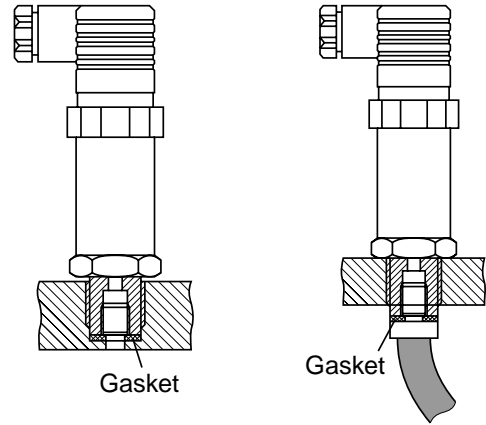




Compact Pressure Sensor

Type: FCK

INF-TN1FCK-E



1) Mounting using G¹/₂ male screw

2) Mounting using G¹/₈ female screw

1. Outline

The compact pressure sensor (type FCK) measures gage pressure or absolute pressure, and transmits it while converting it to 4 to 20 mA DC current signals.

The piezoresistor on the diaphragm converts the input pressure into voltage, which is then output as current of 4 to 20 mA through the amplifier mounted in the output stage.

The instrument is protected against reverse connection and overvoltage by the protective diode mounted at the input section of the power supply. Several EMC protective elements protect the instrument against electromagnetic noises.

2. Mounting

FCK2 : Use G¹/₂ male screw or G¹/₈ female screw.

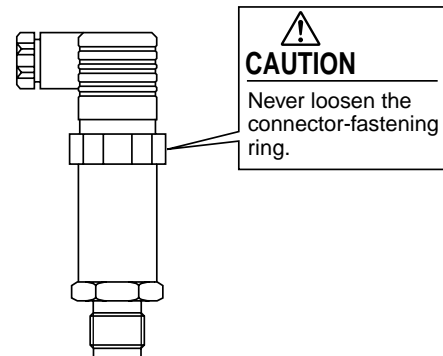
FCK3 : Use G¹/₂ male screw.

Measurement accuracy is not affected by the mounting method. Be careful not to exceed the permissible temperature range. Before mounting the instrument, check the process change against the data on the nameplate, and make sure that the process variable falls within the permissible range of the compact pressure sensor.

3. Wiring

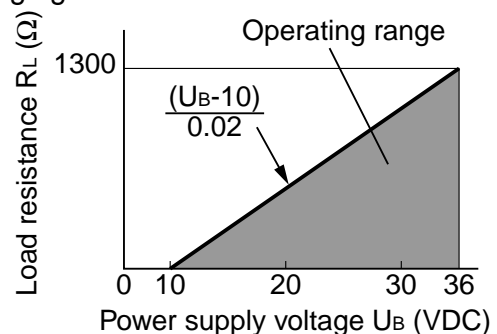
Notes on wiring

Never loosen the connector-fastening ring shown by the following figure when removing the connector. If the connector is rotated in the state where the fastening ring is loose, internal wiring may be twisted or broken.



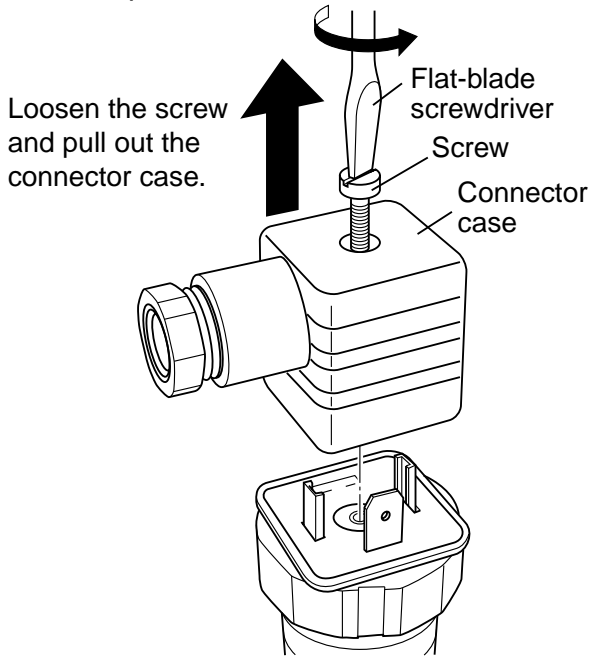
3.1 Power supply voltage and load resistance

Adjust the load resistance between the compact pressure sensor and the power supply to which the sensor is connected so that it falls within the operating range shown by the following figure.



3.2 Removing the connector case

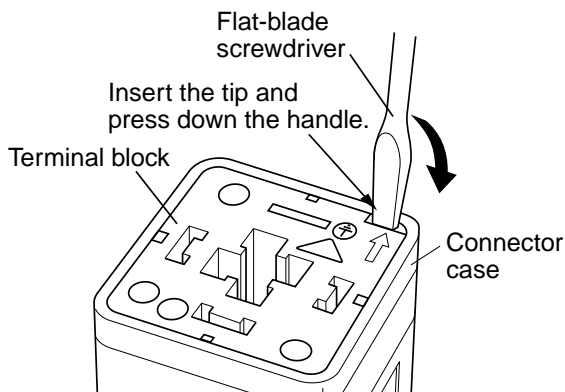
Loosen the screw at the top of the connector case, and pull out the connector case.



3.3 Removing the terminal block

Loosen and remove the screw at the top of the connector case.

Then insert the tip of a flat-blade screwdriver into the hole marked with an arrow and press down the handle of the driver, and the terminal block can be taken out.

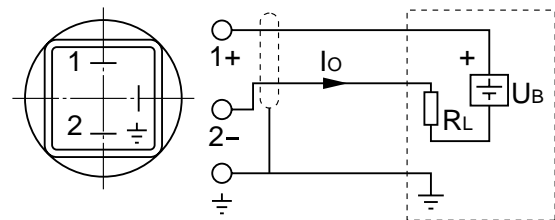
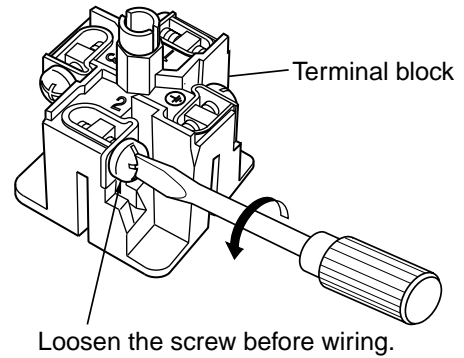


3.4 Wiring

Let 2-wire cable of finished dimension of 4.5 to 7mm through a cable gland (Pg 9) together with the metal washer and the packing.

Then place the connector case into the cave, loosen the screw on the terminal block, and perform wiring of the terminal block. When using a solderless terminal, select one of internal diameter of 3mm. If the cable has a shield, provide it with single-point grounding. Grounding at the terminal box is desirable.

Note that the ground of the connector is connected to the housing.



Terminal 1 (+), 2 (-), Ground terminal (\varnothing)
Output current (I_o), Power supply (U_B), Load (R_L)

3.5 Adjustment

The compact pressure sensor is calibrated to designated range before delivery from the factory. If calibration of the sensor is required, hold the sensor main unit securely, loosen the fastening ring, and remove it, and the "Z" and the "S" knobs appear. Adjust 4mA current with the "Z" knob, and 20mA current with the "S" knob. After adjustment is completed, place the connector-fastening ring back in position and fasten it with the torque of 0.8 ± 0.2 Nm.

4. Maintenance

Maintenance is not required since the compact pressure sensor does not have movable parts or those requiring adjustment.

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