Instruction Manual

Model MS2W POT Transmitter

JUXTA

1. PRECAUTION

Please read thorough this Manual before use the instrument for correct handling. Please keep this Manual carefully after use.
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 Model number and specification check
Check to see the model number and specifications on the nameplate attached to the front face of the instrument are as ordered.

② Contents of instruction manual
This instruction manual provides instructions on handling, external wiring and safety use of transmitter.

2. GENERAL

This compact plug-in type POT transmitter receives resistance value change signal from potentiometers and converts it into unified output signals.
It has features of AC/DC use power supply, isolated dual outputs, selective functions of 1~5V DC/4~20mA DC output signals through one touch select switch. (See Fig.2)
Accessories:

Spacer 1
(Use for DIN rail mounting)
Tag Number Label 2

3. MOUNTING METHOD

JUXTA M Series signal conditioners can be mounted on wall or DIN rail.

3.1 Wall mounting

Unlock stoppers and remove the transmitter from socket as shown in Fig.1. Then, fix the socket on the wall. Take installation gap as shown in Fig.4. (Refer Fig.4 for mounting dimensions).

3.2 DIN rail mounting

Insert DIN rail into upper section of DIN rail groove on rear of socket of transmitter and fix the rail with slidelock at the base of transmitter as shown in Fig.3.
Use furnished spacer and take 5mm gap between transmitters.

3.3

If wiring duct is used, install it aparting more than 20mm from top face of main body.

4. EXTERNAL WIRING

CAUTION Wiring should be done after ensuring power break of each cable.

See Fig.5 for terminal arrangement.
Wires should be connected to M3.5 screw terminals.
For wiring, flexible twisted wires and good contact of durable round crimp-on terminals are recommended to be used.

- Signal cable should has more than 0.5mm² and and power cable should has more than 1.25mm² of nominal cross-sectional area of conductor.

4.1 Wiring

① Connect input signal cable to transmitter terminals 4, 5, 6.
② Connect Output-1 signal cable to 1(+), 2(-) and Output-2 signal cable to 10(+), 11(-).

Fig.1 Wall Mounting

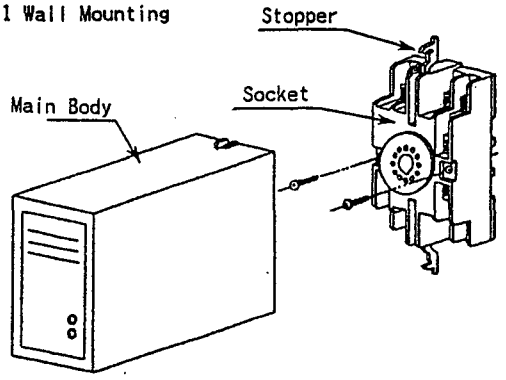
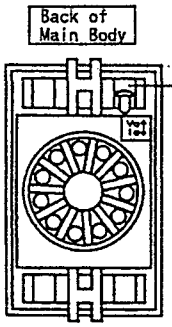


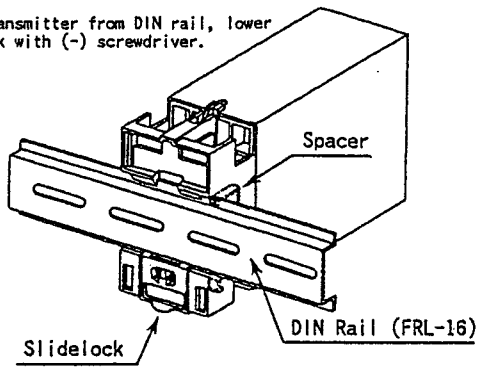
Fig.2 Select Switch

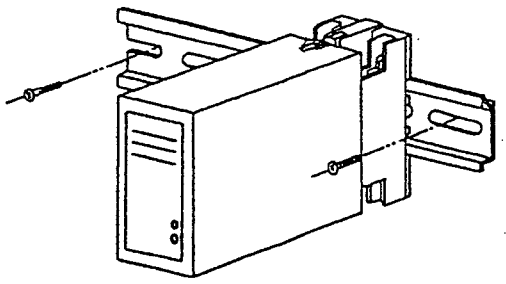


Can select Output-1 Vo(voltage output 1~5V DC)/Io(current output 4~20mA DC) through select switch.
When shipment, Output-1 is set at Io side.
Set lever at vo side in case no use of 4~20mA DC of Output-1 or in case both Output-1 and Output-2 are used at 1~5V DC.

Fig.3 DIN Rail Mounting

To remove transmitter from DIN rail, lower the slidelock with (-) screwdriver.





③ Connect power cable to transmitter terminals 7(L+), 8(N-), 9(GND).
NOTE : Apart wiring of power and input/output cables from noise source. Otherwise, accuracy may not be warranted.

5. INSTALLATION AND HANDLING

① Aviod installation in such environments as shock, vibration, corrosive gas, dust, water oil, solvent, direct sunlight, radiation, powerful electric and magnetic fields.
② In order to protect instrument from inducement of thunder surges in power and signal cables by thunder fall, use arrester between transmitter and equipment installed in the field.

6. SAFETY USE

Following caution for safety should be taken for handling of instrument. We are not responsible for damage incurred by use contrary to caution.

CAUTION

- Be sure to lock the stoppers (top and bottom) after inserting the main body into socket.
- Following items should be checked when turning power on. Use of instrument ignoring specifications may cause overheat or burning.
  (a) Voltage of power supply and input value be applied to the instrument should meet with required specifications.
  (b) External wiring to terminals should be connected correctly. (See preceding Article 4)
- Do not use the instrument in such dangerous places where exist inflammable and explosive gas or steam.

7. MAINTENANCE

10~15 minutes warm up is required to satisfy the specifications of the instrument.

7.1 Calibration Equipment

- 6 Dial Variable Resistor 2
  (Yokogawa Model 2793-01 or equivalent)
- Voltmeter 1
  (Yokogawa Model 7562 or equivalent)
- Precision Resistor 250Ω ±0.01% 1W 1

7.2 Calibration

① Connect each equipment as shown in Fig.7.
② Input/output characteristics check
The instrument is adjusted at 2kΩ when shipment from factory. Adjustment in the field can be done as per the following procedures :

- Set potentiometer at resistance value equivalent 0% of input range. Use SPAN ADJ variable resistor (15 rotations) on front panel so as output would be 5V DC (or 20mA DC). Since ZERO ADJ and SPAN ADJ sometimes be interfered each other, repeat the above procedures for several times to make accurate adjustment. Check to see intermediate input/output features are within accuracy rating range.
- If output signal is out of tolerance, adjust it through span and zero adjustment trimmer on front face of transmitter.
- In case calibration is done at either one side of Output-1 or Output-2, calibration of other output side is made simultaneously. Carry out calibration at output side presently used.
- Zero adjust range : 0% output at 0~50% of full resistance value
- Span adjust range : 100% output at 50~100% of full resistance value

(Note) Input span is more than 50% of full resistance value

Fig.4 Mounting Dimension

Unit : mm

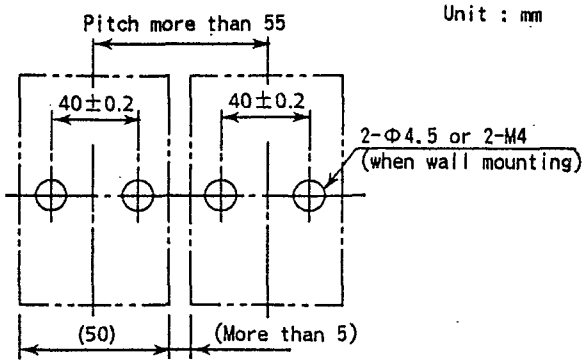
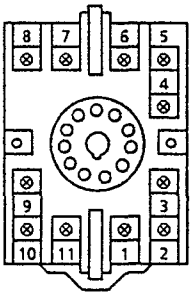


Fig.5 Terminal Arrangement



TML	
1	OUTPUT +
2	OUTPUT -
3	
4	INPUT 100%
5	INPUT CENTER
6	INPUT 0%
7	SUPPLY L+
8	SUPPLY N-
9	GND
10	OUTPUT② +
11	OUTPUT② -

Fig.6 Wiring Diagram

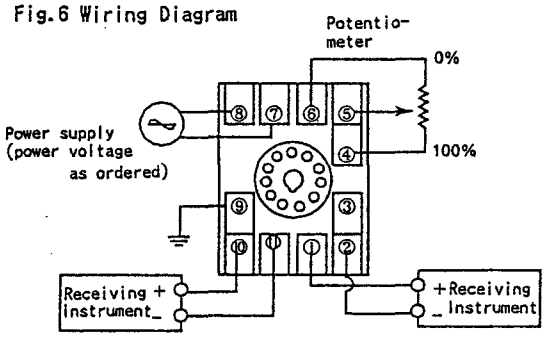
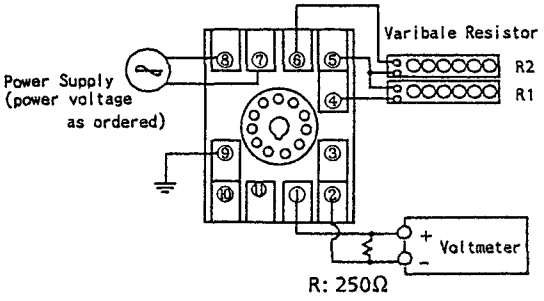


Fig.7 Wiring of Calibration Equipment



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

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