

## For your safety, please read the following before using.

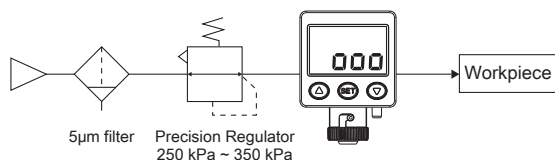
- ① Do not use corrosive or flammable gas or liquid with this product.
- ② Please use within the rated pressure range. Do not apply pressure beyond recommended maximum withstand pressure, permanent damage to the pressure sensor may occur.
- ③ Do not drop, hit or allow excessive shock. Even if switch 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 Optimal operating conditions : Tube O.D. 6.0 mm, tubing length < 1.5 meter , detection nozzle dimension  $\varnothing 1.5\text{mm}$ .
- ⑨ Sensors at end-of-life must be disposed of in accordance with E-Waste regulations of the country/region, NOT disposed of with regular garbage.

## A SPECIFICATIONS

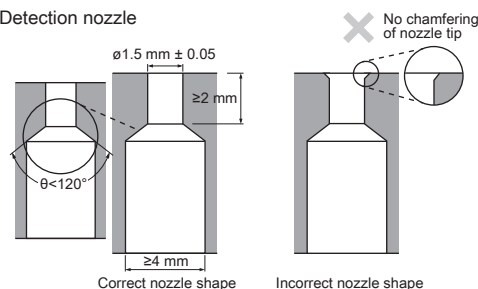
MODEL	KGS01-G-02	KGS01-G-04
Detection distance	0.01 ~ 0.10 mm	
Operating pressure range	250 ~ 350 kPa	
Withstand pressure	600 kPa	
Fluid	Clean air, Non-corrosive / Non-flammable gas (*1)	
Power supply voltage	12 ~ 24 V DC $\pm 10\%$ , Ripple (P-P) $\leq 10\%$	
Current consumption	$\leq 20\text{mA}$	
Switch output	1 NPN : open collector 1 output Max. Load Current : 125 mA Max. Supply Voltage : 30 V DC Residual Voltage : $\leq 1.5\text{V}$	1 PNP : open collector 1 output Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Residual Voltage : $\leq 1.5\text{V}$
Consumption flow rate	$\leq 16\text{L/min @ 300kPa}$	
Repeatability	$\pm 5\ \mu\text{m}$	
Hysteresis	Adjustable 1 ~ 30 digits	
Output short circuit protection	Yes	
Display	3 1/2 digital, 7 segment LCD display ( White ) ( Sampling rate : 5 times / sec. )	
Switch on indicator	White Indicator 1 : OUT1	
Detection nozzle	$\varnothing 1.5\ \text{mm}$ (*2)	
Environment	Enclosure	IP65 (*3)
	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	$\geq 50\ \text{M}\Omega$ ( at 500V 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 <sup>2</sup> ( 10 G ), 3 times each in direction of X, Y and Z
Piping Specifications	Supply port	F1C : Rc1/8" (*4)
	Detection port	
Lead wire	$\varnothing 4$ Oil-resistance cable ( PVC ) - 26 AWG ( 0.15 mm <sup>2</sup> ) - 3 cores	
Weight ( with 2 meter lead wire )	Approx. 115 g	

### 【 NOTE : 】

\*1. Please use air filter to clean air ( 5  $\mu\text{m}$  or less ) and install precision regulator.



\*2. Detection nozzle

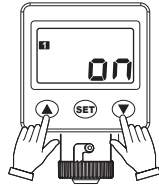


\*3. Dustproof protector must be installed to maintain IP65.

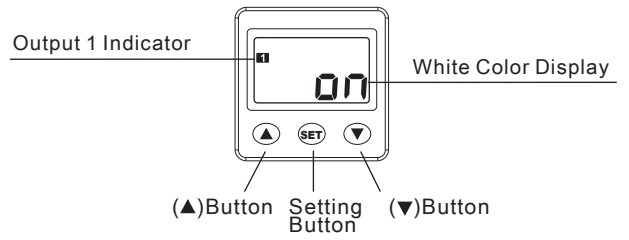
\*4. Back side of product, please refer to product dimension.

## B WORKING POINT SETTING

Press the ▲ + ▼ button at the same time until the "on" is shown, and blink one time then release the buttons to complete working point setting.

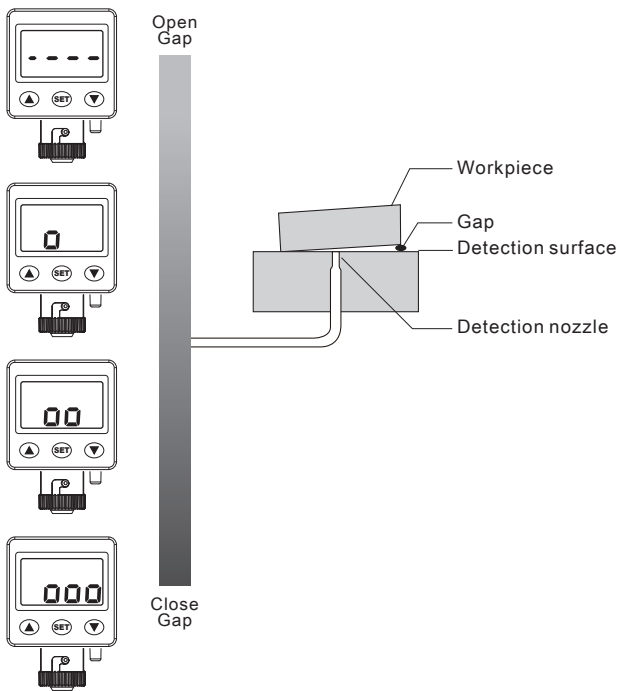


## C PANEL DESCRIPTION

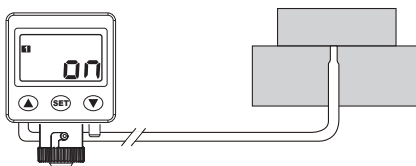


## D MEASUREMENT MODE DISPLAY DESCRIPTION

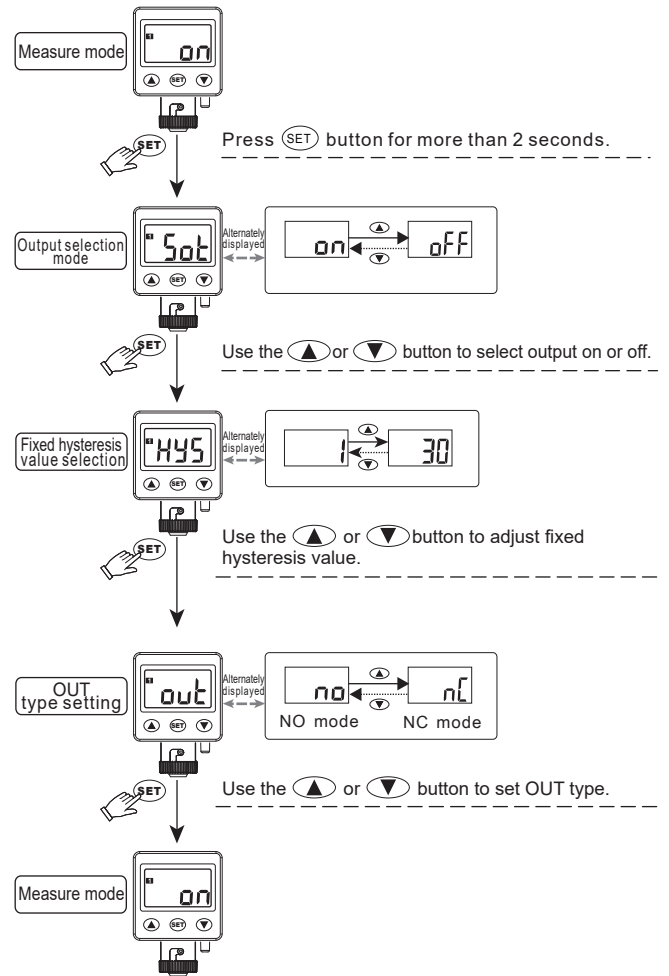
⊙ Workpiece in incorrect position



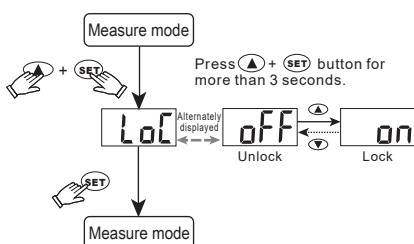
⊙ Workpiece in correct position  
The display shows "on".



## E SETTING MODE



## F KEY LOCK/UNLOCK MODE

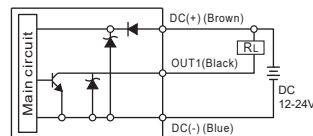


⊙ Key lock mode, it displays as picture when pressing any key. After some time, it would be returned to measure mode.

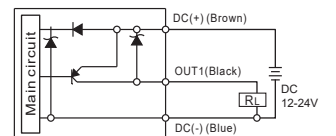


## G OUTPUT CIRCUIT WIRING DIAGRAMS

KGS01-G-02  
1 NPN Output



KGS01-G-04  
1 PNP Output



## H ORDERING INFORMATION

**K G S 0 1 - G - 0 2 - F 1 C**

**Rated Distance Range**

G : 0.01 ~0.10 mm

**Pressure Port**

F1C : Rc1/8"

**Output Specifications**

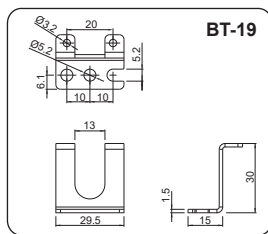
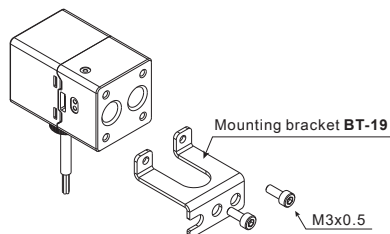
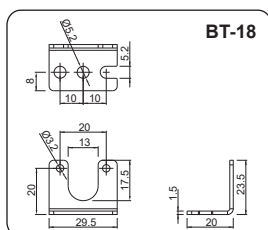
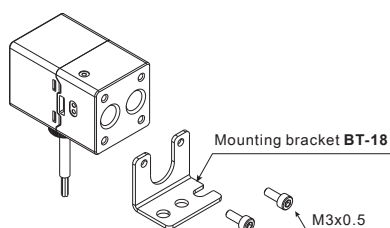
02 : 1 NPN output  
04 : 1 PNP output

**Optional Parts**

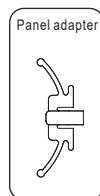
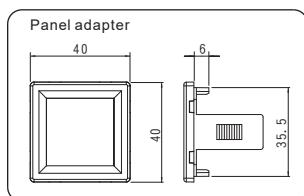
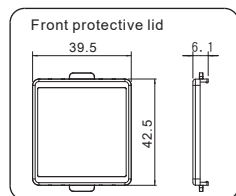
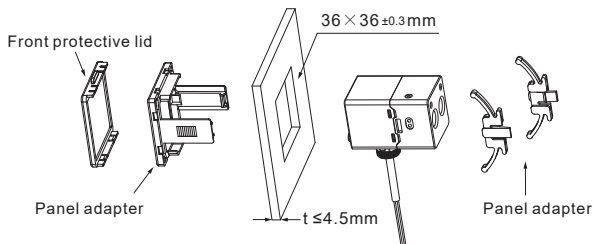
BT-18 : Mounting bracket  
BT-19 : Mounting bracket  
PA-E : Panel adapter  
PA-F : Panel adapter + Front protective lid

## I OPTIONAL PARTS DIMENSIONS

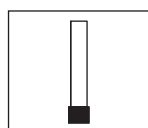
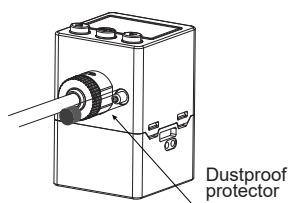
### ① Mounting Bracket



### ② Panel Mounting

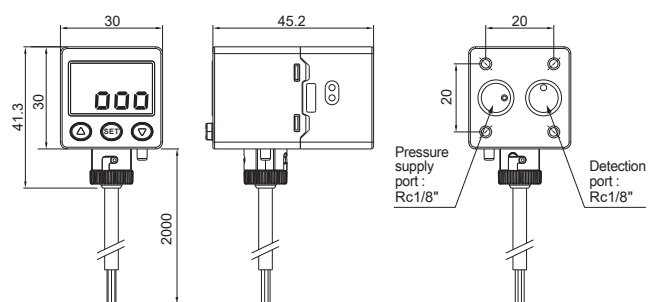


### ③ Accessory



**Caution:**  
This device must be installed to maintain IP 65 (Dust and splash proof) enclosure rating.

## J DIMENSIONS



Unit : mm

## K ERROR CODE INSTRUCTION

Error Type	Error code	Error Condition	Troubleshooting
Excess load current error	Err1	Output 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.
System error	Err5	Internal system error	Turn power off, and then restart. If error condition remains, please return to factory for inspection.
Applied pressure error	Errr	Supply pressure is exceed the upper limit of pressure setting.	Adjust the pressure within setting pressure range.