

COPAL ELECTRONICS

PRESSURE TRANSDUCERS
WITH AMP.

PA-858 series

INSTRUCTION MANUAL Ver.2.1

Thank you for purchasing NIDEC COPAL
ELECTRONICS CORP. product.

In order to use the product correctly and most
appropriately, please completely read this manual
before use and keep it for future reference.

For more detailed information please ask for the nearest
distributor or the following sales center.

COPAL ELECTRONICS

NIDEC COPAL ELECTRONICS CORPORATION

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1. NOTES OF HANDLING



CAUTION ... This indicates the precaution in handling and/or the risk in misusing.



- ! The product can be used for corrosive gases/liquids compatible with SUS316L.
- ! Never take in the over-pressure exceeding the maximum pressure which is the double of rated pressure.
- ! Never insert any foreign matters, like wire or needle, into the pressure port hole.
- ! Do not touch or scratch the diaphragm at the edge of the GF fitting, as this may alter the performance characteristics or damage the diaphragm, and cause malfunctions.
- ! Do not give any unnecessary force to the main body and the cable when installing the product.
- ! Be sure to connect the output terminals correctly. Wrong connection will cause damage of the internal electric circuit.
- ! This product is dust proof and drip proof (to IP65 of IEC standards) and is not suitable for use in environments requiring higher standards.

! Please supply a stable power source.

! Place the wirings as far away as possible from the power lines carrying large power.

2. PART NUMBER DESIGNATION

*Please confirm the part number of the product you purchased.

PA-858-□□□□ □-□□
A B C D

A : Part name

B : Rated pressure range

102 : 100 [kPa] 302 : 300 [kPa] 352 : 350 [kPa] 502 : 500 [kPa]
103 : 1 [MPa]

C : Pressure reference

G : Positive pressure (Gauge) A : Absolute pressure
V : Vacuum pressure (Gauge) R : Compound pressure (Gauge)

D : Fitting

R 2 : R 1 / 4 (PT 1 / 4) GF : G 3 / 8 (PF 3 / 8)
G 2 : G 1 / 4 (PF 1 / 4)

3. ACCESSORIES

An O-ring (Fluoro-rubber) is provided. (G F:P 1 8,G 2:P 1 5)

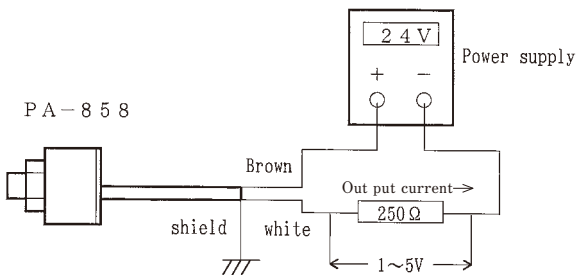
4. INSTALLATION

- ①Please put the wrench the hexagonal portion only. In case of joint of taper screw thread, please screw into the fitted pipe, winding the sealing tape on the screw part.
- ②When wiring or changing wire, please turn off the power line. Please make sure of appropriate wiring before turning on the power line.

5. MAIN SPECIFICATIONS

Item	Specifications	
Maximum pressure	Twice of rated pressure	
Break-down pressure	Triple of rated pressure	
Operating temp. range	-20 to 70°C	
Compensated temp. range	0 to 50°C	
Operating humidity	35 to 85%RH	
Storage temp.	-20 to 80°C	
Pressure medium	Corrosive gases/liquids compatible with SUS316L	
Sealed liquid	Silicone oil	
Protection grade	IP65 (in accordance with IEC)	
Net weight	Approx.180g	
Supply voltage	24VDC \pm 10%	
Output current	4 to 20mA	
Zero current	4mA \pm 0.2mA	
Span current	16mA \pm 0.2mA	
Linearity/Hysteresis	\pm 0.5%FS	
Thermal error	Zero	\pm 0.06%FS/°C
	Span	\pm 0.06%FS/°C
Load resistance	500ohm max.	

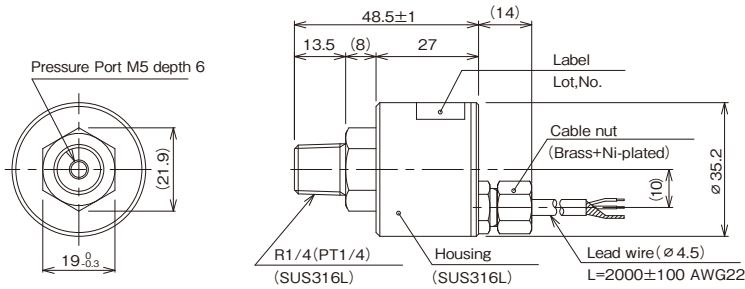
6. RECOMMENDED EXTERNAL SCHEMATICS



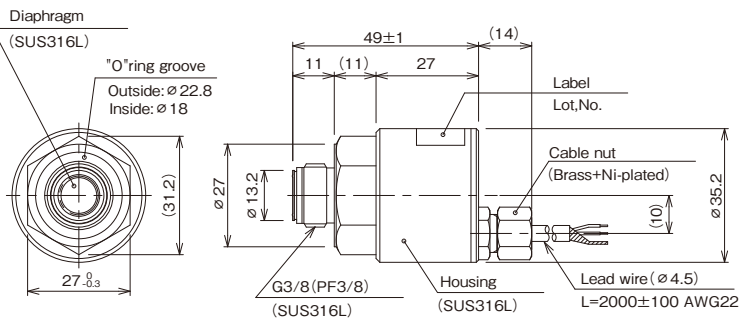
7. OUTLINE DIMENSIONS

Unspecified tolerances:±0.5 Unit:mm

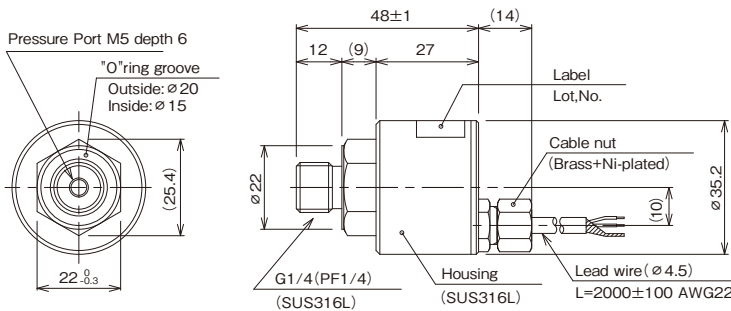
① R2 TYPE



② GF TYPE



③ G2 TYPE



Wire color	Connection
Brown	Power supply
White	Output
Black	N.C. ※
Blue	N.C. ※
Shield	Housing

※ Please do not connect wire.

8. WARRANTY

This product is covered by a warranty for a period of one year from the date of delivery. This warranty covers free-of-charge repair and replacement for defects occurring through design or manufacturing inadequacy of NIDEC COPAL ELECTRONICS CORP. Even during the warranty period, the following failures will be handled on a fee basis.

- 1) Failures or damages occurring through misuse or disoperation performed not following the instruction manual.
- 2) Failures or damages occurring through improper modification, adjustment, or repair.
- 3) Failures or damages occurring through natural calamities, fires or other inevitable accidents.
- 4) Replacement of accessories (e.g.O-ring rubber, etc.)