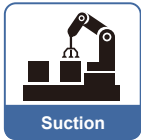


KP90 SERIES

Slim Pressure Sensor

Features

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



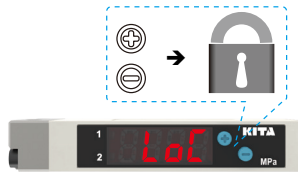
Features Highlight

1 Quick Installation

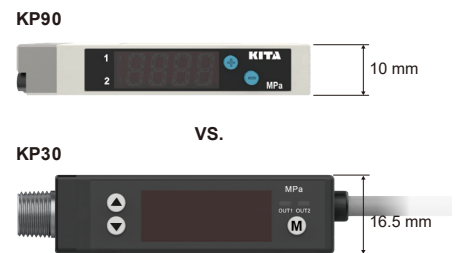
- Save installation time
- Easy removal



2 Key-lock Function



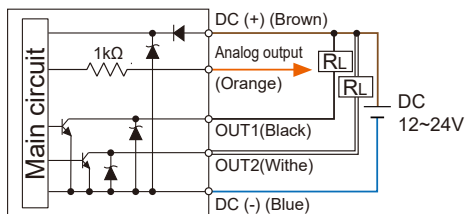
3 Compact Size



Output Circuit Wiring Diagrams

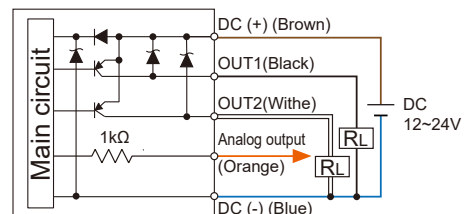
KP90 □ - 010 - M5

2 NPN Output + Analog Output (1 ~ 5 V)

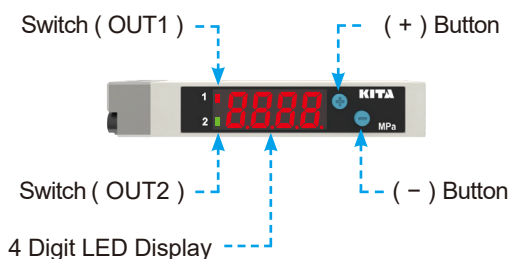


KP90 □ - 030 - M5

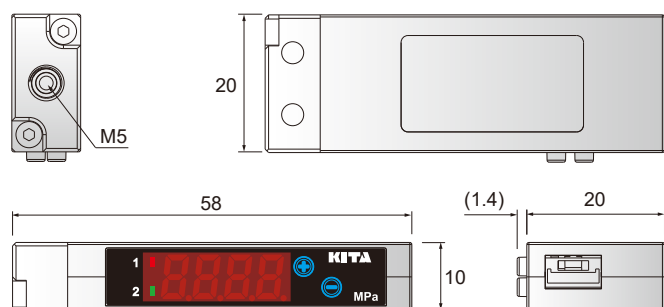
2 PNP Output + Analog Output (1 ~ 5 V)



Panel Description



Dimensions



Unit : mm

Specifications

MODEL		KP90C	KP90V	KP90P
		Compound Pressure	Vacuum Pressure	Positive Pressure
1.000 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
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 ~ 24 V DC $\pm$ 10 %, Ripple (P-P) $\leq$ 10 %		
Current Consumption		$\leq$ 40 mA (with no load)		
Switch Output		2 NPN : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 30 V DC Residual Voltage : $\leq$ 1.5 V 2 PNP : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Residual Voltage : $\leq$ 1.5 V		
Repeatability		$\pm$ 0.2 % F.S. $\pm$ 1 digit		
Hysteresis	Hysteresis Mode	Adjustable		
	Window Comparator Mode	Fixed (3 digits)		
Response Time		$\leq$ 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. $\pm$ 1 digit (Ambient temperature : 25 ± 3 °C)		
Switch on Indicator		Red Indicator : OUT1 & Green Indicator : OUT2		
Analog Output (Voltage Output)		Output Voltage : 1 ~ 5 V $\pm$ 2.5 % F.S. (within rated pressure range) Linearity : $\pm$ 1 % F.S. Output Impedance : about 1 k Ω		
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	$\geq$ 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, 2 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 : M5 female thread		
Lead Wire		$\varnothing$ 3.8 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 5 cores		
Weight (with 2 meter lead wire)		Approx. 53 g		

Ordering Information

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

Pressure Range

C : Compound pressure (-101.0 ~ 101.0 kPa)
 V : Vacuum pressure (10.0 ~ -101.3 kPa)
 P : Positive pressure (-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)