

## PRESSURE TRANSDUCERS

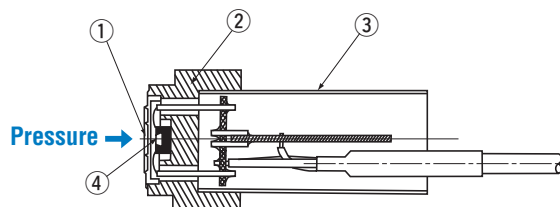
## P-8600



## FEATURES

- Compact/high reliability
- Corrosion resistant SUS 316L diaphragm
- Built-in sensor actuation circuit  
(Temperature compensating, Linearity compensating)
- High output

## INTERNAL STRUCTURE



|   | Part name                 | Material |
|---|---------------------------|----------|
| ① | Stainless steel diaphragm | SUS 316L |
| ② | Body                      | SUS 316  |
| ③ | Housing                   | SUS 304  |
| ④ | Sensor chip               | Silicone |

## MODEL NUMBER DESIGNATION

|                      |                                                                             |   |            |          |                                       |
|----------------------|-----------------------------------------------------------------------------|---|------------|----------|---------------------------------------|
| Series name          | <u>P-8600</u>                                                               | - | <u>503</u> | <u>P</u> | Pressure unit<br>P : Pa pressure unit |
| Rated pressure range | 503 : 0 ~ 5 MPa<br>104 : 0 ~ 10 MPa<br>204 : 0 ~ 20 MPa<br>354 : 0 ~ 35 MPa |   |            |          |                                       |

## LIST OF MODEL NUMBERS

| Rated pressure range [MPa] | 0 ~ 5         | 0 ~ 10        | 0 ~ 20        | 0 ~ 35        |
|----------------------------|---------------|---------------|---------------|---------------|
| Model number               | ➡ P-8600-503P | ➡ P-8600-104P | ➡ P-8600-204P | ➡ P-8600-354P |

※ Verify the above model numbers when placing orders.

The products marked ➡ are manufactured upon receipt of order basis.

# P-8600

## PRESSURE TRANSDUCERS

### 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     | P-8600                                                      |      |      |      |
|------------------------|-------------------------------------------|------------------|-------------------------------------------------------------|------|------|------|
|                        |                                           |                  | 503P                                                        | 104P | 204P | 354P |
| General specifications | Pressure reference                        |                  | Gauge                                                       |      |      |      |
|                        | Rated pressure range                      | MPa              | 5                                                           | 10   | 20   | 35   |
|                        | Maximum pressure                          | MPa              | 10                                                          | 20   | 40   | 50   |
|                        | Operating temp. range                     | °C               | – 10 ~ 75                                                   |      |      |      |
|                        | Compensated temp. range                   | °C               | 0 ~ 50                                                      |      |      |      |
|                        | Operating humidity                        | %RH              | 35 ~ 85 (No condensation)                                   |      |      |      |
|                        | Storage temp.                             | °C               | – 20 ~ 90 (Atmospheric pressure, humidity 65 %RH maximum)   |      |      |      |
|                        | Pressure medium                           |                  | Corrosive gases/liquids compatible with SUS 316L or SUS 316 |      |      |      |
|                        | Insulation resistance                     | MΩ minimum       | 100 (500 V DC)                                              |      |      |      |
|                        | Dielectric strength                       |                  | 350 V AC, 60 s (Leakage current 0.5 mA maximum)             |      |      |      |
|                        | Net weight                                |                  | g                                                           |      |      |      |
| Power                  | Excitation voltage                        | V DC             | 5 ± 5 %                                                     |      |      |      |
|                        | Consumption current                       | mA maximum       | 5                                                           |      |      |      |
| Analog output          | Offset voltage                            |                  | mV                                                          |      |      |      |
|                        | Span voltage                              |                  | mV                                                          |      |      |      |
|                        | Linearity/Hysteresis                      |                  | %F.S.                                                       |      |      |      |
|                        | Thermal error<br>(Reference temp.: 25 °C) | ZERO<br>%F.S./°C | ± 0.05                                                      |      |      |      |
|                        |                                           | SPAN<br>%F.S./°C | ± 0.05                                                      |      |      |      |
|                        | Load resistance                           |                  | MΩ                                                          |      |      |      |
| Response               |                                           | ms               |                                                             |      |      |      |

### ENVIRONMENTAL CHARACTERISTICS

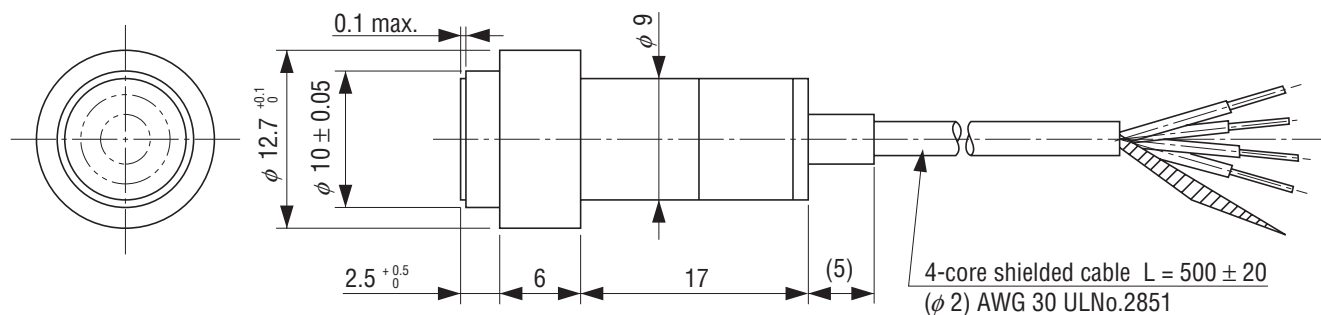
| Test item           | Test conditions (At 25 ± 5 °C)                                                       | permissible change                                   |
|---------------------|--------------------------------------------------------------------------------------|------------------------------------------------------|
| Vibration           | 10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s <sup>2</sup> ,<br>3 directions for 2 hours each | Zero voltage, Span voltage<br>± 3 %F.S. maximum each |
| Shock               | 490 m/s <sup>2</sup> , 3 directions for 3 times each                                 |                                                      |
| Pressure cycling    | 0 ~ Rated pressure, 10 <sup>6</sup> cycles                                           |                                                      |
| Moisture resistance | 40 °C, 90 ~ 95 %RH, 240 hrs.                                                         |                                                      |

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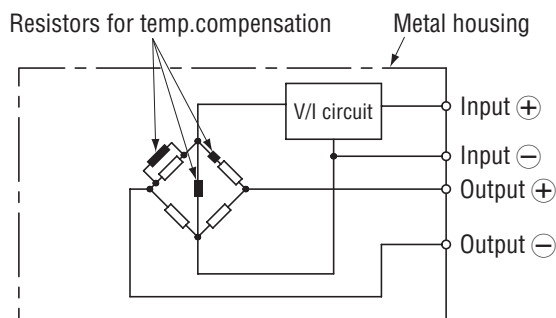
### OUTLINE DIMENSIONS

Unless otherwise specified, tolerance :  $\pm 0.5$  (Unit: mm)



| Wire color | Connection       |
|------------|------------------|
| Red        | Input $\oplus$   |
| Black      | Input $\ominus$  |
| White      | Output $\oplus$  |
| Blue       | Output $\ominus$ |
| Shield     | N.C.             |

### INTERNAL ELECTRICAL SCHEMATICS



✱ Please make sure of a proper wiring. A wrong connection may cause a damage of sensor.