Handling Instructions

ANALOG PRESSURE SENSOR

3QR1-PPES series

Thank you for purchasing CKD product.
Please review the precautions in this Instruction thoroughly for safe operation of this equipment.

Keep this document in a safe location so that it is easily referenced as necessary.
For further information, refer to the instruction manual and product catalog.

CAUTION!! Do not unpack until the piping is ready for connection.

Foreign materials entering through piping port will cause failure and malfunction.

⚠ WARNING

■This product is designed for air and compressed dry air.
Do not use it with corrosive and combustible gases.

■Do not touch electric wiring connections (exposed live parts) : this will cause an electric shock. During wiring, keep the power off.
Also, do not touch these live parts with wet hands.

Caution of handing the product

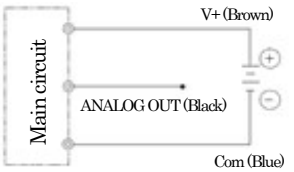
- In installation, please be sure to hold the product's main body to prevent any impact to body and stress to the flying lead.
- Please do not apply other media than "indicated" applicable media. In case other media is used, we are not in a position to guarantee the performance of the product and assure the safety. Please never apply corrosive gases, inflammable gases, oxygen etc.
- When vacuum suction is checked and the positive pressure for vacuum break is applied to this product, ensure the pressure does not exceed the specified value.
- Do not disassemble this product. If the product is disassembled, a part may be ejected when pressure is applied.
- The protection is equivalent to IP40. Take necessary measures to prevent leakage off water or oil.
- Do not use it, letting me rotate or rock a pressure sensor assembly.

Sensor specifications

Item	Analog sensor
Applicable media	Air、Vacuum
Pressure sensing element	Semiconductor strain gauge
Power source	DC10.8 to 30V
Consumption current	20mA or less (DC24V , no load)
Pressure range	−100kPa to 0kPa
Ambient temperature range	0 to 50℃
Proof pressure	500kPa
Protection	Dust proof (IP40 equivalent)
Output voltage	1 to 5V
Zero-point voltage	1±0.1V
Output current	1mA max (Load resistance : 5kΩ以上)
Linearity	0.5%F.S. max

Internal circuits and wiring

Identification color	Connection to
Brown	Power source (DC10.8 to 30V)
Black	Analog output(1 to 5V)
Blue	GND (0V)



■ Do not give strong drawer pull (more than 10N) or extreme bending to the leads wire of the Heads and indicator. Doing so may result in lead wires being snapped off and connector components broken.

Precaution for wiring

■ Wiring

Please be sure that the wiring works are done after the electrical supply was cut. Before and during the wiring works, charged static electricity on body or on tools should be discharged.
For moving part, flexible cables should be used.

■ Wiring

Insert surge-absorbing circuits into relays, valves, etc. Do not arbitrarily use these units at currents that exceed rated levels.

Take the utmost care to avoid short-circuiting the output terminal with other terminals.

■ Wiring installation

This product and wiring should be installed as much away as possible from those noise source like strong electric cables. Also please take measures for surge transferred to power source cable.

■ Power voltage

Do not use this component with higher voltage than specified.
If voltage exceeds the specification or alternative current (AC100V) is applied, the equipment may be damaged or burned.

■ Short-circuiting

Do not short-circuit the wiring, otherwise, damage or burning may occur.

■ Incorrect wiring

Connect wires to the correct poles or terminals, otherwise, wires may be damaged or burned.

■ Load

The output impedance of analog output part is 1kΩ. In case the impedance of the connected load is low, the error of output value will be large. Be sure o check the impedance of the connected load.

Sensor replacement

＜Remove＞

1、Extract the fixing pin using a tool with slender tip.

2、Remove the pressure sensor assembly with drawing out.

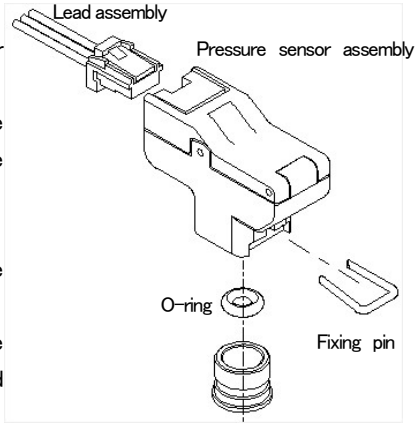
3、Remove the O-ring. (Be careful of adhesion o-ring on the back side of pressure sensor.)

＜Installing＞

1、Fit the new O-ring onto the sensor adapter.

2、Confirm if foreign matter etc. are not adhered on O-ring and assemble them as they were.

3、Pull the pressure sensor assembly to check the pressure sensor assembly are locked at their positions.



■ It is working being careful enough, when extracting a fixed pin. It will become a cause of failure, if other parts are thrown or a shock is added to a sensor.

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For dealer information, refer to our catalog or visit our website.
http://www.ckd.co.jp/

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