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Smart Pressure Transmitter KC-7730D



Smart Pressure Transmitter(KC-7730D)

Features

- Accuracy: $\pm 0.2\%$ FS
- Measurement: Differential pressure for pressure, level, mass, and volume flow
- Display: LCD
- Protection Class: KCs
- Explosion-proof Certification: Ex d IIC T6 pending, IP67
- Operation: Magnetic switch touch
- Communication: HART protocol



Pressure & D/P type
KC-7730D

Measurement Principle

- Pressure Sensor: Single-crystal silicon / metal sensor
Temperature Compensation

Applications

- Pressure / Flow Measurement / Level
- Industrial Process Control
- High Static Pressure and Pneumatic Control
- Petrochemical / Steam / BWMS Processes
- Environmental Control Systems

Applicable Sizes and Materials

- Pressure Connection: NPT1/4 including drain valve
- Process Fluid Wetted Material (Diaphragm): Stainless Steel 316L
- Sensor Body Material: Stainless Steel 304
- Housing Material: Aluminum ALDC 21.1
- Weight: Approx. 3.9 kg

Product Benefits

Golden Rule pressure transmitters are ideal for any application requiring accurate measurement and control of pressure, flow, and level. Transmitters can be used in a wide range of pressure management industries.

This product has passed R-Class environmental testing, waterproof testing, and software validation testing.

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Standard specifications

item	my	dragon
supply power	DC 24V	
current consumption	Up to 3.2 mA	
apply	differential pressure gauge, flow meter, water level gauge	
accuracy	$\pm 0.2\%$ (repeatability + hysteresis 2)0.5	
temperature	$-40 \sim +80^{\circ}\text{C}$ (explosion-proof specification $-20 \sim +60^{\circ}\text{C}$)	
case	Explosion-proof structure	Explosion-proof (Ex d IIC T6) pending
	texture	Aluminum ALDC 12.1
Waterproof and dustproof rating	IP 67	
process contact	1/4" NPT Female, Bleed valve included	
transmitter weight	Approximately 3.9 kg	
indicator	Customized LCD	
response time	0.1 second or less	
How to operate	Magnetic contactless method	
change units	pressure, flow, height	
communication output	HART Ver.6	
analog output	4-20 mA 2-wire current output, span value change, damping time adjustment	
Sensor reference conditions	reference temperature	$+21 \sim +33^{\circ}\text{C}$
	humidity	5 ~ 80 % RH
	reference pressure	860 ~ 1060 mbar
	measuring shell position	Horizontal $\pm 1^{\circ}$
	Contact surface material	ANSI 316L/1.4435
	filling oil	single crystal silicone oil
	one side excess pressure	Up to 160/400 bar
error display	Sensor range over (Low < 3.6 mA, High > 22.0 mA)	
environmental testing	IEEE 323-2, J230C Q-class testing completed	
seismic test	IEEE 344, OBE, and SSE testing completed	
EMC testing	USNRC RG1.180 test completed	
Software verification	IEEE 1012, Software V&V Completed	

The information contained herein is subject to change without notice.

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Technical specifications

Temperature compensation and sensor accuracy:

Digital temperature compensation

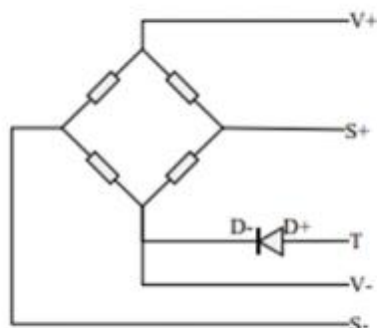
Temperature constant $\pm 0.02\%/10K$

(%) 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/cm², N/cm², lb/ft², psi, torr, Pa

Flow rate: m³/h, cm³/h, cm³/min, ft³/h, ft³/min, ft³/s, USgal/h, USgal/min, USgal/s, UKgal/h, UKgal/min, UKgal/s

l/h, l/min, l/s, m³/min, m³/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-7730D)

wiring diagram

Wiring method:

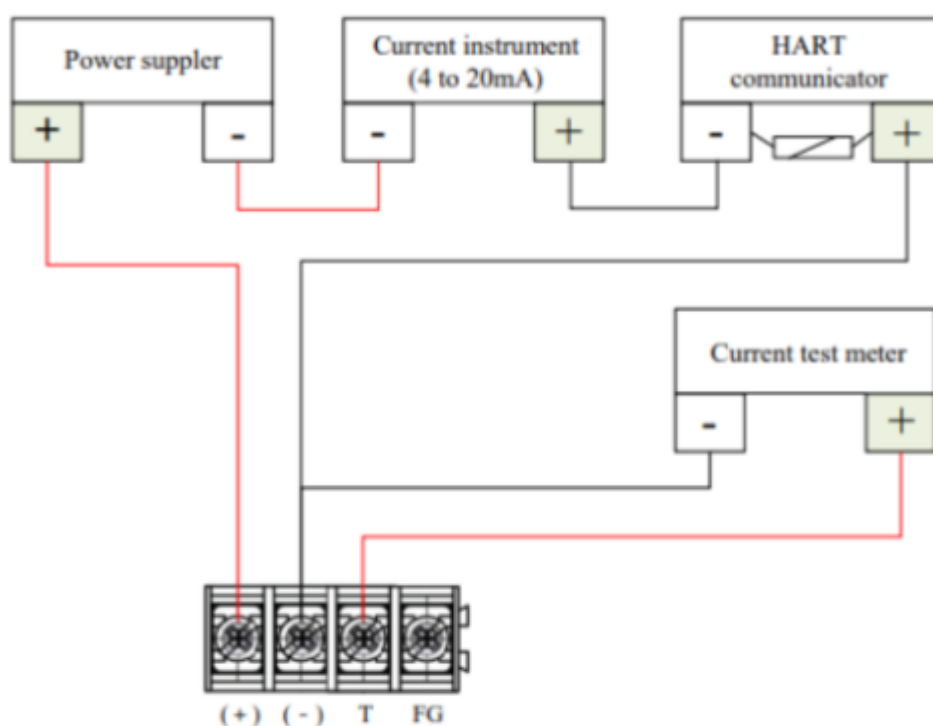
4 ~ 20 mA Current Loop : Panel meter / Recorder / Computer / etc.

+ : DC(+)

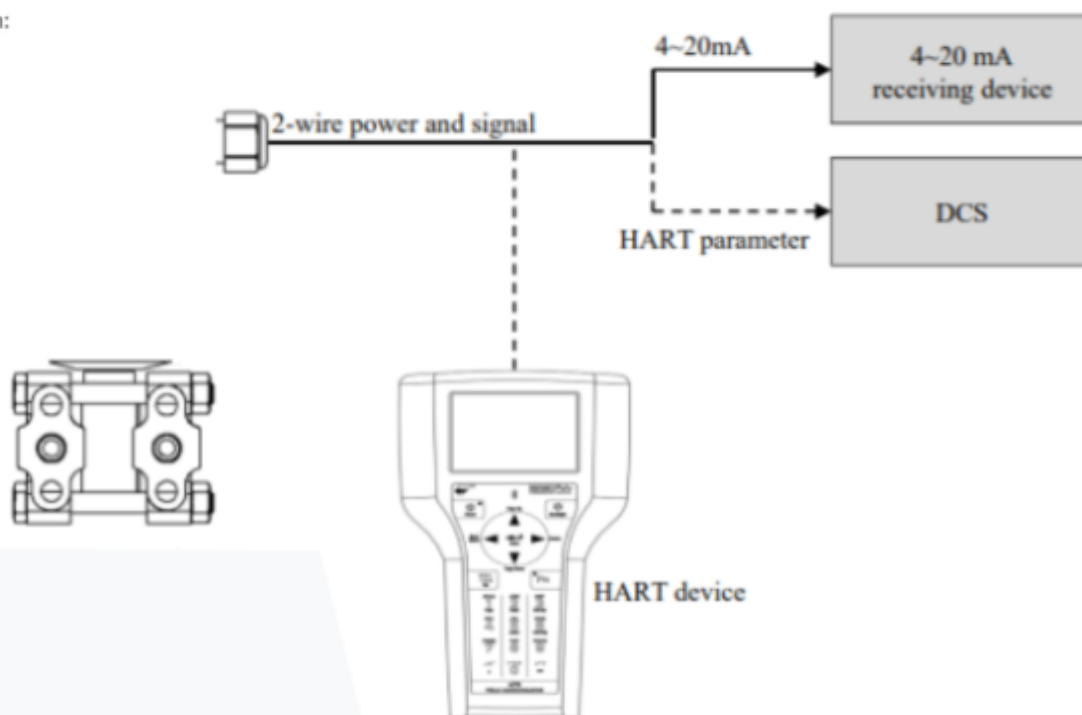
- : DC(-)

T : 4~20 mA test terminal

FG : Frame GND



Wiring diagram:



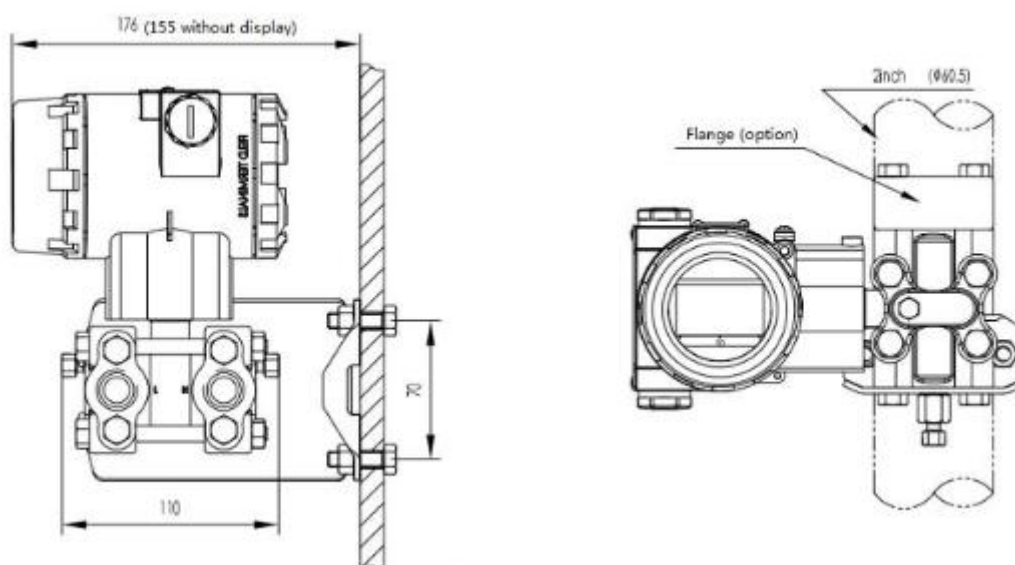
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Smart Pressure Transmitter(KC-7730D)

Standard range and allowable pressure

Nominal range(kPa)	System process PN(MPa)	Overload		Remark
		One-side	Two-side	
1	16	PN	PN	1kPa=10mbar 1MPa=10bar
6	16 / 40	PN	PN	
40	16 / 40	PN	PN	
250	16 / 40	PN	PN	
1 000	16 / 40	PN	PN	
10 000	16 / 40	PN	PN	
40 000	16 / 40	PN	PN	

External dimension drawing



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Order Code

KC-7730 — — — — — P — V — — — —

Type
Cable Conn'
Process Conn'
Span
Power
Output
Display
Accessory Requirement
Option

1
2
3
4
5
6
7
8
9
10

Pressure type	Code1
Absolute	A
Gauge	G
Diferential Pressure (Flowl or Level)	D
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
1 kPa (10 mbar)	101
6 kPa (60 mbar)	601
40 kPa (400 mbar)	402
250 kPa (2.5 bar)	253
1000 kPa (10 bar)	104
10000 kPa (100 bar)	105
40000 kPa (400 bar)	406
Agency	W

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	J1
Agency	W

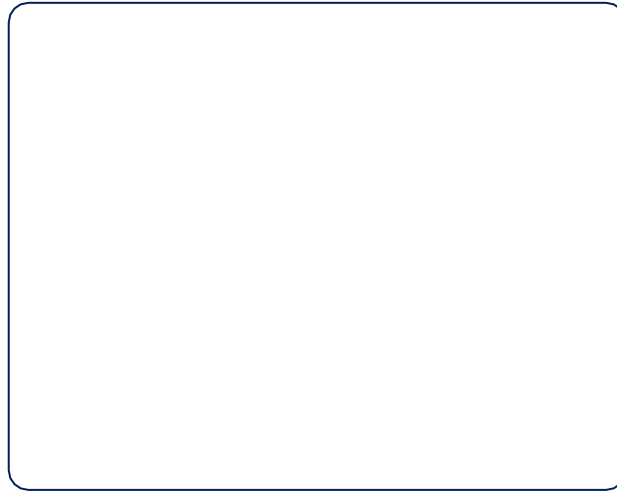
Display	Code7
Digital Display (LCD)	DD
Agency	W

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