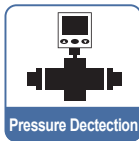
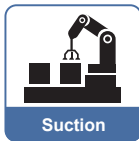


## Features

- 1 output ( hysteresis adjustable )
- 2 outputs
- Easy installation
- Response time : less than 5 ms

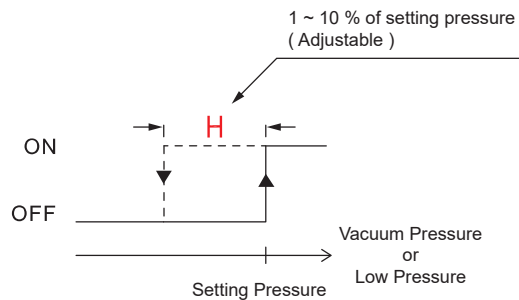


## Features Highlight

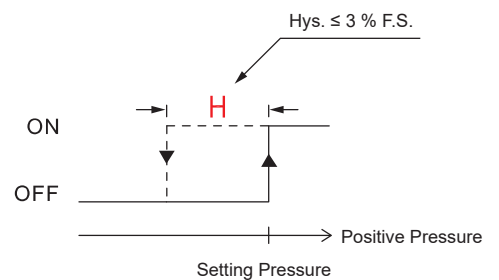
### 1 Hysteresis Adjustable

- Output hysteresis (H) is adjustable

KP1- □ - 01, 02

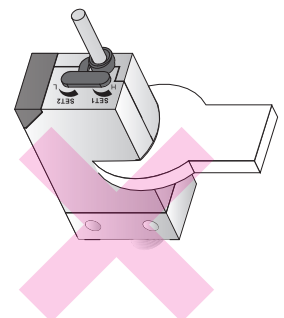
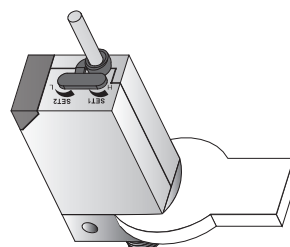


KP1 - □ - 03



## 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.



## Specifications

| MODEL                             |                        | KP1-1                                                                                                         | KP1-2       | KP1-3     |
|-----------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------|-------------|-----------|
|                                   |                        | Vacuum                                                                                                        | Low         | Positive  |
|                                   |                        |                                                                                                               |             |           |
| Set Pressure Range                |                        | -101 ~ 0 kPa                                                                                                  | 0 ~ 100 kPa | 0 ~ 1 MPa |
| Withstand Pressure                |                        | 300 kPa                                                                                                       |             | 1.5 MPa   |
| Fluid                             |                        | Filtered air, Non-corrosive / Non-flammable gas                                                               |             |           |
| Power Supply Voltage              |                        | 12 ~ 24 V DC $\pm$ 10 %, Ripple ( P-P ) $\leq$ 10 %                                                           |             |           |
| Current Consumption               |                        | 1 NPN or 1 PNP output : $\leq$ 21 mA ; 2 NPN output : $\leq$ 35 mA                                            |             |           |
| Repeatability                     |                        | $\pm$ 1 % F.S.                                                                                                |             |           |
| Response Time                     |                        | $\leq$ 5 ms                                                                                                   |             |           |
| Environment                       | Enclosure              | IP40                                                                                                          |             |           |
|                                   | Ambient Temp. Range    | Operation : 0 ~ 50 °C, storage : -20 ~ 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 $\Omega$ ( 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                             |                        | 980 m/s <sup>2</sup> ( 100 G ), 3 times each in direction of X, Y and Z                                       |             |           |
| Temperature Characteristic        |                        | $\pm$ 3 % F.S. of detected pressure ( 25 °C ) at temp. ( Range of 0 ~ 50 °C )                                 |             |           |
| Port Size                         |                        | PT : 1/8"PT ( R1/8" ), M5 ; NPT : NPT1/8", M5 ; G : G1/8" ( BSPP ), M5                                        |             |           |
| Lead Wire                         |                        | $\varnothing$ 4 Oil-resistance cable ( PVC ) - 24 AWG ( 0.22 mm <sup>2</sup> ) - 3 cores                      |             |           |
| Weight ( with 1 meter lead wire ) |                        | Approx. 50 g                                                                                                  |             |           |

## Circuit Wiring Diagrams

| MODEL                     | KP1 - □ - 01                                | KP1 - □ - 02             | KP1 - □ - 03                  |
|---------------------------|---------------------------------------------|--------------------------|-------------------------------|
| Connect Diagram           |                                             |                          |                               |
| Characteristics           |                                             |                          |                               |
| Output Method             | NPN open collector 30 V 80 mA               | PNP open collector 80 mA | NPN open collector 30 V 80 mA |
| Hysteresis                | 1 ~ 10 % of setting pressure ( Adjustable ) |                          | $\leq$ 3 % F.S. ( Fixed )     |
| Setting Points            | 1 Point                                     |                          | 2 Points                      |
| Operation Indicating Lamp | Red LED turns on                            |                          | Out1 = Red,<br>Out2 = Green   |

## Ordering Information

K P 1 - 1 - 0 1 - 0 1 - N P T

### Pressure Range

- 1 : Vacuum ( -101 ~ 0 kPa )
- 2 : Low ( 0 ~ 100 kPa )
- 3 : Positive ( 0 ~1 MPa )

### Pressure Port

- PT : 1/8"PT ( R1/8" ), M5
- NPT : NPT1/8", M5
- G : G1/8" ( BSPP ), M5

### Output Specification

- 01 : NPN output
- 02 : PNP output
- 03 : 2 NPN output

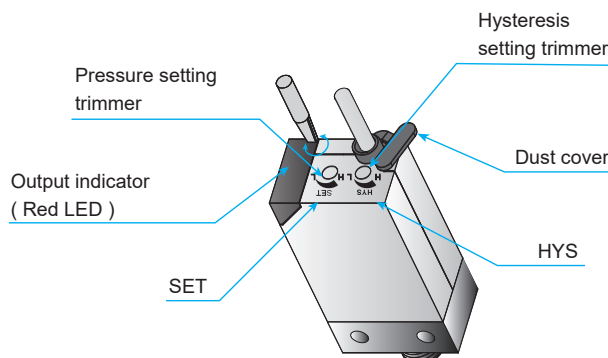
### Cable Length / Connector

- 01 : With 1 meter cable
- 03 : With 3 meter cable
- C : With M8 4Pin male connector

## How To Set Pressure

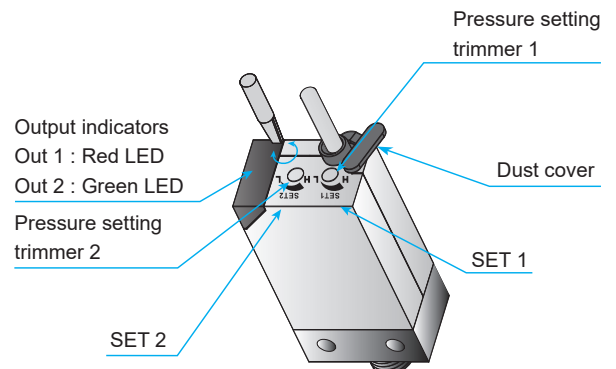
### 1 KP1 - □ - 01, 02

- Remove dust cover to make adjustments to pressure value. Replace dust cover when finished to prevent foreign object from entering.
- Pressure setting trimmer ( SET ) is for setting the output ( ON ) pressure. Rotate SET trimmer counter-clockwise to increase ( Pressure or Vacuum ) the setting pressure ( ON ) point. Rotate clockwise to decrease the setting pressure.
- Hysteresis setting trimmer ( HYS ) is for changing the hysteresis. Rotate trimmer counter-clockwise to increase the range 1 ~ 10 %.
- Use appropriate size screwdriver for the setting trimmers. Gently turn the screwdriver to make adjustments. Do not force the trimmer when it comes to a stop to prevent damage to the setting trimmer.



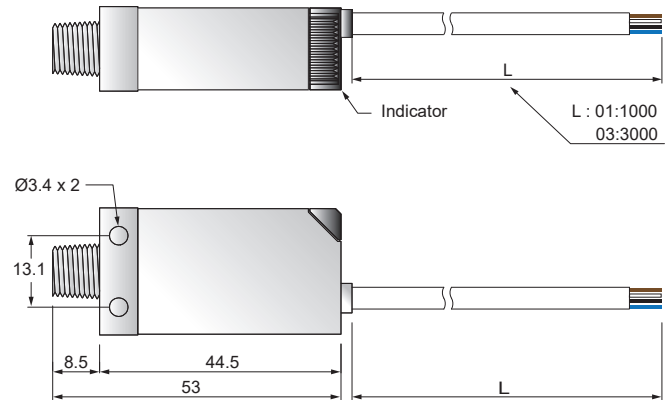
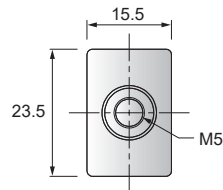
### 2 KP1 - □ - 03

- Remove dust cover to make any adjustments. Replace dust cover when finished to prevent foreign object from entering.
- Pressure setting trimmer ( SET 1, SET 2 ) is for setting the output ( ON ) pressure. Rotate SET trimmer counter-clockwise to increase ( Pressure or Vacuum ) the ON point. Rotate clockwise will decrease the setting pressure.
- Hysteresis for models with two outputs is 3 % fixed.

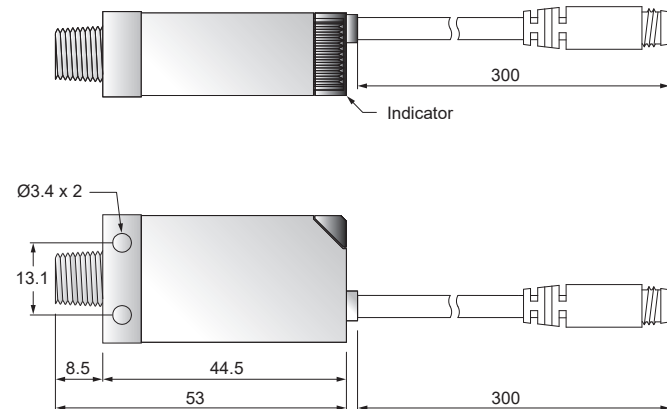
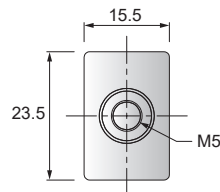


## Dimensions

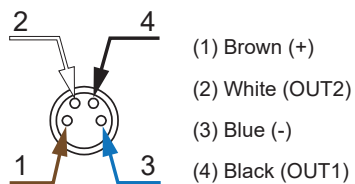
KP1 - □ - □ - □



KP1 - □ - C - □



### QD PINOUT



Unit : mm