

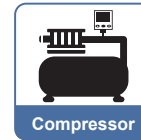
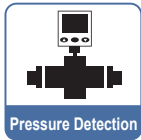
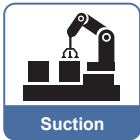
KP48E SERIES

High performance pressure sensor

Features

- Main / Sub-Display, 4 ½ digital 7 segment LCD display
- Multifunctional sub-display
- Switchable voltage output (1 ~ 5 V or 0 ~ 10 V)
- User-defined analog output range
- Digital filter function
- Invertible analog output

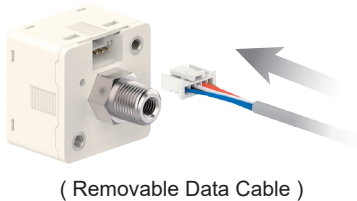
RS485 MODBUS CONTROL



Features Highlight

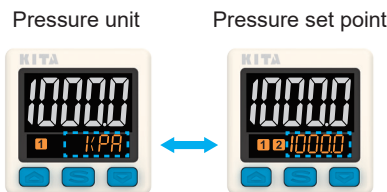
1 Quick Installation

- Save installation time
- Easy removal



2 Multifunctional Sub-Display

- The display can be switched between pressure unit or set points



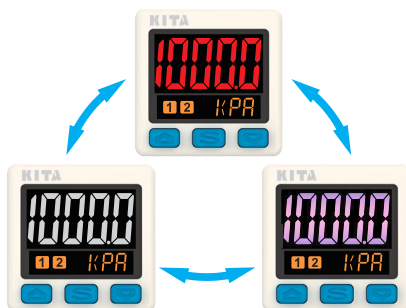
3 Power-Save Mode

- 4-level brightness adjustment leads to power savings of up to 30 %. In mode 4, the sub-display shows the current pressure value.



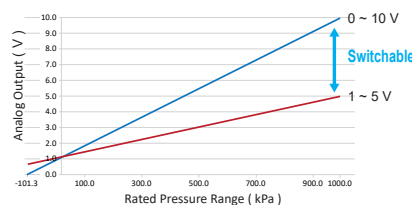
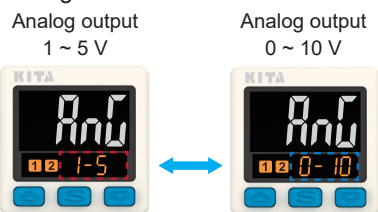
4 4-Color Display

- Choose the desired backlight to highlight different setting states

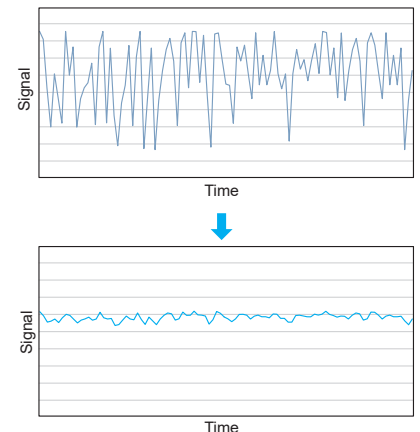


5 High-Resolution

- Flexibly switch the voltage output range



6 Digital Filter Function



Specifications

MODEL		KP48E	
Rated Pressure Range		-101.3 ~ 1000.0 kPa	
Set Pressure Range		-101.3 ~ 1000.0 kPa	
Withstand Pressure		1500 kPa	
Fluid		Filtered air, Non-corrosive / Non-flammable gas	
Set Pressure Resolution	kPa	0.1	
	kgf / cm ²	0.001	
	bar	0.001	
	psi	0.01	
	inHg	0.1	
	mmHg	1	
	mmAq (mmH ₂ O)	1 ※1	
Power Supply Voltage		15 ~ 24 V DC, Ripple (P-P) ≤ 10 %	
Current Consumption		≤ 40 mA (with no load)	
Switch Output		2 NPN open collector outputs Max. Load Current : 150 mA Max. Supply Voltage : 30 V DC Residual Voltage : ≤ 1 V	2 PNP open collector outputs Max. Load Current : 150 mA Max. Supply Voltage : 24 V DC Residual Voltage : ≤ 1 V
Repeatability ※2		± 0.2 % S.R. (Ambient temperature : 25 ± 3 °C)	
Hysteresis	One Point Set Mode	Adjustable ※3	
	Hysteresis Mode		
	Window Comparator Mode		
Response Time of Digital Filter ※4		OFF, 25 ms, 100 ms, 250 ms, 500 ms, 1000 ms, 1500 ms, 3000 ms selectable	
Overcurrent Protection		Yes	
Display		4 ½ digital, 7 segment LCD display (Red / White / Pink / Orange) (Sampling rate : 0.2, 0.5, 1 sec. / time)	
Indicator Accuracy ※2		C : -100.0 ~ 100.0 kPa ± 1 % S.R. V : -101.3 ~ 0.0 kPa ± 1 % S.R.	P : -100.0 ~ 1000.0 kPa ± 0.5 % S.R. A : -101.3 ~ 1000.0 kPa ± 0.5 % S.R.
		(Ambient temperature : 25 ± 3 °C)	
Switch on Indicator		Orange Indicator 1 : OUT1 & Orange Indicator 2 : OUT2	
Analog Output (Voltage Output)		Output Voltage : 0 ~ 10 V ± 0.5 % F.S. Linearity : ± 0.5 % F.S. Output Impedance 2 KΩ	
Analog Output (Current Output)		Output Current : 4 ~ 20 mA ± 0.5 % F.S. Linearity : ± 0.5 % F.S. Max. Load Impedance : 250 Ω at power supply of 15 V, 600 Ω at power supply of 24 V Min. Load Impedance : 50 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	≥ 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/s ² (10 G), 3 times each in direction of X, Y and Z	
Temperature Characteristic		± 0.5 % F.S. of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C)	
Communication Interface ※5		RS485 Modbus RTU	
Port Size		F1 : R1/8", M5 ; F3 : G1/8" (BSPP), M5 ; M5 : M5 female thread	
Lead Wire		Ø4 PVC - 26 AWG (0.15 mm ²) - 5 cores	
Weight (with 2 meter lead wire)		Approx. 67 g	

NOTE

※1 : If set pressure unit is mmAq, the value requires to ten multiply by display value.

※2 : S.R. : Set range

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

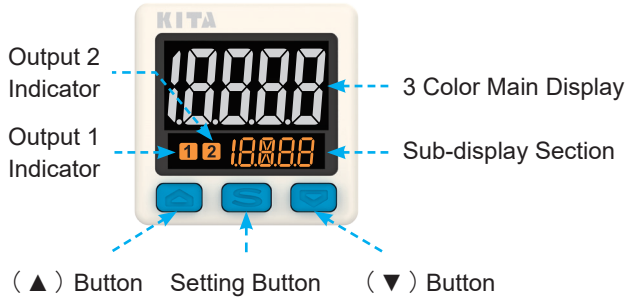
※4 : When digital filter function is OFF, the response time is 4ms ~ 6ms.

※5 : This function is only available for Output Specification 02R and 04R.

KP48E SERIES

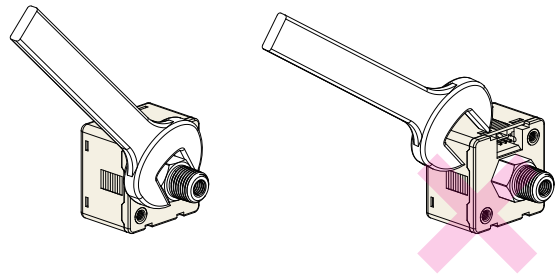
High performance pressure sensor

Panel Description



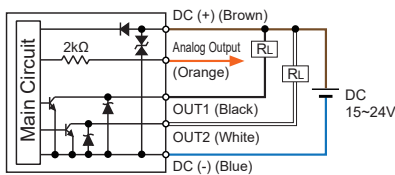
Installation Precautions

- 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.

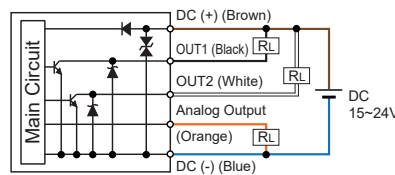


Circuit Wiring Diagrams

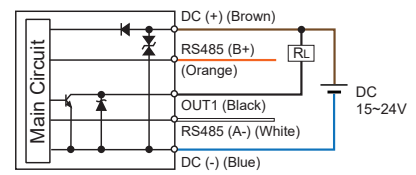
KP48E - 010 - □
2NPN + Analog Output (0 ~ 10 V)



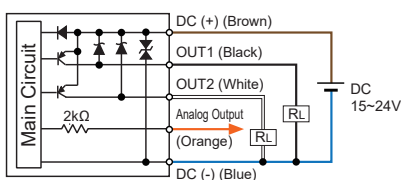
KP48E - 011 - □
2NPN + Analog Output (4 ~ 20 mA)



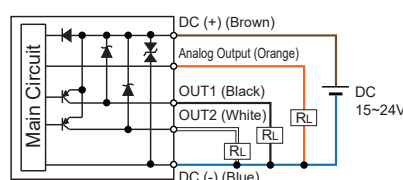
KP48E - 02R - □
NPN Output + RS485



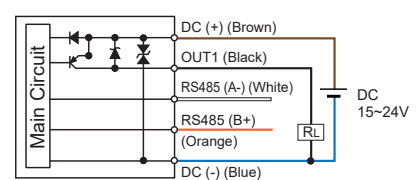
KP48E - 030 - □
2PNP + Analog Output (0 ~ 10 V)



KP48E - 031 - □
2PNP + Analog Output (4 ~ 20 mA)



KP48E - 04R - □
PNP Output + RS485



※ For RS485 MODBUS wiring, please connect RS485 (B+) or (A-) before powering to avoid short circuits resulting in product damage.

Ordering Information

K P 4 8 E - 0 1 0 - F 1

Output Specifications

- 010 : 2 NPN output & Analog output (0 ~ 10 V)
- 011 : 2 NPN output & Analog output (4 ~ 20 mA)
- 030 : 2 PNP output & Analog output (0 ~ 10 V)
- 031 : 2 PNP output & Analog output (4 ~ 20 mA)
- 02R : 1 NPN Output + RS485
- 04R : 1 PNP Output + RS485

Pressure Port

- F1 : R1/8", M5
- 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

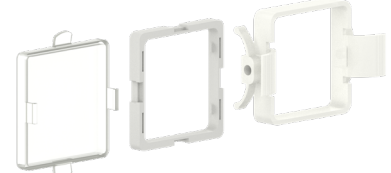
- Mounting Bracket : BT-22 / BT-23



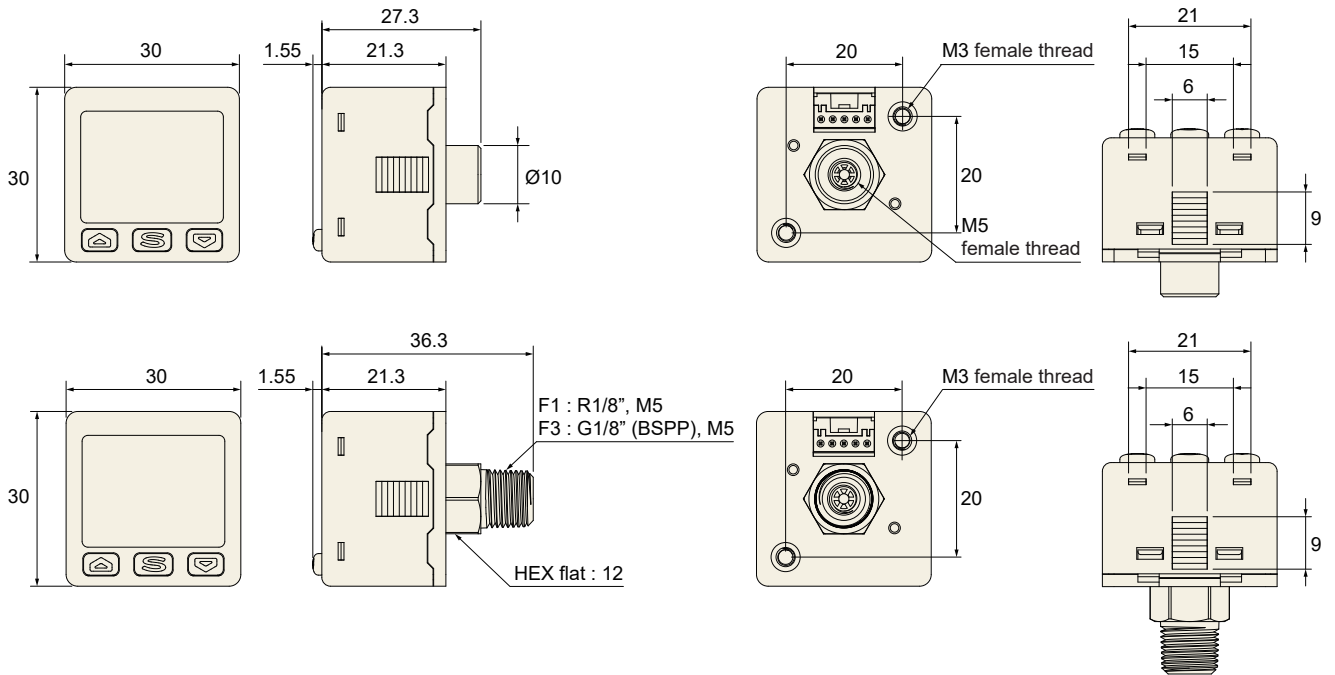
- Panel Adapter : PA-C



- Panel Adapter + Front Protective Lid : PA-D

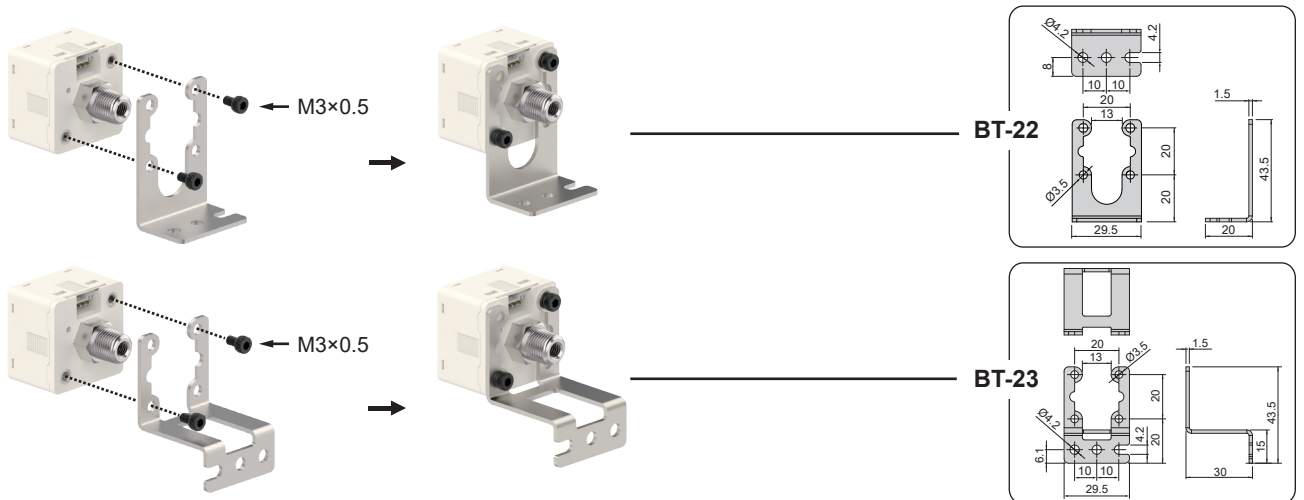


Dimensions

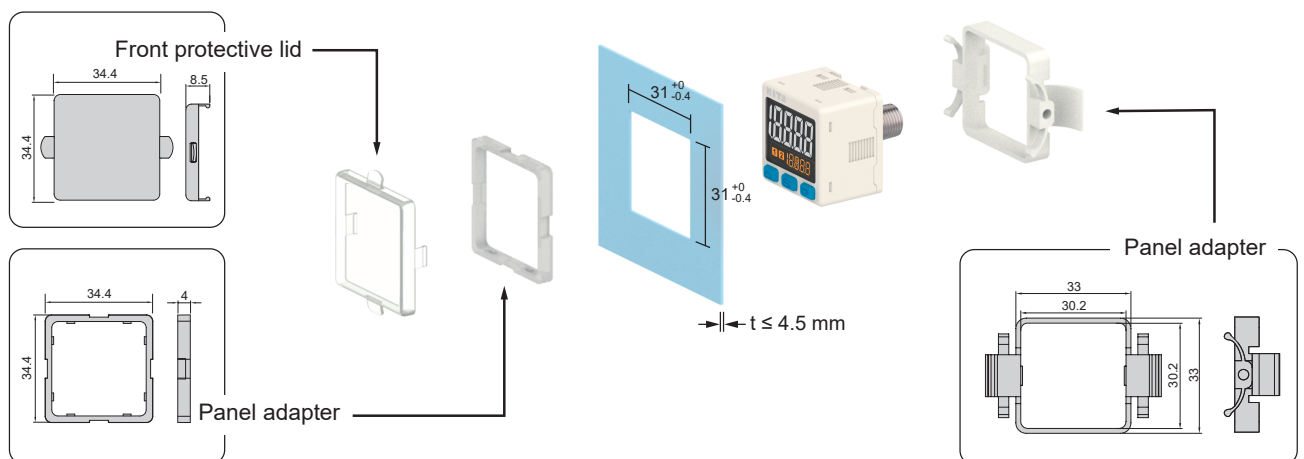


Optional Parts Dimensions

1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



Unit : mm