



Pressure Sensor, 0-700kPa, Gauge, 3.3VDC, I2C signal

## PS8808 Series IOT Pressure Sensors Technical Data Sheet

**PS8808-700k3CBNG**

### Features

- Pressure range 0-700kPa
- Gauge pressure sensor
- Constant current / Constant Voltage power supply
- Output in I<sup>2</sup>C interface and protocol
- Stainless Steel 316L

### Applications

- Industrial process control
- Gas, liquid pressure measurement
- Pressure checking meter
- Pressure calibrator
- Cooling equipment and air conditioning system
- Aviation and navigation inspection

### Description

PS8808-700k3CBNG Digital Output Pressure Transducer is a piezoresistive pressure sensor with 316L stainless steel corrugated diaphragm and isolated oil-filling construction. The sensing package utilizes silicone oil to transfer pressure from the 316L stainless steel diaphragm to the sensing die. The pressure is transformed to an analog electrical signal. With an integrated circuit for temperature compensation and nonlinear correction, it provides output data conforming to I<sup>2</sup>C interface protocol. It is widely used for various liquid pressure measurements compatible with stainless steel and viton.

### Product Configuration

|                       |                 |
|-----------------------|-----------------|
| Application:          | Pressure Sensor |
| Pressure Type:        | Gauge           |
| Electrical Connector: | 5-pin PH2.0     |

### General Specifications

| Description            | Minimum | Typical | Maximum | Unit            |
|------------------------|---------|---------|---------|-----------------|
| Pressure Range         | 0       |         | 700     | kPa             |
| Accuracy (Pressure)    |         | ±0.5    |         | %Full Scale     |
| Accuracy (Temperature) |         | ±1.5    |         | °C              |
| Long Term Stability    |         | ±0.3    |         | %FullScale/year |
| Overpressure           |         | 1.5     |         | xFull Scale     |

### Electrical Specifications

| Description                   | Minimum | Typical | Maximum | Unit |
|-------------------------------|---------|---------|---------|------|
| Output Signal                 |         | 5%-95%  |         |      |
| Power Supply/Excitation Level |         | 3.3±0.1 |         | VDC  |
| Power Supply Current          |         | 2.5     |         | mA   |
| Sampling Interval             |         |         | 1.5     | msec |



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### Material Specifications

| Description  | Material             |
|--------------|----------------------|
| Diaphragm    | Stainless Steel 316L |
| Plug Housing | Stainless Steel 316L |

### Mechanical Specifications

#### Electrical Connection

| Wire Color | (I <sup>2</sup> C) Standard Mode |
|------------|----------------------------------|
| Black      | -IN                              |
| Red        | +IN                              |
| Blue       | SCL                              |
| White      | SDA                              |
| Yellow     | NULL                             |



### Environmental Specifications

|                         |                                |
|-------------------------|--------------------------------|
| Temperature (Operating) | -10°C to 80°C                  |
| Temperature (Storage)   | -40°C to 125°C                 |
| Shock                   | 10g, 20Hz-2000Hz               |
| Impact                  | 100g, 11ms                     |
| Certifications          | ROHS Compliant<br>CE Compliant |

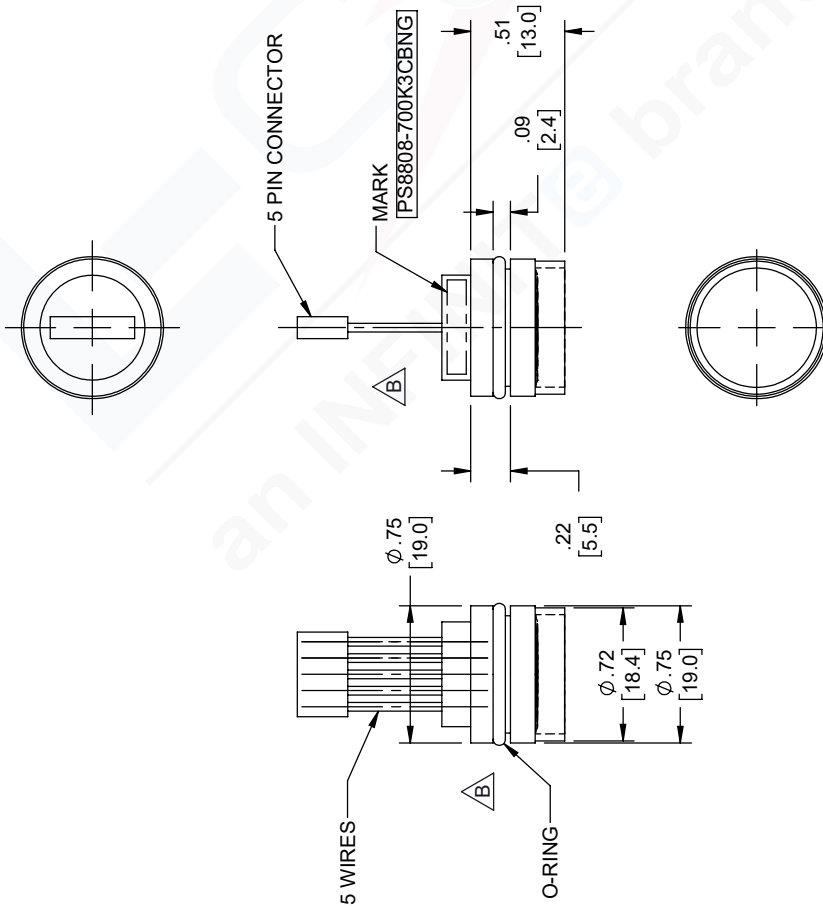
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## PS8808-700k3CBNG CAD Drawing

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| REVISIONS |                                       |          |          |
|-----------|---------------------------------------|----------|----------|
| REV.      | DESCRIPTION                           | DATE     | APPROVED |
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|                                                                                                         |                                                                                                                       |                                                                                                                                                                                                                  |                                                                                                                     |                                                                                                                               |
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| <p>A</p>                                                                                                | <p>43321</p>                                                                                                          | <p>DZINN</p>                                                                                                                                                                                                     | <p>PS8808-700K3CBNG</p>                                                                                             | <p>REV B</p>                                                                                                                  |

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