

# 3-2

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## Smart Pressure Transmitter KC-7730P Series



## Smart Pressure Transmitter(KC-7730P)



**KC-7730P**

### Features

- Accuracy :  $\pm 0.2\%$  FS
- Measurement : 압력
- Display : 5-digit LCD
- Protection Class: KCs
- Explosion-proof Certification: Ex d IIC T6 pending, IP67
- Operation: Magnetic switch touch
- Communication: HART protocol

### Measurement Principle

- Pressure sensor: Piezoresistive/metal sensorTemperature compensation

### Applications

- Absolute pressure / gauge pressure / vacuum pressure
- For industrial process control
- For high static pressure and pneumatic control
- For petrochemical / steam / BWMS processes
- For environmental control systems
- LPG / LNG / Bio Gas Line

### Applicable Sizes and Materials

- Pressure Connection: PT, NPT, PF
- Process Fluid Wetted Material (Diaphragm): Stainless Steel 316L
- Sensor Body Material: Stainless Steel 304
- Housing Material: Aluminum ALDC 21.1
- Weight: Approx. 1.5 kg

### Product Benefits

Golden Rule Smart Pressure Transmitters are ideal for any application requiring accurate pressure measurement and control. They can be used in a wide range of pressure management industries. This product has passed environmental, noise, and software verification tests, including KC certification.

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### Standard specifications

#### Temperature compensation and sensor accuracy:

Digital temperature compensation : Laser trimming technics Wide temperature compensation : -10 to 70 °C/ 0 to 70 °C (7 / 20 / 35 kPa)

Long term stability : 0.1 % FS per year

#### Basic conditions:

Reference temperature :  $25 \pm 1$  °C

Vibration : Max. 0.1g (1m/s<sup>2</sup>)

Humidity :  $80 \pm 10$  %RH

Local air pressure :  $100 \pm 5$  kPa

#### Performance specifications:

Thermal sensitivity :  $\pm 0.2$  % FS in reference temperature to typical

Thermal zero shift :  $\pm 0.2$  % FS in reference temperature to typical

Thermal hysteresis :  $\pm 0.1$  % FS in reference temperature to typical

#### Engineering Units:

Pressure : kPa / MPa / mbar / bar / mmH<sub>2</sub>O / mmHg / torr / psi / kg/cm<sup>2</sup> / atm / inHg

#### Environmental conditions:

Ambient / Process temperature : - 30 to 70 °C

Storage temperature range : - 30 to 70 °C

#### Input power:

Voltage supply : DC 24V (Min. 12V to Max. 30V)

Load resistance : Max. 500  $\Omega$  at 24V / Power ripple :  $\leq 500$  mV P-P

Reverse polarity : Protected / Wire size : AWG 20

#### Output signal:

2-wire loop power / Analog 4 to 20 mA DC

#### Physical performance:

Process connection : PT  $\frac{1}{4}$  /  $\frac{3}{8}$  /  $\frac{1}{2}$  male thread

Electrical connection : Cable gland port PF  $\frac{1}{2}$  female

Shock : No change at 10 g RMS / 20 to 2000 Hz

Impact : 100g / 11ms

The information contained herein is subject to change without notice

## Smart Pressure Transmitter(KC-7730P)

### Technical specifications

Temperature compensation and sensor accuracy:

Digital temperature compensation

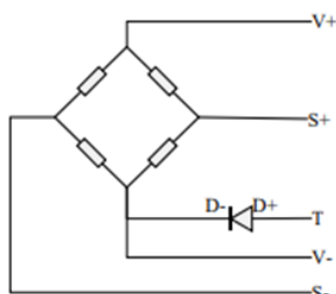
Temperature constant  $\pm 0.02\%/10K$

(%) of  $\pm$  span :  $< 0.05\%$

Long term stability : 0.05% FS per year



Temperature Compensation:



Unit settings:

Pressure: kPa, hPa, MPa, bar, mbar, atm, mmHg, cmHg, inHg, mmH2O, inH2O, ftH2O, kg/cm<sup>2</sup>, N/cm<sup>2</sup>, lb/ft<sup>2</sup>, psi, torr, Pa

Flow rate: m<sup>3</sup>/h, cm<sup>3</sup>/h, cm<sup>3</sup>/min, ft<sup>3</sup>/h, ft<sup>3</sup>/min, ft<sup>3</sup>/s, USgal/h, USgal/min, USgal/s, UKgal/h, UKgal/min, UKgal/s

l/h, l/min, l/s, m<sup>3</sup>/min, m<sup>3</sup>/s, bbl/h, kg/h, kg/s

Level: mm/cm/m/ft/Ja

Decimal point settings:

Auto / 00000. / 0000.0 / 000.00 / 00.000 / 0.0000

Temperature conditions for use:

Transmitter installation ambient conditions: -40 to 85 °C

Process temperature conditions: Max. 300 °C

Transmitter location effects:

Pressure difference between horizontal and vertical installation: approximately 400 Pa

After vertical installation, be sure to set the zero point.

Protection circuit:

Test standards: MIL-STD-461E/IEEE C62.45/IEEE C37.90

EMI / EMC / ESD test

Electromagnetic radiation/electromagnetic conduction/magnetic field/power line conduction testing

Power supply:

Voltage: DC 24V (Minimum 6V ~ Maximum 42V)

Signal output:

2-wire loop power line

Analog 4 to 20 mA DC

Digital HART protocol

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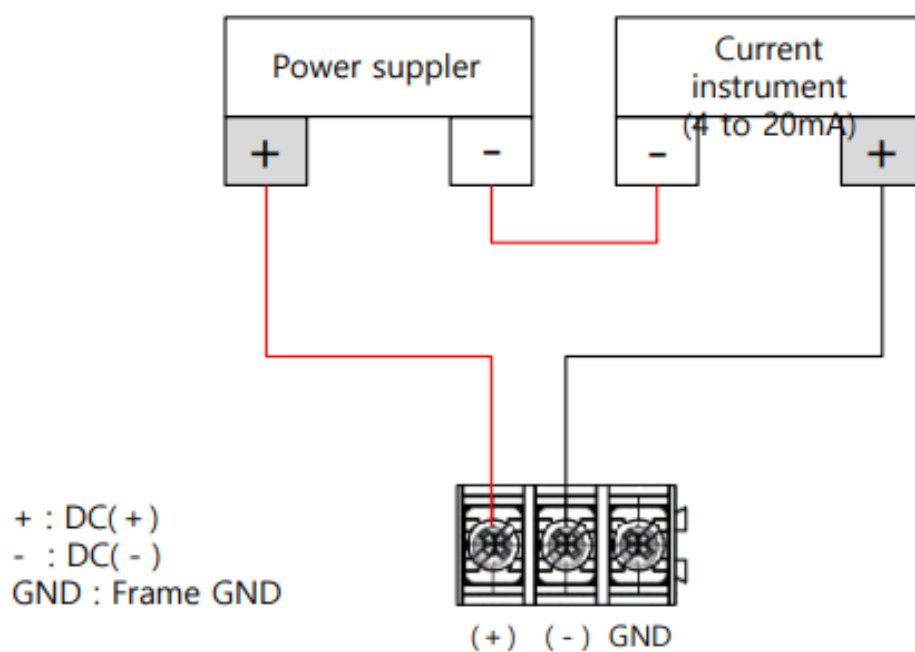
## Smart Pressure Transmitter(KC-7730P)

### Measuring range and allowable pressure

Overpressure: 1 minute 50 seconds F.S

Nominal range(kPa)	Measurement	Nominal range(kPa)	Measurement	Remark
7	G	1 000	G / A	1kPa=10mbar 1MPa=10bar
20	G	2 000	G / A	
35	G / A	3 500	G / A	
70	G / A	7 000	A	
100	G / A	10 000	A	
200	G / A	35 000	A	
350	G / A	70 000	A	
700	G / A	100 000	A	

### wiring method

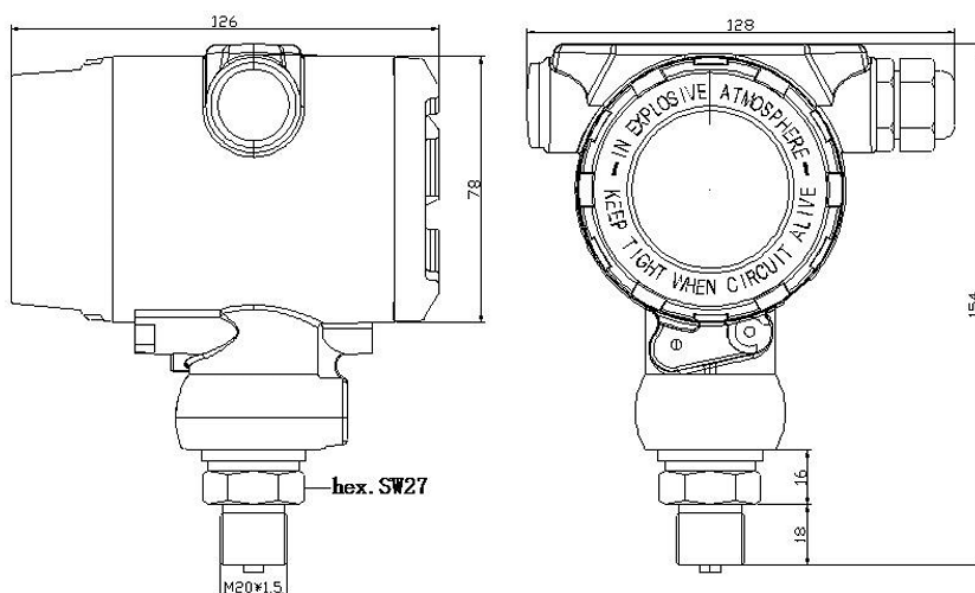


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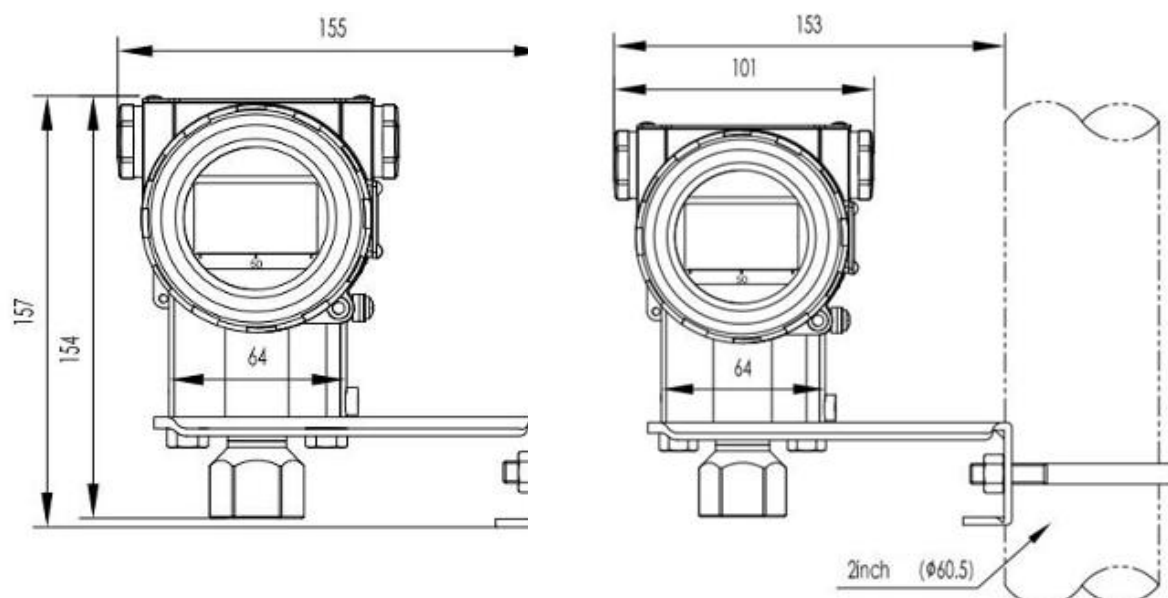
## Smart Pressure Transmitter(KC-7730P)

### External dimension drawing

#### NPT (M) type



#### NPT (F) type



## Smart Pressure Transmitter(KC-7730P)

### Oder code

KC-7730P –  –  –  –  –  –  –  –  –  –

1            2            3            4            5            6            7            8            9            10

Pressure type	Code1
Absolute	A
Gauge	G
Explosion Proof (Ex d IIC T6)	Ex
Agency	W

wire connector	Code2
G(PF)1/2" Female	G
Agency	W

Process access	Code3
NPT1/4"Female,Bleed valve포함	R
Others (Adapter) 1/2"	O
None	0
Agency	W

Span range	Code4
7 kPa (70 mbar)	1
70 kPa (700 mbar)	2
100 kPa (1.0 bar)	3
1000 kPa (10 bar)	4
2000 kPa (20 bar)	5
5000 kPa (50 bar)	6
10000 kPa (100 bar)	7
Agency	8

Input power	Code5
DC 24 V $\pm$ 10 %, 100 mA	2
Agency	W

Output signal	Code6
DC(4~20)mA,Hart 2-wire	4
MODBUS RS-485	5
Agency	W

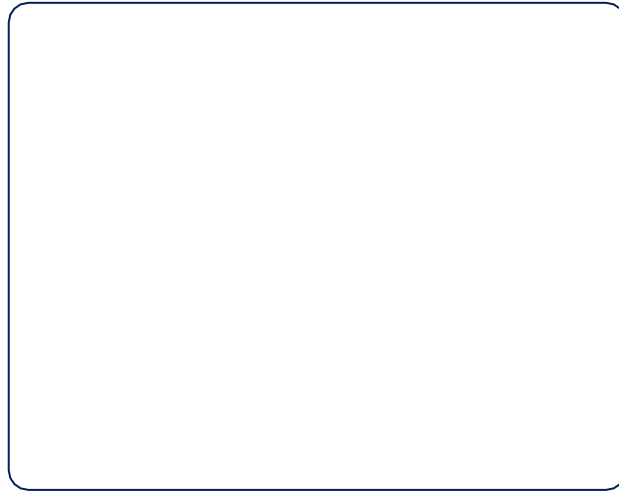
Display	Code7
Digital Display (LCD)	DD
Agency	W

Applicable accessories	Code8
Not Apply	J0
Vent Plug	J1
Non-Indicating	J2
Diaphragm Seal	DS
Sanitary Seal	SS
Agency	W

Requirements	Code9
Test Report (by Manufacturer)	T1
Calibration (by KOLAS)	T2
Material Certificate (Mill Sheet)	M1
Vent Plue	VP
Oxygen Cleaning (Oil Free)	OX
Agency	W

Option	Code10
Diaphragm mat'l : Hastelloy C	H
Agency	W

**Air & Gas & Steam & Liquid  
Mass Flowmeter  
Specialized Manufacturer**



*Certified in accordance with*  
**KC Q ISO 9001 : 2015**  
**KC Q ISO 14001 : 2015**

**GOLDEN RULES Co.,Ltd**