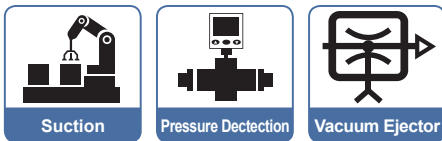


KP90 SERIES

Slim Pressure Sensor

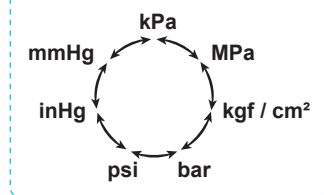
Features

- 2 output & analog output (1 ~ 5 V)
- 10mm width with compact size
- Key lock function
- Programmable pressure unit :
kPa 、 MPa 、 kgf / cm² 、 bar 、 psi 、 inHg 、 mmHg



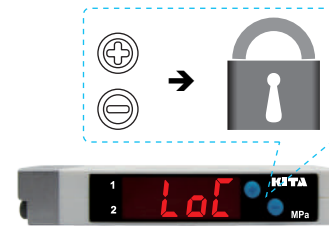
Features Highlight

1 Programmable Pressure Unit



2 Key Lock Function

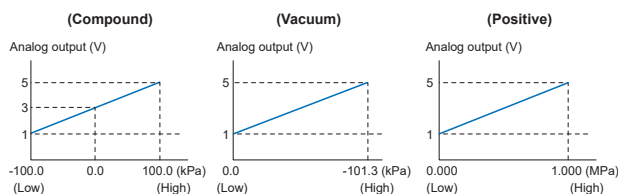
- Key lock mode to prevent unauthorized adjustments Press ⊕ and ⊖ button at the same time for 3 sec.



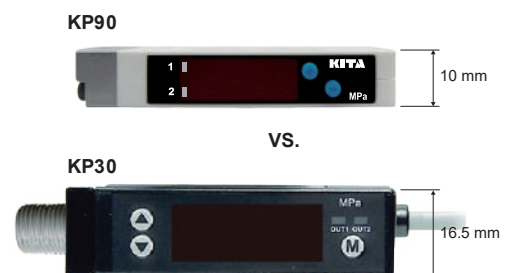
Key lock function

3 Analog Output

- Output range 1 to 5 V, proportional to the pressure range



4 Compact Size





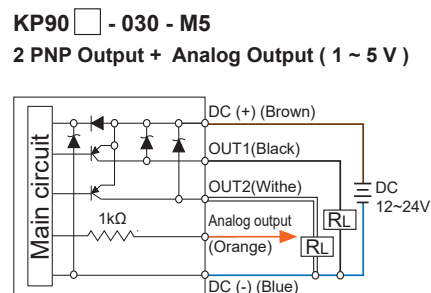
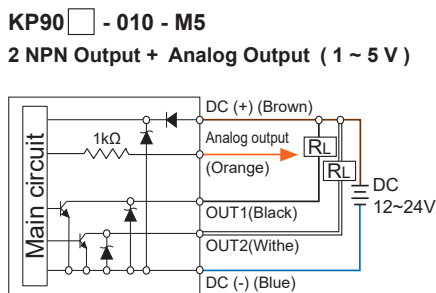
Specifications

MODEL	KP90C (Compound)	KP90V (Vacuum)	KP90P (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	500 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	-
	mmHg	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)	$\pm 0.2\%$ F.S. ± 1 digit		
Hysteresis	Hysteresis Mode	Adjustable	
	Window Comparator Mode	Fixed (3 digits)	
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	4 digit, 7 segment LED display (Red) (Sampling rate : 5 times / sec.)		
Indicator Accuracy	$\pm 2\%$ F.S. ± 1 digit (ambient temperature : 25 ± 3 °C)		
Switch on Indicator	Indicator Red : OUT1 & Indicator Green : OUT2		
Analog Output (Voltage Output)	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		
Environment	Enclosure	IP 40	
	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 M Ω (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, two hours each direction of X, Y and Z	
	Shock	980 m/s ² (100 G), 3 times each in direction of X, Y and Z	
Temperature Characteristic	$\pm 2\%$ F.S. of detected pressure (25 °C) at temp. range of 0 ~ 50 °C		
Port Size	M5		
Lead Wire	Oil-resistance cable (0.14 mm ²)		
Weight	Approx. 53 g (with 2 meter lead wire)		

Panel Description

- **Switch (OUT1)**
(Red LED)
- **Switch (OUT2)**
(Green LED)
- **(+) Button**
Use the (+) button to change setting mode and pre-set desired value.
- **(-) Button**
Use the (-) button to change setting mode and pre-set desired value.
- **4 Digit LED Display**
Pressure value display.

Output Circuit Wiring Diagrams



Ordering Information

K P 9 0 P - 0 1 0 - M 5

Pressure Range

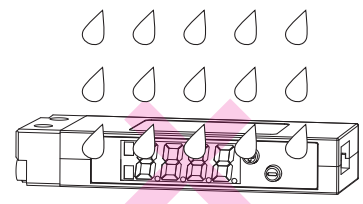
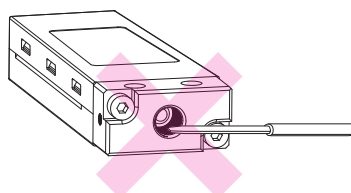
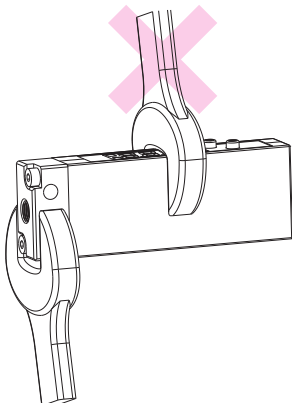
C : Compound (-101.0 ~ 101.0 kPa)
V : Vacuum (10.0 ~ -101.3 kPa)
P : Positive (-0.100 ~ 1.000 MPa)

Output Specification

010 : 2 NPN output & Analog output (1 ~ 5 V)
030 : 2 PNP output & Analog output (1 ~ 5 V)

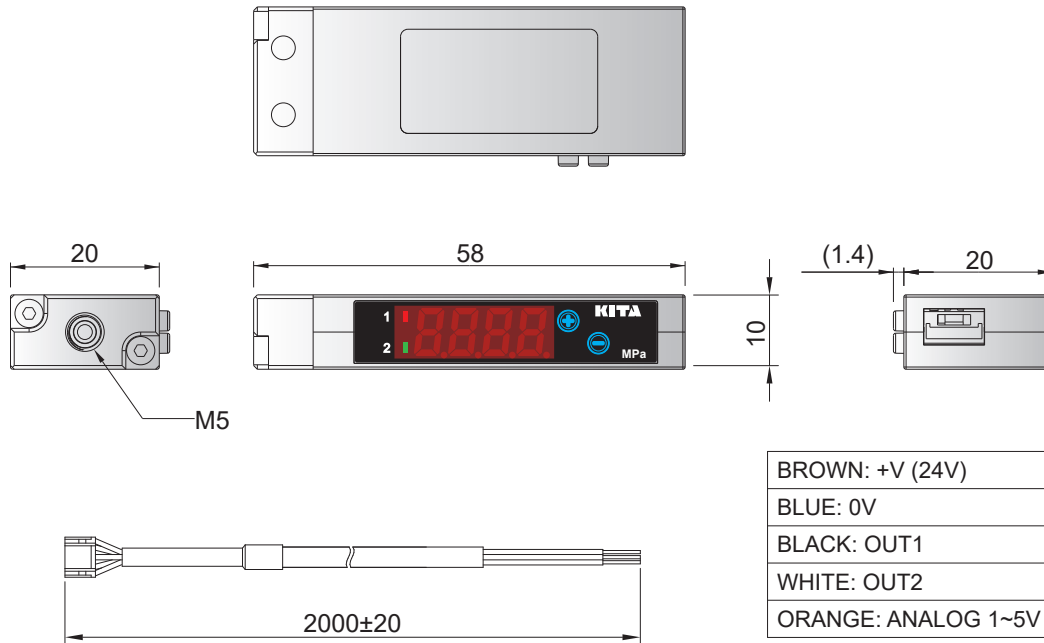
Installation Precautions

- 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.
- Do not use a sharp tool to insert the pressure inlet to avoid damaging the sensor chip.
- Do not use the product in an environment that is exposed to the splash of water or dust. Otherwise failure or malfunction may occur.



Dimensions

KP90□ - □ - M5



BROWN: +V (24V)
BLUE: 0V
BLACK: OUT1
WHITE: OUT2
ORANGE: ANALOG 1~5V

Unit : mm