

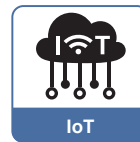
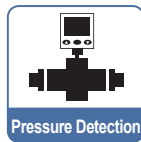
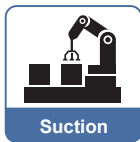
KP72 SERIES

IIoT Pressure Sensor

Features

- Smart pressure sensor
- Remote control
- Real-time monitoring
- Multiple output function
- Cost reduction
- IO-Link compatible

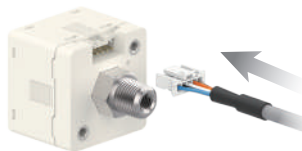
 IO-Link



Features Highlight

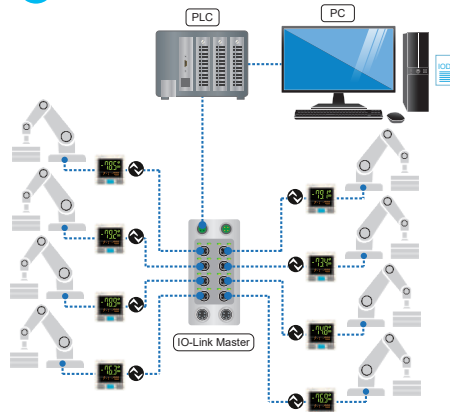
1 Quick Installation

- Save Installation Time
- Easy Removal



(Removable Data Cable)

2 IO-Link compatible



3 2-Color Main Display

- User selectable color mode, for different conditions use



| | SoG | SoR | Grn | Red |
|-----|-------|-------|-------|-----|
| ON | Green | Red | Green | Red |
| OFF | Red | Green | Green | Red |

IO-Link Specifications

| | |
|-------------------------------|--|
| Type | Device |
| Version | V1.1 ※1 |
| Communication Speed | COM2 (38.4 kbps) |
| Configuration File | IODD file ※2 |
| Min. Cycle Time | 3 ms |
| Process Data Length | Input Data : 2 byte (2 bit BDC ; 14 bit PDV) , Output Data : 0 byte |
| On Request Data Communication | Available |
| Data Storage Function | Available |
| Event Function | Available |
| Vendor ID | 1254 (0x04E6) |
| Device ID | KP72V - □ : 170 (0x0000AA) KP72C - □ : 171 (0x0000AB) KP72P - □ : 172 (0x0000AC) |

NOTE

※1 : IO-Link Interface and System Specification, V1.1.3, June 2019

※2 : IO-Link device description (IODD) is available on KITA web site : www.kita.com.tw

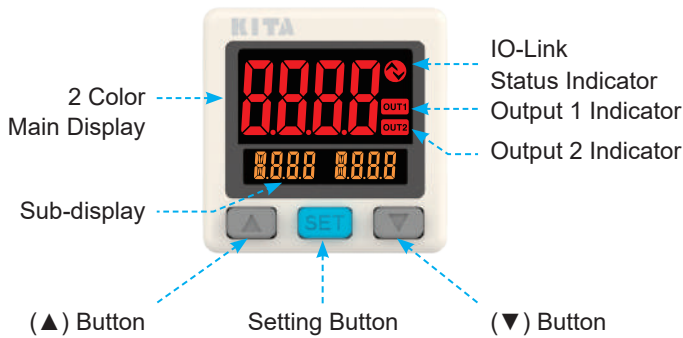
Specifications

| MODEL | | KP72C | KP72V | KP72P |
|----------------------------------|------------------------|--|--|--------------------|
| | | Compound Pressure | Vacuum Pressure | Positive Pressure |
| | | | | |
| Rated Pressure Range | | -100.0 ~ 100.0 kPa | 0.0 ~ -100.0 kPa | 0.000 ~ 1.000 MPa |
| Set Pressure Range | | -105.0 ~ 105.0 kPa | 10.5 ~ -105.0 kPa | -0.105 ~ 1.050 MPa |
| Withstand Pressure | | 500 kPa | | 1.5 MPa |
| Fluid | | Filtered air, Non-corrosive / Non-flammable gas | | |
| Set Pressure Resolution | kPa | 0.1 | | 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 | | 24 V DC, Ripple (P-P) ≤ 10 % | | |
| Current Consumption | | ≤ 35 mA (with no load) | | |
| Switch Output | | 1 NPN open collector output Max. Load Current : 150 mA Max. Supply Voltage : 30 V DC Residual Voltage : ≤ 1 V (Load current 150 mA) | 1 PNP open collector output Max. Load Current : 150 mA Max. Supply Voltage : 24 V DC Residual Voltage : ≤ 1 V (Load current 150 mA) | |
| Repeatability | | ± 0.2 % F.S ± 1 digit | | |
| Hysteresis | Hysteresis Mode | Adjustable | | |
| | Window Comparator Mode | | | |
| Output Short Circuit Protection | | Yes | | |
| Display | | Main Display : 4 digital, 7 segment LCD display (Red / Green) Sub Display : 4 digital, 1st digit 11 segment, 7 segment for other (Orange) | | |
| Indicator Accuracy | | ± 2 % F.S ± 1 digit (Ambient temperature : 25 ± 3 °C) | | |
| Switch on Indicator | | Red Indicator 1, 2 : OUT1 or OUT2 ; Green Indicator 1, 2 : OUT1 or OUT2 | | |
| Analog Output (Voltage Output) | | Output Voltage : 1 ~ 5 V or 0 ~ 10 V ± 2.5 % F.S (within rated pressure range) Linearity : ± 1.5 % F.S. Output Impedance : about 1 kΩ | | |
| Analog Output (Current Output) | | Output Current : 4 ~ 20 mA ± 2.5 % F.S (within rated pressure range) Linearity : ± 1.5 % F.S. Max. Load Impedance : 500 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/s ² (10 G), 3 times each in direction of X, Y and Z | | |
| Temperature Characteristic | | ± 2 % F.S of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C) | | |
| Port Size | | F1 : R1/8", M5 ; F2 : NPT1/8", #10-32 UNF ; F3 : G1/8" (BSPP), M5 | | |
| Lead Wire | | Ø4 PVC - 26 AWG (0.15 mm ²) - 5 cores | | |
| Weight | | Approx. 80 g (with 2 meter lead wire) ; Approx. 52 g (with M12 4Pin male connector) | | |

KP72 SERIES

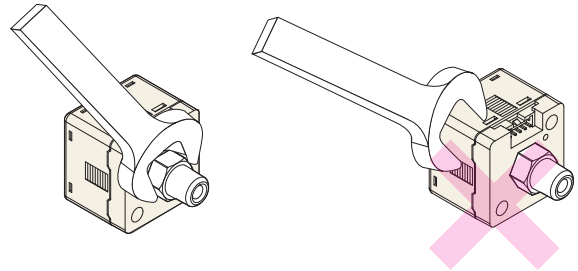
IloT Pressure Sensor

Panel Description

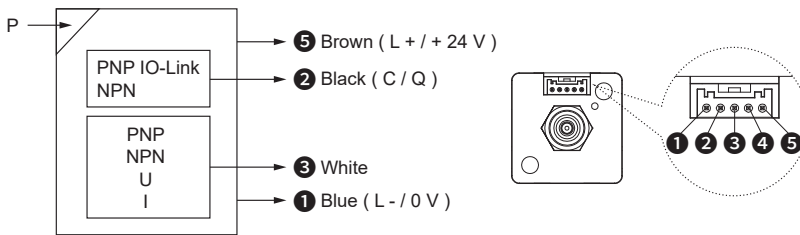


Installation Precautions

- 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.



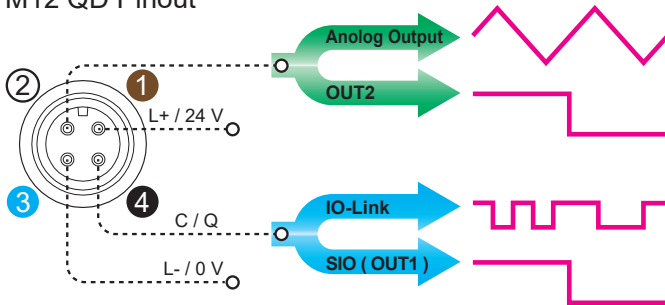
Circuit Wiring Diagrams



| Pin No. | Line Color | Content |
|---------|------------|--|
| 1 | Blue | 0 V |
| 2 | Black | Switch output OUT1 or IO-Link (C / Q Line) |
| 3 | White | Switch output OUT2 or analog output (1 ~ 5 V, 0 ~ 10 V, 4 ~ 20 mA) |
| 4 | Orange | Not Used |
| 5 | Brown | Operating voltage + 24 V DC |

※ NPN/PNP of switch output can be switched.

• M12 QD Pinout



| PIN No. | Line Color | Content |
|---------|------------|--|
| 1 | Brown | Operating voltage + 24 V DC |
| 2 | White | Switch output OUT2 or analog output (1 ~ 5 V, 0 ~ 10 V, 4 ~ 20 mA) |
| 3 | Blue | 0 V |
| 4 | Black | Switch output OUT1 or IO-Link (C / Q Line) |

※ NPN/PNP of switch output can be switched.

Ordering Information

K P 7 2 C - F 1 - □

Pressure Range

C : Compound pressure (-105.0 ~ 105.0 kPa)
 V : Vacuum pressure (10.5 ~ -105.0 kPa)
 P : Positive pressure (-0.105 ~ 1.050 MPa)

Pressure Port

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

Cable Length / Connector

Blank : With 2 meter cable
 QD : With M12, 4Pin male connector

Optional Parts

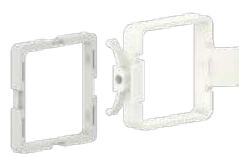
BT-12 : Mounting bracket
 BT-13 : Mounting bracket
 PA-C : Panel adapter
 PA-D : Panel adapter + Front protective lid

Optional Parts

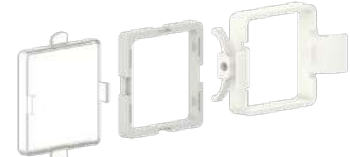
- Mounting bracket : BT-12 / BT-13



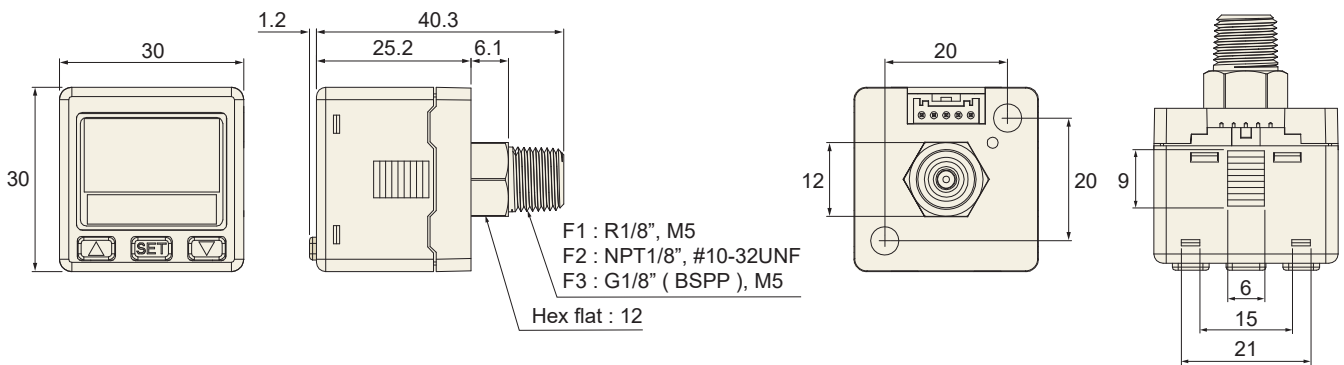
- Panel adapter : PA-C



- Panel adapter + Front protective lid : PA-D

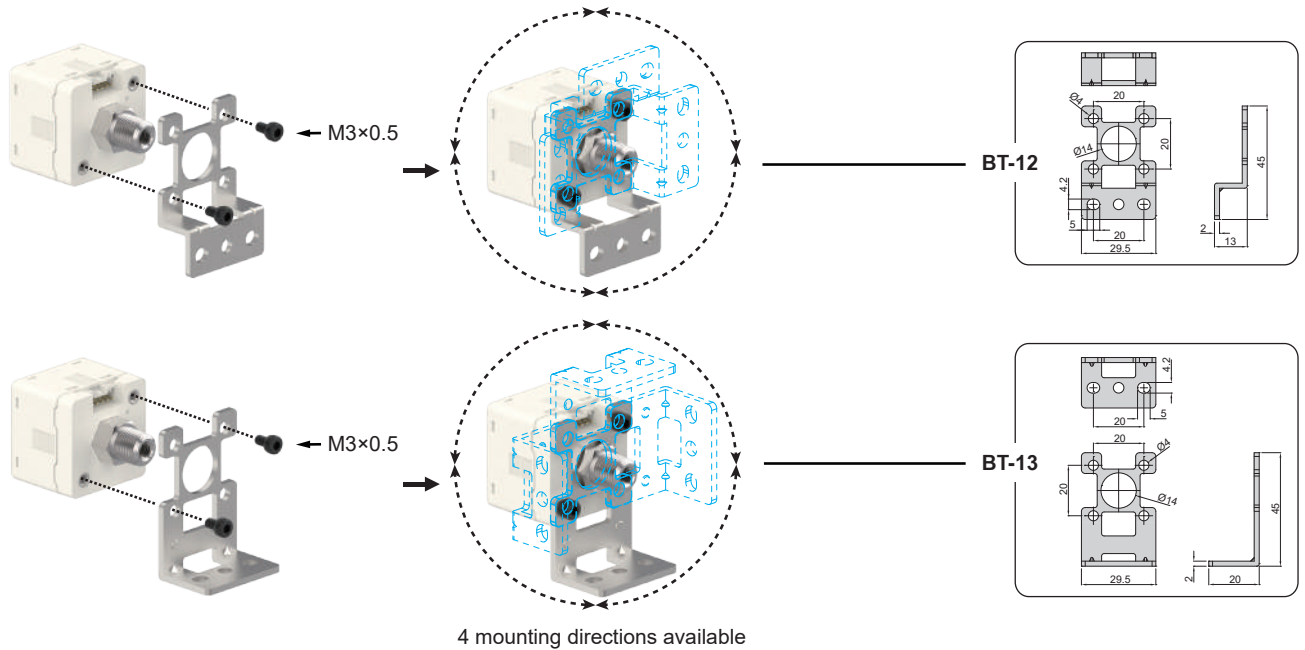


Dimensions

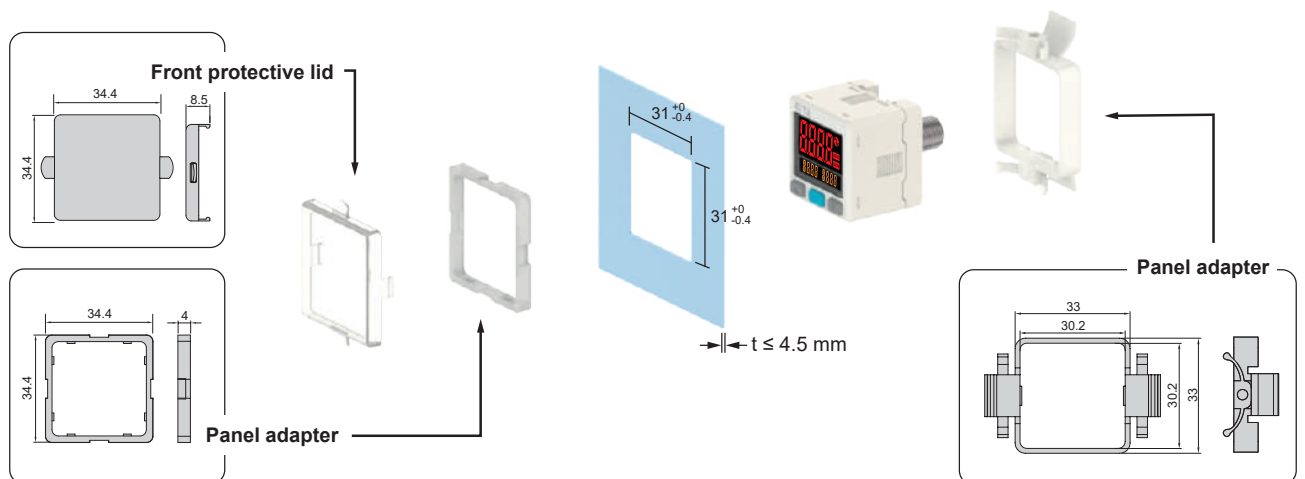


Optional Parts Dimensions

1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



Unit : mm