KP10 SERIES

Compact Pressure Sensor - Analog Output

Features

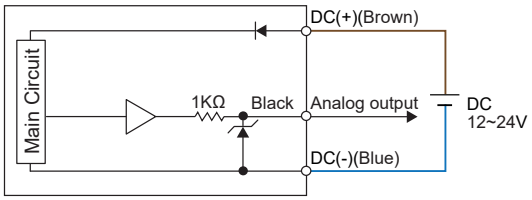
- Simple installation, plug-in port or thread-in fitting
- Compact size : 26 × 10 × 10.4 mm
- Rated pressure range :
  Compound (-100 ~ 100 kPa)
  Compound (-101 ~ 500 kPa)
  Low (0 ~ 100 kPa)
  Vacuum (0 ~ -101.3 kPa)
  Positive (0 ~ 1.0 MPa)
  Micro pressure S1 (0 ~ 10 kPa)
  Micro pressure S2 (0 ~ 5 kPa)

Specifications

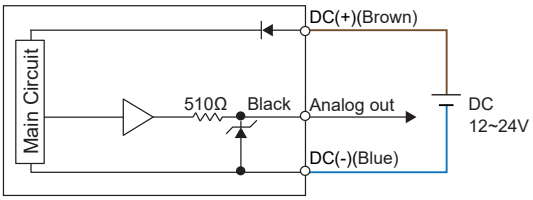
MODEL		KP10S1	KP10S2	KP10C-01	KP10L-01	KP10V-01	KP10R-01	KP10P-01
1.0 MPa 0 -101.3 kPa								
Rated Pressure Range		0 ~ 10 kPa	0 ~ 5 kPa	-100 ~ 100 kPa	0 ~ 100 kPa	0 ~ -101.3 kPa	-101 ~ 500 kPa	0 ~ 1.0 MPa
Withstand Pressure		20 kPa		0.2 MPa			1.5 MPa	
Fluid		Filtered air, Non-corrosive / Non-flammable gas						
Power Supply Voltage		12 ~ 24 V DC (5 % ripple voltage)						
Current Consumption		≤ 15 mA		≤ 10 mA				
Analog Output		1 ~ 5 V ± 1 % F. S. / Linearity ± 0.5 % F. S.	1 ~ 5 V ± 1.5 % F. S. / Linearity ± 1 % F. S.	1 ~ 5 V ± 1 % F. S. / Linearity ± 0.5 % F. S.				
Environment	Enclosure	IP40						
	Ambient Temp. Range	Operation : 0 ~ 50 °C (32 ~ 122 ºF), Storage : -20 ~ 70 °C (-4 ~ 158 ºF) (No condensation or freezing)						
	Ambient Humidity Range	Operation / Storage : 35 ~ 85% RH (No condensation)						
	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	980 m/s² (100 G), 3 times each in direction of X, Y and Z						
Temperature Characteristic		± 3 % F.S. of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C)		± 2 % F.S. of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C)				
Piping Size		R4 : Ø4 mm ; R6 : Ø6 mm ; F1 : R1/8", M5 ; F2 : NPT1/8", M5 ; F3 : G1/8" (BSPP) , M5 ; M5 : M5 * 0.8						
Lead Wire		Ø2.6 Oil-resistance cable (PVC) - 26 AWG (0.15 mm²) - 3 cores						
Weight (with 3 meter lead wire)		Approx. 50 g						

Circuit Wiring Diagrams

KP10S□ - 01 - □ - □
Analog Output (1 ~ 5 V)



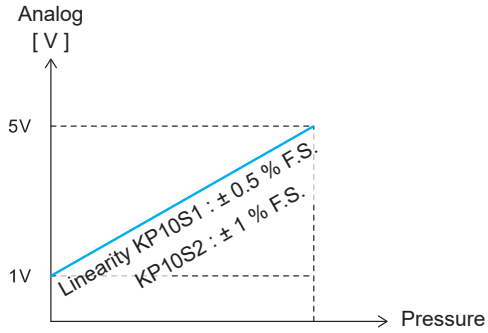
KP10□ - 01 - □ - □
Analog Output (1 ~ 5 V)



RoHS

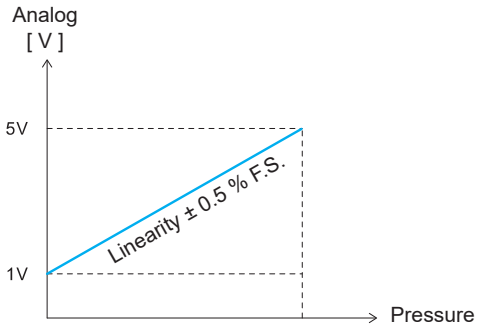
Output Type

KP10S□ - 01 - □ - □



Micro pressure	0 kPa	10 kPa
Micro pressure	0 kPa	5 kPa

KP10□ - 01 - □ - □



Compound	-100 kPa	100 kPa
Compound	-101 kPa	500 kPa
Low	0 kPa	100 kPa
Vacuum	0 kPa	-101.3 kPa
Positive	0 kPa	1.0 MPa

Ordering Information

K P 1 0 V - 0 1 - R 4 - □

Pressure Range

C : Compound (-100 ~ 100 kPa)
R : Compound (-101 ~ 500 kPa)
L : Low (0 ~ 100 kPa)
V : Vacuum (0 ~ -101.3 kPa)
P : Positive (0 ~ 1.0 MPa)
S1 : Micro pressure (0 ~ 10 kPa)
S2 : Micro pressure (0 ~ 5 kPa)

Output Specification

01 : Analog output (1 ~ 5 V)

Pressure Port

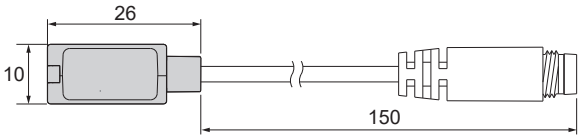
R4 : Ø4 mm
R6 : Ø6 mm
F1 : R1/8", M5
F2 : NPT1/8", M5
F3 : G1/8" (BSPP), M5
M5 : M5 * 0.8

Cable Length / Connector

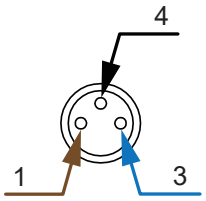
Blank : With 3 meter cable
C : With M8 3Pin male connector

Dimensions

KP10□ - 01 - □ - C

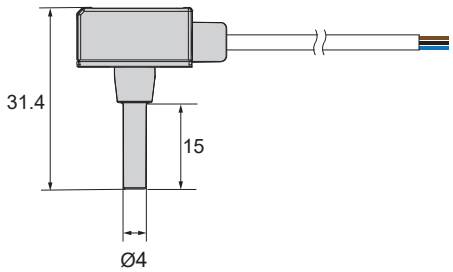


QD PINOUT

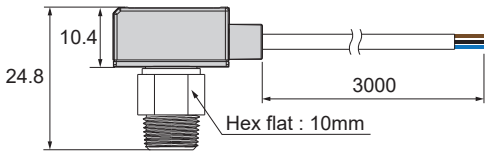


(1) Brown(+)
(3) Blue (-)
(4) Black (Analog out)

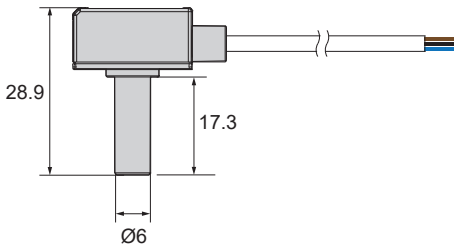
KP10□ - 01 - R4



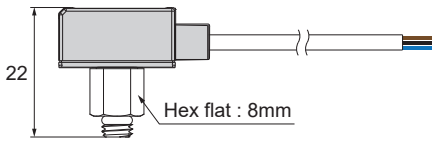
KP10□ - 01 - F1, F2, F3



KP10□ - 01 - R6



KP10□ - 01 - M5



Unit : mm

For your safety, please read the following before using.

① Do not use corrosive or flammable gas or liquid with this product.

② Please use within the setting pressure range. Do not apply pressure beyond recommended maximum pressure, permanent damage to the pressure sensor may occur.

③ Do not drop, hit or allow excessive shock. Even if switch body appears undamaged, internal components may be broken and can cause malfunction.

④ Turn power off before connecting wiring. Wrong wiring or short circuit will damage and/or cause malfunction.

⑤ Do not use in environment containing steam or oil vapor.

⑥ This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.

⑦ Wiring for pressure sensor should avoid power source line and high voltage line. If use in the same circuit, noise may cause malfunction.

⑧ ESD protection ±4KV.

A. SPECIFICATIONS	KP10S1-01	KP10S2-01
Rated pressure range	0 ~ 10 kPa	0 ~ 5 kPa
Withstand pressure	20 kPa	
Fluid	Filtered air, Non-corrosive/Non-flammable gas	
Power supply voltage	12 to 24V DC (5% ripple voltage)	
Current consumption	15 mA max.	
Analog output	1~5V ±1%F.S. / Linearity ±0.5%F.S.	1~5V ±1.5%F.S. / Linearity ±1%F.S.
Enclosure	IP40	
Temperature characteristic	±3% F.S. of detected pressure (25°C) at temp. Range of 0~50°C	
Ambient temp. range	Operation: 0 ~ 50°C, Storage: -20 ~ 70°C (No condensation or freezing)	
Ambient humidity range	Operation/Storage: 35 ~ 85% RH (No condensation)	
Vibration	Total amplitude 1.5mm or 10G, 10Hz~55Hz~10Hz scan for 1 minute, two hours each direction of X, Y and Z	
Shock	980m/s^2 (100G), 3 times each in direction of X, Y and Z	
Piping size	R4 : Φ4mm ; R6 : Φ6mm ; F1 : R1/8", M5 ; F2 : NPT1/8", M5 ; F3 : G1/8"(BSPP), M5 ; M5 : M5*0.8	
Lead wire	Oil-resistance cable, 3 wires (0.18mm^2), Φ2.6mm	
Weight	Approx. 50g (with 3-meter lead wire)	

B. ORDERING INFORMATION

K P 1 0 [S 1] - 0 1 - [ ] - [ ]

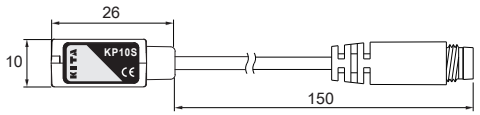
Pressure Range
S1 : Micro (0 ~ 10 kPa)
S2 : Micro (0 ~ 5 kPa)

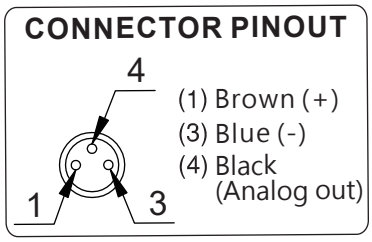
Output Specifications
01 : Analog output (1~5V)

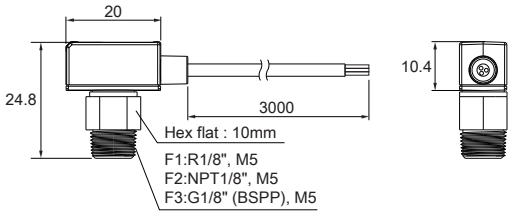
Pressure Port
R4 : Φ 4mm Tube
R6 : Φ 6mm Tube
F1 : R1/8", M5
F2 : NPT1/8", M5
F3 : G1/8"(BSPP), M5
M5 : M5*0.8

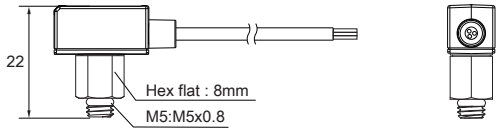
Cable Length/Connector
Blank : With 3 meter cable
C : With M8 3Pin male connector

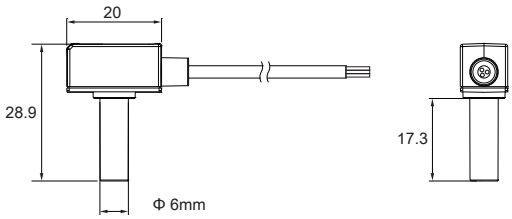
C. DIMENSIONS

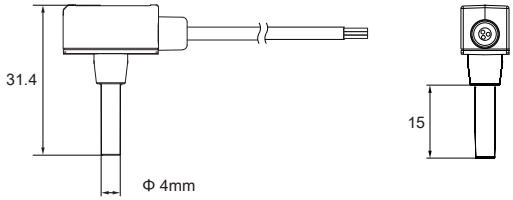






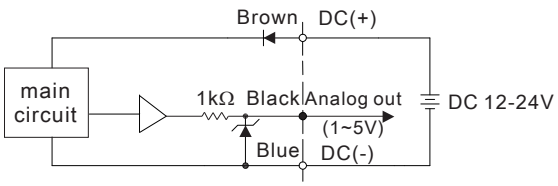




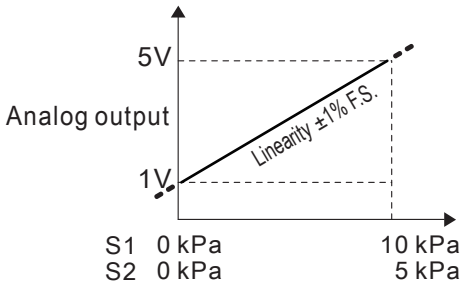


Unit:mm

D. CIRCUIT WIRING DIAGRAM



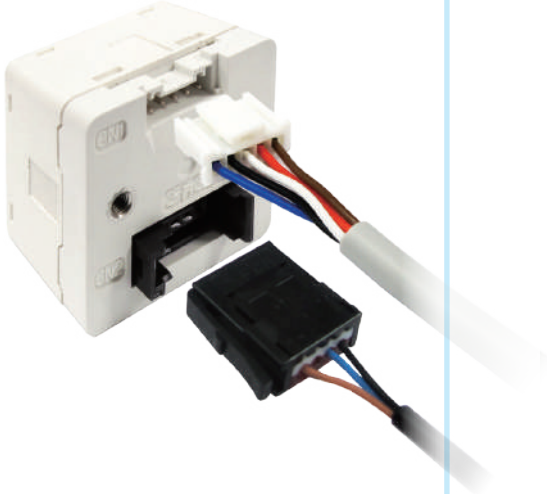
E. OUTPUT TYPE

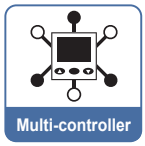


KP400 SERIES Multi-Controller

Features

- 3-color digital LCD display
- Selectable pressure unit :
  kPa、MPa、kgf / cm²、bar、psi、inHg、mmHg
- Dual LCD display allows setting value to be displayed
- Key-lock indicator
- Analog output : 1 ~ 5 V or 4 ~ 20 mA
- Sensor input : 1 ~ 5 V or 4 ~ 20 mA
- 12 pressure ranges for transducer

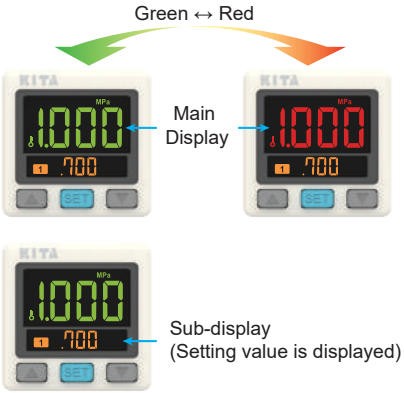




Features Highlight

1 3-Color Digital LCD Display

- Main display color change with output status

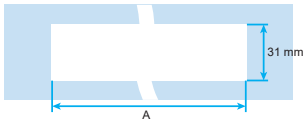


2 Selectable Pressure Unit

- Unit conversion easy to read

3 Save Installation Space

Panel opening for multiple pressure controller



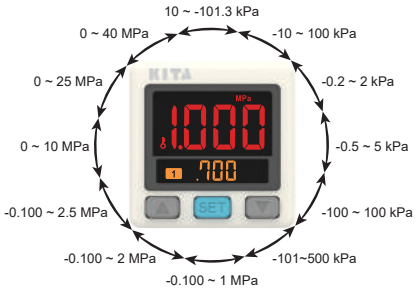
Calculation factor (A) = (34.4 x n) - 3.4
n = number of controller

Actual dimension after installation

4 Key-lock Function

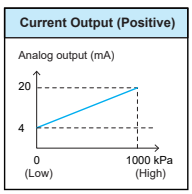
- Key-lock icon is shown on the display when the function is enabled

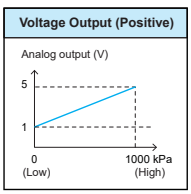
5 12 Pressure Ranges for Transducer



6 Analog Output / Sensor Input

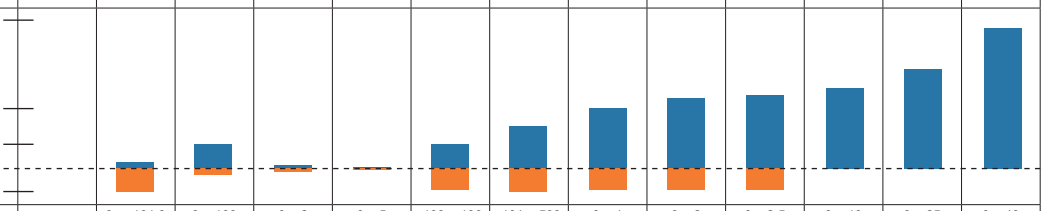
- Current output or voltage output is available





RoHS

Specifications

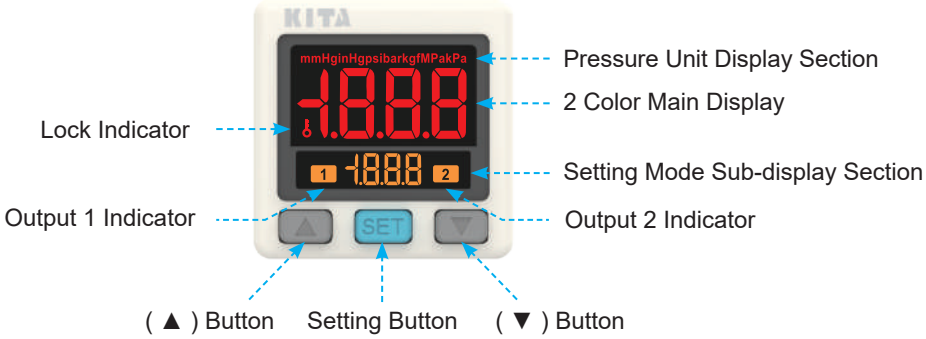
MODEL		KP400												
Sensor Type		S - 0	S - 1	S - 2	S - 3	S - 4	S - 5	S - 6	S - 7	S - 8	S - 9	S - 10	S - 11	S - 12
40.0 MPa 1.0 MPa 100 kPa 0 -101.3 kPa														
Rated Pressure Range		Self-Setting ※1	0 ~ -101.3 kPa	0 ~ 100 kPa	0 ~ 2 kPa	0 ~ 5 kPa	-100 ~ 100 kPa	-101 ~ 500 kPa	0 ~ 1 MPa	0 ~ 2 MPa	0 ~ 2.5 MPa	0 ~ 10 MPa	0 ~ 25 MPa	0 ~ 40 MPa
Set Pressure Range			10 ~ -101.3 kPa	-10 ~ 100 kPa	-0.2 ~ 2 kPa	-0.5 ~ 5 kPa	-100 ~ 100 kPa	-101 ~ 500 kPa	-0.100 ~ 1 MPa	-0.100 ~ 2 MPa	-0.100 ~ 2.5 MPa	0 ~ 10 MPa	0 ~ 25 MPa	0 ~ 40 MPa
Set Pressure Range (Auto-Shift Input)		-	101.3 ~ -101.3 kPa	-100 ~ 100 kPa	-2 ~ 2 kPa	-5 ~ 5 kPa	-100 ~ 100 kPa	-500 ~ 500 kPa	-1 ~ 1 MPa	-2 ~ 2 MPa	-2.5 ~ 2.5 MPa	-10 ~ 10 MPa	-25 ~ 25 MPa	-40 ~ 40 MPa
Set Pressure Resolution	kPa	Self-Setting	0.1	0.1	0.01	0.01	0.1	1	-	-	-	-	-	-
	MPa		-	-	-	-	-	-	0.001	0.01	0.01	0.01	0.1	0.1
	kgf / cm²		0.001	0.001	-	-	0.001	0.01	0.01	0.1	0.1	0.1	1	1
	bar		0.001	0.001	-	-	0.001	0.01	0.01	0.1	0.1	0.1	1	1
	psi		0.01	0.01	-	-	0.01	0.1	0.1	1	1	1	1 ※2	1 ※2
	inHg		0.1	-	-	-	0.1	-	-	-	-	-	-	-
	mmHg		1	-	0.1	0.1	1	-	-	-	-	-	-	-
	- - -		-	-	-	-	-	-	-	-	-	-	-	-
Power Supply Voltage		12 ~ 24 V DC ± 10 %, Ripple (P-P) ≤ 10 %												
Current Consumption		≤ 40 mA (with no load)												
Sensor Input		1 ~ 5 V or 4 ~ 20 mA												
Switch Output		2 NPN : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 30 V DC Residual Voltage : ≤ 1.5 V						2 PNP : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Residual Voltage : ≤ 1.5 V						
Repeatability		± 0.1 % F.S. ± 1 digit												
Hysteresis	One Point Set Mode	Adjustable ※3												
	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		± 1 % F.S. ± 1 digit (Ambient temperature : 25 ± 3 °C)												
Switch on Indicator		Orange Indicator 1 : OUT1 & Orange Indicator 2 : OUT2												
Analog output (Voltage Output) ※4		Output Voltage : 1 ~ 5 V ± 2 % F.S. (within rated pressure range) Linearity : ± 1 % F.S. Output Impedance : about 1 kΩ												
Analog output (Current Output) ※5		Output Current : 4 ~ 20 mA ± 2 % F.S. (within rated pressure range) Linearity : ± 1 % F.S. Max. Load Impedance : 300 Ω at power supply of 12 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 ~ 55 Hz ~ 10 Hz scan for 1 minute, 2 hours each direction of X, Y and Z												
	Shock	100 m/s² (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)												
Lead Wire		Ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm²) - 5 cores												
Weight (with 2 meter lead wire)		Approx. 67 g												

NOTE

※1 : S-0 : Set the sensor range (1999 ~ -1999) by self. The decimal place can be adjusted.
※2 : If set pressure unit is psi, the value requires to ten multiply by display value.
※3 : Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.
※4 : If analog voltage output is selected, the analog current output cannot be selected at the same time.
※5 : If analog current output is selected, the analog voltage output cannot be selected at the same time.

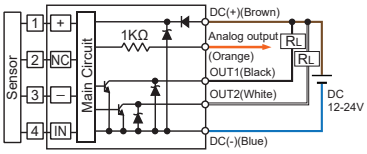
KP400 SERIES Multi-Controller

Panel Description

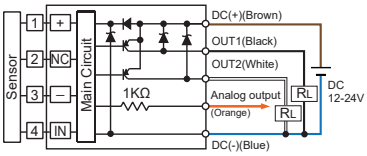


Output Circuit Wiring Diagrams

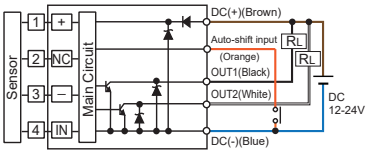
KP4☐0 - 010
2 NPN + Analog Output (1 ~ 5 V)



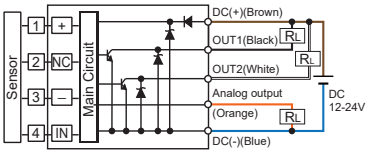
KP4☐0 - 030
2 PNP + Analog Output (1 ~ 5 V)



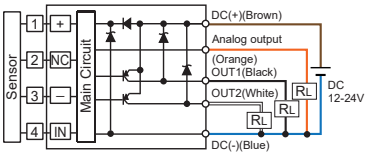
KP4☐0 - 05
2 NPN Output + Auto-shift input



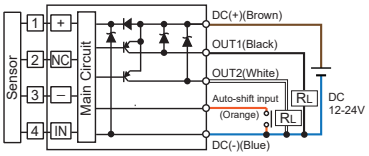
KP4☐0 - 011
2 NPN + Analog Output (4 ~ 20 mA)



KP4☐0 - 031
2 PNP + Analog Output (4 ~ 20 mA)



KP4☐0 - 07
2 PNP Output + Auto-shift input



Ordering Information

K P 4 1 0 - 0 1 0

Input Specifications
1 : Voltage input
2 : Current input

Output Channel
0 : 1 Channel

Input / Output Specifications
010 : 2 NPN outputs & Analog output (1 ~ 5 V)
011 : 2 NPN outputs & Analog output (4 ~ 20 mA)
030 : 2 PNP outputs & Analog output (1 ~ 5 V)
031 : 2 PNP outputs & Analog output (4 ~ 20 mA)
05 : 2 NPN outputs & Auto-shift input
07 : 2 PNP outputs & Auto-shift input

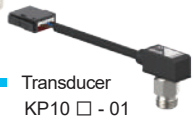
Optional Parts
BT-8 : Mounting bracket
BT-9 : Mounting bracket
PA-C : Panel adapter
PA-D : Panel adapter + Front protective lid
CN-0046A : Sensor connector Ø0.8 ~ Ø1.0 mm, 26 ~ 24 AWG
CN-0046B : Sensor connector Ø1.0 ~ Ø1.2 mm, 26 ~ 24 AWG
CN-0046C : Sensor connector Ø1.2 ~ Ø1.6 mm, 26 ~ 24 AWG
KP10 ☐ -01 : Transducer

Optional Parts

- Mounting Bracket : BT-8 / BT-9

- Sensor Connector CN - 0046 ☐

- Transducer KP10 ☐ - 01

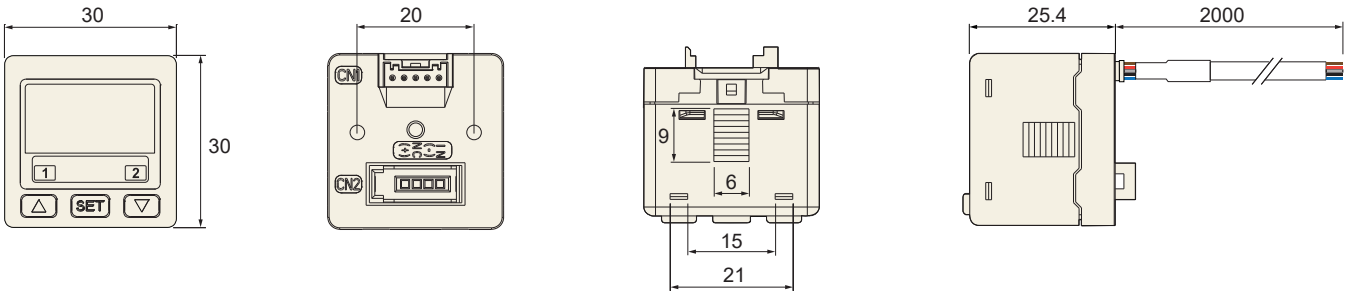


- Panel Adapter : PA-C

- Panel Adapter + Front Protective Lid : PA-D

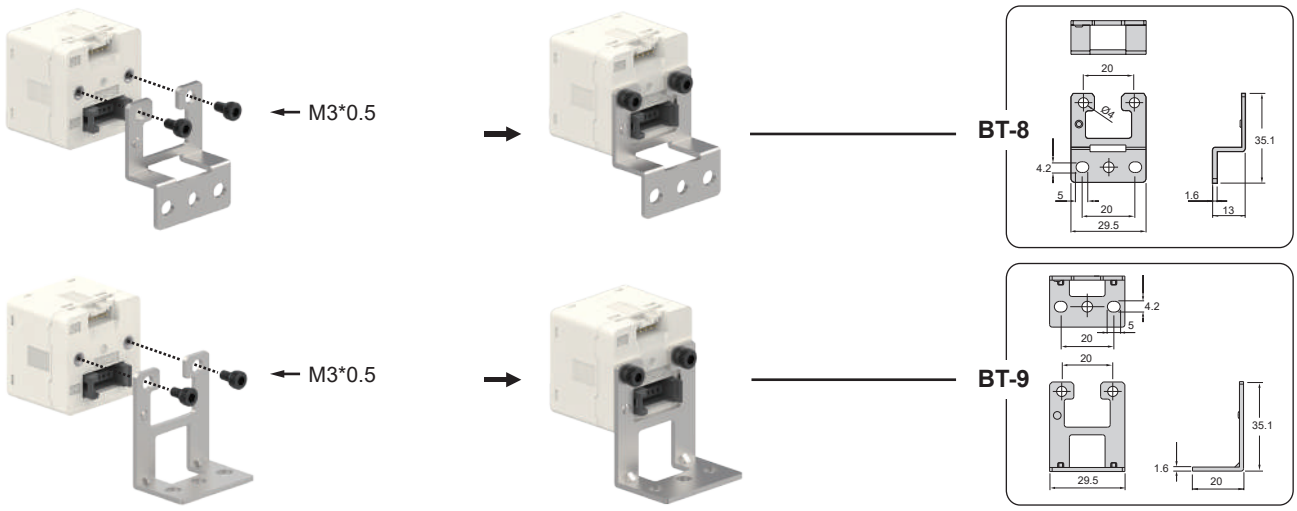
RoHS

Dimensions

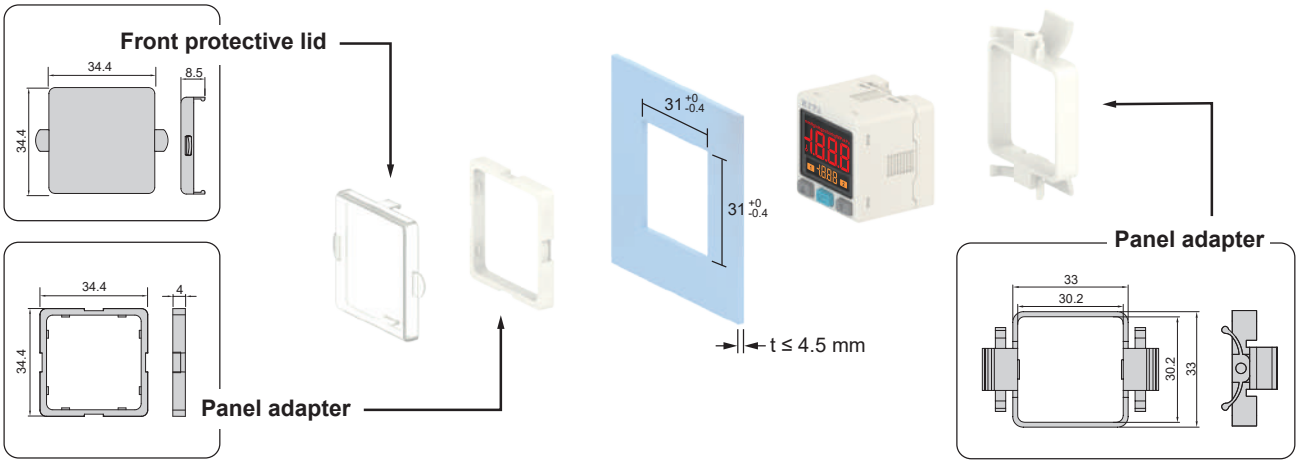


Optional Parts Dimensions

1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



Unit : mm

For your safety, please read the following before using.

① Do not drop, hit or allow excessive shock. Even if switch body appears undamaged, internal components may be broken and can cause malfunction.
② Turn power off before connecting wiring. Wrong wiring or short circuit will damage and / or cause malfunction.
③ Do not use in environment containing steam or oil vapor.
④ This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.
⑤ Wiring for pressure controller should avoid power source line and high voltage line. If use in the same circuit, noise may cause malfunction.

A. SPECIFICATIONS		KP400												
SENSOR TYPE		S-0	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12
Rated pressure range		Self-Setting *1	0 ~ -101.3 kPa	0 ~ 100 kPa	0 ~ 2 kPa	0 ~ 5 kPa	-100 ~ 100 kPa	-101 ~ 500 kPa	0 ~ 1 MPa	0 ~ 2 MPa	0 ~ 2.5 MPa	0 ~ 10 MPa	0 ~ 25 MPa	0 ~ 40 MPa
Setting pressure range			10 ~ -101.3 kPa	-10 ~ 100 kPa	-0.2 ~ 2 kPa	-0.5 ~ 5 kPa	-100 ~ 100 kPa	-101 ~ 500 kPa	-0.100 ~ 1 MPa	-0.100 ~ 2 MPa	-0.100 ~ 2.5 MPa	0 ~ 10 MPa	0 ~ 25 MPa	0 ~ 40 MPa
Setting pressure range (Auto-shift input)		–	101.3 ~ -101.3 kPa	-100 ~ 100 kPa	-2 ~ 2 kPa	-5 ~ 5 kPa	-100 ~ 100 kPa	-500 ~ 500 kPa	-1 ~ 1 MPa	-2 ~ 2 MPa	-2.5 ~ 2.5 MPa	-10 ~ 10 MPa	-25 ~ 25 MPa	-40 ~ 40 MPa
Set pressure resolution	kPa	Self-Setting	0.1	0.1	0.01	0.01	0.1	1	–	–	–	–	–	–
	MPa		–	–	–	–	–	–	0.001	0.01	0.01	0.01	0.1	0.1
	kgf/cm²		0.001	0.001	–	–	0.001	0.01	0.01	0.1	0.1	0.1	1	1
	bar		0.001	0.001	–	–	0.001	0.01	0.01	0.1	0.1	0.1	1	1
	psi		0.01	0.01	–	–	0.01	0.1	0.1	1	1	1	1(*5)	1(*5)
	inHg		0.1	–	–	–	0.1	–	–	–	–	–	–	–
	mmHg		1	–	0.1	0.1	1	–	–	–	–	–	–	–
	---		–	–	–	–	–	–	–	–	–	–	–	–
Power supply voltage		12 to 24V DC ±10%, Ripple (P-P) 10% or less												
Current consumption		≤ 40mA (With no load)												
Sensor input		1~5V or 4~20mA												
Switch output		NPN: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 30V DC Residual voltage: ≤ 1.5V PNP: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 24V DC Residual voltage: ≤ 1.5V												
Repeatability (Switch output)		±0.1% F.S. ±1 digit												
Hysteresis	One point set mode	Adjustable (*2)												
	Hysteresis mode													
	Window comparator mode													
Response time		≤ 2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selectable)												
Output short circuit protection		Yes												
7 segment LCD display		Two color(Red/Green) main & unit display, Orange sub-display (Sampling rate: 5 times/1sec.)												
Indicator accuracy		±1% F.S. ±1 digit (ambient temperature: 25 ±3°C)												
Switch ON Indicator		Orange (1 & 2 Indicator) OUT1 OUT2												
Analog output (Voltage Output) *3		Output Voltage: 1 to 5V ±2% F.S. (within rated pressure range) Linearity: ±1% F.S. Output impedance: about 1kΩ												
Analog output (Current Output) *4		Output Current: 4 to 20mA ±2% F.S.(within rated pressure range) Linearity: ±1% F.S. Max.Load Impedance: 300Ω at power supply of 12V 600Ω at power supply of 24V Min.Load impedance: 50Ω												
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	1000V AC in 1-min (between case and lead wire)												
	Insulation resistance	50MΩ (at 500V DC, between case and lead wire)												
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z												
	Shock	100m/s²(10G), 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												
Lead wire		Oil-resistance cable(0.15mm²)												
Weight		Approx. 67g (with 2 meter lead wire)												

*1. S-0 : Set the sensor range (1999 ~ -1999) by self. The decimal place can be adjusted.
*2. Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.
*3. If analog voltage output is selected, the analog current output cannot be selected at the same time.
*4. If analog current output is selected, the analog voltage output cannot be selected at the same time.
*5. If set pressure unit is psi, the value requires to ten multiply by display value.

B. ORDERING INFORMATION

K P 4 1 0 - 0 1 0

Input Specifications

1 : Voltage input
2 : Current input

Output Channel

0 : 1 Channel

Input/Output Specifications

010 : 2 NPN outputs & Analog output (1~5V)
011 : 2 NPN outputs & Analog output (4~20mA)
030 : 2 PNP outputs & Analog output (1~5V)
031 : 2 PNP outputs & Analog output (4~20mA)
05 : 2 NPN outputs & Auto-shift input
07 : 2 PNP outputs & Auto-shift input

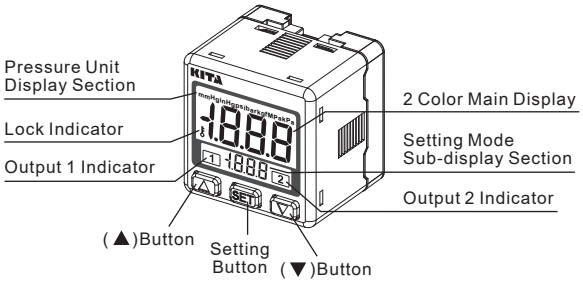
Standard Part

CN-0048-01 :
Power supply / Output connection cable

Optional Parts

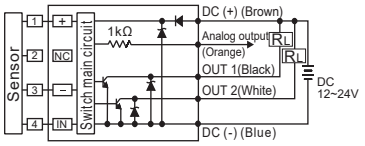
BT-8 : Mounting bracket
BT-9 : Mounting bracket
PA-C : Panel adapter
PA-D : Panel adapter + Front protective lid
CN-0046A : Sensor connector Ø0.8~Ø1.0 mm, 24~26AWG
CN-0046B : Sensor connector Ø1.0~Ø1.2 mm, 24~26AWG
CN-0046C : Sensor connector Ø1.2~Ø1.6 mm, 24~26AWG
KP10□-01 : Transducer

C. PANEL DESCRIPTION

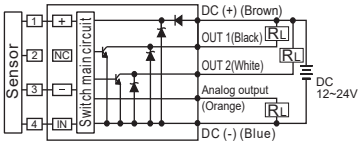


D. OUTPUT CIRCUIT WIRING DIAGRAMS

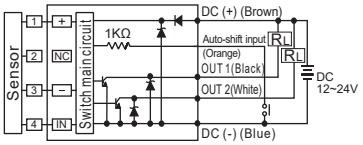
KP4□0-010
2NPN+Analog(Voltage) output



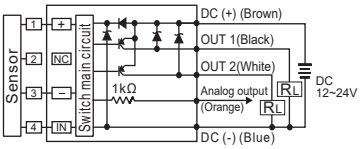
KP4□0-011
2NPN+Analog(Current) output



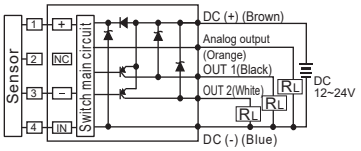
KP4□0-05
2NPN output + Auto-shift input



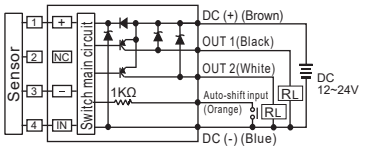
KP4□0-030
2PNP+Analog(Voltage) output



KP4□0-031
2PNP+Analog(Current) output

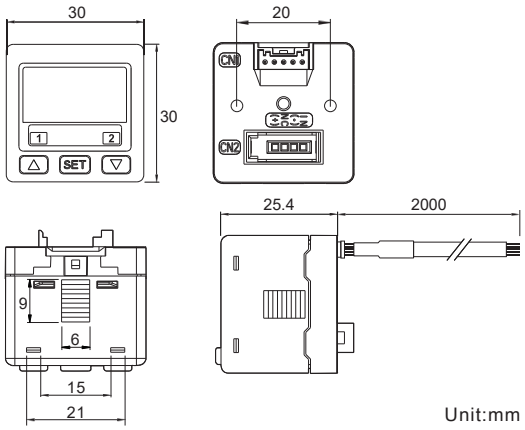


KP4□0-07
2PNP output + Auto-shift input



*Two wire current input only can be used "+" & "OUT" type.

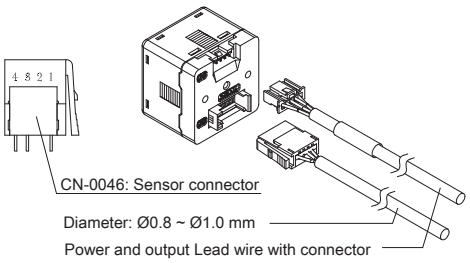
E. DIMENSIONS



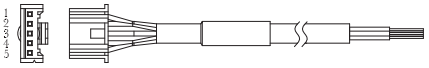
Unit:mm

F. CONNECTOR

PIN No.	Wire Color
1	Brown (DC+)
2	NC
3	Blue (DC-)
4	Black (IN)

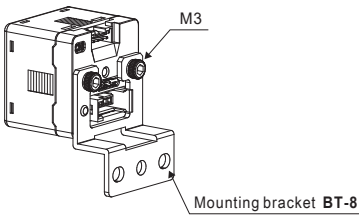


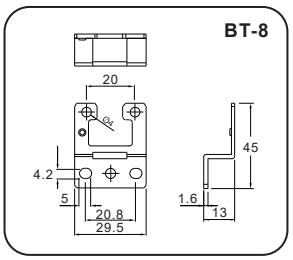
PIN No.	Wire Color
1	Brown (DC+)
2	Orange (Analog or Auto Shift)
3	White (OUT2)
4	Black (OUT1)
5	Blue (DC-)

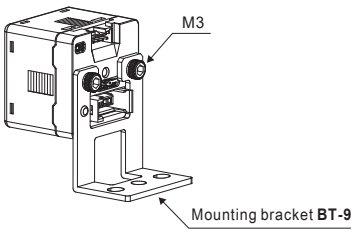


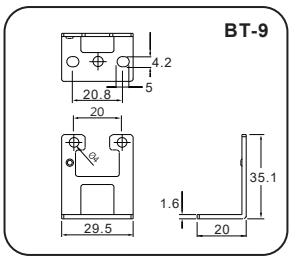
G. OPTIONAL PARTS DIMENSIONS

① Mounting bracket

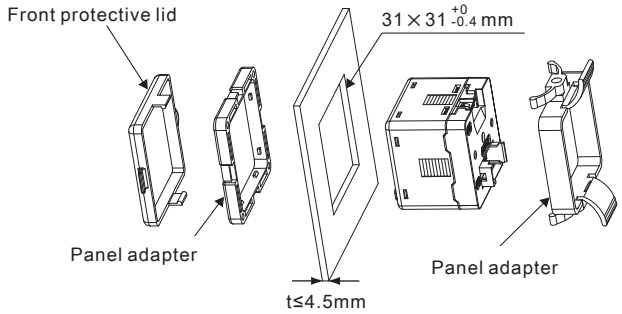


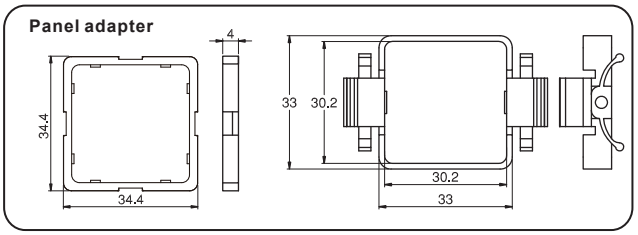


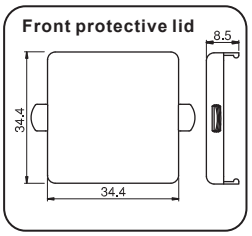




② Panel Mounting

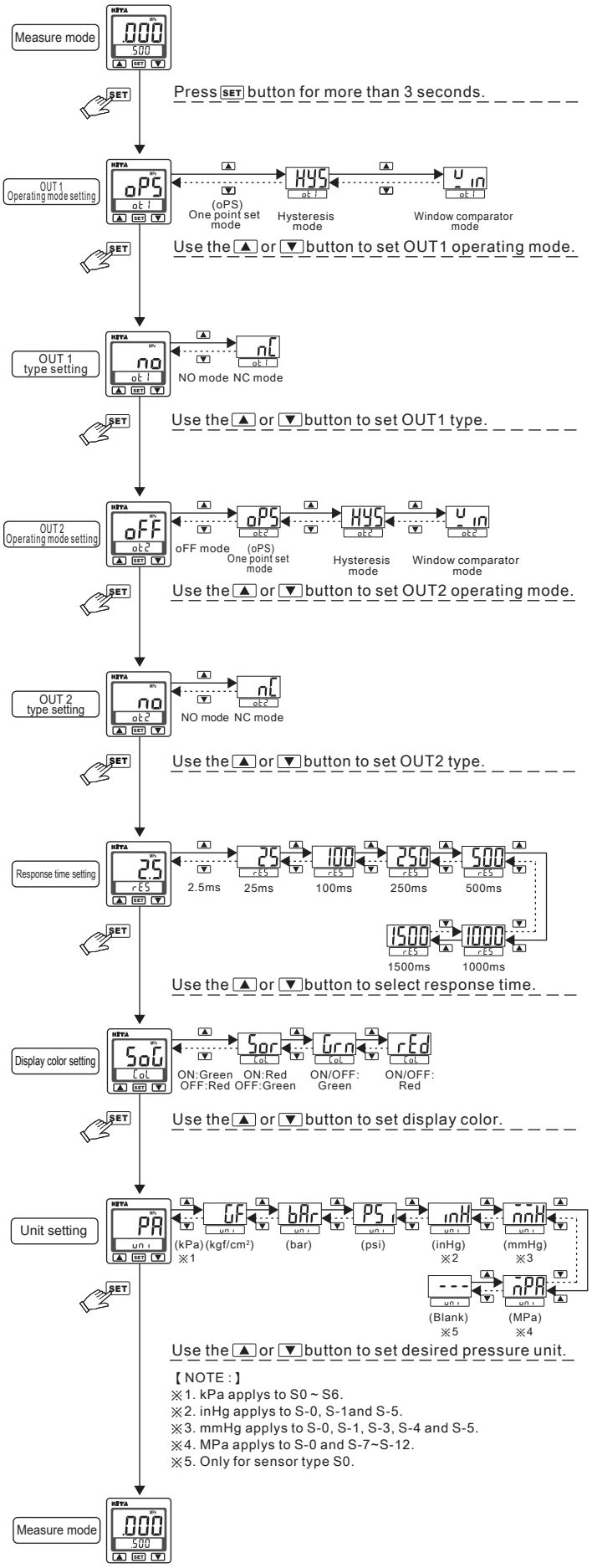




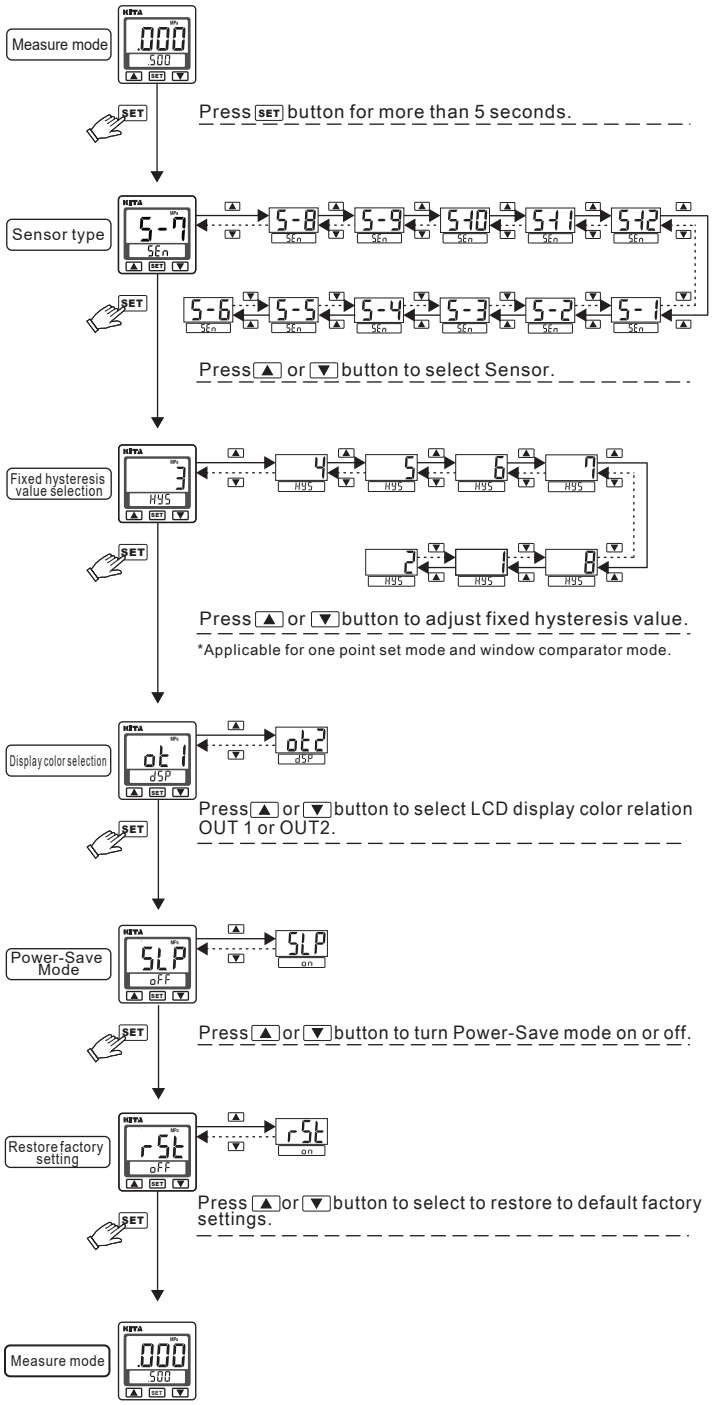


Unit:mm

H. INITIAL SETTING MODE



I. ADVANCE SETTING MODE

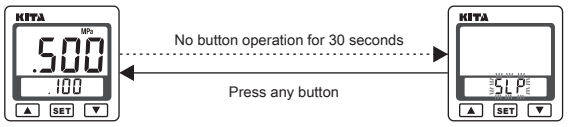


J. POWER-SAVE MODE

◎ During Power-Save mode, the main display will turned off if no buttons is pressed after 30 seconds.

◎ During Power-Save mode, the output LCD's may not be synchronize with the output. It is normal and will not affect output operation.

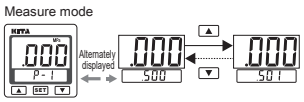
◎ Press any button to turn-on main display temporarily.



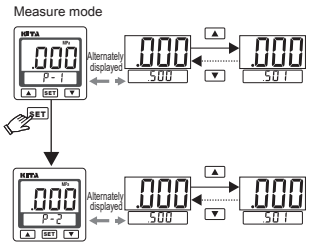
(Main display is off,
sub-display will flash " SLP ")

K. PRESSURE SETTING MODE

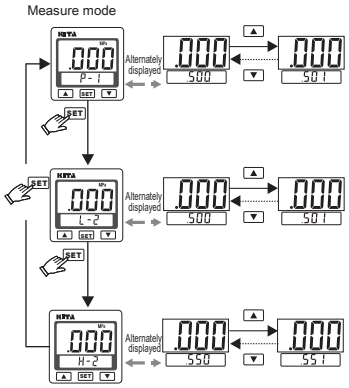
◎ Setting Condition 1 :
OUT 1 mode setting :
" oPS " (One point set mode)
OUT 2 mode setting :
" oFF " (Not used)



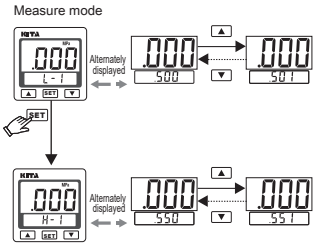
◎ Setting Condition 2 :
OUT 1 mode setting :
" oPS " (One point set mode)
OUT 2 mode setting :
" oPS " (One point set mode)



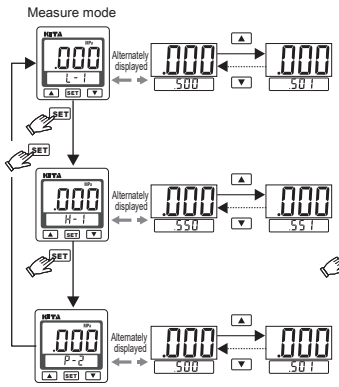
◎ Setting Condition 3 :
OUT 1 mode setting :
" oPS " (One point set mode)
OUT 2 mode setting :
" HYS " (Hysteresis mode)
" Win " (Window comparator mode)



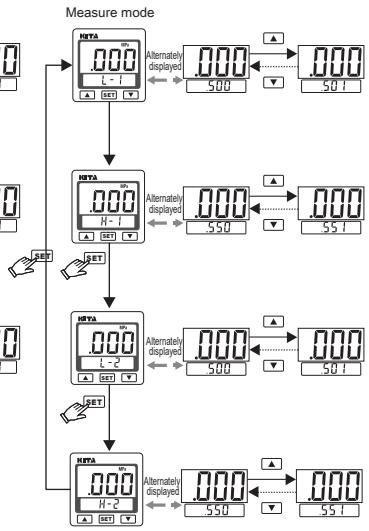
◎ Setting Condition 4 :
OUT 1 mode setting :
" HYS " (Hysteresis mode)
" Win " (Window comparator mode)
OUT 2 mode setting :
" oFF " (Not used)



◎ Setting Condition 5 :
OUT 1 mode setting :
" HYS " (Hysteresis mode)
" Win " (Window comparator mode)
OUT 2 mode setting :
" oPS " (One point set mode)



◎ Setting Condition 6 :
OUT 1 mode setting :
" HYS " (Hysteresis mode)
" Win " (Window comparator mode)
OUT 2 mode setting :
" HYS " (Hysteresis mode)
" Win " (Window comparator mode)

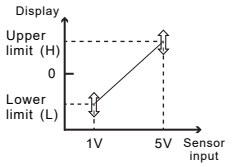


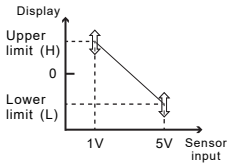
【NOTE :】
Do not disconnect power when the sub-display and setting value is flashing alternately; otherwise the system cannot store the values.

L. S-0 PRESSURE SETTING MODE

The pressure can be set to the value within the range of ±1999, and decimal place can be adjusted.

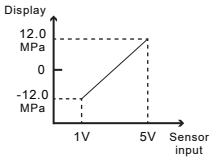
※NOTE : Upper limit (H) and lower limit (L) can't be set the same polarity.

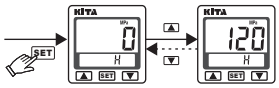




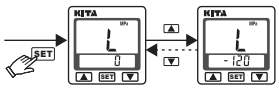
	S-0
Upper(H)	000
	~
Lower(L)	000

Ex.) ±12.0 MPa

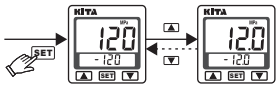




Upper(H) limit setting



Lower(L) limit setting

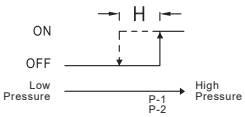


Decimal places setting

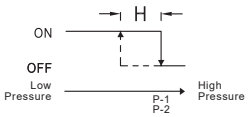
M. OUTPUT TYPE

(1) One point set mode:

Normal open mode

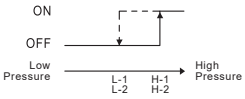


Normal close mode

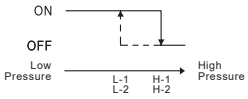


(2) Hysteresis mode:

Normal open mode

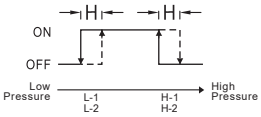


Normal close mode

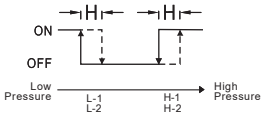


(3) Window comparator mode:

Normal open mode



Normal close mode



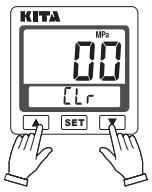
【NOTE :】

*1. In case hysteresis is set at less than or equal to 3 digits, switch output may chatter if input pressure fluctuates near the set point.

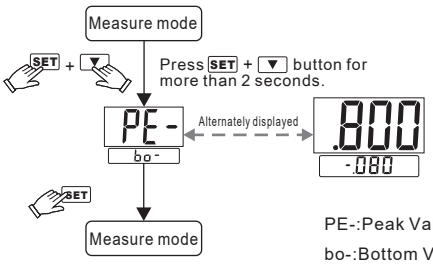
*2. When using window comparator mode, the difference between two set points must be greater than the fixed hysteresis, otherwise will cause the switch output to malfunction.

N. ZERO POINT SETTING

Press the ▲ + ▼ button at the same time until the "00" is shown.
Release the button to end zero setting.



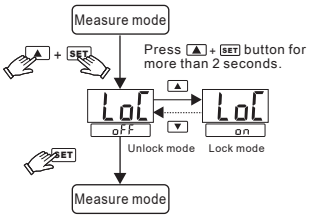
O. PEAK/BOTTOM HOLD FUNCTION



PE-:Peak Value

bo-:Bottom Value

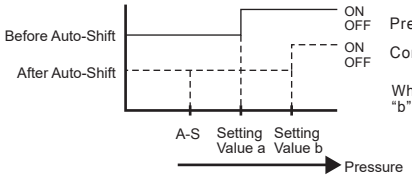
P. KEY LOCK/UNLOCK MODE



◎ Use key lock mode to prevent unauthorized or accidental tampering with the switch setting.

◎ When lock mode is selected, panel will display " ⚷ ".

Q. AUTO-SHIFT MODE



Pressure value by Auto-shift (A-S)

Comfirmed value after Auto-shift b=a+(A-S)

When(A-S) value is 200kPa and "a" is 300kPa, "b" is 500kPa after Auto-shift.

R. APPENDED TABLE

AWG	Diameter (mm)	Color of cover	KITA Product No.	Sumitomo 3M Ltd. Product No.
24~26	Ø0.8 ~ Ø1.0 mm	Red	CN-0046A	37104-3101-000FL
	Ø1.0 ~ Ø1.2 mm	Yellow	CN-0046B	37104-3122-000FL
	Ø1.2 ~ Ø1.6 mm	Orange	CN-0046C	37104-3163-000FL

S. ERROR CODE INSTRUCTION

Error Type		Error code	Error Condition	Troubleshooting
Excess load current error	out1	Er1	Output 1 load current is more than 125 mA	Turn power off and check the cause of overload current or lower the current load under 125 mA, then restart.
	out2	Er2	Output 2 load current is more than 125 mA	
Residual pressure error		Er3	During zero reset, ambient pressure is over ±3% F.S.	Change input pressure to ambient pressure and perform zero reset again.
Applied pressure error		HHH	Supply pressure exceeds the upper limit of pressure setting.	Adjust the pressure within operating pressure range.
		LLL	Supply pressure exceeds the lower limit of pressure setting.	
System error		Er4	Internal system error	Turn power off, and then restart. If error condition remains, please return to factory for inspection.
		Er5	Internal system error	
		Er6	Internal data error	
		Er7	Internal data error	

T. PRESSURE UNIT CONVERSION TABLE

From \ To	Pa	kPa	MPa	kgf/cm²	mmHg	psi	bar	inHg
1 Pa	1	0.001	0.000001	0.000010197	0.00750062	0.000145038	0.00001	0.0002953
1 kPa	1000.000	1	0.001000	0.010197	7.500616	0.145038	0.010000	0.2953
1 MPa	1000000	1000	1	10.197	7500.616	145.038	10	295.2998
1 kgf/cm²	98066.5	98.0665	0.0980665	1	735.559	14.2233	0.980665	28.95979
1 mmHg	133.32	0.13332	0.000133	0.0013595	1	0.019336	0.0013332	0.039370
1 psi	6895	6.895	0.006895	0.07031	51.7157	1	0.06895	2.036074
1 bar	100000.0	100.0000	0.100000	1.01972	750.062	14.5038	1	29.52998
1 inHg	3386.388	3.386388	0.003386	0.034530	25.40000	0.491141	0.033863	1