

KP70 SERIES

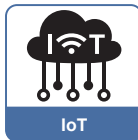
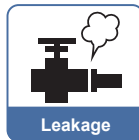
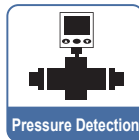
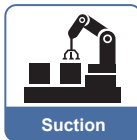
IIoT Pressure Sensor

Features

- Smart pressure sensor
- Remote control
- Real-time monitoring
- RS485 Modbus RTU / ASCII
- 4 digits, 7 segment LCD display

Patented

RS485 MODBUS CONTROL



Features Highlight

1 Station Setting Display

- Provide 0 ~ 255 station to set the sensor



ID Number Display

2 Modes Display

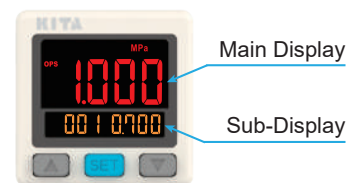
- Three modes show on the screen



3 Setting Value Easy Indication

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

Main / Sub-Display



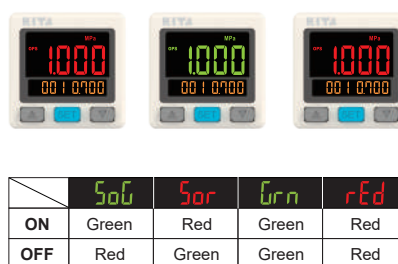
4 Easy Unit Identification

- Unit conversion easy to read



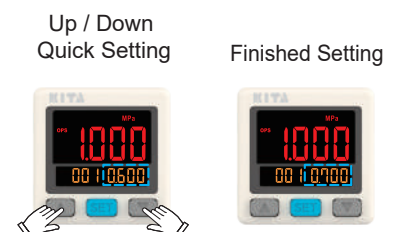
5 2-Color Main Display

- User selectable color mode, for different conditions use

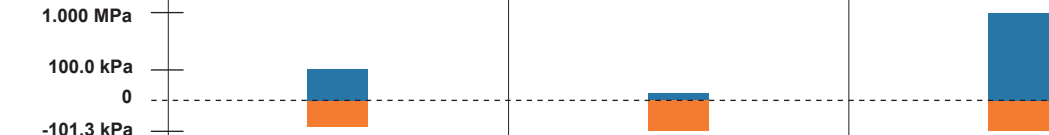


6 OPS Quick Setting

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



Specifications

MODEL		KP70C	KP70V	KP70P
		Compound Pressure	Vacuum Pressure	Positive Pressure
				
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		1 NPN open collector output Max. Load Current : 125 mA Max. Supply Voltage : 30 V DC Residual Voltage : $\leq$ 1.5 V		1 PNP open collector output 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	One Point Set Mode	Adjustable ※1		
	Hysteresis Mode			
	Window Comparator Mode			
Response Time		$\leq$ 2.5 ms (Chattering-proof function : 25 ms, 100 ms, 250 ms, 500 ms, 1000 ms, 1500 ms, 2000 ms and 5000 ms selectable)		
Output Short Circuit Protection		Yes		
Display		4 digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate : 0.2, 0.5, 1 seconds / time selectable)		
Indicator Accuracy		$\pm$ 2 % F.S. $\pm$ 1 digit (Ambient temperature : 25 $\pm$ 3 °C)		
Switch on Indicator		Orange Indicator 1 : OUT1		
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 ~ 55 Hz ~ 10 Hz scan for 1 minute, 2 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		$\pm$ 2.5 % F.S. of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C)		
Communication Interface		RS485		
Port Size		F1 : R1/8", M5 ; F2 : NPT1/8", #10-32 UNF ; F3 : G1/8" (BSPP), M5		
Lead Wire		$\varnothing$ 4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 5 cores		
Weight (with 2 meter lead wire)		Approx. 80 g		

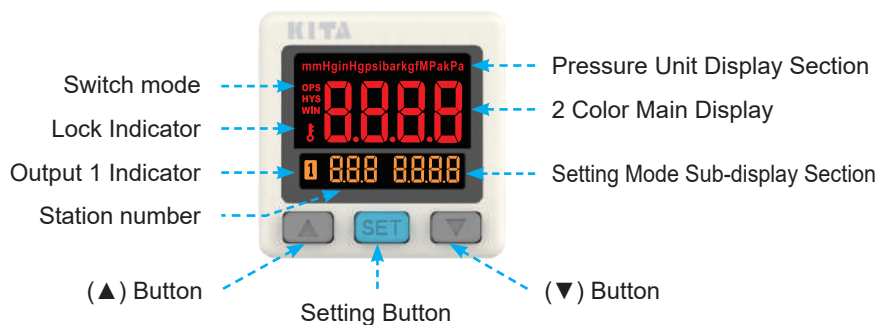
NOTE

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

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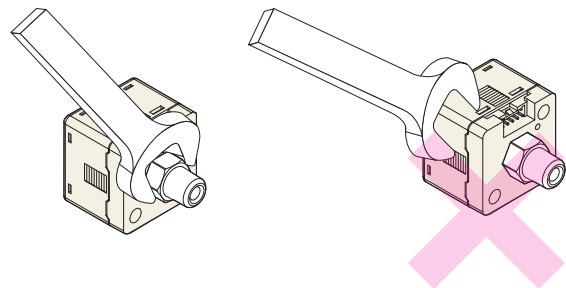
IIoT Pressure Sensor

Panel Description



Installation Precautions

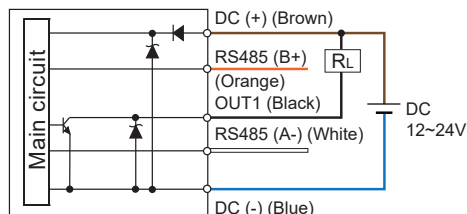
- When mounting, always use the wrench on the metallic area near the pressure port. Never apply a wrench to the plastic body, it will damage the sensor.
- Over tightening may cause damage to the port thread, mounting bracket and pressure sensor. Under tightening may result loosen or leakage.
- Apply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



Output Circuit Wiring Diagrams

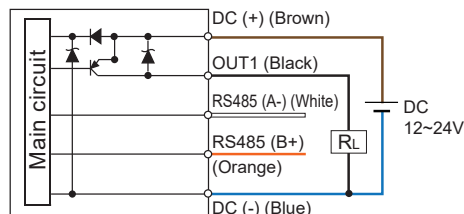
KP70 □ - 02 - □

NPN Output + RS485



KP70 □ - 04 - □

PNP Output + RS485



※ Wiring for RS485 MODBUS :

Please connect RS485 (B+) or (A-) before connecting power supply to avoid short circuit to damage to product.

Ordering Information

K P 7 0 C - 0 2 - F 1

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 Specifications

02 : 1 NPN output + RS485
04 : 1 PNP output + RS485

Pressure Port

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

Optional Parts

BT-12 : Mounting bracket
BT-13 : Mounting bracket
PA-C : Panel adapter
PA-D : Panel adapter + Front protective lid

Optional Parts

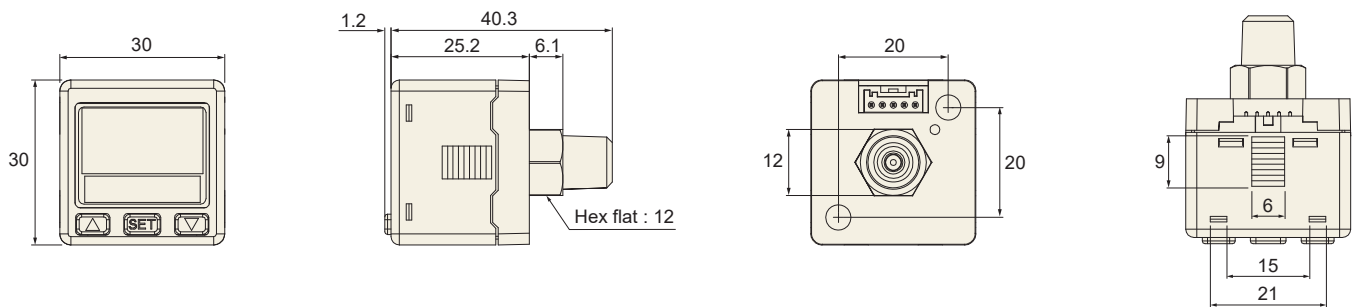
■ Mounting Bracket : BT-12 / BT-13

■ Panel Adapter : PA-C

■ Panel Adapter + Front Protective Lid : PA-D

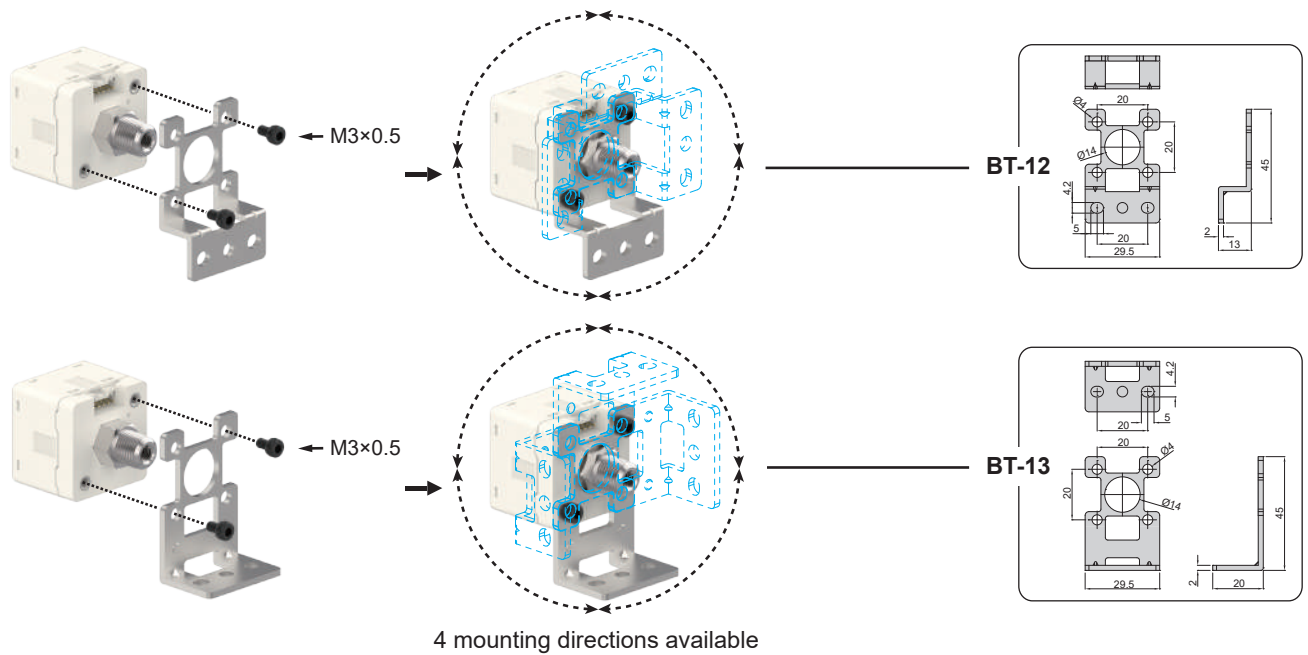


Dimensions

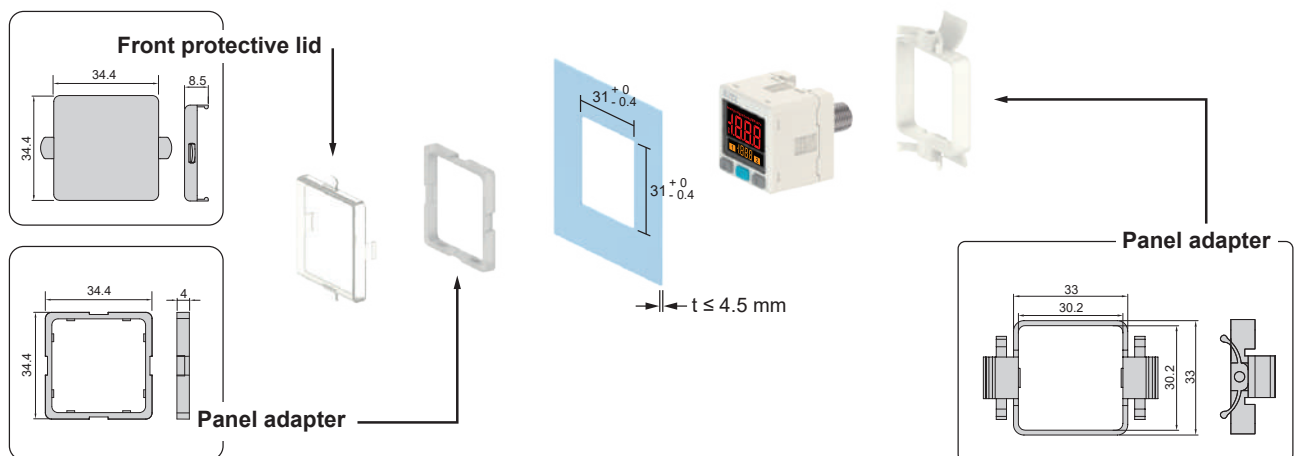


Optional Parts Dimensions

1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



Unit : mm