure/Rated pressure range, 10 <sup>6</sup> cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

### OUTLINE DIMENSIONS

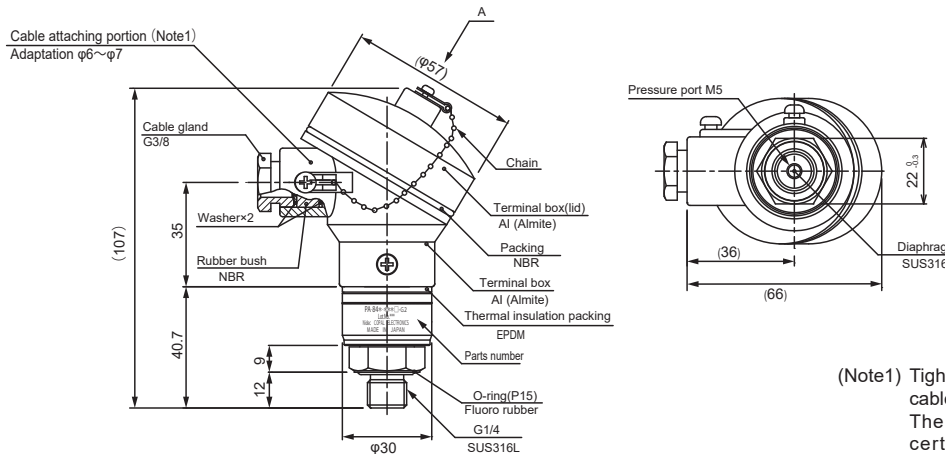
#### R 1/4 type

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

Wiring table		
	PA-840	PA-848
1	Power ⊕	Power ⊕
2	Common	N.C.
3	Output	Output



#### G 1/4 type



(Note1) Tighten wiring opening with the supplied cable gland for avoiding water intrusion. The cable and/or lid may get loose in certain usage environments and the sealing level may lower as a result. So please use a locking or tighten regularly.

(Note2) A cable is not supplied with the product. please purchase separately.