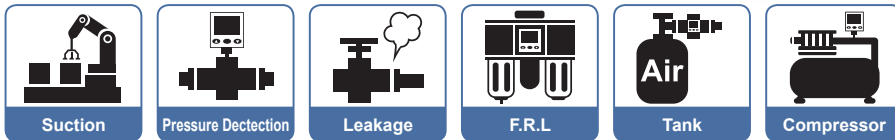


KP45 SERIES

IP65 Pressure Sensor

Features

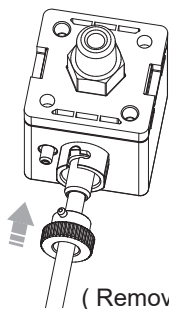
- 2-color digital LCD display
- Copy function
- Programmable pressure unit :
kPa \ MPa \ kgf / cm² \ bar \ psi \ inHg
- IP65 enclosure



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 2-Color Display

- User programmable color mode, for different setting conditions.



	500	500	600	600
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

5 IP65 Compliance



6 Environmental Protection Design

- RoHS Compliance / Without Harmful Substance



Specifications

MODEL	KP45C (Compound)	KP45V (Vacuum)	KP45P (Positive)
Rated Pressure Range	-100.0 ~ 100.0 kPa	0.0 ~ -101.3 kPa	0.000 ~ 1.000 MPa
Set Pressure Range	-101.0 ~ 101.0 kPa	10.0 ~ -101.3 kPa	-0.100 ~ 1.000 MPa
Withstand Pressure	300 kPa		1.5 MPa
Fluid	Filtered air, Non-corrosive / Non-flammable gas		
Set Pressure Resolution	kPa	0.1	-
	MPa	-	0.001
	kgf / cm ²	0.001	0.01
	bar	0.001	0.01
	psi	0.01	0.1
	inHg	0.1	-
Power Supply Voltage	12 to 24 V DC ±10 %, Ripple (P-P) 10 % or less (UL class 2)		
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)	±0.2 % 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) *2	Output Voltage : 1 to 5 V ±2.5 % F.S. (within rated pressure range) Linearity : ±1 % F.S. Output Impedance : about 1 kΩ		
Analog Output (Current Output) *3	Output Current : 4 to 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	IP 65 *4	
	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 - 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	±2 % F.S. 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 F1C : Rc1/8" ; F2C : NPT1/8" ; F3C : G1/8" (BSPP)		
Lead Wire	Oil-resistance cable (0.15 mm ²)		
Weight (With 2 Meter Lead Wire)	Approx. 86g (Port F1 ~ F3) ; Approx. 114g (Port F1C ~ F3C)		

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 : Air tube must be installed to maintain IP65.

KP45 SERIES

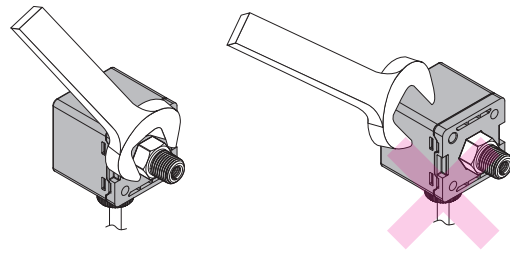
IP65 Pressure Sensor

Panel Description



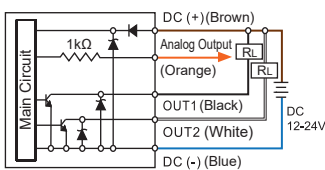
Installation Precautions

- 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.

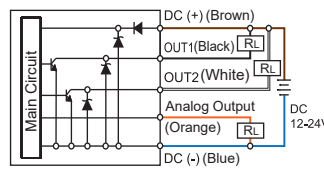


Circuit Wiring Diagrams

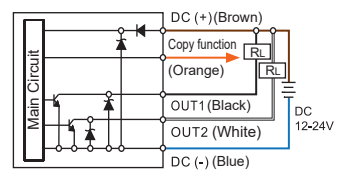
KP45 □ - 010 - □
2 NPN + Analog Output (1 ~ 5 V)



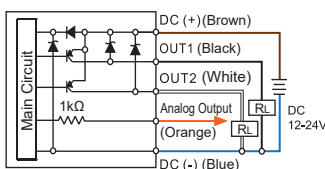
KP45 □ - 011 - □
2 NPN + Analog Output (4 ~ 20 mA)



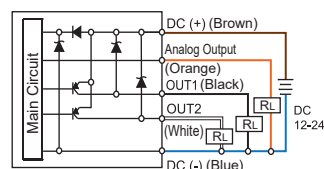
KP45 □ - 02 - □
2 NPN + Copy Function



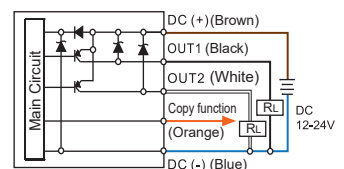
KP45 □ - 030 - □
2 PNP + Analog Output (1 ~ 5 V)



KP45 □ - 031 - □
2 PNP + Analog Output (4 ~ 20 mA)



KP45 □ - 04 - □
2 PNP + Copy Function



Ordering Information

K P 4 5 C - 0 1 0 - F 1

Pressure Range

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 PNP Output & Copy Function

Pressure Port

F1 : R1/8", M5 , with external threads
F2 : NPT1/8", #10-32UNF,
with external threads
F3 : G1/8" (BSPP), M5,
with external threads
F1C : Rc1/8", with internal threads
F2C : NPT1/8", with internal threads
F3C : G1/8" (BSPP),
with internal threads

Optional Parts

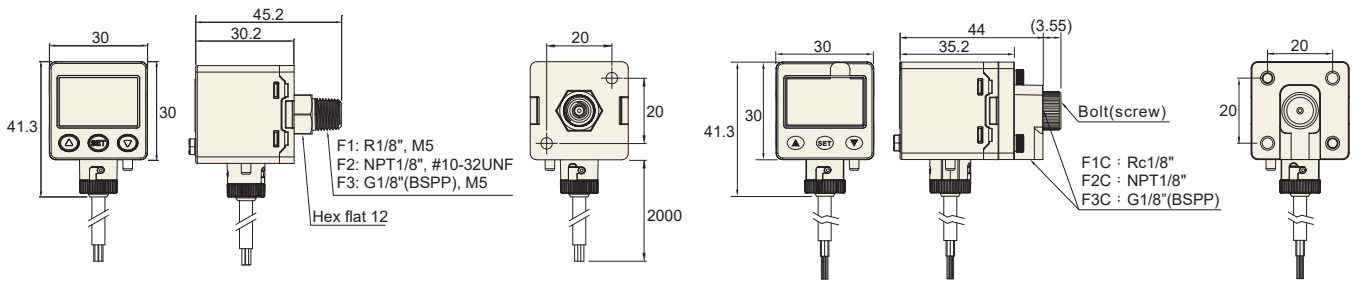
BT-10 : Mounting bracket
(for Pressure Port F1 ~ F3)
BT-11 : Mounting bracket
(for Pressure Port F1 ~ F3)
BT-1 : Mounting bracket
(for Pressure Port F1C ~ F3C)
BT-17 : Mounting bracket
(for Pressure Port F1C ~ F3C)
PA-E : Panel adapter
PA-F : Panel adapter + Front protective lid

Optional Parts

- Mounting Bracket :
BT-10 / BT-11 (For Pressure Port F1 ~ F3)
BT-1 / BT-17 (For Pressure Port F1C ~ F3C)
- Panel Adapter : PA-E
- Panel Adapter + Front Protective Lid : PA-F

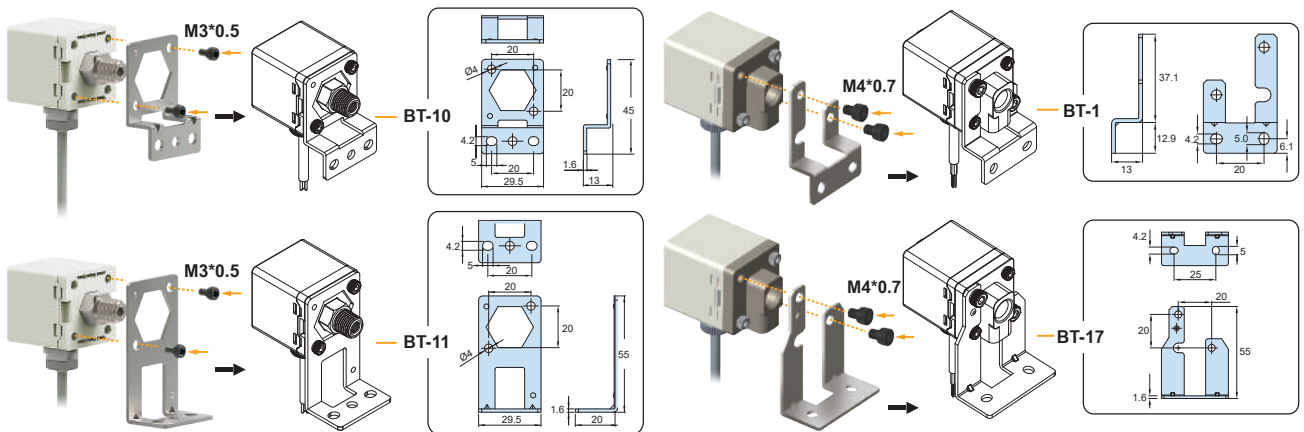


Dimensions

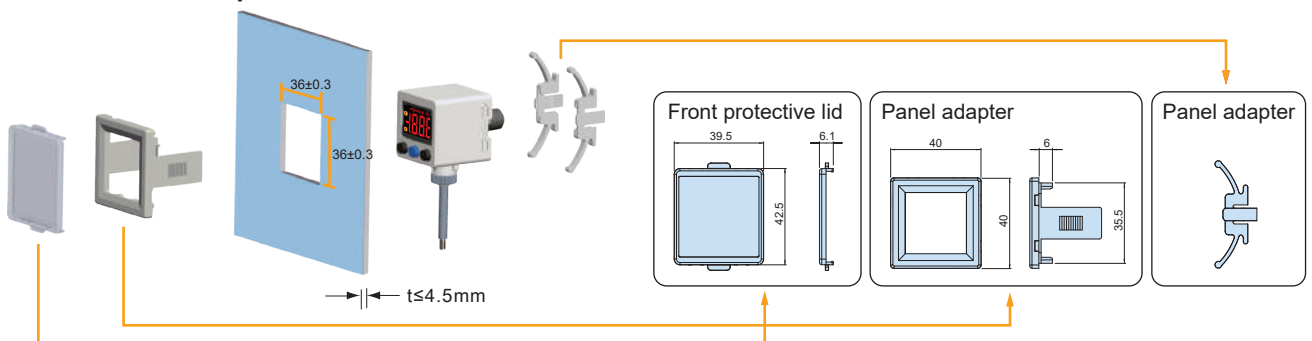


Optional Parts Dimensions

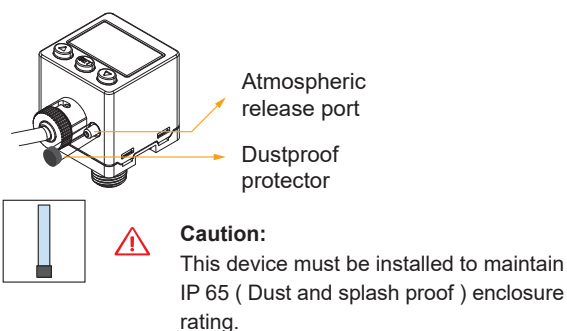
1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



3 IP65 Protector



4 KP45 Accessory for Pressure Port F1C ~ F3C

