

# Model PTA

## General Purpose Pressure Transducer

### Description

PTA model has applied Silicon Piezoresistive cell, which attached High Temperature Glass on Titanium. Since it does not use O-ring, there is no possibility of corrosion and leak. Its low price makes it suitable for industrial uses. With its various outputs, it may be interfaced with various controllers.

### Features

- ▶ CE Certified
- ▶ Built-in amplifier Circuit(VDC, mA)
- ▶ Measuring range -0.1 ~ 500MPa
- ▶ 0.5%FS accuracy
- ▶ Piezoresistive silicon cell
- ▶ Zero, Span Adjustable
- ▶ Stainless steel, Titanium media-wetted materials

### Applications

- ▶ Process control
- ▶ Hydraulics & Pneumatic
- ▶ Compressor Control
- ▶ Chillers
- ▶ Refrigeration Equipment



### Specifications

#### Range

0 ~ 100kPa ... 500MPa (Gauge)  
-100kPa ~ 0 ~ 100kPa ... 500MPa (Gauge)

#### Performance

|                               |                                    |
|-------------------------------|------------------------------------|
| Accuracy                      | ±0.5%FS(RSS)                       |
| Thermal Effect on Zero        | ±0.05%FS/°C (≤200kPa : ±0.1%FS/°C) |
| Thermal Effect on Span        | ±0.05%FS/°C (≤200kPa : ±0.1%FS/°C) |
| Compensated Temperature Range | -10 ~ 70°C                         |
| Operating Temperature Range   | -30 ~ 100°C                        |

#### Electrical

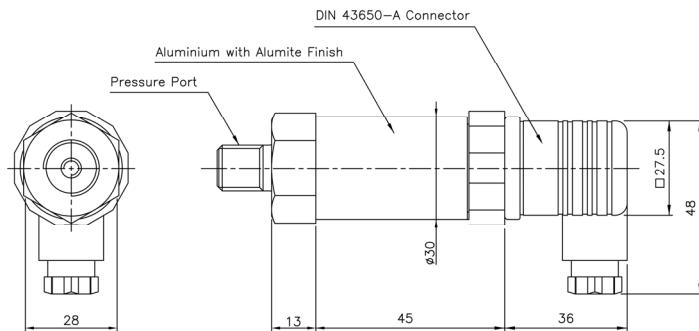
|                       |                                                                                  |
|-----------------------|----------------------------------------------------------------------------------|
| Excitation            | 11 ~ 28VDC(PTAA 12VDC Max.)                                                      |
| Output                | 10~20mV/V(Din Type Only)<br>0~5VDC, 1~5VDC, 0~10VDC(3, 4Wire), 4~20mA(2, 3 Wire) |
| Electrical Connection | Connector, Head, Din Connector                                                   |

#### Physical

|                        |                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------|
| Proof Pressure         | ≤ 150 MPa : X1.5 or 150MPa Whichever is less. / > 150MPa : X1.5 or 500MPa Whichever is less.    |
| Burst Pressure         | ≤ 150 MPa : X2 or 150MPa Whichever is less. / > 150MPa : X2 or 600MPa Whichever is less.        |
| Vibration              | 49.1m/s <sup>2</sup> {5G}, 10~500Hz                                                             |
| Shock                  | 490m/s <sup>2</sup> {50G}                                                                       |
| Pressure Port          | R(PT)1/8", G(PF)1/8", R(PT)1/4", G(PF)1/4", R(PT)3/8", G(PF)3/8", 9/16UNF Female(Only >1500bar) |
| Media-Wetted Materials | Stainless Steel 304 + Titanium 87%                                                              |
| Weight                 | `Connector type : Approx. 140g (Sensor Only)                                                    |

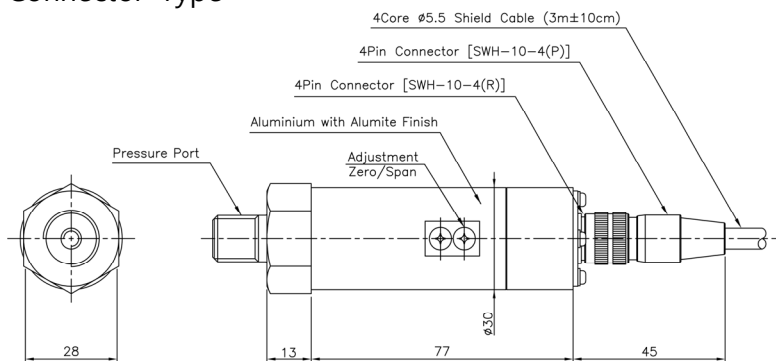
## Dimension

### ► mV Output DIN Connector Type



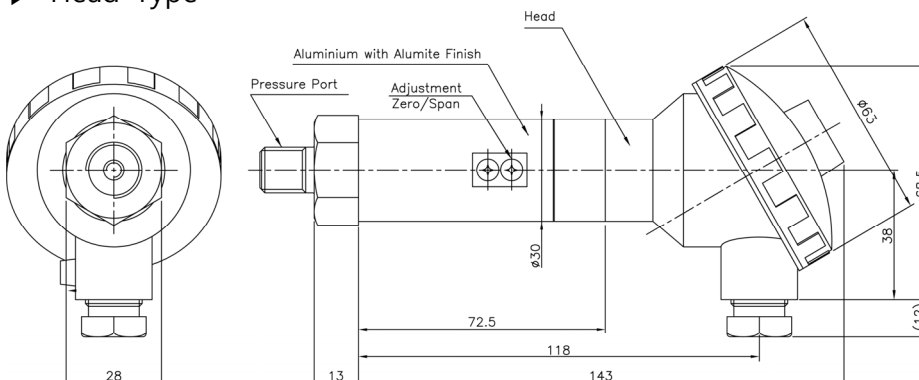
| Pin No. | Connections |
|---------|-------------|
| 1       | Input ⊕     |
| 2       | Input ⊖     |
| 3       | Output ⊕    |
| ⊕       | Output ⊖    |

### ► Connector Type



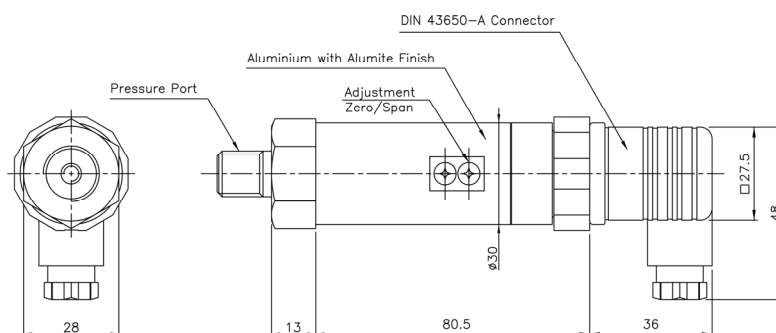
| Pin No. | Wire Color | Connections |          |          |
|---------|------------|-------------|----------|----------|
|         |            | 4Wire       | 3Wire    | 2Wire    |
| 1       | Red        | Input ⊕     | Input ⊕  | Input ⊕  |
| 2       | White      | Output ⊖    | Common ⊖ | ×        |
| 3       | Black      | Input ⊖     | ×        | Output ⊕ |
| 4       | Green      | Output ⊕    | Output ⊕ | ×        |
| 5       | Shield     | Earth       | Earth    | Earth    |

### ► Head Type



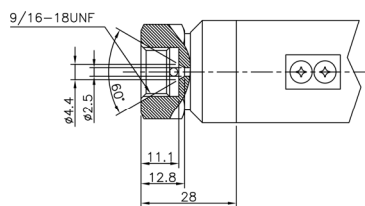
| No. | Connections |
|-----|-------------|
|     | 2Wire       |
| +   | Input ⊕     |
| ⊕   | Earth       |
| -   | Output ⊕    |

### ► Din connector Type



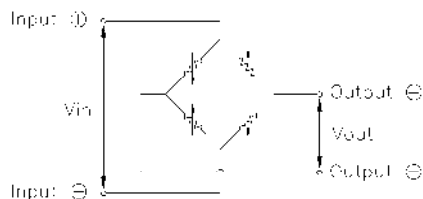
| Pin No. | Connections |          |
|---------|-------------|----------|
|         | 3Wire       | 2Wire    |
| 1       | Input ⊕     | Input ⊕  |
| 2       | Common ⊖    | Output ⊕ |
| 3       | Output ⊕    | ×        |
| ⊕       | Earth       | Earth    |

► Pressure Port(> 1500bar)

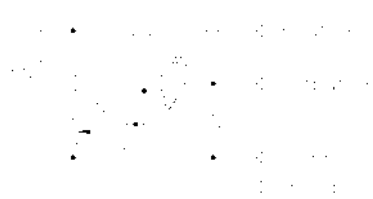


## Internal Circuit Diagram

► mV Output Type



► 2Wire mA Output Type



► 3, 4Wire VDC Output Type



## Ordering Information

|                          |  |            |          |             |          |          |          |          |          |           |                                     |  |
|--------------------------|--|------------|----------|-------------|----------|----------|----------|----------|----------|-----------|-------------------------------------|--|
| <b>Model Name</b>        |  | <b>PTA</b> | <b>B</b> | <b>0100</b> | <b>R</b> | <b>A</b> | <b>P</b> | <b>A</b> | <b>-</b> | <b>TI</b> | <b>Media-Wetted Materials</b>       |  |
| <b>Output</b>            |  |            |          |             |          |          |          |          |          |           | None : SS304, Ti 87%                |  |
| A : mV/V                 |  |            |          |             |          |          |          |          |          |           | TI : Ti 87%                         |  |
| B : 4Wire 0~5V           |  |            |          |             |          |          |          |          |          |           | <b>Option</b>                       |  |
| C : 3Wire 0~5V           |  |            |          |             |          |          |          |          |          |           | A : Normal                          |  |
| D : 4Wire 1~5V           |  |            |          |             |          |          |          |          |          |           | <b>Connecting Methods</b>           |  |
| E : 3Wire 1~5V           |  |            |          |             |          |          |          |          |          |           | P : Connector                       |  |
| <b>Pressure Range</b>    |  |            |          |             |          |          |          |          |          |           | H : Head                            |  |
| XXXX : Pressure          |  |            |          |             |          |          |          |          |          |           | I : Din 43650-A connector           |  |
| CXXX : Compound Pressure |  |            |          |             |          |          |          |          |          |           | <b>Pressure port</b>                |  |
| <b>Pressure Unit</b>     |  |            |          |             |          |          |          |          |          |           | A : R(PT)3/8"                       |  |
| R : kPa                  |  |            |          |             |          |          |          |          |          |           | D : G(PF)1/4"                       |  |
| B : bar                  |  |            |          |             |          |          |          |          |          |           | B : G(PF)3/8"                       |  |
| P : psi                  |  |            |          |             |          |          |          |          |          |           | E : R(PT)1/2"                       |  |
| M : MPa                  |  |            |          |             |          |          |          |          |          |           | C : R(PT)1/4"                       |  |
| K : kgf/cm <sup>2</sup>  |  |            |          |             |          |          |          |          |          |           | Q : G(PF)1/2"                       |  |
| H : mmHg                 |  |            |          |             |          |          |          |          |          |           | K : 9/16-18 UNF(F) (Only > 1500bar) |  |



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