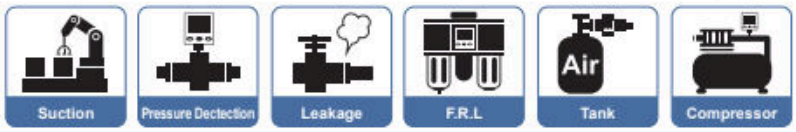
KP47 SERIES Economical Pressure Sensor

KRAFTMOVE

Features

- 3-color digital LCD display
- Main / Sub-Display, 4 digits 7 segment LCD display
- Selectable pressure unit :
  kPa、MPa、kgf / cm²、bar、psi、inHg、mmHg
- Dual LCD display allows setting value to be displayed
- Key-lock indicator
- Power-save mode
- Fine adjustment mode



Features Highlight

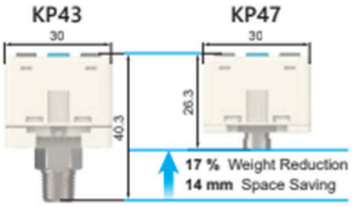
1 Quick Installation

- Save installation time
- Easy removal

(Removable Data Cable)

2 Compact design

- Compared with similar products, approx. 35 % shorter



3 Setting Value Easy Indication

- User can easily observe the setting value from sub-display

4 2-Color Main Display

- User selectable color mode, for different conditions use

	SoG	Sor	Grn	rEd
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

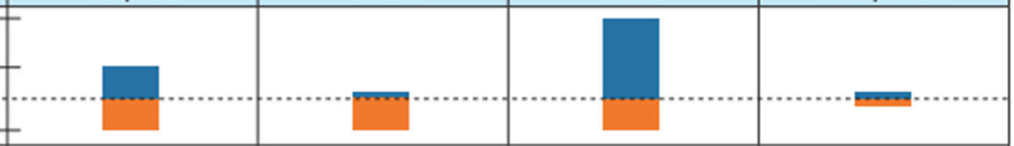
5 OPS Quick Setting

- Sub-display allows changing the parameter directly, reduce setting step by 3/4

6 Easy Unit Identification

- Unit conversion easy to read

Specifications

MODEL		KP47C Compound	KP47V Vacuum	KP47P Positive	KP47S Micro-pressure
1.03 MPa 103.0 kPa 0 -103.0 kPa					
Rated Pressure Range		-100.0 ~ 100.0 kPa	0.0 ~ -101.3 kPa	-0.100 ~ 1.000 MPa	-10.00 ~ 10.00 kPa ※1
Set Pressure Range		-103.0 ~ 103.0 kPa	10.0 ~ -103.0 kPa	-0.103 ~ 1.030 MPa	-10.10 ~ 10.10 kPa ※1
Withstand Pressure		500 kPa		1.5 MPa	20 kPa
Fluid		Filtered air, Non-corrosive / Non-flammable gas			
Set Pressure Resolution	kPa	0.1		-	0.01
	MPa	-		0.001	-
	kgf / cm²	0.001		0.01	-
	bar	0.001		0.01	-
	psi	0.01		0.1	-
	inHg	0.1		-	-
	mmHg	1		-	-
Power Supply Voltage		12 ~ 24 V DC ± 10 %, Ripple (P-P) ≤ 10 %			
Current Consumption		≤ 30 mA (with no load)			
Switch Output		NPN : open collector outputs Max. Load Current : 80 mA Max. Supply Voltage : 30 V DC Residual Voltage : ≤ 1 V		PNP : open collector outputs Max. Load Current : 80 mA Max. Supply Voltage : 24 V DC Residual Voltage : ≤ 1 V	
Repeatability		± 0.3 % F.S. ± 1 digit			≤ ± 0.4 kPa
Hysteresis	One Point Set Mode	Adjustable ※2			
	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 selections)			
Output Short Circuit Protection		Yes			
Display		4 digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate : 0.2, 0.5, 1 sec. / time)			
Indicator Accuracy		± 1 % F.S. ± 1 digit (Ambient temperature : 25 ± 3 °C)			≤ ± 0.4 kPa
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		Output Voltage : 0.6 ~ 5 V ± 2.5 % F.S. (within rated pressure range) ; Linearity : ± 1 % F.S. ; Output Impedance : about 1 kΩ	Output Voltage : 1 ~ 5 V ± 2.5 % F.S. (within rated pressure range) : Linearity : ± 1 % F.S. : Output Impedance : about 1 kΩ
Environment	Enclosure	IP40			
	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	1000 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 ~ 150 Hz ~ 10 Hz scan for 1 minute, 2 hours each direction of X, Y and Z			
	Shock	100 m/s² (10 G), 3 times each in direction of X, Y and Z			
Temperature characteristic		± 2 % F.S. of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C)			± 0.4 kPa of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C)
Port size		F1 : R1/8", M5 : F2 : NPT1/8", #10~32 UNF : F3 : G1/8" (BSPP), M5 : M5 : M5 female thread			
Lead wire		Ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm²) - 4 cores			
Weight (with 2 meter lead wire)		Approx. 67 g			

NOTE

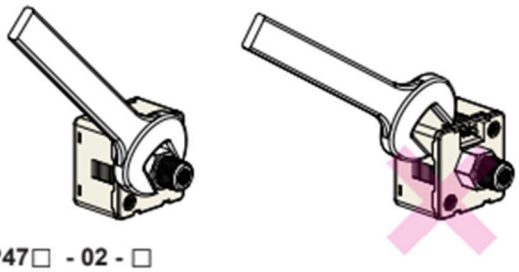
※1 : Selectable pressure ranges (S-01 ~ S-09).

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

Panel Description

Installation Precautions

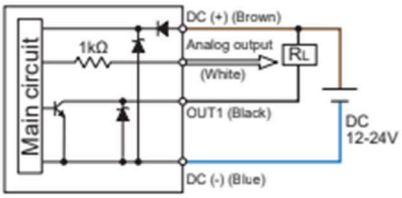
- When mounting, always use the wrench on the metallic area near the pressure port. Never apply a wrench to the plastic body, it will damage the sensor.
- Over tightening may cause damage to the port thread, mounting bracket and pressure sensor. Under tightening may result loosen or leakage.
- Apply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



Circuit Wiring Diagrams

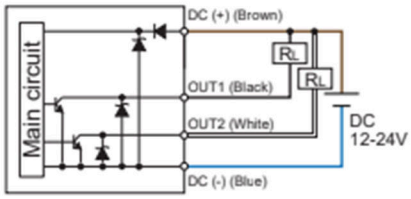
KP47□ - 01 - □

1NPN + Analog output (1 ~ 5 V) (0.6 ~ 5 V only positive)



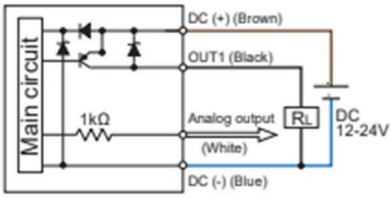
KP47□ - 02 - □

2NPN + output



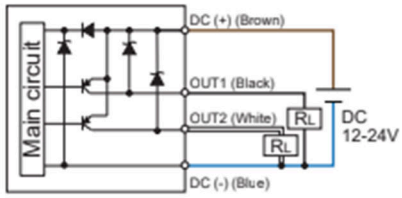
KP47□ - 03 - □

1PNP + Analog output (1 ~ 5 V) (0.6 ~ 5 V only positive)



KP47□ - 04 - □

2PNP + output



Ordering Information

K P 4 7 C - 0 1 - F 1

Pressure Range

C : Compound (-103.0 ~ 103.0 kPa)
V : Vacuum (10.0 ~ -103.0 kPa)
P : Positive (-0.103 ~ 1.030 MPa)
S : Micro-pressure (-10.00 ~ 10.00 kPa)

Output Specifications

01 : 1 NPN output + Analog output (1 ~ 5 V)
02 : 2 NPN output
03 : 1 PNP output + Analog output (1 ~ 5 V)
04 : 2 PNP output

Pressure Port

F1 : R1/8", M5
F2 : NPT1/8", #10-32UNF
F3 : G1/8" (BSPP), M5
M5 : M5 female thread

Optional Parts

BT-22 : Mounting bracket
BT-23 : Mounting bracket
PA-C : Panel adapter
PA-D : Panel adapter + Front protective lid

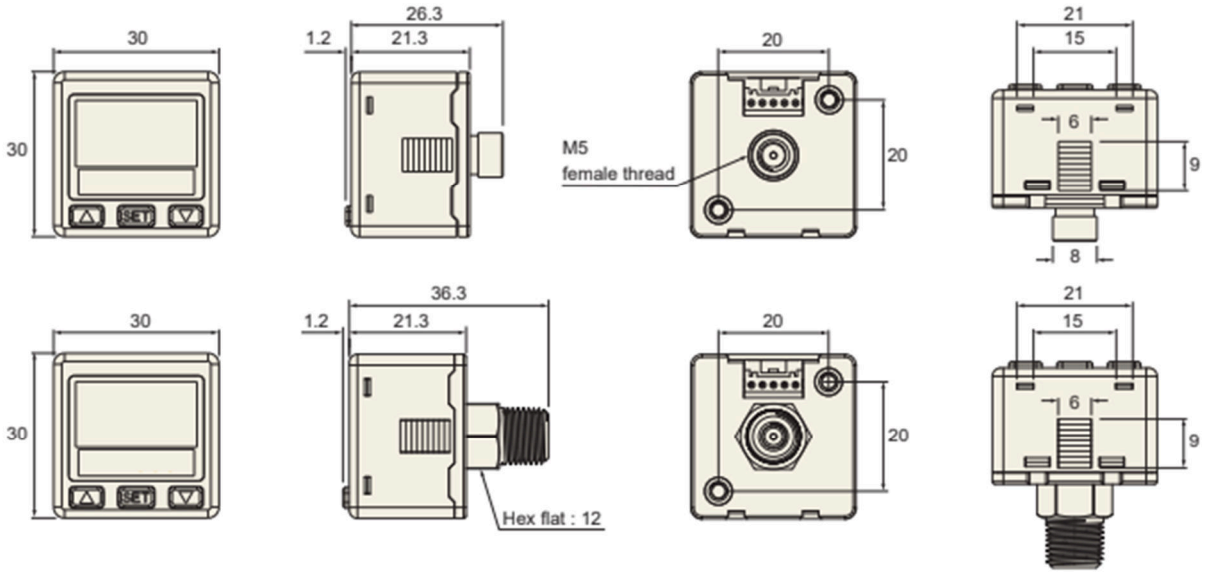
Optional Parts

- Mounting Bracket : BT-22 / BT-23

- Panel Adapter : PA-C

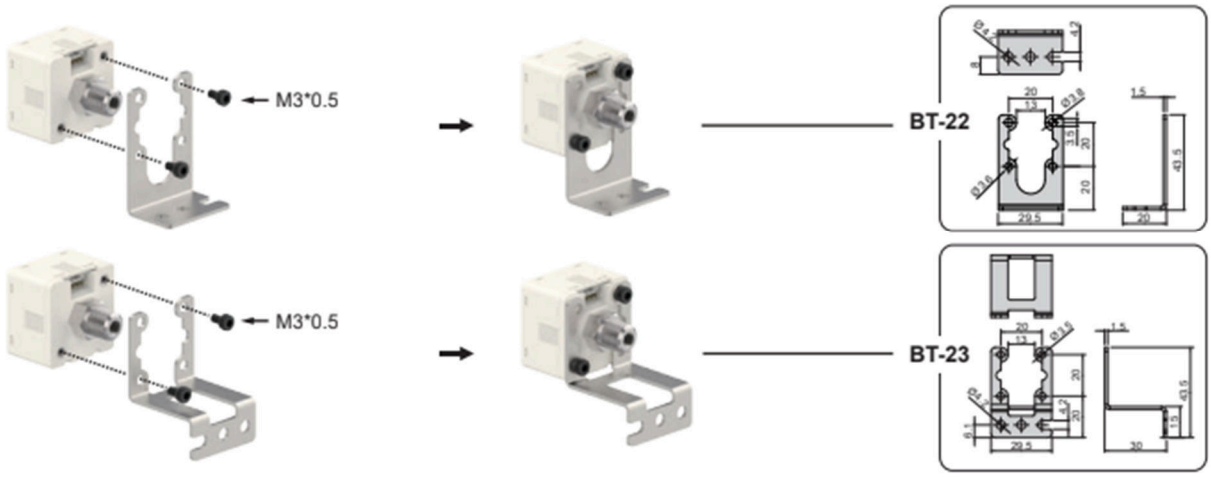
- Panel Adapter + Front Protective Lid : PA-D

Dimensions

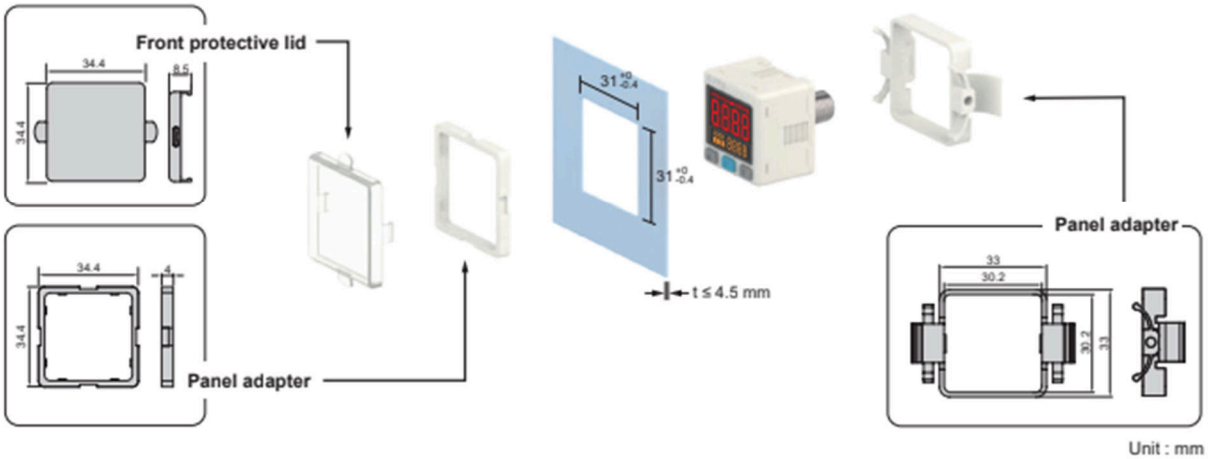


Optional Parts Dimensions

1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



Unit : mm