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Golden Rules Co.,Ltd

Double membrane waterproof
smart type

KC-8300 Series Double membrane waterproof Smart Pressure Transmitter



13. SMART PRESSURE TRANSMITTER

13-5. Double Membrane Type KC-8300 Series

Feature



Double Membrane
KC-8300 Series

- High reference accuracy: $\pm 0.2\%$ of F.S
- Long-term stability: $\pm 0.2\%$ URL per 24 months
- Repeatability: $\pm 0.1\%$ span high scalability (100 : 1)
- Display: None
- Measurement: gage/absolute pressure
- Communication: HART, RS-485
- Certification: IP65
- Power: (16 ~ 26)V DC, 30mA, 0.8W
- Output signal: 4 ~ 20 mA, 2-wire, 1-5V, 0-5V, 0-10V (3-Wire) Material: Housing - Aluminum, ALDV 12.1
- Wet Process – AISI 316L
- Pressure range: -100kpa... ~ 0 ~0.6kpa... 7Mpa
- Gauge Filling Fluid: Silicone Oil
- Size/Weight: W100 x H190 x D111 / Approx. 2.5kg
- PCB current consumption: less than 3mA
- Cell position measurement: $\pm 1^\circ$ one side horizontally
- Overload: 16~40 Mpa
- operating temperature range
- Ambient temperature: -40 ~ 85°C
- LCD Meter Ambient Temperature : -40 ~ 80°C
- Operating temperature range: -10 ~ 80°C
 - Thermal effect on zero: $\pm 0.05\%FS/^\circ C$
 - Thermal effect on span : $\pm 0.05\%FS/^\circ C$
 - Compensation temperature range: -10~70°C
- Humidity limit: 5-100% RH

Application

KC-8300 Series pressure transmitter is designed and manufactured to measure hydraulic pressure, pneumatic pressure, gas, water, oil, etc. Robust silicon sensor design and stable Zero & Span signal can be applied to various industrial facilities.

Products Description

KC-8300 Smart Pressure Transmitter is a microprocessor-based high-performance transmitter with flexible pressure calibration and output, automatic compensation of ambient temperature and process variables, various parameter configuration, and communication with HART protocol. Depending on the application method, the range of application is very wide, such as measuring the flow and pressure and level of liquids, gases or vapors. All data from the sensor is entered, modified and stored in EEPROM.

Products Function

- ▶ Flexible sensor input: GP, AP
- ▶ Various outputs: 4 ~ 20mA, RS-485, HRAT
- ▶ Various parameter settings: zero/span, trim, unit,
- ▶ Self-diagnosis function: sensor, memory A/D converter, power, etc.
- ▶ Digital communication using HART protocol
- ▶ **Double diaphragm applied**
- ▶ Stable Zero and Span signal
- ▶ Robust silicon sensor design
- ▶ Excellent corrosion resistance and friction resistance
- ▶ Shock and vibration protection
- ▶ High accuracy and temperature drift compensation

Products Performance

» Zero and span adjustment limits

- Zero and Span value span must be greater than or equal to the minimum value. Ranges specified in Table 1.

» Output (analog current)

- User configurable for 2-wire 4-20mA 3-wire 0-5V, 1-5V, 0-10V

» Power supply and load requirements

- Requires external power supply. * 250 ohm load to 17.5Vdc 550 ohm load max - 24Vdc max loop resistance = $(E - 12) / 0.022$ (E = power supply voltage)
- Voltage range: 16 to 26 Vdc • Rated voltage: 24 Vdc ±30%

» **Storage temperature**

- -40°C to 85°C (non-condensing)

» **Process temperature limits (range codes and approval codes may affect limits)**

- -40°C ~ 120°C (-104 ~ 248°F)

» **Flexible sensor input**

- GP, AP, vacuum » Various parameter settings
- Zero/Span, Trim, Unit, Fail-mode, etc.

» **Table 1 Range and sensor limits**

AP 측정범위(bar)	시스템압력(bar)	과부하(bar)	충전액
0~30	160	160	Silicone oil
0~100	200	200	Silicone oil
0~200	400	400	Silicone oil

Physical Specifications

» **Wetted materials**

- Insulation Diaphragm 316L SST, Monel, Tantalum, HAST-C
- Drain/vent valve 316 SST, HAST-C
- Flanges and adapters 316 SST (ASTMCF8M), HAST-C
- O-ring Viton, PTFE

» **Non-contact materials**

- Fill fluid silicone oil or inert fill
- Bolt 304 SST
- Electronic housing aluminum or 316L SST (optional) flame retardant and Waterproof(IP67)
- Cover O-ring Buna-N
- Epoxy-polyester or polyurethane paint
- Mounting bracket with U-bolts 304SST (304SST) 2 inches for pipe
- Nameplate 304 SST

» **Electrical Connections**

- ½ PF conduit with M4 screw terminals

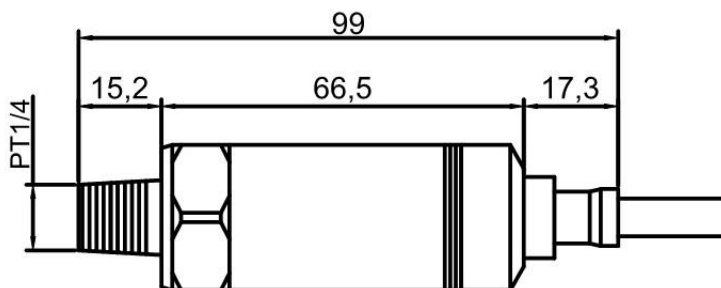
» **Process Connections**

- PT ¼", 3/8", ½" or PF

- Weight 0.5kg

(Standard – excluding options)

Dimensional Drawing KC-8300 Series



Order Code KC-8300 Series (Double Membrane Pressure

KC-8300 – – – – – – – – – – –

Type C-conn' P-conn' Span Power Output Display Accessory Require Option
 1 2 3 4 5 6 7 8 9 10

Pressure type	Code 1
Absolute	A
Gauge	G
Vacuum	V

Input power	Code 5
DC 24 V ±10%, 30 mA	2

Requirements	Code 9
Test Report (by Manufacturer)	T1
Calibration (by KOLAS)	T2
Material Certificate (Mill Sheet)	M1
Oxygen Cleaning (Oil Free)	OX
Agency	W

Conduit conn'	Code 2
G(PF)1/2" Female	G
Agency	W

Output signal	Code 6
DC 4~20mA 2-wire, Hart	4
RS-485	RS

Process conn'	Code 3
PT 1/4"	0
PT 3/8"	R
PT 1/2"	O
Agency	W

Display	Code 7
Digital Display (LCD)	DD

Option	Code 10
Agency approved, customer specified	W

Span range	Code 4
-1 Bar ~ 1 Bar	1
5 Bar	2
10 Bar	3
20 Bar	4
20 Bar	5
30 Bar	6
50 Bar	7
Agency	W

Accessory	Code 8
Not Apply	J0
Diaphragm Seal	DS
Sanitary Seal	SS
Agency	W



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Flow & Level & Pressure & Temperature
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Distributor

Certified in accordance with

KC Q ISO 9001 : 2015

KC Q ISO 14001 : 2015

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