

1. INSPECTION

This instrument has been thoroughly tested at the factory before shipment. When you receive it, visually inspect it for damage and check the accessories.

1.1 Model number and specification check

Check to see if the model number and specifications on the nameplate are as ordered.

1.2 Contents of instruction manual

This instruction manual provides instructions on mounting, external wiring and maintenance.

2. GENERAL

This instrument receives 1~5V or 4~20mA DC signal and converts it into pneumatic signal proportional to input signal.

3. MOUNTING METHOD

This transducer is used to mount on the wall combining with air supply unit (PPU-01). First, fix air supply unit on the wall as shown in Fig.1 and then install terminal board on the air supply unit. Terminal board can be detached from the main body by removing two screws. Then fix the main body on terminal board with two screws.

4. AUTOMATIC SEALING

When main body of the transducer is removed from the terminal board, air will be sealed automatically by closing a valve of terminal board.

5. PIPING

- ① Connect piping of 140kPa (1.4 kgf/cm²) pneumatic pressure supply to the air supply unit as shown in Fig.3. Pipe has Rc3/8 (PT3/8) male screw.
- ② Air supply unit for 16 units (PPU-16) has 5 inlets and the one for 8 units (PPU-08) has 4 inlets. Seal unused inlets with sealing plugs.
- ③ Connect pipe for output air pressure signal to outlet of terminal board. Pipe has Rc1/4 (PT1/4) male screw.

CAUTION

Fastening torque of pipe is $2 \pm 0.5 \text{ N} \cdot \text{m}$

6. EXTERNAL WIRING

Connect wires to the terminals on terminal board. Flexible twisted wire and good contact of durable round crimp-on terminal (JIS C2805) are recommended to be used.

Fig.1

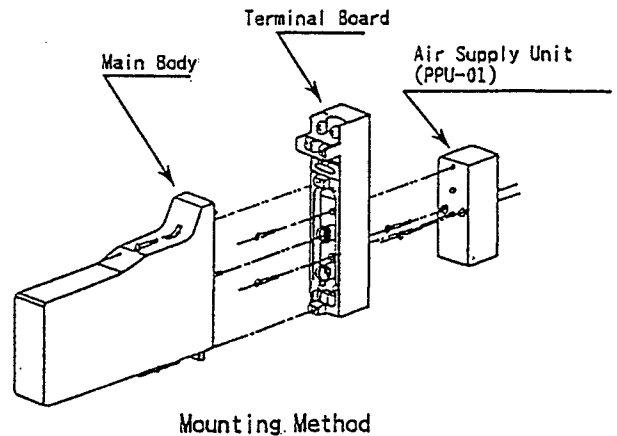


Fig.2

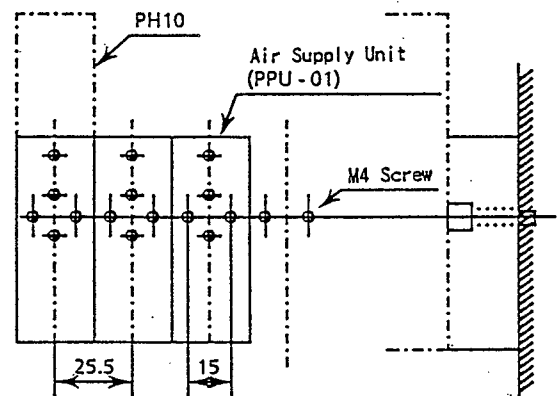
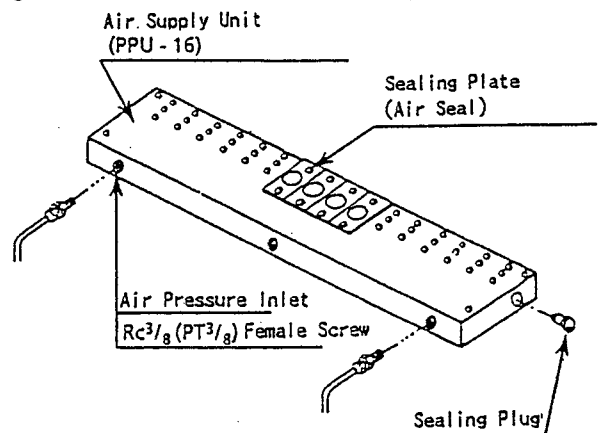


Fig.3



6.1 Signal cable

Nominal cross-sectional area of conductor:
0.5~0.75mm²

Example of suitable cable:

Twisted vinyl cord (VSF) (JIS C3306)

6.2 Power cable

Nominal cross-sectional area of conductor:
1.25~2.00mm²

Example of suitable cable:

Twisted 600V vinyl cord (IV) (JIS C3307)

6.3 Wiring

- ① See Fig.6 for terminal arrangement.
- ② Connect input signal cable to terminals 3(+) and 4 (-) of the transducer.
- ③ Connect 24V DC power cables to terminals 1(+) and 2(-) of the transducer.

7. ITEMS TO BE CHECKED BEFORE TURNING THE POWER SWITCH ON

- ① Make sure that 24V DC power cables of the transducer are connected to the correct polarities (+), (-).
 - ② Check that the external wiring to terminal board is correct.
 - ③ Check that the mounting, ambient temperature, humidity, dust and vibration are normal.
- Check the above items before turning the power on. The transducer needs 5 minutes warmup to meet its specified accuracy level.

8. MAINTENANCE

CAUTION

Carry out the following calibration after warming up the equipment for more than 5 minutes. When measuring the output, make length of tube between transducer and pneumatic pressure generator more than 10m. Beware that hatching may cause applying the input signal to transducer with sealing plug sealed.

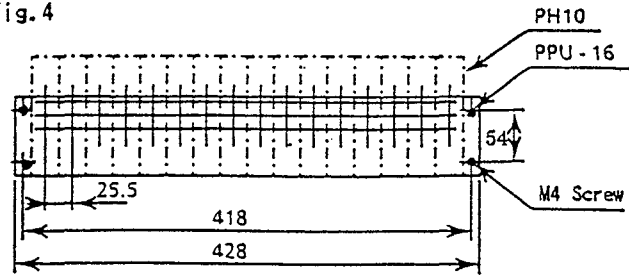
8.1 Calibration equipment

- Pneumatic pressure generator (Yokogawa Model 2657 or equivalent) : 1
- Pneumatic manometer (Yokogawa Model 2654 or equivalent) : 1
- Voltage/Current generator (Yokogawa model 2553A or equivalent) : 1

8.2 Calibration

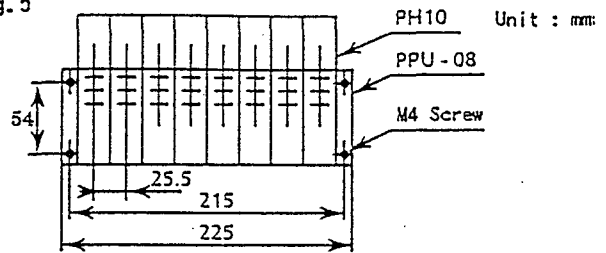
- ① Connect each equipment as shown in Fig.8.
- ② Input/output characteristics check
Use pneumatic pressure generator and apply pneumatic pressure of 140kPa (or 1.4kg/cm²) and input signal of 0, 25, 50, 75, 100% of input span to the transducer. Make sure that the corresponding output signals of the transducer are 0, 25, 50, 75, 100% of span respectively and are within accuracy rating range.
- If output signal is out of specified tolerance, adjust it by zero and span adjust trimmer on front face of the transducer.

Fig.4



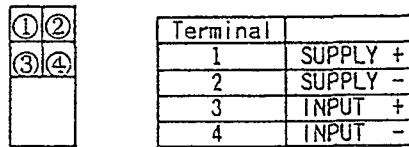
Use for 16 Units

Fig.5



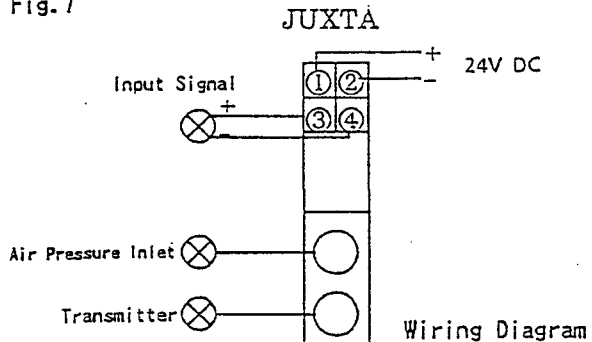
Use for 8 Units

Fig.6



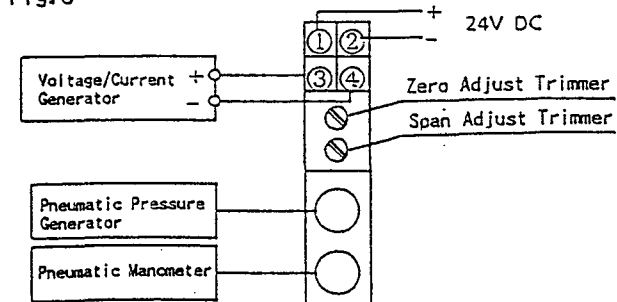
Terminal Arrangement

Fig.7



Wiring Diagram

Fig.8



Subject to change without notice for grade up quality and performance.