

# PSS Series

## Small Pressure Sensor

### ■ Features

- Measurement pressure range
  - : Negative pressure(-101.3 to 0.0kPa)
  - Standard pressure(0 to 100.0kPa, 0 to 1,000kPa)
  - Compound pressure(-100 to 100kPa)
- Compact size : W11.8×H29.3×D24.3mm(including pressure port)
- Output type: Voltage(1-5VDC) output/Current(DC4-20mA) output
- Power supply: 12-24VDC ±10%

**NEW**

(available soon)



⚠ Please read "Caution for your safety" in operation manual before using.



### ■ Ordering information

|           |          |   |               |                |          |   |             |                             |
|-----------|----------|---|---------------|----------------|----------|---|-------------|-----------------------------|
| <b>PS</b> | <b>S</b> | - | <b>V</b>      | <b>01</b>      | <b>V</b> | - | <b>R1/8</b> | Pressure port               |
| Item      | Size     |   | Pressure type | Pressure range | Output   |   |             |                             |
|           |          |   | No-mark       | 01             | V        |   | R1/8        | Standard                    |
|           |          |   | V             | 1              | A        |   |             | Voltage(1-5VDC) output      |
|           |          |   | C             |                |          |   |             | Current(DC4-20mA) output    |
|           |          |   |               |                |          |   |             | 100kPa                      |
|           |          |   |               |                |          |   |             | 1,000kPa                    |
|           |          |   |               |                |          |   |             | Standard pressure           |
|           |          |   |               |                |          |   |             | Negative pressure           |
|           |          |   |               |                |          |   |             | Compound pressure           |
|           |          |   |               |                |          |   |             | Small(19.8mm×12.8mm×11.8mm) |
|           |          |   |               |                |          |   |             | Pressure Sensor             |

### ■ Specifications

| Pressure type                          |                          | Gauge pressure   |                           |                             |                           |
|--|--------------------------|--|---------------------------|-----------------------------|---------------------------|
|  |                          | Negative pressure  | Standard pressure         |                             | Compound pressure         |
| Model                                  | Voltage(1-5VDC) output   | <b>PSS-V01V-R1/8</b>   | <b>PSS-01V-R1/8</b>       | <b>PSS-1V-R1/8</b>          | <b>PSS-C01V-R1/8</b>      |
|  | Current(DC4-20mA) output | <b>PSS-V01A-R1/8</b>   | <b>PSS-01A-R1/8</b>       | <b>PSS-1A-R1/8</b>          | <b>PSS-C01A-R1/8</b>      |
| Rated pressure range                   |                          | 0.0 to -101.3kPa   | 0 to 100.0kPa             | 0 to 1,000kPa               | -101.3 to 100.0kPa        |
| Extended analog output                 |                          | 5.0 to -101.3kPa   | -5.0 to 110.0kPa          | -50 to 1,100kPa             | -101.3 to 110.0kPa        |
| Max. pressure range                    |                          | 2 times of rated pressure  | 2 times of rated pressure | 1.5 times of rated pressure | 2 times of rated pressure |
| Applied vapor                          |                          | Air, non-corrosive gas   |                           |                             |                           |
| Power supply                           |                          | 12V-24VDC ±10%(ripple P-P: Max. 10%)   |                           |                             |                           |
| Current consumption                    |                          | Voltage output: Max. 15mA, Current output: —   |                           |                             |                           |
| Affection by power supply              |                          | Max. ±0.3% F.S.  |                           |                             |                           |
| Protection circuit                     |                          | Reverse polarity protection circuit  |                           |                             |                           |
| Analog output                          | Voltage output           | •Output voltage : 1-5VDC ±2% F.S.  |                           | •Linear: Max. ±1% F.S.      | •Output impedance: 1kΩ    |
|  | Current output           | •Output current: DC4-20mA ±2% F.S.   |                           | •Linear: Max. ±1% F.S.      |                           |
| Temp. characteristics of analog output |                          | Max. ±2% F.S. of output voltage/current at 25°C within temperature range 0 to 50°C                                       |                           |                             |                           |
| Insulation resistance                  |                          | Max. 50MΩ(at 500VDC megger)  |                           |                             |                           |
| Dielectric strength                    |                          | 2000VAC 50/60Hz for 1 min.(between all terminals and case)   |                           |                             |                           |
| Vibration                              |                          | 1.5mm amplitude or 300m/s <sup>2</sup> at frequency of 10 to 55Hz (for 1 min.) in each of X, Y, Z directions for 2 hours |                           |                             |                           |
| Environment                            | Ambient temperature      | 0 to 50°C, storage: -10 to 60°C  |                           |                             |                           |
|  | Ambient humidity         | 35 to 85%RH, storage : 35 to 85%RH   |                           |                             |                           |
| Protection                             |                          | IP40(IEC standards)  |                           |                             |                           |
| Material                               |                          | Front case: PC, Rear case: PC, Pressure port: Nickel plated brass  |                           |                             |                           |
| Cable                                  |                          | ø3, 4-wire, Length 1.1m (AWG28, Core diameter: 0.08mm, Number of cores: 19, Insulator out diameter: ø0.88)               |                           |                             |                           |
| Sold separately                        |                          | Sensor connector plug(CNE-P04-YG) <sup>※1</sup>  |                           |                             |                           |
| Approval                               |                          | CE (pending)   |                           |                             |                           |
| Weight <sup>※2</sup>                   |                          | Approx. 60g (approx. 26g)  |                           |                             |                           |

※1: For more information about sensor connector plug, refer to '(G) Connector/Socket'.

※2: The weight is with packaging and the weight in parentheses is only unit weight.

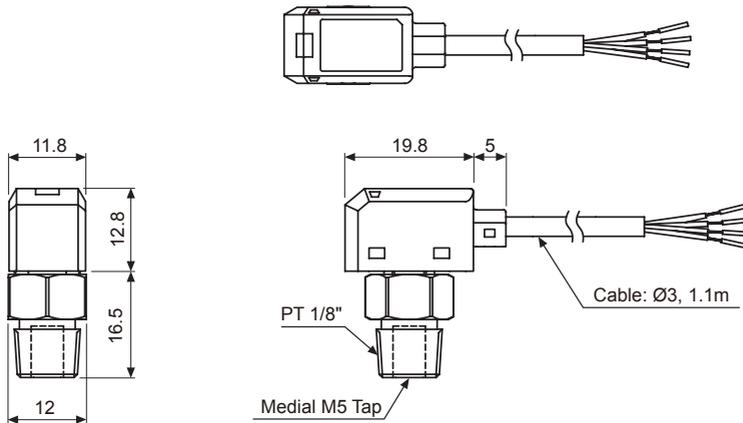
※Full scale is the rated pressure.

※Environment resistance is rated at no freezing or condensation.

# Small Pressure Sensor

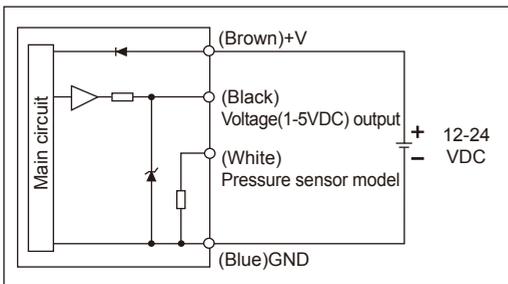
## ■ Dimensions

(unit : mm)

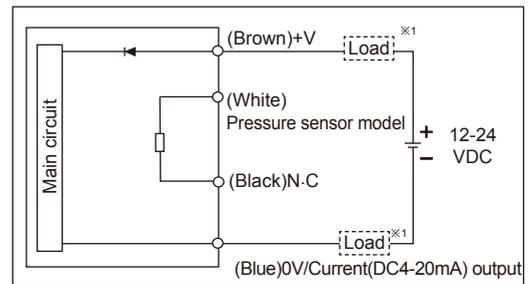


## ■ Connections

### ● Voltage(1-5VDC) output type



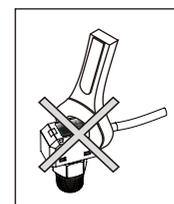
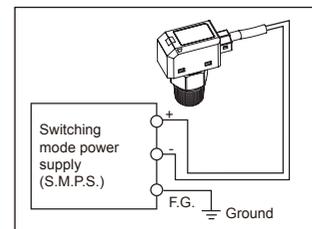
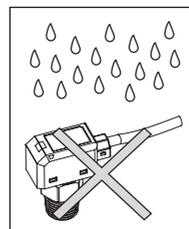
### ● Current(DC4-20mA) output type



※1 : Load can be connected to + or - side.  
Allowable load impedance: Max. 100Ω for 12VDC power  
Max. 500Ω for 24VDC power

## ■ Caution for using

- Do not insert any sharp or pointed object into pressure port. It may cause malfunction and damage the sensor.
- Be sure that this unit must avoid direct touch with water, oil, thinner etc.
- It is ready to operate 3 sec. after it is turned ON. Be sure not to use the product within 3 sec.
- When using switching mode power supply, frame ground (F.G.) terminal of power supply should be grounded.
- To avoid inductive noise, keep the wiring away from power line, high voltage line. It may cause malfunction.
- When moving this unit from warm place to cold place, please remove the humidity on the cover then use it.
- Do not use spanner to mount this unit.  
Tightening torque for one touch fitting should be max. 10N·m.
- Do not apply a tensile strength in excess of 30N to the cables or connector.
- Allowable installation environment
- It shall be used indoor.
- Altitude Max. 2,000m
- Pollution degree 3
- Installation Category II



|     |                                  |
|-----|----------------------------------|
| (A) | Photo electric sensor            |
| (B) | Fiber optic sensor               |
| (C) | Door/Area sensor                 |
| (D) | Proximity sensor                 |
| (E) | Pressure sensor                  |
| (F) | Rotary encoder                   |
| (G) | Connector/Socket                 |
| (H) | Temp. controller                 |
| (I) | SSR/ Power controller            |
| (J) | Counter                          |
| (K) | Timer                            |
| (L) | Panel meter                      |
| (M) | Tacho/ Speed/ Pulse meter        |
| (N) | Display unit                     |
| (O) | Sensor controller                |
| (P) | Switching mode power supply      |
| (Q) | Stepper motor& Driver&Controller |
| (R) | Graphic/ Logic panel             |
| (S) | Field network device             |
| (T) | Software                         |
| (U) | Other                            |