

KP50 SERIES

Features

- Corrosive fluid or gas available
- 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



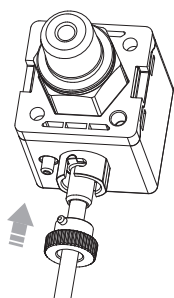
SPECIFICATIONS

TYPE	Compound	Vacuum	Positive	High
MODEL	KP50C	KP50V	KP50P	KP50H
Rated pressure range	-100.0 ~ 100.0 kPa	0.0 ~ -101.3 kPa	0.000 ~ 1.000 MPa	0.000 ~ 2.00 MPa
Setting pressure range	-101.0 ~ 101.0 kPa	10.0 ~ -101.3 kPa	-0.100 ~ 1.000 MPa	-0.100 ~ 2.00 MPa

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)

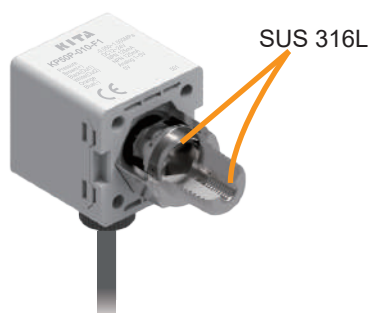
3 Easy Unit Identification

- 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.

	50.0	50.0	50.0	50.0
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

6 IP65 Compliance

- Protected against water and dust splash from all directions.



SPECIFICATIONS

MODEL		KP50C (Compound)	KP50V (Vacuum)	KP50P (Positive)	KP50H (High)
2.0 MPa 1.0 MPa 100.0 kPa 0 -101.3 kPa					
Rated pressure range		-100.0 ~ 100.0 kPa	0.0 ~ -101.3 kPa	0.000 ~ 1.000 MPa	0.000 ~ 2.00 MPa
Setting 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(∼1.999) 0.01(2.00∼)	
	kgf/cm²	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 24V DC ±10%, Ripple (P-P) 10% or less			
Current consumption		≤ 40mA(With no load)			
Switch output		NPN: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 30V DC Residual voltage: ≤ 1.5V		PNP: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 24V DC Residual voltage: ≤ 1.5V	
Repeatability(Switch output)		±0.3% F.S. ±1 digit			
Hysteresis	One point set mode	Adjustable(*1)			
	Hysteresis mode				
	Window comparator mode				
Response time		≤ 2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selectable)			
Output short circuit protection		Yes			
7 segment LCD display		3½ digit, 7 segment (red/green) (Sampling rate: 5 times/1sec.)			
Indicator accuracy		±2% F.S. ±1 digit (ambient temperature: 25 ±3°C)			
Switch ON Indicator		Orange (1&2 Indicator) OUT1 OUT2			
Analog output (Voltage Output) (*2)		Output Voltage: 1 to 5V ±2.5% F.S. (within rated pressure range) Linearity: ±1% F.S. Output impedance: about 1kΩ			
Analog output (Current Output) (*3)		Output Current: 4 to 20mA ±2.5% F.S. (within rated pressure range) Linearity: ±1% F.S. Max.Load impedance: 250Ω at power supply of 12V , 600Ω at power supply of 24V Min.Load impedance: 50Ω			
Environment	Enclosure	IP 65			
	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	250V AC in 1-min (between case and lead wire)			
	Insulation resistance	50MΩ (at 500V DC, between case and lead wire)			
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z			
	Shock	100m/s² (10G), 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 (*4)		F1 : R1/4", M5; F2 : NPT1/4", #10-32 UNF; F3 : G1/4"(BSPP), M5; F1C : Rc1/8"			
Lead wire		Oil-resistance cable(0.15mm²)			
Weight (with 2 meter lead wire)		Approx. 110g (Rear ported) , Approx. 150g (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.

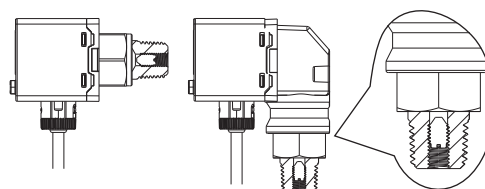
*4 : G port O-Ring material is NBR. if any special request, please contact KITA.

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.

*Snubber is not applied to F1C port.



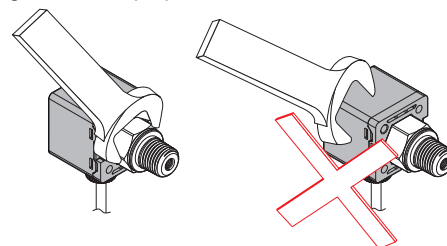
KP50 SERIES

■ PANEL DESCRIPTION



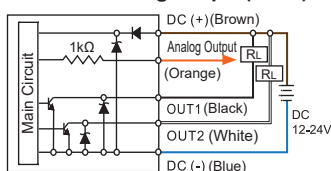
■ INSTALLATION PRECAUTIONS

- 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.

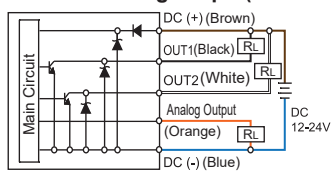


■ OUTPUT CIRCUIT WIRING DIAGRAMS

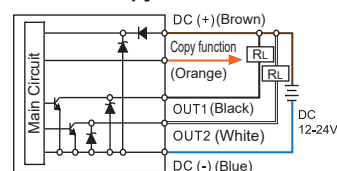
KP50 □ - 010 - □
2 NPN + Analog Output(1~5V)



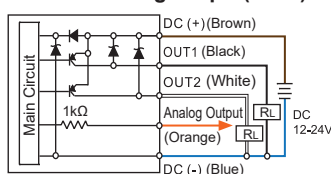
KP50 □ - 011 - □
2 NPN + Analog Output(4~20mA)



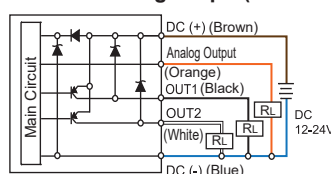
KP50 □ - 02 - □
2 NPN + Copy Function



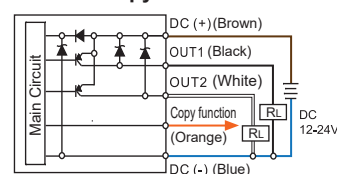
KP50 □ - 030 - □
2 PNP + Analog Output(1~5V)



KP50 □ - 031 - □
2 PNP + Analog Output(4~20mA)



KP50 □ - 04 - □
2 PNP + Copy Function



■ ORDERING INFORMATION

K P 5 0 H - 0 1 0 - F 1 □

Pressure Range

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

Output Specifications

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

Piping Direction

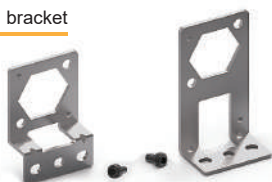
Blank : Rear ported
L : Bottom ported

Optional Parts

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

Optional Parts

Mounting bracket



■ BT-10 ■ BT-11

Panel adapter



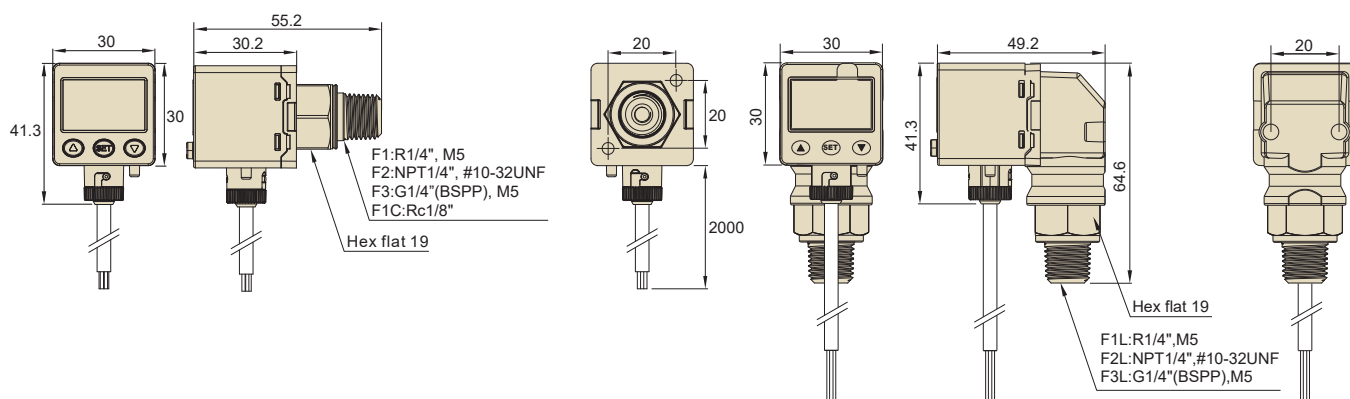
■ PA-E

Panel adapter + Front protective lid



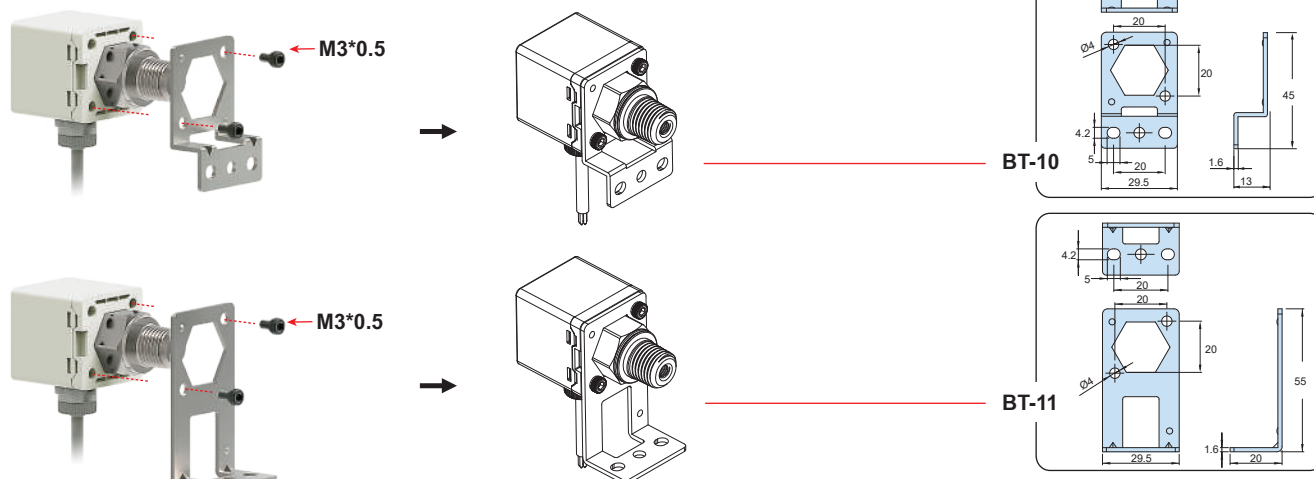
■ PA-F

DIMENSIONS

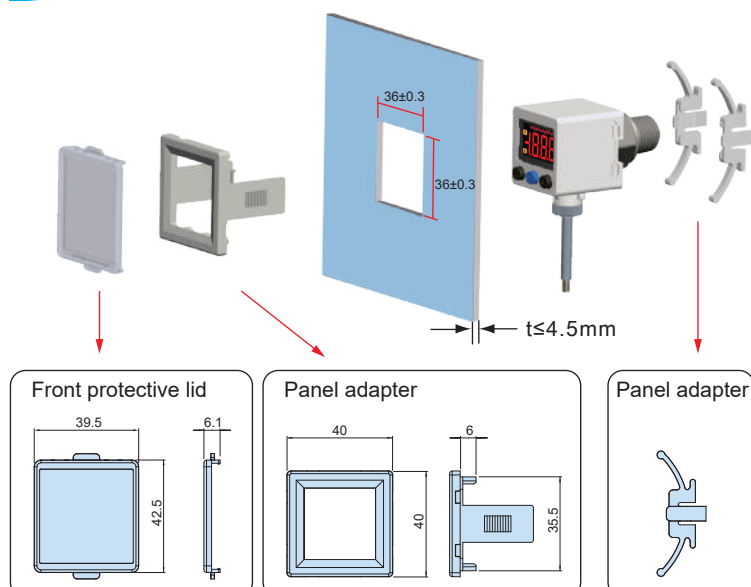


OPTIONAL PARTS DIMENSIONS

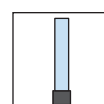
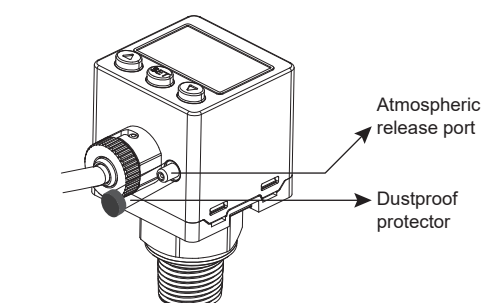
1 Mounting Bracket



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