

# Model PTC

Car, Building Purpose Pressure Transducer

## Description

PTC model has applied Silicon Piezoresistive cell, which attached High Temperature Glass on Titanium. It is small to be usable by automobiles or heavy equipment and it is also provided at low price. With its output of 1~5V or 4~20mA(2Wire), it may be interfaced with various controllers.

## Features

- ▶ CE Certified
- ▶ Built-in amplifier Circuit(VDC, mA)
- ▶ Measuring range -100kPa~10MPa
- ▶ 0.5%FS accuracy
- ▶ IP55 protection(Cable type)
- ▶ Piezoresistive silicon cell
- ▶ Stainless steel, Titanium, EPDM media-wetted materials

## Applications

- ▶ Off road equipment
- ▶ Hydraulics & Pneumatic
- ▶ Compressor control
- ▶ Industrial engines
- ▶ Pump pressure control



## Specifications

### Range

0 ~ 100, 200, 600kPa / 1, 2, 3, 5, 10MPa (Gauge)  
-100 ~ 0, 100, 200, 600kPa / 1, 2, 3, 5, 10MPa (Gauge)

### Performance

|                               |              |
|-------------------------------|--------------|
| Accuracy                      | ±0.5%FS(RSS) |
| Thermal Effect on Zero        | ±0.05%FS/°C  |
| Thermal Effect on Span        | ±0.05%FS/°C  |
| Compensated Temperature Range | -10 ~ 70°C   |
| Operating Temperature Range   | -20 ~ 80°C   |

### Electrical

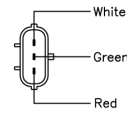
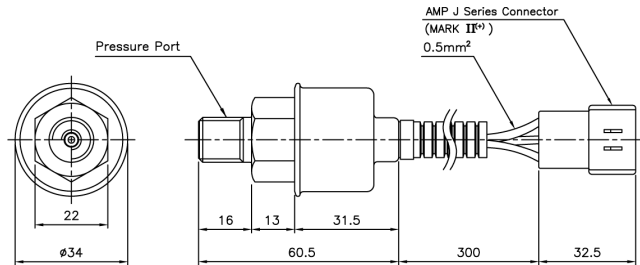
|                       |                                                                         |
|-----------------------|-------------------------------------------------------------------------|
| Excitation            | 11 ~ 28VDC                                                              |
| Output                | 0~5VDC, 1~5VDC, 0~10VDC, 4~20mA(2Wire)                                  |
| Electrical Connection | Connector, Cable, AMP Connector(1~5VDC 3Wire Only), Head, Din Connector |

### Physical

|                        |                                                                  |
|------------------------|------------------------------------------------------------------|
| Proof Pressure         | 150%FS Max.                                                      |
| Burst Pressure         | 200%FS Min.                                                      |
| 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" |
| Media-Wetted Materials | Stainless Steel 304, Titanium 87%, O-ring : EPDM(Optional VITON) |
| Weight                 | Approx. 130g (AMP Connector Type)                                |

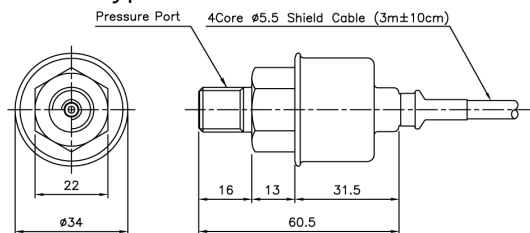
## Dimension

### ► AMP Connector Type



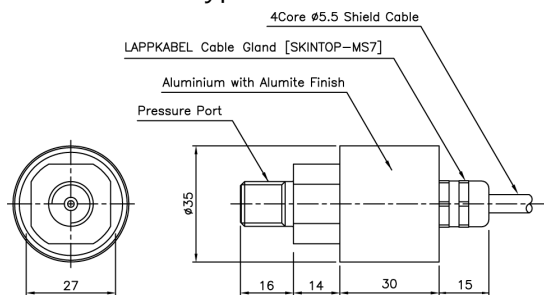
| Wire Color | Connections |
|------------|-------------|
| Red        | Input ⊕     |
| White      | Common ⊖    |
| Green      | Output ⊕    |

### ► Cable Type



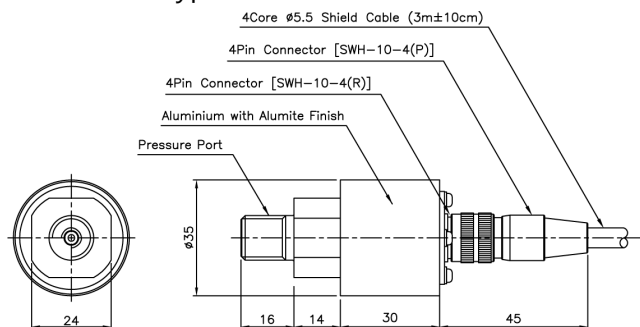
| Wire Color | Connections |          |          |
|------------|-------------|----------|----------|
|            | 4Wire       | 3Wire    | 2Wire    |
| Red        | Input ⊕     | Input ⊕  | Input ⊕  |
| White      | Output ⊖    | Common ⊖ | ×        |
| Black      | Input ⊖     | ×        | Output ⊕ |
| Green      | Output ⊕    | Output ⊕ | ×        |
| Shield     | Earth       | Earth    | Earth    |

### ► Cable Gland Type



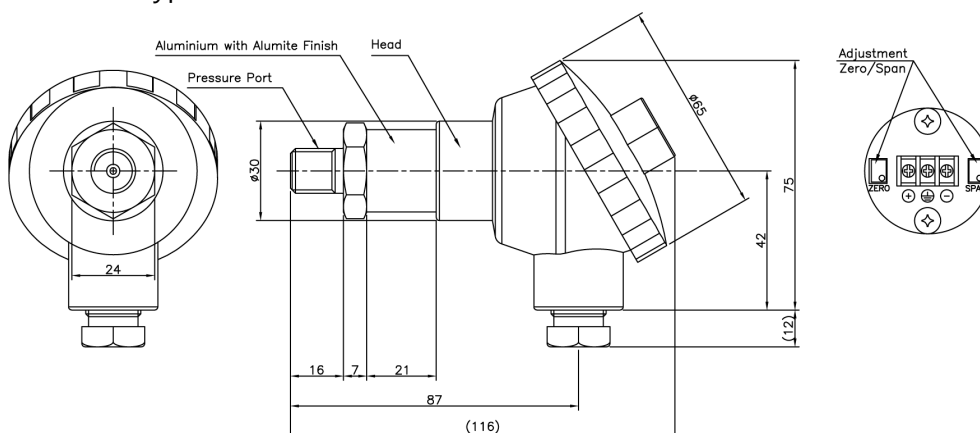
| Wire Color | Connections |          |          |
|------------|-------------|----------|----------|
|            | 4Wire       | 3Wire    | 2Wire    |
| Red        | Input ⊕     | Input ⊕  | Input ⊕  |
| White      | Output ⊖    | Common ⊖ | ×        |
| Black      | Input ⊖     | ×        | Output ⊕ |
| Green      | Output ⊕    | Output ⊕ | ×        |
| Shield     | Earth       | Earth    | Earth    |

### ► Connector Type



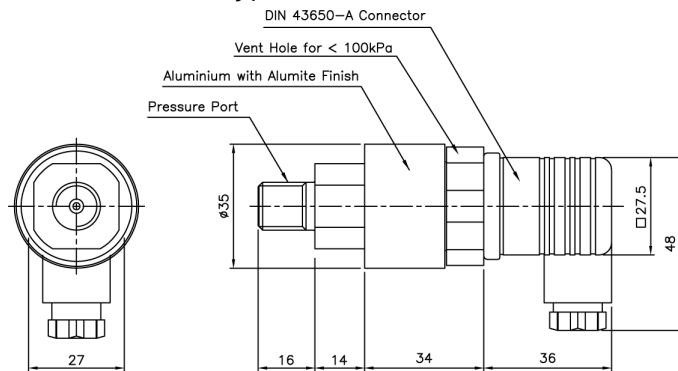
| Pin No. | Wire Color | Connections |          |          |
|---------|------------|-------------|----------|----------|
|         |            | 4Wire       | 3Wire    | 2Wire    |
| 1       | Red        | Input ⊕     | Input ⊕  | Input ⊕  |
| 2       | White      | Output ⊖    | Common ⊖ | ×     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

### ► Head Type



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

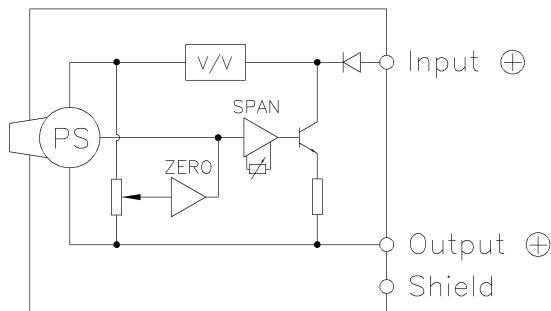
## ► Din connector Type



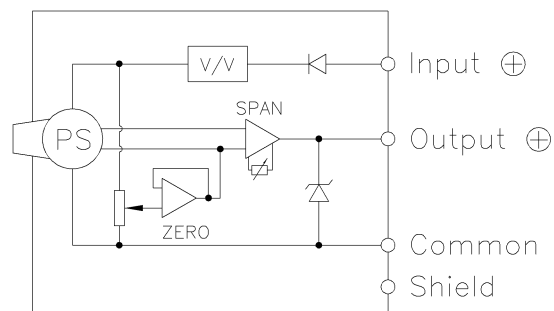
| Pin No. | Connections |          |
|---------|-------------|----------|
|         | 3Wire       | 2Wire    |
| 1       | Input ⊕     | Input ⊕  |
| 2       | Common ⊖    | Output ⊕ |
| 3       | Output ⊕    | ×        |
| ⊕       | Earth       | Earth    |

## Internal Circuit Diagram

### ► 2Wire mA Output Type



### ► 3, 4Wire VDC Output Type



## Ordering Information

| Model Name               |                         | PTC E 0100 R A P A |  | Option                    |               |
|--------------------------|-------------------------|--------------------|--|---------------------------|---------------|
| <b>Output</b>            |                         |                    |  | A : Normal                |               |
| B : 4Wire 0~5V           | H : 2Wire 4~20mA        |                    |  | <b>Connecting Methods</b> |               |
| C : 3Wire 0~5V           | J : 3Wire 0~10V         |                    |  | P : Connector             |               |
| D : 4Wire 1~5V           | K : 4Wire 0~10V         |                    |  | C : Cable                 |               |
| E : 3Wire 1~5V           |                         |                    |  | F : AMP Connector         |               |
| <b>Pressure Range</b>    |                         |                    |  | H : Head                  |               |
| XXXX : Pressure          |                         |                    |  | I : Din 43650-A connector |               |
| CXXX : Compound Pressure |                         |                    |  | S : Cable Gland           |               |
| <b>Pressure Unit</b>     |                         |                    |  | <b>Pressure port</b>      |               |
| R : kPa                  | M : MPa                 |                    |  | A : R(PT)3/8"             | D : G(PF)1/4" |
| B : bar                  | K : kgf/cm <sup>2</sup> |                    |  | B : G(PF)3/8"             | G : R(PT)1/8" |
| P : psi                  | H : mmHg                |                    |  | C : R(PT)1/4"             | H : G(PF)1/8" |

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