



# Model KH17 Pressure Transducer

## OUTLINE

This is a small type and low-priced pressure transducer equipped with a semiconductor strain gauge as a converter from pressure to electric signals. This pressure transducer is appropriate for applying to hydraulic devices of construction machines and machine tools, and to checking pressures of projection molding machines and others.

## FEATURE

- This pressure transducer is equipped with the pressure sensing portion using an evaporative-condensing type semiconductor strain gauge, resulting in durable and stable performance.
- A compact apparatus using this pressure transducer can be realized due to its small and light construction.
- No moving portion existed in this pressure transducer results in vibration resistance and impact resistance.
- Because of applying a metallic diaphragm, this pressure transducer demonstrates good corrosion resistance and resistance for overloaded conditions.

## 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.

### Type:

Connector type, Cable type (With 2m shielded cable)

### Connection:

G1/4B(PF), G3/8B(PF), G1/2B(PF), R1/8(PT), R1/4(PT), R3/8(PT), R1/2(PT), 1/4NPT, 3/8NPT, 1/2NPT

### Seal type:

Method to joint pressure sensing parts and transmission parts.

O-ring type... Silicon Sensor Module is used to the sensing element, so non-corrosive air is only applied. Only non-corrosive gas can use it.

Diaphragm : Si

O-ring : NBR

O-ring type... Sealed with O-ring, so well performing the seal diaphragm

Diaphragm : 630st.st.(17-4PH st.st.)

O-ring : NBR

Welding type... By EB welding, completely sealed.

Diaphragm : 630st.st.(17-4PH st.st.)

### Wetted parts material:

Diaphragm 630 st.st.(17-4PH st.st.)

Socket 316 st.st.

O-ring NBR(O-ring type only)

### Pressure range:

O-ring type -0.1 ~ 0, 0.1MPa, 0 ~ 0.05, 0.1MPa

(Silicon PSM) (-1 ~ 0, 1kgf/cm<sup>2</sup> 0 ~ 0.5, 1kgf/cm<sup>2</sup>)

O-ring type -0.1 ~ 0.3 → -0.1 ~ 2MPa

(-1 ~ 3 → -1 ~ 20kgf/cm<sup>2</sup>)

0 ~ 0.3 → 0 ~ 10MPa

(0 ~ 3 → 0 ~ 100kgf/cm<sup>2</sup>)

Welding type -0.1 ~ 1, 2MPa

(-1 ~ 10, 20kgf/cm<sup>2</sup>)

0 ~ 1 → 0 ~ 100MPa

(0 ~ 10 → 0 ~ 1000kgf/cm<sup>2</sup>)

### Max. allowable pressure:

200% of rated pressure

(150% for range 35,50MPa. 120% for range 70,100MPa)

### Operating temperature:

-20 ~ 70°C (0 ~ 70°C for range 0.1MPa or less)

### Power source:

5V DC

### Output:

60±25mV DC or 70±25mV DC

(Depend on range)

### Input and output impedance:

3.5kΩ (Typ.)

4.5kΩ (Typ.) for range 0.1MPa or less

### Zero point offset:

±6mV max.

### Accuracy:

±0.25%F.S., ±0.5%F.S., ±1.0%F.S.

(Depend on range)

## SPECIFICATION 2

### Temperature coefficient:

Zero	$\pm 0.025\% \text{F.S./}^\circ\text{C}$ (Accuracy $\pm 0.25\% \text{F.S.}$ )
	$\pm 0.05\% \text{F.S./}^\circ\text{C}$ (Accuracy $\pm 0.5\% \text{F.S.}$ )
Span	$\pm 0.1\% \text{F.S./}^\circ\text{C}$ (Accuracy $\pm 1.0\% \text{F.S.}$ )

### Natural frequency:

5~500kHz  
(1kHz or less for range 0.1MPa or less)

### Case material:

Aluminium alloy die casting(ADC12)  
(Connector type)  
316st.st. (Cable type)

### Construction:

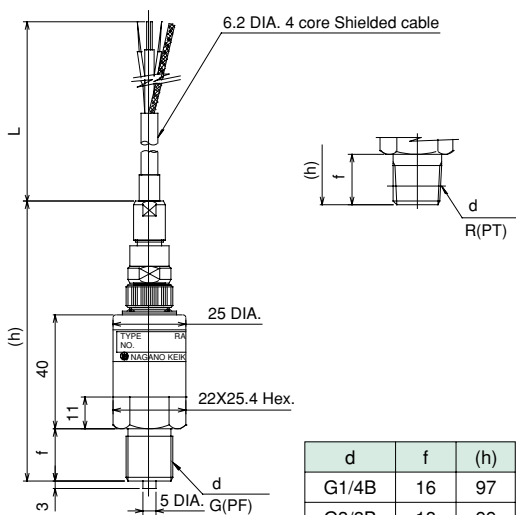
Cable type Drip-proof II  
Connector type Indoor use

### Weight:

Approx. 60 g

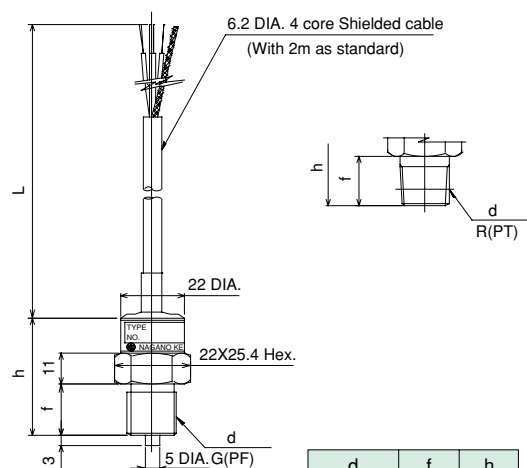
## DIMENSIONS

### Connector type



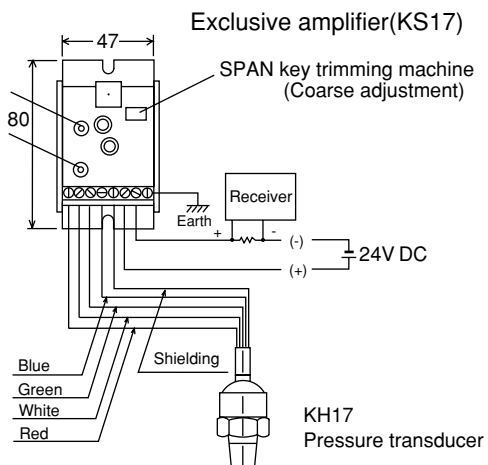
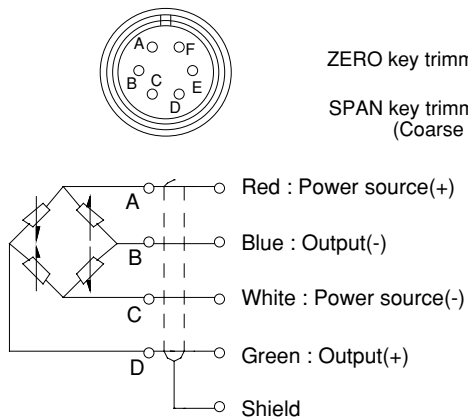
d	f	(h)
G1/4B	16	97
G3/8B	18	99
G1/2B	20	101
R1/8	14	95
R1/4	16	97
R3/8	18	99
R1/2	18	101

### Cable type



d	f	h
G1/4B	16	39
G3/8B	18	41
G1/2B	20	43
R1/8	14	37
R1/4	16	39
R3/8	18	41
R1/2	18	43

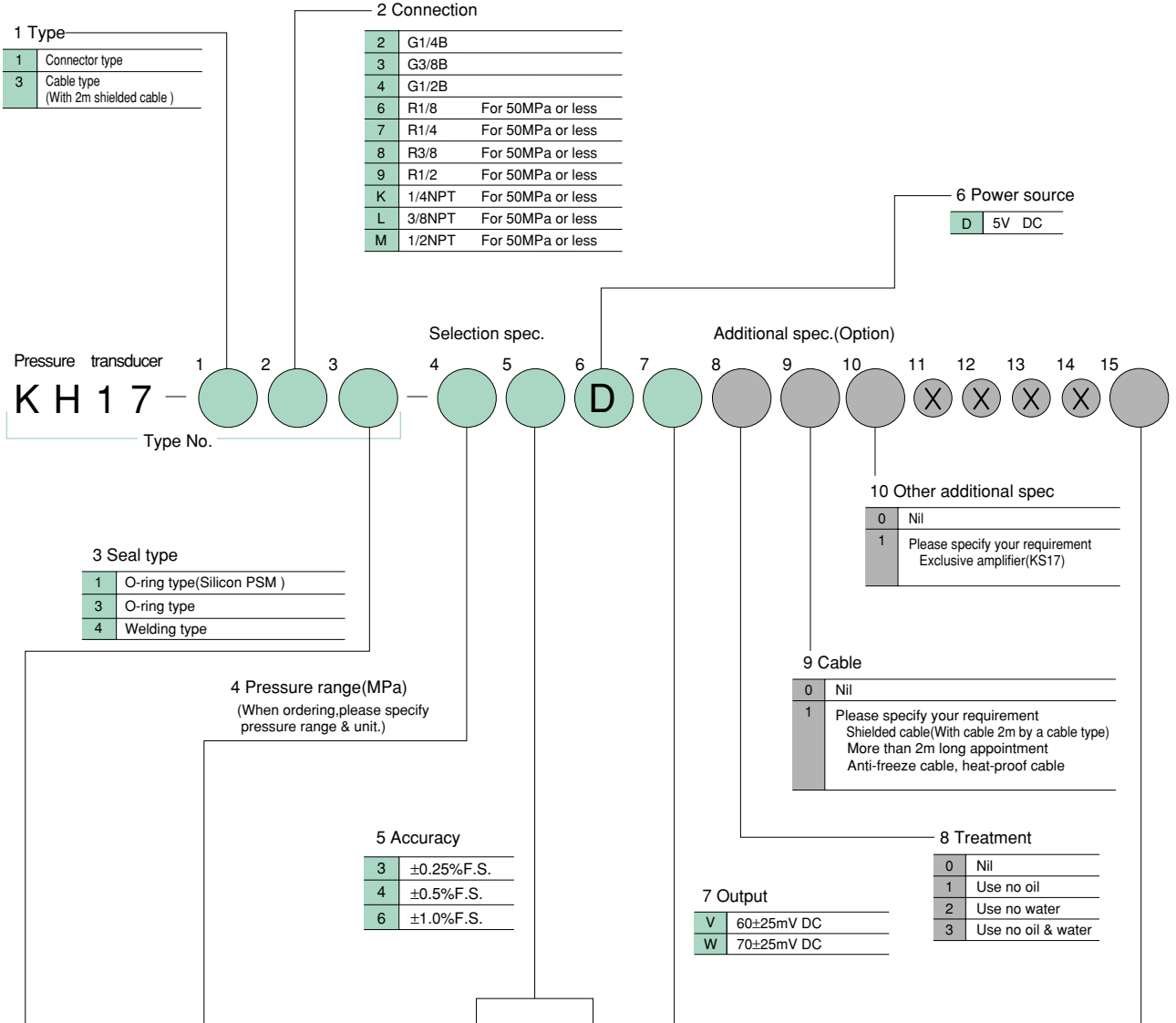
## WIRING



# 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.



Seal type	Pressure range	MPa	Accuracy%F.S.			Output
			±0.25	±0.5	±1.0	
1 O-ring type (Silicon PSM)	1 -0.1 ~ 0 ~ 0.1	4 0 ~ 0.05 ~ 0.1	-	-	○	V 60±25mV DC
3 O-ring type	2 -0.1 ~ 0.3 ~ 0.4	5 0 ~ 0.3 ~ 0.4	-	-	○	V 60±25mV DC
	2 -0.1 ~ 0.5	5 0 ~ 0.5	-	○	○	
	3 -0.1 ~ 1 ~ 2	6 0 ~ 1 ~ 2	-	○	○	W 70±25mV DC
	7 0 ~ 3.5 ~ 5 ~ 7 ~ 10		○	○	○	
4 Welding type	1 -0.1 ~ 1 ~ 2	2 0 ~ 1 ~ 2	-	○	○	W 70±25mV DC
	3 0 ~ 3.5 ~ 5 ~ 7 ~ 10		○	○	○	
	4 0 ~ 20		-	○	○	
	4 0 ~ 35		-	○	○	
	5 0 ~ 50 ~ 70		-	-	○	
	6 ~ 100		-	-	○	

15 Document

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