



Model KH33 Differential Pressure Gauge with Differential Pressure Transmitter

OUTLINE

This is an indicator attached differential pressure transmitter which senses differential pressure, liquid level, liquid flow, etc., converts them into an electric signal and transmits them. A bellows is applied to the pressure sensing element, its displacement is taken out as an inductance variation and is converted into an electric signal in proportion with measuring quantity and at the same time it is indicated by converting the calibration into various units.

FEATURES

- A pressure transmitting mechanism is built in a conventional differential pressure gauge.
- Therefore, a conventional differential pressure gauge can be exchange with a new one because exterior appearance and attaching measurements remain identical.
- As the sensing sensor is of non-contact type, no wear and hysteresis occur.
- A circuit is of hybrid IC type, demonstrating high reliability and high quality.
- Piping work becomes easier because two directional connections, upper and lower side, are provided.
- Excellent corrosion resistance is demonstrated because the material of the liquid contacting portion is made of stainless steel.

SPECIFICATION 1

Fluid:

Gas or liquid

Operating condition:

Under the normal condition, where there is no inflammable gas or liquid which cause the ignition or explosion.

Mounting:

2B pipe mounting



Panel mounting



Type:

Cable type, connector type

Size (Indication part):

150 DIA.

Connection:

Rc 1/4 (PT), 1/4 NPT female

* For other connections, please contact us.

Wetted parts material:

Body SCS14, 316st.st.

Bellows 316Lst.st.

O-ring NBR

Differential pressure range:

0 ~ 5kPa → 0 ~ 2MPa(0 ~ 500mmH₂O → 0 ~ 20kgf/cm²)

Operating pressure range:

0 ~ 5MPa (0 ~ 50kgf/cm²)

One side proof pressure:

0.2 ~ 2.4MPa (2 ~ 24kgf/cm²)

(Depending on differential pressure range)

Operating temperature:

0 ~ 45°C

Storage temperature:

0 ~ 60°C

Power source:

24V DC±10%

Output:

4 ~ 20mA DC

Load resistance:

400Ω max.

Transmission system:

2 wire system

Output accuracy:

±2.0%F.S.

Indication accuracy:

±1.5%F.S.

Temperature coefficient:

±0.1%F.S./°C

Case material • finishing:

Aluminium alloy die casting (ADC12) • Black

Construction:

Drip-proof (IP43)

Valve-Manifold: (Option)

Three-way valve manifold which combined the stop valve for high and low pressure and stop valve. This valve manifold is suitable for checking zero point or zero adjustment during operation and also available to prevent excess differential pressure or reversal differential pressure.
Type No.: FV43-993

Dial scale: (Option)

Dual scale, conversion scale, printed words

Weight:

2B pipe mounting Approx. 4.6 kgs

Panel mounting Approx. 3.8 kgs

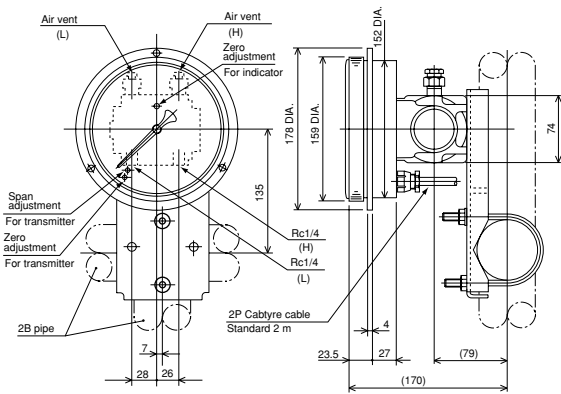
SPECIFICATION 2

Differential pressure range and one side proof pressure:

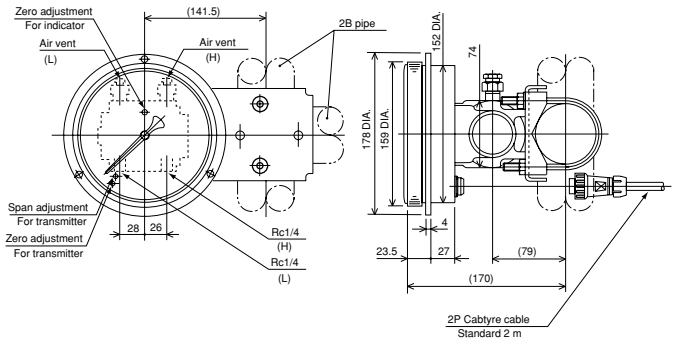
Differential pressure range	One side proof pressure	Differential pressure range	One side proof pressure
0 ~ 5kPa (0 ~ 500mmH ₂ O) 0 ~ 7kPa (0 ~ 700mmH ₂ O) 0 ~ 10kPa (0 ~ 1000mmH ₂ O) 0 ~ 15 kPa (0 ~ 1500mmH ₂ O) 0 ~ 20 kPa (0 ~ 2000mmH ₂ O)	0.2MPa (2kgf/cm ²)	0 ~ 0.15MPa (0 ~ 1.5kgf/cm ²) 0 ~ 0.2MPa (0 ~ 2kgf/cm ²) 0 ~ 0.3MPa (0 ~ 3kgf/cm ²) 0 ~ 0.4MPa (0 ~ 4kgf/cm ²) 0 ~ 0.5MPa (0 ~ 5kgf/cm ²)	1.2MPa (12kgf/cm ²)
0 ~ 30kPa (0 ~ 3000mmH ₂ O) 0 ~ 40kPa (0 ~ 4000mmH ₂ O) 0 ~ 0.05MPa (0 ~ 5000mmH ₂ O) 0 ~ 0.07 MPa (0 ~ 7000mmH ₂ O) 0 ~ 0.1 MPa (0 ~ 1kgf/cm ²)	0.4MPa (4kgf/cm ²)	0 ~ 0.7MPa (0 ~ 7kgf/cm ²) 0 ~ 1MPa (0 ~ 10kgf/cm ²) 0 ~ 1.5MPa (0 ~ 15kgf/cm ²) 0 ~ 2 MPa (0 ~ 20kgf/cm ²)	2.4MPa (24kgf/cm ²)

DIMENSIONS 1

2B pipe mounting

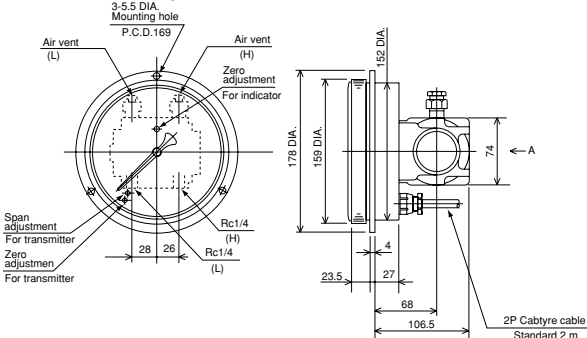


KH33-171



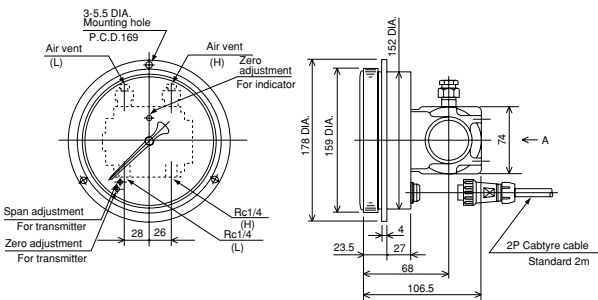
KH33-172

Panel mounting



KH33-271

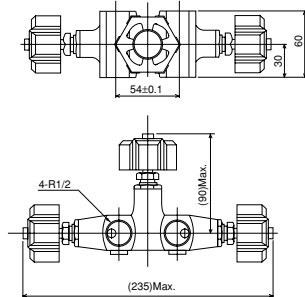
A View



KH33-272

A View

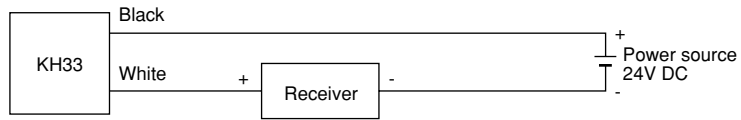
Valve manifold: (Option)



Type No.: FV43-993

* As for connection of differential pressure gauge and valve-manifold, FJ92-001 (2 pieces) is necessary.

WIRING



Type No. constitution

Please specify Type No., each specification and range when ordering.

Note: For this Model, there is no applicable item for the figures X, but please specify X when ordering.

Differential pressure transmitter

K H 3 3 — 1 2 3 — Selection spec. 4 5 6 7 8 9 10 11 12 13 14 15 Additional spec. (Option)

Type No.

1 Mounting

1	2B pipe mounting
2	Panel mounting
6	2B pipe (reverse mounting)
7	Panel (reverse mounting)

2 Connection

7	Rc1/4
X	1/4 NPT female

3 Type

1	Cable type (with 2m shielded cable)
2	Connector type

4 Differential pressure range (When ordering, please specify pressure range & unit.)

1	0 ~ 5, 7, 10, 15, 20kPa
2	0 ~ 30, 40kPa 0 ~ 0.05, 0.07, 0.1MPa
3	0 ~ 0.15, 0.2, 0.3, 0.4, 0.5MPa
4	0 ~ 0.7, 1MPa
5	0 ~ 1.5, 2MPa

5 Output accuracy

8	±2%F.S.
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6 Power source

1	24V DC ±10%
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7 Output

1	4 ~ 20mA DC (2 wire system)
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9 Other additional spec.

0	Nil
1	Please specify your requirement Wetted parts O-ring: Fluorine rubber Case finishing Valve Manifold FV43-DD3 Valve Manifold FV43-993 FJ92 adapter between transmitter and FV43 Dial scale except standard Cable more than 2m long

8 Treatment

0	Nil
1	Use no oil
2	Use no water
3	Use no oil & water

15 Document

0	Nil
1	Please specify your requirement Drawing one sheet, Instruction manual, Inspection procedure, Mill sheet, Test report