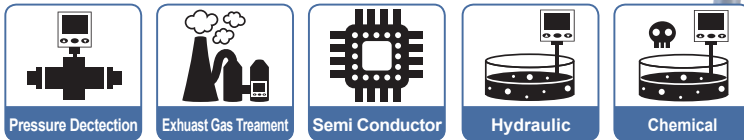


KP50E SERIES

Pneumatic · Hydraulic Pressure Sensor (Multi-Medium)

Features

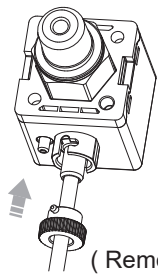
- Corrosive fluid or gas available (in the pipeline)
- Sensor parts & Fitting parts : Stainless steel 316L
- 2-color digital LCD display
- Copy function
- Programmable pressure unit :
kPa 、 MPa 、 kgf / cm² 、 bar 、 psi 、 inHg
- IP65 enclosure



Features Highlight

1 Quick Installation

- Save installation time
- Easy removal



(Removable data cable)

2 Copy Setting

- Avoid setting errors
- Reduce setting time



(Original Parameter)

(Copied)

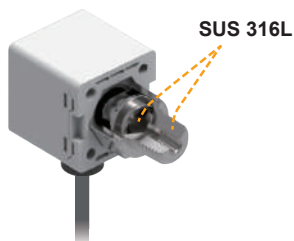
3 Easy Unit Identification

- Conversion unit is on display and easy to read



4 Applicable for Corrosive Fluid or Gas

- Sensor parts & Fitting parts are SUS 316L, applicable for corrosive fluid or gas equipment



5 2-Color Display

- User programmable color mode, for different setting conditions



	500	500	500	500
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

6 IP65 Compliance



Specifications

MODEL		KP50EC (Compound)	KP50EV (Vacuum)	KP50EP (Positive)	KP50EH (High)
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		Fluids do not corrode stainless steel 316L			
Sealed Liquid		Silicon oil			
Set Pressure Resolution	kPa	0.1	-	-	-
	MPa	-	-	0.001	0.001 (~19.99) 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 to 24 V DC $\pm 10\%$, Ripple (P-P) 10 % or less			
Current Consumption		≤ 40 mA (With no load)			
Switch Output		2NPN : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 30 V DC Residual Voltage : ≤ 1.5 V		2PNP : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Residual Voltage : ≤ 1.5 V	
Repeatability (Switch Output)		$\pm 0.3\%$ 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		$\pm 2\%$ F.S. ± 1 digit (ambient temperature : 25 ± 3 °C)			
Switch on Indicator		Orange indicator 1 : OUT1 & Orange indicator 2 : OUT2			
Analog Output (Voltage Output) *2		Output Voltage : 1 to 5 V $\pm 2.5\%$ F.S. (within rated pressure range) Linearity : $\pm 1\%$ F.S. Output Impedance : about 1 k Ω			
Analog Output (Current Output) *3		Output Current : 4 to 20 mA $\pm 2.5\%$ F.S. (within rated pressure range) Linearity : $\pm 1\%$ 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	IP 65 *5			
	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 M Ω (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, two 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		$\pm 3\%$ F.S. of detected pressure (25 °C) at temp. Range of 0 ~ 50 °C			
Port Size *4		F1 : R1/4", M5 ; F2 : NPT1/4", #10-32 UNF ; F3 : G1/4" (BSPP), M5 ; F1C : Rc1/8"			
Lead Wire		Oil-resistance cable (0.15 mm ²)			
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 : If analog voltage output is selected, the analog current output cannot be selected at the same time.

*3 : If analog current output is selected, the analog voltage output cannot be selected at the same time.

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

*5 : Air tube must be installed to maintain IP65.

KP50E SERIES

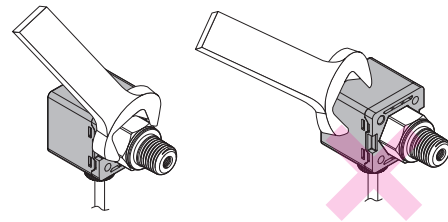
Pneumatic · Hydraulic Pressure Sensor (Multi-Medium)

Panel Description



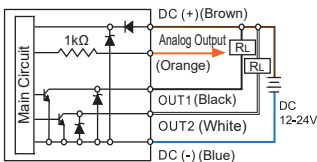
Installation Precautions

- 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 damages to the port thread, mounting bracket and pressure sensor. Under tightening may result loosen or leakage.
- Apply pressure and power after installation and make necessary adjustments and inspect any possible signs of leakage to ensure proper installation.

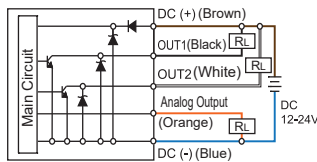


Circuit Wiring Diagrams

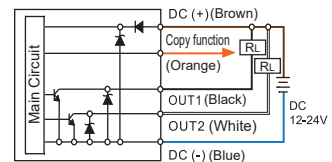
KP50E□ - 010 - □
2NPN + Analog Output (1 ~ 5 V)



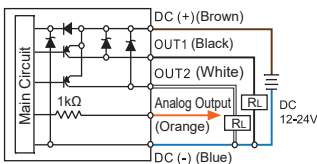
KP50E□ - 011 - □
2NPN + Analog Output (4 ~ 20 mA)



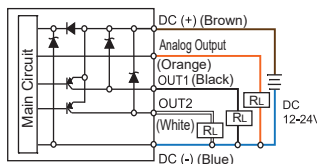
KP50E□ - 02 - □
2NPN + Copy Function



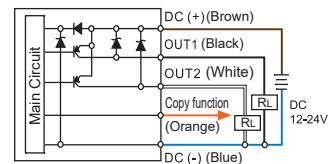
KP50E□ - 030 - □
2PNP + Analog Output (1 ~ 5 V)



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



KP50E□ - 04 - □
2NPN + Copy Function



Ordering Information

K P 5 0 E H - 0 1 0 - F 1 □

Pressure Range

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

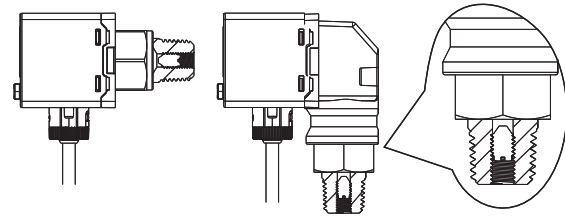


I-0360 : for Pressure Port F1 & F3
I-0379 : for Pressure Port F2

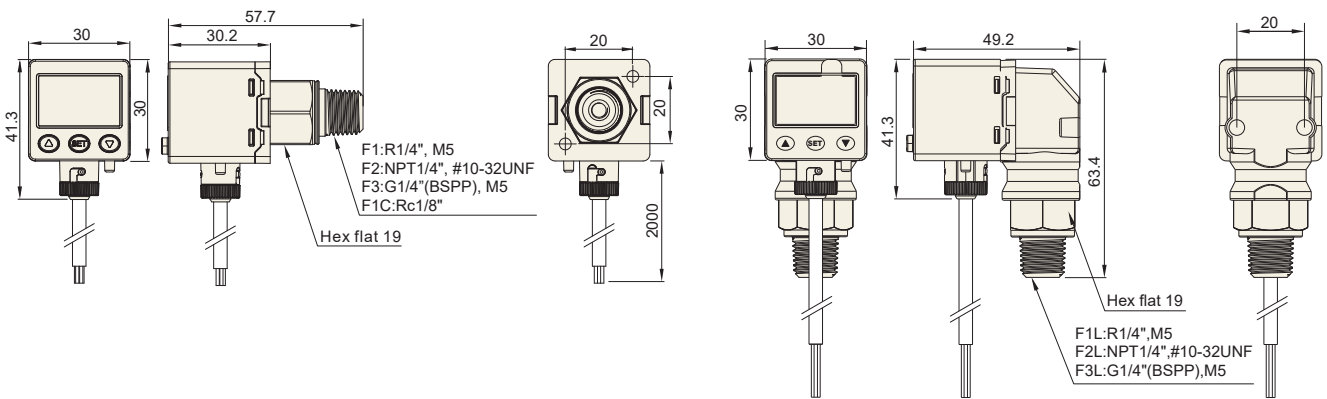
Removable Snubber Installed

- 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.

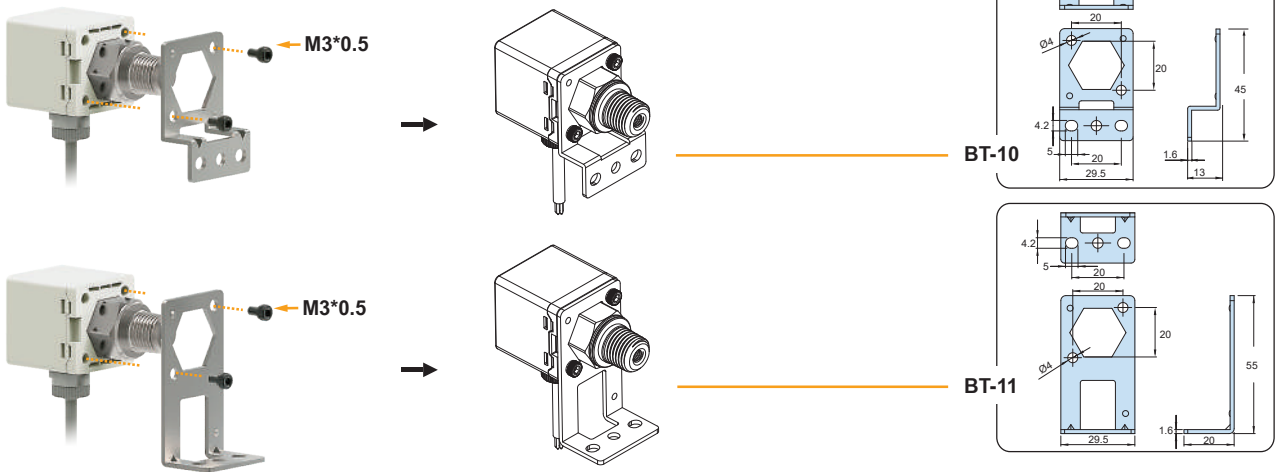


Dimensions

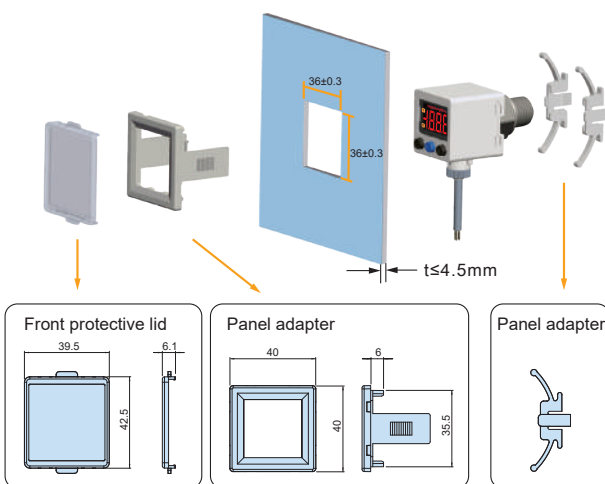


Optional Parts Dimensions

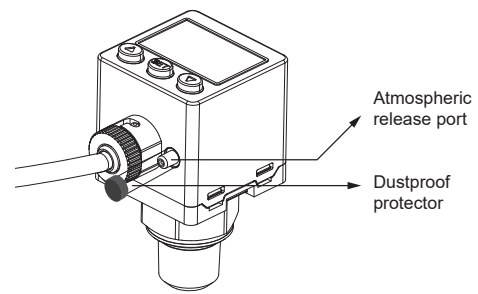
1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



3 IP65 Protector



Caution:
 This device must be installed to maintain IP 65 (Dust and splash proof) enclosure rating.

Unit : mm