

**Model : KP-10(KP-20)**

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## **LOW COST INDICATING PRESSURE TRANSMITTER**

### **FEATURES**

- Compact field case
- Programmable digital pressure transmitter
- Variable functions
- Range turn-down
- High performance & cost effective
- Extremely corrosion resistant
- Wide Measuring Ranges
- LED 4-digits Local display

### **APPLICATIONS**

- A wide range of application in ;**
- Standard hydraulic & pneumatic equipments
- Process control
- Machine tools & automatic machinery
- Servo valves & drives
- Chemical & petrochemical industries
- Air & gas compressors



### **GENERAL DESCRIPTION**

KP-10 series Microprocessor based digital pressure transmitter has been designed as an advanced device for measuring pressure of gases and liquids in industrial applications. It is extremely versatile and suitable for measuring static pressure. A compact field case and 4 digit LED local display make it easy to control process and adjust the value for measuring range, damping, zero & span. The built-in ceramic measuring cell is highly corrosion resistant, stable and has an excellent price / performance ratio. Thanks to their high natural frequency and the rugged construction, KP-10 withstands high shock & vibration.

They are available as absolute and relative pressure types with either 2-wire current or 3-wire voltage output. The pressure to be measured acts without transmitting liquid fill on a stable, corrosion resistant ceramic measuring cell. Piezoresistive resistors are attached to the cell and connected in a Wheatstone bridge

## TECHINCAL DATA

### Input

Measuring Principle  
Pressure Reference  
Measuring Ranges(bar)

### Ceramic Pressure Cell (KP-20: Piezoresistive Pressure Cell)

Gauge, Absolute, Vacuum & Compound  
Gauge : 0~1, 2, 3, 4, 5, 8, 10, 15, 20, 25, 35, 50, 100, 200, 350  
Absolute : 0~1, 2, 5, 10, 20, 50, 100, 200, 350, 400  
Vacuum : -1~0  
Compound : -1~1, 2, 3, 5, 10, 20, 35, 50, 100, 200, 350, 400  
Note : Other ranges are available on request  
1.5 × Full scale without damage

Over Pressure Limit

### Output

Output Signal

4~20mA DC, 2-wire  
1~5V DC, 3-wire(Optional)  
4 Digits, 7-segment digital LED

Local Display

### Electrical Specification

Electrical Connection  
Conduit Connection  
Excitation Voltage  
Load Resistance max.@24V  
Influence Of Excitation  
Reverse Polarity  
Response Time  
Adjustment

Weather-proofed field case  
1/2"PF,Female  
10~36V DC  
750 ohm at 24V  
0.01% FSO/V  
Protected  
≤1.5 miliseconds  
3 : 1 Range turn-down

### Performance Specification

Accuracy  
Non-linearity  
Repeatability  
Pressure Hysteresis  
Long-term Stability  
Operation Temperature Range  
Compensated Temperature Range

±0.5% FSO (KP-20: ±0.25% FSO)  
±0.20% FSO typical (KP-20: ±0.10% FSO typical)  
±0.20% FSO typical (KP-20: ±0.015% FSO typical)  
±0.050% FSO typical (KP-20: ±0.01% FSO typical)  
±0.3% FSO over 6 months  
-40~125°C  
0~70°C (KP-20: 0~82°C)

### Physical Specification

Process Connection

Thread Type : PT, NPT, PF  
Thread Size : 1/4", 3/8", 1/2"  
Other connections available such as JIS, ANSI, DIN Flange

Process Media

Gases & liquids compatible with  
Stainless steel 316 & Ceramic Al2 O3, 96%

Materials

Field case : ALDC  
Wetted parts : Stainless steel 316

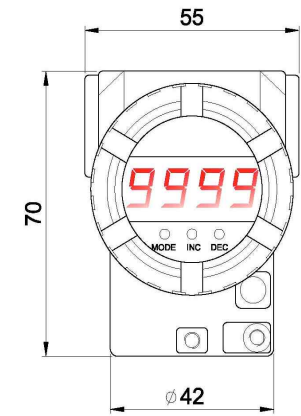
Enclosure Rate

**Diaphragm : Ceramic Al2 O3, 96% (KP-20: Stainless steel 316L)**  
IP65

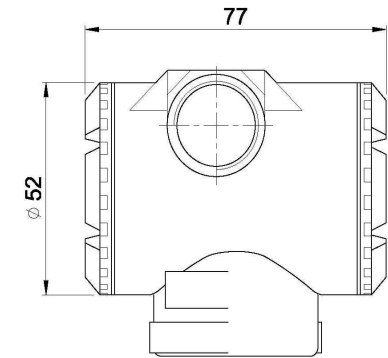
DIMENSION

Terminal Head

Front View

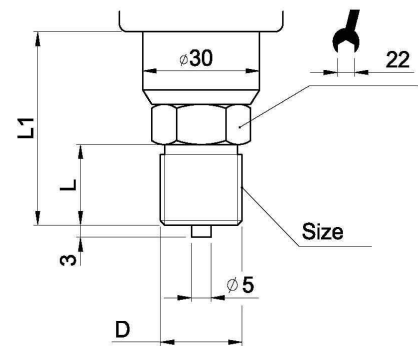


Side View



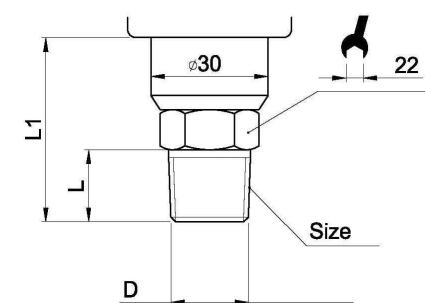
Wetted Parts

PF Connection



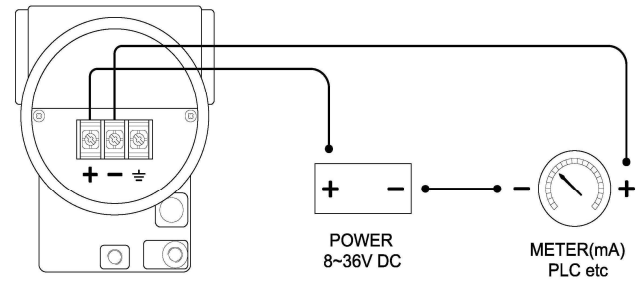
size	D	L	L1
PF1/2	20.9	20.0	48.0
PF3/8	16.6	18.0	46.0
PF1/4	13.1	16.0	44.0

PT Connection



size	D	L	L1
PT1/2	20.9	18.0	46.0
PT3/8	16.6	16.0	44.0
PT1/4	13.1	14.0	42.0

Electrical Connection



## ORDERING INFORMATION

Order Code

KP-10/20

### Model

#### Pressure reference

- R : Gauge pressure
- A : Absolute pressure
- V : Vacuum
- C : Compound pressure

**R**

#### Process connection type

- A : NPT
- B : PT
- C : PF
- X : Others available on request

**B**

#### Process connection size

- 1 : 1/4"
- 2 : 3/8"
- 3 : 1/2"
- X : others on request

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#### Measuring range

- |             |              |
|-------------|--------------|
| 113 : -1~0  | 126 : -1~1   |
| 114 : 0~1   | 127 : -1~2   |
| 115 : 0~2   | 128 : -1~5   |
| 116 : 0~5   | 129 : -1~10  |
| 117 : 0~10  | 130 : -1~15  |
| 118 : 0~15  | 131 : -1~20  |
| 119 : 0~20  | 132 : -1~25  |
| 120 : 0~25  | 133 : -1~35  |
| 121 : 0~35  | 134 : -1~50  |
| 122 : 0~50  | 135 : -1~100 |
| 123 : 0~100 | 136 : -1~250 |
| 124 : 0~250 | 137 : -1~350 |
| 125 : 0~350 |              |

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#### Unit

- A : kgf/cm<sup>2</sup> or mmHg+kgf/cm<sup>2</sup>
- B : mmHg
- C : bar
- D : psi
- E : Mpa
- F : Kpa
- X : Other calibration unit available on request

**A**

#### Output signal

- 0 : None-output(Only digital gauge)
- 1 : 4~20mA DC, 2-wire
- 2 : 1~5V DC, 3-wire(Optional)

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#### Option

- 1 : None
- x : Sealed diaphragm,

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Refer to data sheet No.0416

**Note** 1) Other ranges are available on request.  
2) Please mark "abs." for absolute pressure.

Specifications subject to change without notice.



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