



## Model KH25 Pressure Transmitter

## Model KH27 Pressure Transducer

### OUTLINE

These are micro and low-pressure converters for checking micropressures in liquid and gas and for converting them into electrical signals to transmit them. Semiconductor strain gauges are equipped with pressure sensing portions, making these converters durable and stable.

### FEATURE

- These converters are durable and stable because vacuum-evaporation-type semiconductor deformation gauges are installed to pressure sensing portions.
- These converters are provided with corrosion resistance because metallic diaphragms are applied.
- These converters are low-priced.

### SPECIFICATION

#### Fluid:

Gas or Liquid

#### Operating condition:

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

#### Type:

Connector type (With 2m shielded cable)

Terminal box type (KH25 only)

\* The diaphragm seal type is available, contact NKS for details. (Only in case of KH25)

#### Connection:

G1/4B (PF), G3/8B (PF), G1/2B (PF), R1/4 (PT), R3/8 (PT), R1/2 (PT), 1/4NPT, 1/2NPT

#### Wetted parts material:

Diaphragm 316st.st.

Socket 316st.st.

#### Pressure range:

0 ~ 5kPa → 0 ~ 0.3MPa (0 ~ 500mmH<sub>2</sub>O → 0 ~ 3kgf/cm<sup>2</sup>)

-5 ~ +5kPa → -0.1 ~ 0.3MPa

(-500 ~ +500mmH<sub>2</sub>O → -1 ~ 3kgf/cm<sup>2</sup>)

\* The absolute pressure type is available, contact NKS for details. (Only in case of KH25)

#### Max. allowable pressure:

150% of rated pressure

#### Operating temperature:

-10 ~ 60°C

#### Accuracy:

±0.5%F.S.

#### Temperature coefficient:

±0.05%F.S./°C (Zero)

±0.05%F.S./°C (Span)

#### Electrical characteristics:

##### KH25

Power source 24V DC±10%

Output 4 ~ 20mA DC (2wire system)

1 ~ 5V DC (3wire system)

Load resistance 500Ω max. (Current output)  
0kΩ min. (Voltage output)

Transmission system 2 or 3 wire system

##### KH27

Output signal 20mV±5mV  
(At 5VDC power supply)

Power requirements 3 ~ 5V DC

Input and output impedance 3.5kΩ (typ.)

Zero point offset ±1mV max.

#### Outlet for electric wire:

Gland JIS 15b (In case of terminal box type)

#### Case material • finishing:

Aluminium alloy casting (AC7A) • Gray

#### Construction:

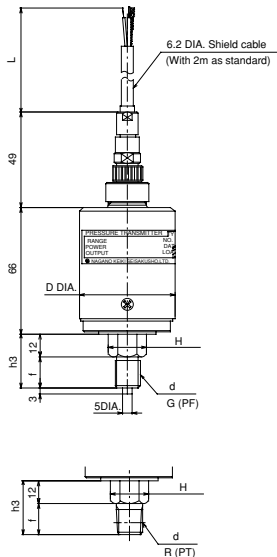
Indoor use

#### Weight:

Approx. 550g ~ 750g

# DIMENSIONS

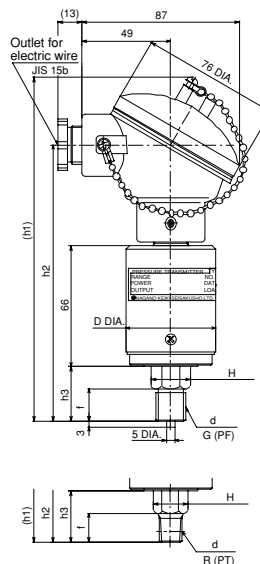
## Connector type



d	f	h3	H
G1/4B	16	28	17 × 19.6Hex.
G3/8B	18	30	19 × 21.6Hex.
G1/2B	20	32	24 × 27.7Hex.
R1/4	16	28	17 × 19.6Hex.
R3/8	18	30	19 × 21.6Hex.
R1/2	20	32	24 × 27.7Hex.
1/4NPT	16	28	17 × 19.6Hex.
1/2NPT	20	32	24 × 27.7Hex.

Range	D DIA.
30kPa or less	60
0.04 ~ 0.3MPa	50

## Terminal box type

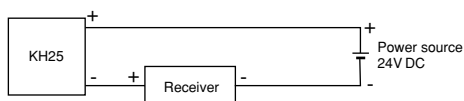


d	f	(h1)	h2	h3	H
G1/4B	16	188	150	28	17 × 19.6Hex.
G3/8B	18	190	152	30	19 × 21.6Hex.
G1/2B	20	192	154	32	24 × 27.7Hex.
R1/4	16	188	150	28	17 × 19.6Hex.
R3/8	18	190	152	30	19 × 21.6Hex.
R1/2	20	192	154	32	24 × 27.7Hex.
1/4NPT	16	188	150	28	17 × 19.6Hex.
1/2NPT	20	192	154	32	24 × 27.7Hex.

# WIRING

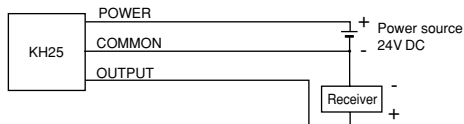
## KH25

### 2 wire system



In case of the voltage output, I become 1-5 V when turn resistance into 250 Ω

### 3 wire system



### Connector type

#### 2 wire system

A (Red) +  
C (White) -



#### 3 wire system

A (Red) POWER  
C (White) COMMON  
E (Green) OUTPUT

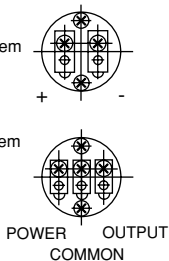
### Terminal box type

#### 2 wire system

+  
-

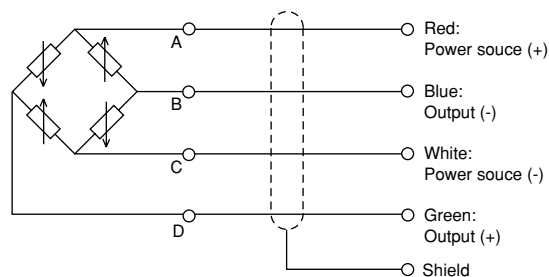
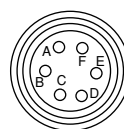
#### 3 wire system

POWER  
COMMON  
OUTPUT



## KH27

### Connector pin assignment



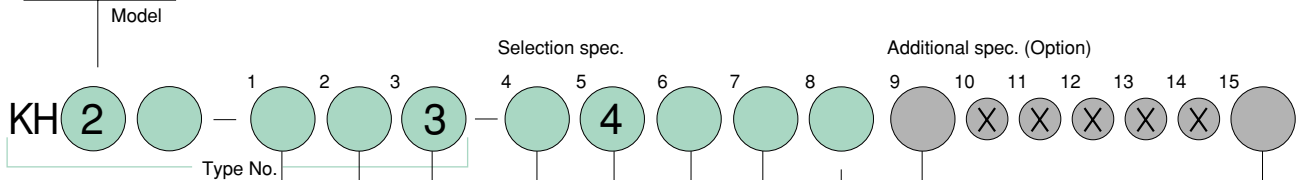
Note: Output stability is directly determined by the power supply stability. Use a power supply which is properly stabilized.

# 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.

K	H	2	5	Pressure transmitter
K	H	2	7	Pressure transducer



### 1 Type

1	Connector type (With 2m shielded cable)
2	Terminal box type KH25 only

### 2 Connection

2	G1/4B
3	G3/8B
4	G1/2B KH25 only
7	R1/4
8	R3/8
9	R1/2 KH25 only
K	1/4NPT KH25 only
M	1/2NPT KH25 only

### 3 Wetted parts material

3	Diaphragm • socket:316st.st.
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### 4 Pressure range

(When ordering ,please specify pressure range & unit)

1	0 ~ 5, 10, 20kPa
2	-5 ~ +5, -10 ~ +10, -20 ~ +20kPa
3	0~0.05, 0.1, 0.2, 0.3MPa
4	-0.05 ~ +0.05MPa -0.1 ~ 0, 0.1MPa -0.1 ~ 0.2, 0.3MPa KH25 only

### Selection spec.

### 5 Accuracy

4	±0.5%F.S.
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### Additional spec. (Option)

### 9 Treatment

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

### 8 Outlet for electric wire In case of connector type

X	Nil
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### 8 Outlet for electric wire In case of terminal box type

4	JIS 15b
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### 7 Output In case of KH25

1	4 ~ 20mA DC (2wire system)
8	1 ~ 5V DC (wire system)

### 7 Output In case of KH27

X	20±5mV DC
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### 6 Power source

1	KH25: 24V DC ±10%
D	KH27: 5V DC

### 15 Document

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