



**SCIGATE AUTOMATION (S) PTE LTD**

No.1 Bukit Batok Street 22 #01-01 Singapore 659592

Tel: (65) 6561 0488

Fax: (65) 6562 0588

Email: [sales@scigate.com.sg](mailto:sales@scigate.com.sg)

Web: [www.scigate.com.sg](http://www.scigate.com.sg)

Business Hours: Monday - Friday 8.30am - 6.15pm



Strong structure with IP67 degree of protection

# PA-840 / PA-848

SERIES

Pressure transducer

A **Nidec** Group Company

**COPAL ELECTRONICS**

All for dreams

## Pressure transducer



# PA-840/PA-848 SERIES

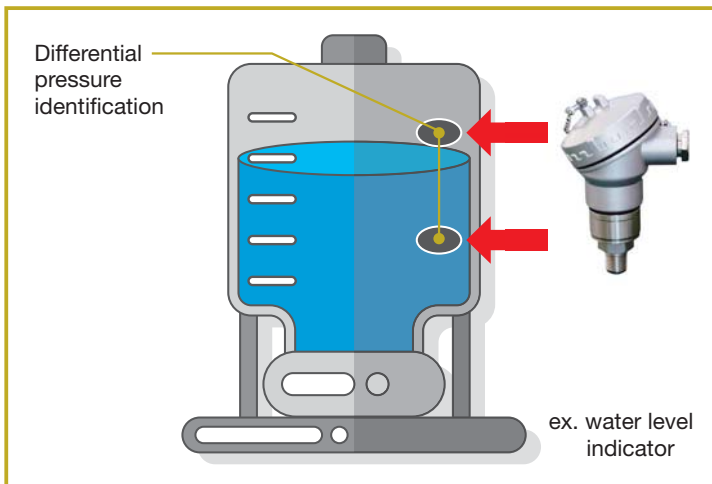
### Features

- Pressure sensors with IP67 degree of protection for outside-house applicants.
- Operation temperature up to 100°C~ for pressure diaphragm.
- Voltage Output of 1~5V DC with built-in amplifier (PA-840), Current output of 4~20mA DC (PA-848).
- High reliability (SUS316L diaphragm, oil-filled) by using double diaphragm structure.
- The most miniaturized terminal-assembly-type pressure sensor for outside-house applicants.



It is with a tough structure, and the terminal base's top cover can be replaced by cable, which is suitable for outdoors under harsh environment.

### Applications



Application as require for waterproof, it is suitable for outdoors equipment plant and water treatment device.

### ● Model number designation

## PA - 840 - 102R - R2

Series name	Rated pressure range	Pressure reference	Fitting
PA-840 : Output voltage (1~5V)	102R : -0.1~0.1 MPa 352R : -0.1~0.35 MPa	G : Gauge pressure R : Gauge pressure (Compound) A : Absolute pressure	R2 : R 1/4 G2 : G 1/4
PA-848 : Output current (4~20mA)	103G : 0~1.0 MPa 353G : 0~3.5 MPa 102A : 0~0.1 MPa abs.		

## ● List of model numbers

Series name (Reference)	Rated pressure	Fitting	
		R 1/4	G 1/4
PA-840 (Output voltage)	-0.1~0.1MPa	PA-840-102R-R2	PA-840-102R-G2
	-0.1~0.35MPa	PA-840-352R-R2	PA-840-352R-G2
	0~1.0MPa	PA-840-103G-R2	PA-840-103G-G2
	0~3.5MPa	PA-840-353G-R2	PA-840-353G-G2
	0~0.1MPa abs.	PA-840-102A-R2	PA-840-102A-G2
PA-848 (Output current)	-0.1~0.1MPa	PA-848-102R-R2	PA-848-102R-G2
	-0.1~0.35MPa	PA-848-352R-R2	PA-848-352R-G2
	0~1.0MPa	PA-848-103G-R2	PA-848-103G-G2
	0~3.5MPa	PA-848-353G-R2	PA-848-353G-G2
	0~0.1MPa abs.	PA-848-102A-R2	PA-848-102A-G2

## ● Standard specifications

Item	Specification				
	102R	352R	103G	353G	102A
Pressure range					
Pressure reference	Gauge	Gauge	Gauge	Gauge	Absolute
Rated pressure range	-0.1~0.1MPa	-0.1~0.35MPa	0~1.0MPa	0~3.5MPa	0~0.1MPa abs.
Maximum pressure	0.2MPa	0.7MPa	2MPa	4MPa	0.2MPa abs.
Burst pressure	0.3MPa	1.05MPa	3MPa	4.5MPa	0.3MPa abs.
Operating temp. range	PA-840	Ta (No freezing) : -20~80°C / Pressure port : -20~100°C			
Compensated temp. range	PA-848	Ta (No freezing) : -20~70°C / Pressure port : -20~100°C			
Operating humidity	0~50°C				
Storage temp. range	35~85%RH (No condensation)				
Media	-20~80°C				
Pressure port	Gas and liquid which does not corrode SUS316L Gas and liquid which does not corrode O-ring (Fluoro rubber) G2 Fitting				
IP protection	R 1/4, G 1/4				
Weight	IP67				
	Approx. 250g				

## ● Analog output

### PA-840

Item	Specification				
	102R	352R	103G	353G	102A
Pressure range					
Output voltage			1~5V		
Zero voltage	3±0.05V	1.89±0.05V	1±0.05V	1±0.05V	1±0.05V
Span voltage			4±0.1V		
Linearity / Hysteresis	±0.5% FS				
Thermal error	Zero	±0.06% FS/°C			
	Span	±0.06% FS/°C			
Operating Voltage	10.8~26.4V DC (including ripple)				
Consumption Current	20mA maximum				

### PA-848

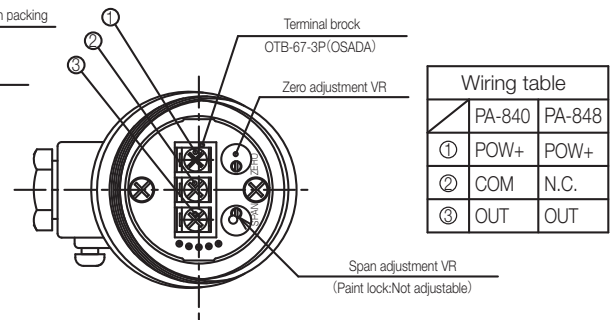
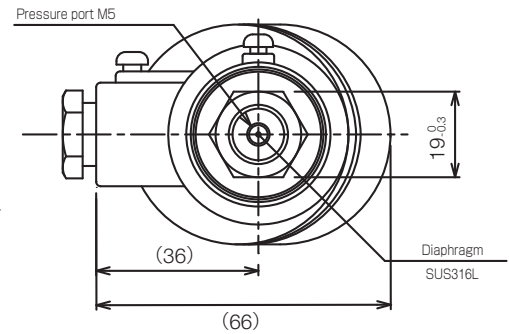
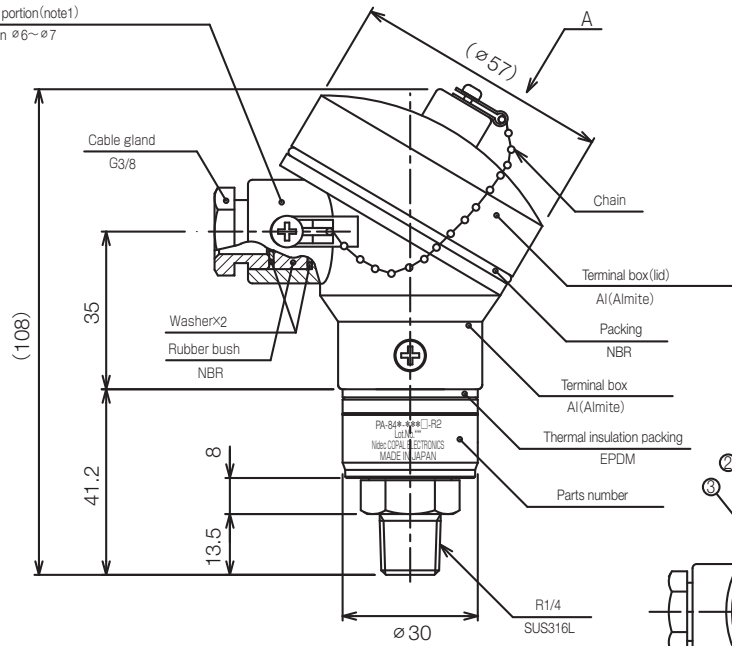
Item	Specification				
	102R	352R	103G	353G	102A
Rated pressure					
Output current			4~20mA		
Zero current	12±0.2mA	7.56±0.2mA	4±0.2mA	4±0.2mA	4±0.2mA
Span current			16±0.4mA		
Linearity / Hysteresis	±0.5%FS				
Thermal error	Zero	±0.06%FS/°C			
	Span	±0.06%FS/°C			
Load resistance	500Ω maximum				
Operating Voltage	21.6~26.4V DC (including ripple)				

## ● Outline dimensions

### ● R 1/4 type

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

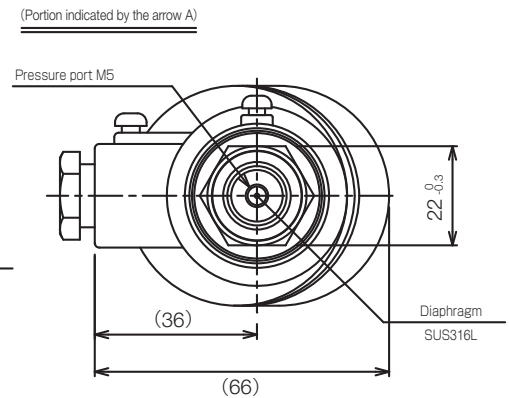
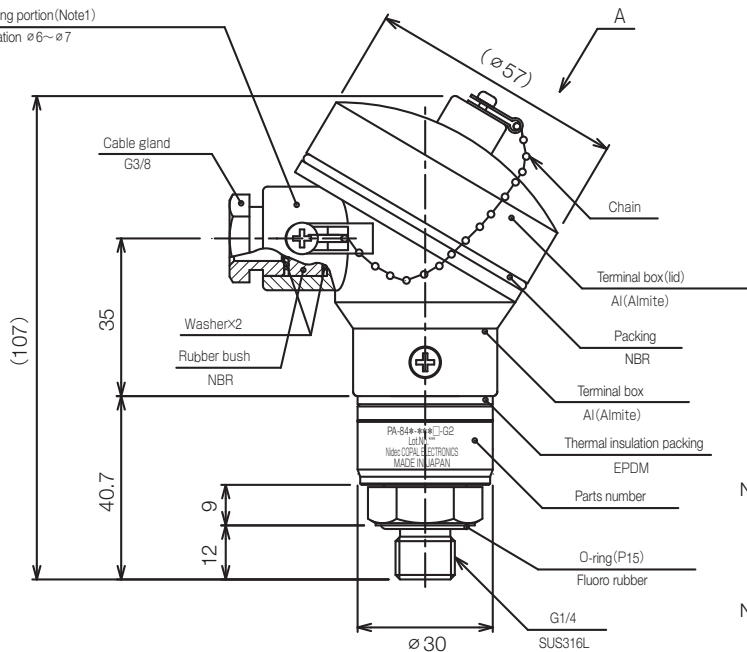
Cable attaching portion(note1)  
Adaptation  $\phi 6-\phi 7$



Wiring table		
	PA-840	PA-848
①	POW+	POW+
②	COM	N.C.
③	OUT	OUT

### ● G 1/4 type

Cable attaching portion(Note1)  
Adaptation  $\phi 6-\phi 7$



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 locking or tighten regularly.

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

A **Nidec** Group Company

**COPAL ELECTRONICS** All for dreams  
www.nidec-copal-electronics.com

**NIDEC COPAL ELECTRONICS, INC.**

367 Van Ness Way, Suite 601  
Torrance, CA 90501 U.S.A  
Phone: +1-310-618-0225 Fax: +1-310-618-9984

**NIDEC COPAL ELECTRONICS (SHANGHAI) CO.,LTD.**

Unit A, 4/F, No.4 Bldg., No.253, Ai Du Rd., Wai Gao Qiao  
Free Trade Zone, Shanghai 200131, CHINA  
Phone: +86-21-5046-3009 Fax: +86-21-5046-3115

**NIDEC COPAL ELECTRONICS (TAIWAN) CO., LTD.**

18F-1, No.57, Sec.2, Tun Hwa S.Rd., Taipei 106, TAIWAN  
Phone: +886-2-27030577 Fax: +886-2-27010577

● Specifications are subject to change without notice.

**NIDEC COPAL ELECTRONICS CORP.**

7-5-25 Nishi-Shinjuku, Shinjuku-ku, Tokyo 160-0023 JAPAN  
Phone: +81-3-3364-7055 Fax: +81-3-3364-7098

**NIDEC COPAL ELECTRONICS GmbH**

Mergenthalerallee 79-81  
65760 Eschborn GERMANY  
Phone: +49-6196-92775-0 Fax: +49-6196-92775-75

**NIDEC COPAL ELECTRONICS KOREA CORP.**

Woolim Lion's Valley, C-406, 371-28, Gasan-dong,  
Geumcheon-gu, Seoul, 153-786, KOREA  
Phone: +82-2-3482-5861 Fax: +82-2-3482-5860

**NIDEC COPAL ELECTRONICS SINGAPORE PTE. LTD.**

180B Bencoolen Street #07-05 The Bencoolen Singapore 189648  
Phone: +65-6535-0056 Fax: +65-6535-0087

TIN201606E0000