

KL75

Low Pressure Transmitter for Gases

Overview

Model KL75 is a small ceramic capacitance type pressure transmitter superior in reproducibility and repeatability suitable for measuring gas pressure.

Features

- This is a pressure transmitter featuring high precision and high repeatability, equipped with a highly reliable capacitance type ceramic pressure sensor
- Small temperature coefficient for use in wide range of temperature range environment
- It has 5 times proof pressure (Maximum 1MPa)
- Jet-proof type corresponding to IP65
- EMC compliance (Conforms to the CE marking)



Specifications 1

Media:

Dry gases
(Gases which do not corrode 96% alumina, SUS316 and fluorosilicone)

Operating environment:

Install in location where no gases or liquids may exist that have the potential to become flammable or ignitable under normal operating condition

Type:

Cable type (With 2m Shielded cable)

Connection:

R1/4

Wetted parts:

Pressure sensing element: Alumina 96%
Conversion joint: SUS316
Gasket: Fluorosilicone

Pressure range:

0 to 10kPa → 0 to 0.5MPa
Compound pressure range
-0.1 to 0.2MPa, -0.1 to 0.3MPa

Maximum allowable pressure:

500% of pressure range
(Maximum 1MPa. Allowable pressure depends on pressure range.)

Operating temperature:

-30 to 80°C (Gases should be non-freezing)

Storage temperature:

-40 to 90°C (Gases should be non-freezing)

Compensation range:

0 to 80°C, 25 to 80%RH
(Gases should be non-freezing or non-condensing)

Power source:

5V DC±0.25V DC

Output:

0.1Vs to 0.9Vs Ratio metric
0.5 to 4.5V DC Output at Vs = 5V DC

Load resistance:

100kΩ or higher

Output impedance:

100Ω or lower

Electric current consumption:

3.8mA or lower

Transmission system:

3 wire system

Accuracy:

±0.5%F.S. (At 23±3°C, incl. linearity and hysteresis)

Temperature coefficient:

±0.02%F.S./°C (Zero)
±0.02%F.S./°C (Span)

Response time:

5ms or less

Case material:

SUS316

Enclosure:

IP65: IEC standard (Except the vent tube tip in the cable)

Weight:

Approx. 80g (Except cable)

Cable:

φ6 0.3mm² Shield cable (With vent tube)

Other:

EMC (Conforms to CE marking)

Specifications2

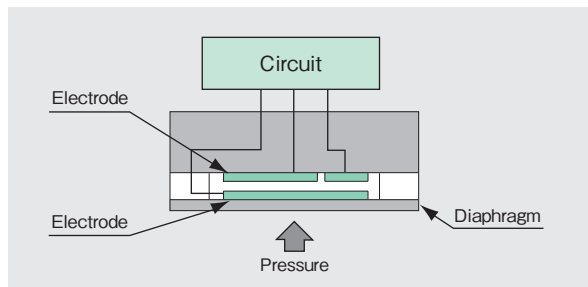
Allowable pressure range:

Pressure range	Allowable pressure range *1
0 to 10kPa	-10 to 50kPa
0 to 20kPa	-20 to 100kPa
0 to 50kPa	-50 to 250kPa
0 to 0.1MPa	-0.1 to 0.5MPa
0 to 0.2MPa, -0.1 to 0.2MPa	-0.1 to 1MPa
0 to 0.3MPa, -0.1 to 0.3MPa	
0 to 0.5MPa	

*1 Instant overpressure applied to product, caused by operation errors etc, to remain in specification safely once pressure is returned to the operating pressure range.

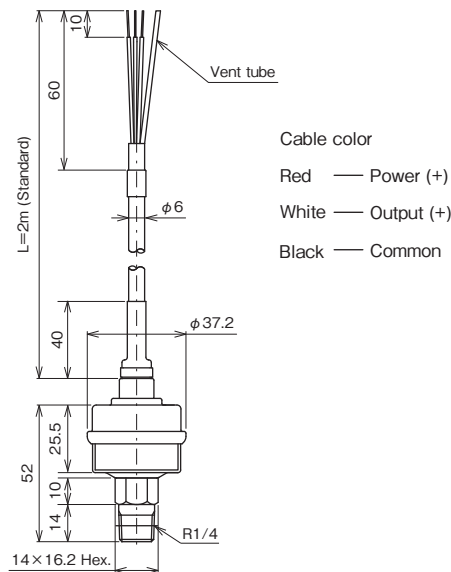
Sensor structure, Operation principle

The pressure sensing element detects changes in capacitance between fixed electrode and moving electrode on a ceramic diaphragm to displace due to changes in pressure as voltage signals with the dedicated ASIC.



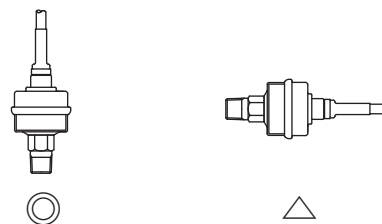
Dimensions

Unit: mm



Position of mounting

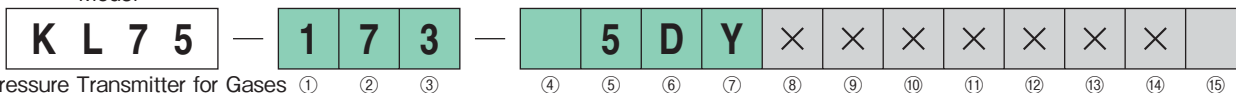
Vertical position is recommended for mounting against KL75 to prevent possible deposit of foreign matter toward pressure receiving part which could be the cause of inaccurate measurement.



Model number configuration

Please specify the model number, each specs and the range for ordering.

Model



Model number		Product specifications		Additional specifications (Optional)	
① Type	1	Cable type (With 2 m Shielded cable)			
② Connection	7	R1/4			
③ Wetted parts	3	Pressure sensing element: Alumina 96% Gasket: Fluorosilicone Case: SUS316			
④ Pressure range	1	0 to 10, 20, 50kPa			
	2	0 to 0.1, 0.2, 0.3, 0.5MPa			
	3	-0.1 to 0.2, 0.3MPa			
⑤ Accuracy	5	±0.5%F.S.			
⑥ Power source	D	5V DC			
⑦ Output	Y	0.5 to 4.5V DC 3 wire system			
⑮ Documents	0	Not required			
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Mill test report Calibration test report (One-part one sheet) Inspection / Traceability certificate Calibration test report for pressure standard Strength calculation sheet Attending inspection			

Treatment against wetted parts

- **Use no oil**
Oil used in manufacturing the gauges had been flushed out & no oil residue remained inside its wetted parts.
- **Use no water**
Water used in manufacturing the gauges had been flushed out & no water residue remained inside its wetted parts.
- **Use no oil & water**
Oil/Water used in manufacturing the gauges had been flushed out & no oil/water residue remained inside its wetted parts.

* Specify code "X" to refer N/A