

# PT10SR-2480

## Piezoresistive OEM Pressure Transmitter



### Features

- Wider pressure range;
- Full stainless steel construction; optional pressure port; flush diaphragm type, sanitation type and anti-corrosive type are available; protection IP65;
- Optional output signal; local calibration and display;
- Reversed-polarity, transient current & voltage protection, which conform to EMI standard;
- Intrinsic safe ex-proof version conforming to GB3836.4 Exia II CT6 Regulation; Ex-proof Certificate is issued;
- EXD product conforming to GB3836.2 Exd II CT6 Regulation; EXD Certificate is issued;
- Ship-use product conforming to CCS Rules of Classification of Sea-going Steel Ships(2006); Ship-use Certificate is issued;
- CE and RoHS Certificates;

### Introduction

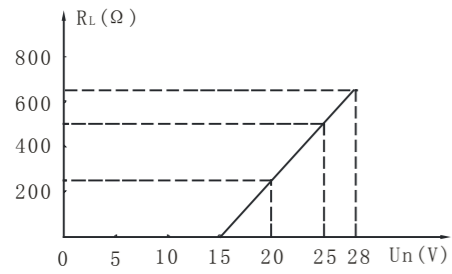
PT10SR-2480 transmitter uses piezoresistive OEM pressure sensor with isolated stainless steel diaphragm as signal sensing element, through automatic testing, laser trimming compensating zero and sensitivity in wider temperature range; the amplifier circuit is in stainless steel housing, transforming sensor signal into standard output signal. Through strict component making, semi-finished product and all-finished product testing and aging, the transmitter is stable and reliable, having excellent flexibility, sensitivity and diversity. The product is widely used for pressure measure and control of petroleum, chemi-industry, metallurgy, power station and hydrology, etc.

### Specification

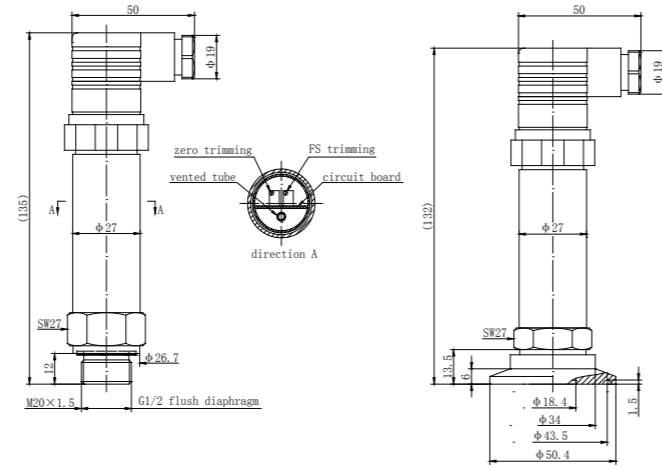
- Pressure range: -0.1...0 ~ 0.01...100MPa
- Overpressure: 1.5 times FS or 110MPa(min. value is valid)
- Pressure type: gauge, absolute or sealed gauge
- Accuracy: 0.25%FS(typ.)  
0.5%FS(max.)
- Long-term stability: 0.2%FS/year(typ.)  
0.3%FS/year(max.)
- Zero temp. drift: 0.03%FS/°C ( $\leq 100\text{kPa}$ );  
0.02%FS/°C ( $> 100\text{kPa}$ )
- FS temp. drift: 0.03%FS/°C ( $\leq 100\text{kPa}$ );  
0.02%FS/°C ( $> 100\text{kPa}$ )
- Operation temp.: -30°C ~80°C
- Storage temp.: -40°C ~120°C
- Power supply: 15~30VDC    15~28VDC    15~28VDC
- Output signal: 4~20mADC    0~10/20mADC    0/1~5/10VDC
- Transmitting: 2-wire    3-wire    3-wire
- Load:  $\leq (U-15)/0.02\Omega$      $\leq (U-15)/0.02\Omega$      $> 100\text{k}$
- Protection: IP65 for both cable and plug connection
- Electric connection: Plug connection or 1.5m cable connection
- Housing: stainless steel 1Cr18Ni9Ti
- Diaphragm: stainless steel 316L
- O-ring: Viton
- Rubber casing: NBR

**Load Characteristic**

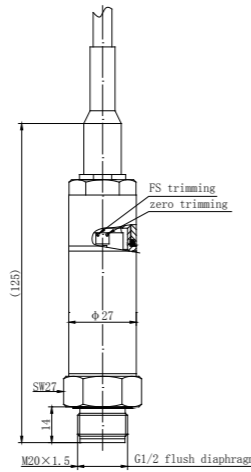
- 2-wire, 4~20mADC output,
- 3-wire, 0~10/20mADC output
- 15~28VDC power supply
- $R_L < (U_n - 15) / 0.02 \text{ (}\Omega\text{)}$



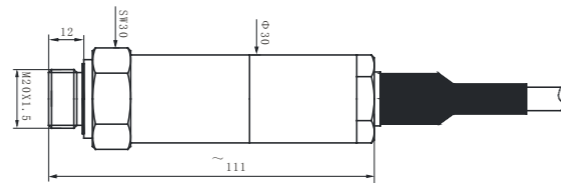
**Outline Construction (Unit: mm)**



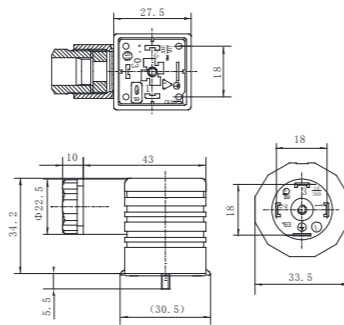
B1 Plug Connection Outline Drawing



B2 Cable Connection Outline Drawing



EXD Product Outline Drawing



Plug Outline and Arrangement

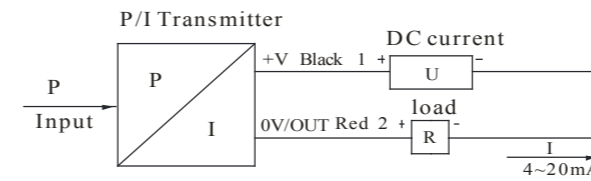
**Electrical Connection**

Plug Connection:

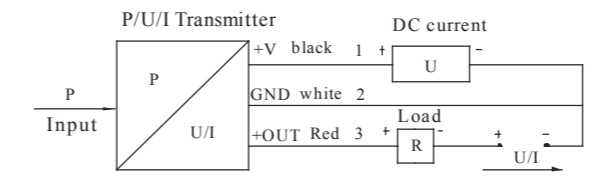
| Pin | 2-wire  | 3-wire |
|-----|---------|--------|
| 1   | +V      | +V     |
| 2   | 0V/+OUT | GND    |
| 3   | Null    | +OUT   |

Cable Connection:

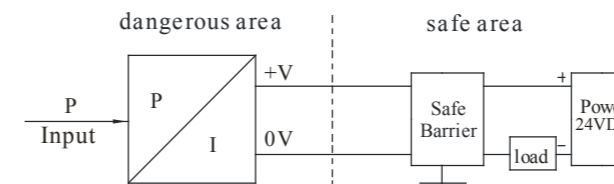
| Wire color | 2-wire  | 3-wire |
|------------|---------|--------|
| Black      | +V      | +V     |
| Red        | 0V/+OUT | +OUT   |
| White      | Null    | GND    |



Electrical Connection for transmitter output 2-wire 4~20mAD



Electrical Connection for transmitter 3-wire 0/1~5VDC, 0~10/20mADC



Electrical Connection for Ex-proof transmitter (Intrinsic safe system 2-wire 4~20mADC)

Transmitter Ex-proof parameter:

$U_i$ : 28VDC  $I_i$ : 93mADC

$L_i$ : 0mH  $C_i$ : 0.044uF

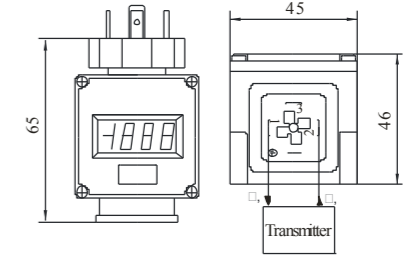
$P_i$ : 0.65W

Safe barrier's ex-proof parameter:

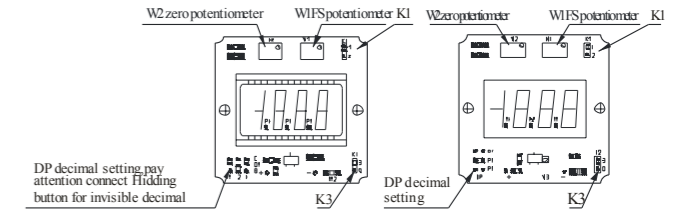
$U_o$ : 28VDC  $I_o$ : 93mADC

$P_o$ : 0.65W

Operation introduction for transmitter with indicator (2-wire 4~20mADC)

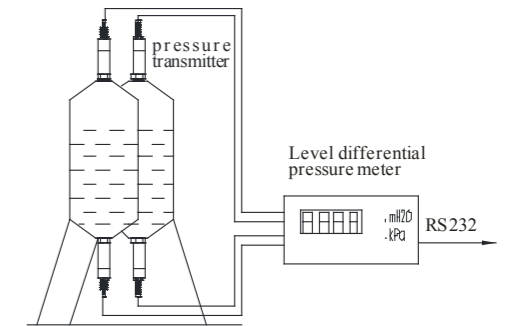


3 1/2 digit indicator outline

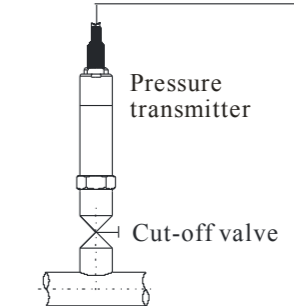
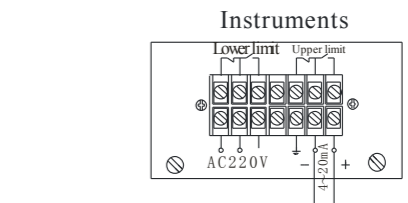


LCD indicator operation (M3) LCD indicator operation (M4)

**Application Example**



Flush diaphragm transmitter installed on beer tank to measure level



General transmitter installed on tube to measure pressure

## Order Guide

| PT10SR-2480 |                 | Piezoresistive Pressure Transmitter                          |         |                                  |                |
|-------------|-----------------|--|---------|----------------------------------|----------------|
| 4~20mA DC   | Range           | Pressure range: -0.1...0~0.01...100MPa                       |         |                                  |                |
|             | [0~X]kPa or MPa | X= actual pressure range                                     |         |                                  |                |
|             | Code            | Output signal  |         |                                  |                |
|             | E               |  |         |                                  |                |
|             | F               | 1~5VDC   |         |                                  |                |
|             | J               | 0~5VDC   |         |                                  |                |
|             | Q               | 0~10mAC  |         |                                  |                |
|             | U               | 0~20mAC  |         |                                  |                |
|             | V               | 0~10VDC  |         |                                  |                |
|             | Code            | Construction material  |         |                                  |                |
|             | Diaphragm       | Pressure port  | Housing |                                  |                |
| 22          | SS 316L         | SS   | SS      |                                  |                |
| 24          | SS 316L         | SS 316L  | SS 316L |                                  |                |
| 25          | Tantalum        | SS   | SS      |                                  |                |
| 35          | Tantalum        | Hastelloy C  | SS      |                                  |                |
|             | Code            | Other  |         |                                  |                |
|             | B <sub>1</sub>  | Plug connection  |         |                                  |                |
|             | B <sub>2</sub>  | Cable connection cable length: 1.5m                          |         |                                  |                |
|             | PC <sub>1</sub> | Flush diaphragm, M20×1.5 male                                |         |                                  |                |
|             | PC <sub>3</sub> | Flush diaphragm, G1/2 male                                   |         |                                  |                |
|             | P <sub>3</sub>  | Sanitation type: -0.1...0~0.02...2MPa, DN25 clamp connection |         |                                  |                |
|             | M <sub>3</sub>  | 31/2 digits LCD digital indicator (only for 4~20mA)          |         |                                  |                |
|             | M <sub>4</sub>  | 31/2 digits LED digital indicator (only for 4~20mA)          |         |                                  |                |
|             | i               | Intrinsic safe version Exia II CT6                           |         |                                  |                |
|             | T               | Ship-use   |         |                                  |                |
|             | d               | Exd II CT6   |         |                                  |                |
|             | C <sub>1</sub>  | M20×1.5 male, face type seal                                 |         |                                  |                |
|             | C <sub>3</sub>  | G1/2 male  |         |                                  |                |
|             | C <sub>5</sub>  | M20×1.5 male, waterline seal                                 |         |                                  |                |
|             | G               | Gauge  |         |                                  |                |
|             | A               | Absolute   |         |                                  |                |
|             | S               | Sealed gauge   |         |                                  |                |
| PT10SR-2480 | [0~100]kPa      | E  | 22      | B <sub>1</sub> PC <sub>3</sub> G | the whole spec |

<http://www.zoricreato.com>

588: Gi ] ` X] b[ ` &szBc ` \*z<Yb[ nY Gy] Yb` Ghf Yyh` Mb[ ` Y` 9Wbca] W8Y] Y` cdaYbh` NbyZ6Y] ^] b[ ` z7\] bU`

HY : 010-51669912