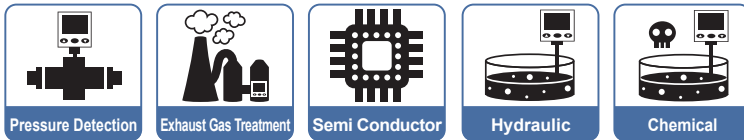


KP50E SERIES

Pneumatic, Hydraulic Pressure Sensor
(Multi-Medium)

Features

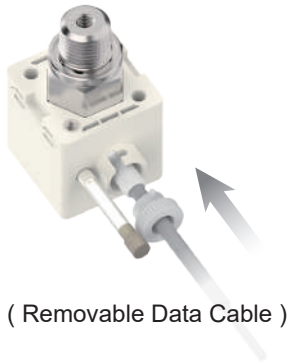
- Corrosive fluid or gas available (in the pipeline)
- Sensor parts & Fitting parts : SUS316L
- 2-color digital LCD display
- Copy function
- Selectable pressure unit :
kPa, MPa, kgf / cm², bar, psi, inHg
- IP65 enclosure



Features Highlight

1 Quick Installation

- Save installation time
- Easy removal



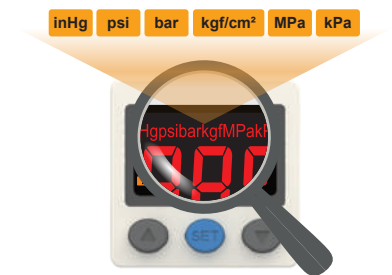
2 Copy Setting

- Avoid setting errors
- Reduce setting time



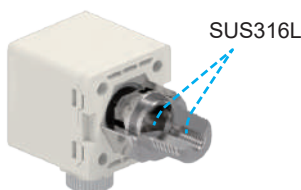
3 Easy Unit Identification

- Unit conversion easy to read



4 Applicable for Corrosive Fluid or Gas

- Sensor parts & Fitting parts are SUS316L, applicable for corrosive fluid or gas equipment



5 2-Color Display

- User selectable color mode, for different conditions use



	SoG	SoR	Grn	rEd
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

6 IP65 Compliance



Specifications

MODEL	KP50EC	KP50EV	KP50EP	KP50EH
	Compound Pressure	Vacuum Pressure	Positive Pressure	High Pressure
Rated Pressure Range	-100.0 ~ 100.0 kPa	0.0 ~ -101.3 kPa	0.000 ~ 1.000 MPa	0.000 ~ 2.00 MPa
Set Pressure Range	-101.0 ~ 101.0 kPa	10.0 ~ -101.3 kPa	-0.100 ~ 1.000 MPa	-0.100 ~ 2.00 MPa
Withstand Pressure	300 kPa		3 MPa	
Fluid	Fluid or air that will not corrode SUS316L			
Sealed Liquid	Silicon oil			
Set Pressure Resolution	kPa	0.1	-	-
	MPa	-	0.001	0.001 (~1.999) 0.01 (2.00~)
	kgf / cm ²	0.001	0.01	0.01 (~19.99) 0.1 (20.0~)
	bar	0.001	0.01	0.01 (~19.99) 0.1 (20.0~)
	psi	0.01	0.1	0.1 (~199.9) 1 (200~)
	inHg	0.1	-	-
Power Supply Voltage	12 ~ 24 V DC ± 10 %, Ripple (P-P) ≤ 10 %			
Current Consumption	≤ 40 mA (with no load)			
Switch Output	2 NPN : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 30 V DC Residual Voltage : ≤ 1.5 V		2 PNP : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Residual Voltage : ≤ 1.5 V	
Repeatability	± 0.3 % F.S. ± 1 digit			
Hysteresis	One point set mode	Adjustable ※1		
	Hysteresis mode			
	Window comparator mode			
Response Time	≤ 2.5 ms (Chattering-proof function : 25 ms, 100 ms, 250 ms, 500 ms, 1000 ms and 1500 ms selectable)			
Output Short Circuit Protection	Yes			
Display	3 ½ digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate : 5 times / sec.)			
Indicator Accuracy	± 2 % F.S. ± 1 digit (Ambient temperature : 25 ± 3 °C)			
Switch on Indicator	Orange Indicator 1 : OUT1 & Orange Indicator 2 : OUT2			
Analog Output (Voltage Output)	Output Voltage : 1 ~ 5 V ± 2.5 % F.S. (within rated pressure range) Linearity : ± 1 % F.S. Output Impedance : about 1 kΩ			
Analog Output (Current Output)	Output Current : 4 ~ 20 mA ± 2.5 % F.S. (within rated pressure range) Linearity : ± 1 % F.S. Max. Load Impedance : 250 Ω at power supply of 12 V, 600 Ω at power supply of 24 V Min. Load Impedance : 50 Ω			
Environment	Enclosure	IP65 ※2		
	Ambient Temp. Range	Operation : 0 ~ 50 °C ; Storage : -10 ~ 60 °C (No condensation or freezing)		
	Ambient Humidity Range	Operation / Storage : 35 ~ 85 % RH (No condensation)		
	Withstand Voltage	250 V AC in 1-min (between case and lead wire)		
	Insulation Resistance	≥ 50 MΩ (at 500 V DC, between case and lead wire)		
	Vibration	Total amplitude 1.5 mm or 10 G, 10 Hz ~ 55 Hz ~ 10 Hz scan for 1 minute, 2 hours each direction of X, Y and Z		
	Shock	100 m/s ² (10 G), 3 times each in direction of X, Y and Z		
Temperature Characteristic	± 3 % F.S. of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C)			
Port Size ※3	F1 : R1/4", M5 ; F2 : NPT1/4", #10-32 UNF ; F3 : G1/4" (BSPP), M5 ; F1C : Rc1/8"			
Lead Wire	Ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 5 cores			
Weight (with 2 meter lead wire)	Approx. 110 g (Rear ported) ; Approx. 150 g (Bottom ported)			

NOTE

※1 : Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.

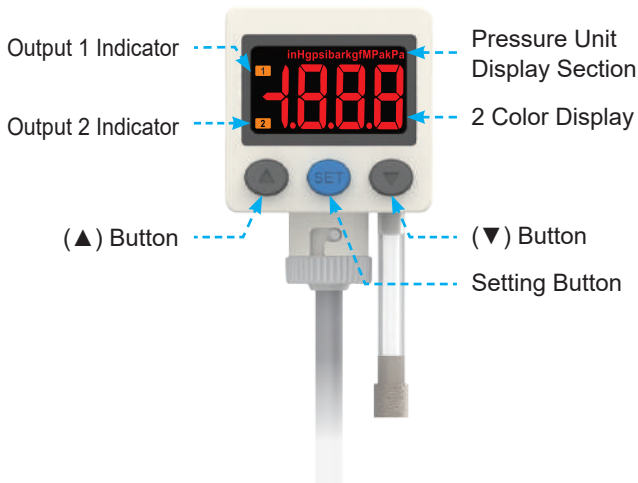
※2 : Dustproof protector must be installed to maintain IP65.

※3 : G port O-Ring material is NBR. if any special request, please contact KITA.

KP50E SERIES

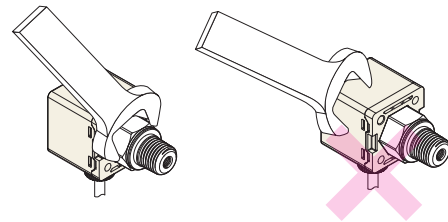
Pneumatic, Hydraulic Pressure Sensor
(Multi-Medium)

Panel Description



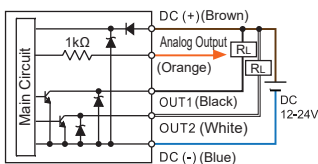
Installation Precautions

- When mounting, always use the wrench on the metallic area near the pressure port. Never apply a wrench to the plastic body, it will damage the sensor.
- Over tightening may cause damage to the port thread, mounting bracket and pressure sensor. Under tightening may result loosen or leakage.
- Apply air pressure and power after installation, make necessary adjustments and inspect any possible signs of leakage to ensure proper installation.

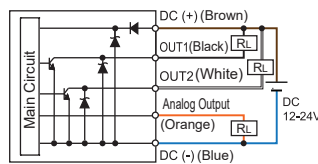


Circuit Wiring Diagrams

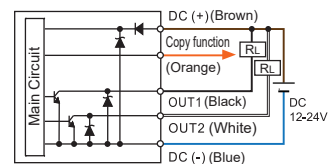
KP50E□ - 010 - □
2NPN + Analog Output (1 ~ 5 V)



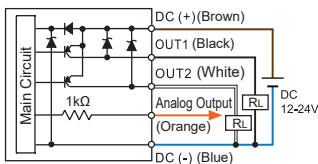
KP50E□ - 011 - □
2NPN + Analog Output (4 ~ 20 mA)



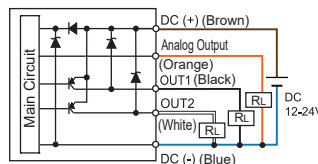
KP50E□ - 02 - □
2NPN + Copy Function



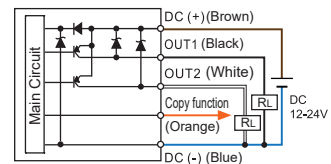
KP50E□ - 030 - □
2PNP + Analog Output (1 ~ 5 V)



KP50E□ - 031 - □
2PNP + Analog Output (4 ~ 20 mA)



KP50E□ - 04 - □
2PNP + Copy Function



Ordering Information

K P 5 0 E H - 0 1 0 - F 1 □

Pressure Range

H : High pressure
(-0.100 ~ 2.00 MPa)
C : Compound pressure
(-101.0 ~ 101.0 kPa)
V : Vacuum pressure
(10.0 ~ -101.3 kPa)
P : Positive pressure
(-0.100 ~ 1.000 MPa)

Output Specifications

010 : 2 NPN Output & Analog Output (1 ~ 5 V)
011 : 2 NPN Output & Analog Output (4 ~ 20 mA)
02 : 2 NPN Output & Copy Function
030 : 2 PNP Output & Analog Output (1 ~ 5 V)
031 : 2 PNP Output & Analog Output (4 ~ 20 mA)
04 : 2 PNP Output & Copy Function

Pressure Port

F1 : R1/4", M5
F2 : NPT1/4", #10-32UNF
F3 : G1/4" (BSPP), M5
F1C : Rc1/8" (only with rear ported)

Piping Direction

Blank : Rear ported
L : Bottom ported

Optional Parts

BT-10 : Mounting bracket
BT-11 : Mounting bracket
PA-E : Panel adapter
PA-F : Panel adapter +
Front protective lid

I-0360 : Snubber (for Pressure Port F1 & F3)
I-0379 : Snubber (for Pressure Port F2)
※ KP50EP & KP50EH suggested to select
a snubber

Optional Parts

- Mounting Bracket : BT-10 / BT-11
- Panel Adapter : PA-E
- Panel Adapter + Front Protective Lid : PA-F
- Snubber

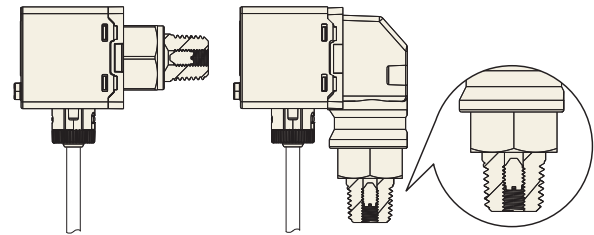


I-0360 : for Pressure Port F1 & F3
I-0379 : for Pressure Port F2

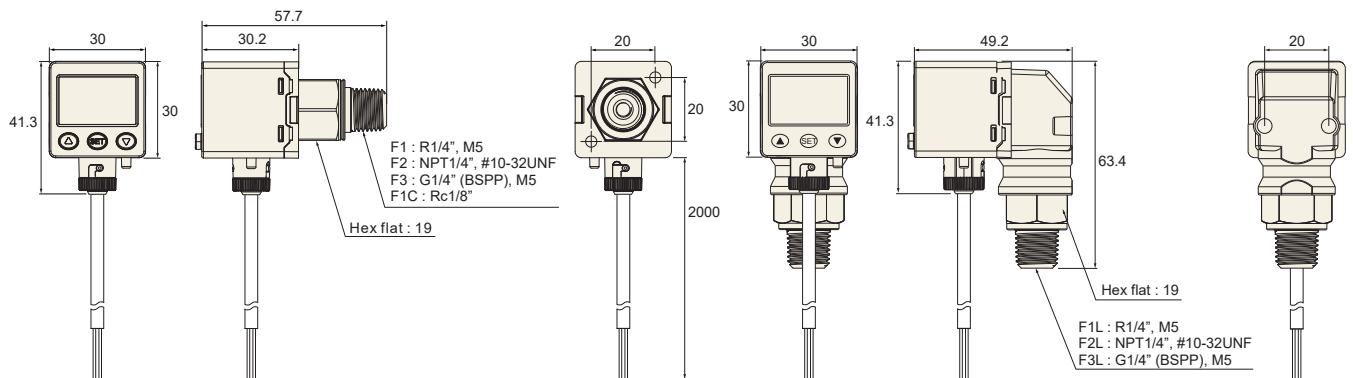
Removable Snubber Installed

- Pressure port equipped with snubber can avoid damage caused by sudden pressure surge of water or oil, improve product durability.

※ When snubber is clogged with contaminants, please use a flat head screwdriver to remove the snubber, clean and reinstall.
 ※ A snubber is not applied to F1C port.

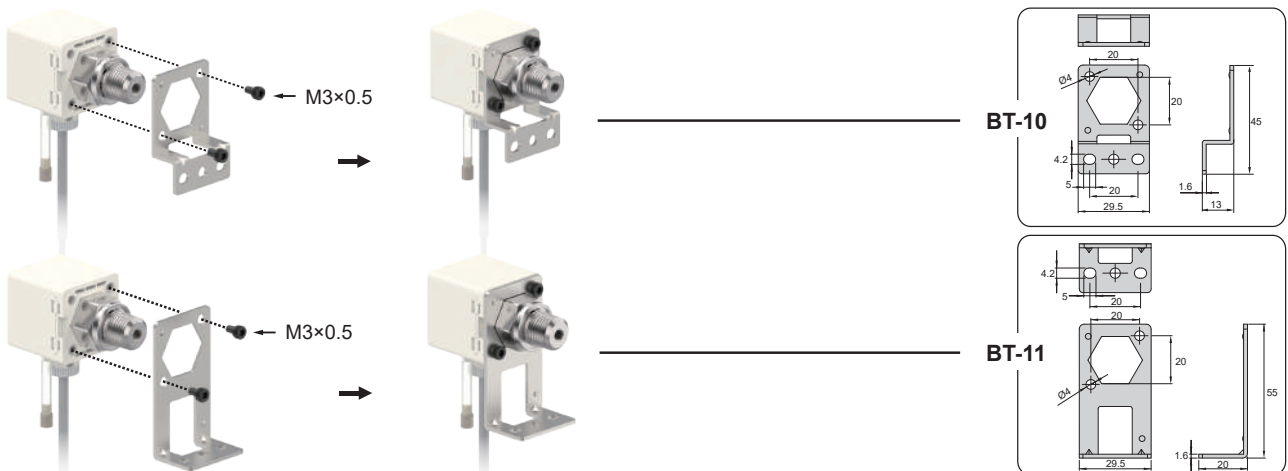


Dimensions

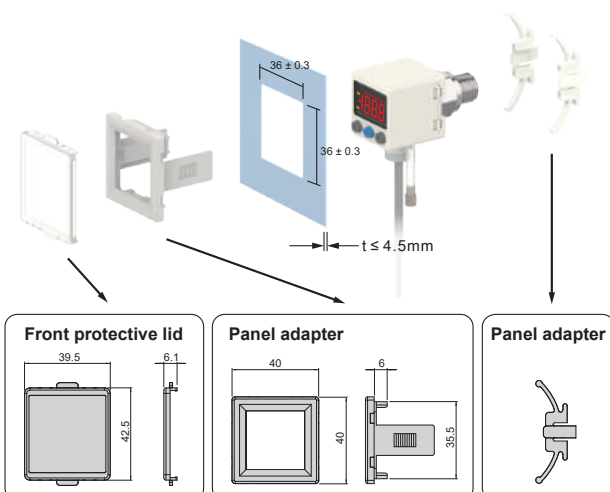


Optional Parts Dimensions

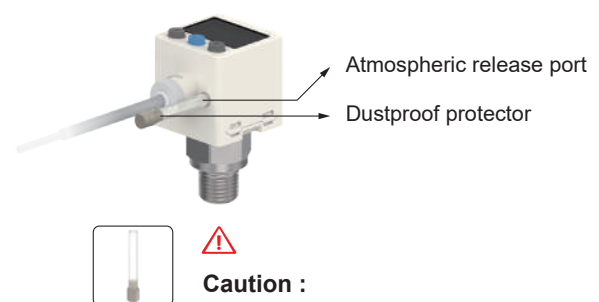
1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



3 IP65 Protector



Caution :
 This device must be installed to maintain IP65 (Dust and splash proof) enclosure rating.

Unit : mm