JUXTA F Series Instruction Manual

Model FQ1A/V
Pulse to Analog Converter

JUXTA

1. INSPECTION

This instrument has been thoroughly tested at the factory before shipment. However, 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 specification on the nameplate attached to the front cover of the converter are as ordered by you.

1.2 The contents of the instruction manual

This instruction manual provides instructions on how to mount, wire externally and maintain the F/I or F/V converter.

2. GENERAL

This instrument receives a pulse train signal and converts it into an isolated DC voltage or current signal.

Accessories:

Mounting block		2
Tag number label		1
Mounting screw	M4	2

3. MOUNTING METHOD

JUXTA signal conditioners can be mounted on racks, walls or DIN rails.

3.1 Rack mounting

Use a panel (FRK-16) and install it on an angle as shown in Fig.1. This is a convenient method for high density mounting of the converters on a 19-inch rack panel. (See Fig. 7.)

3.2 Wall mounting

Use the panel (FRK-16) to mount the converter as shown in Fig. 2 or directly mount it on to a wall mount bracket. (See Figs. 7 and 8 for mounting dimensions.)

3.3 DIN rail mounting

Insert a DIN rail into the upper section of the DIN rail groove on the rear of the converter and fix the rail with the slide lock at the lower part of the converter as shown in Figs. 3 and 4.

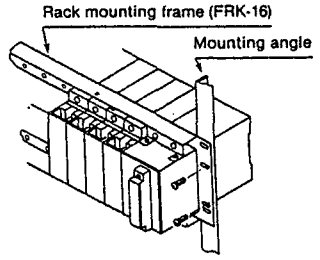
3.4 Angle mounting

If the converter is mounted without using the panel (FRK-16), refer to Fig. 5 for mounting dimensions.

3.5 Mounting block installation and removal

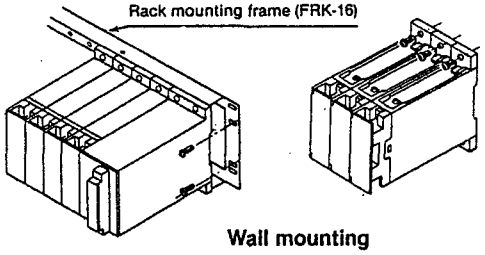
Insert a mounting block into the converter groove as shown in Fig. 6 and slide it until it is fixed with the stopper. To remove it, lift up the mounting block stopper with a screwdriver.

Fig. 1



Rack mounting

Fig. 2



Wall mounting

Fig. 3

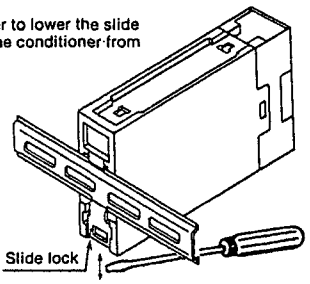
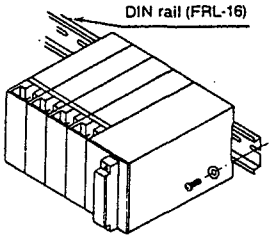
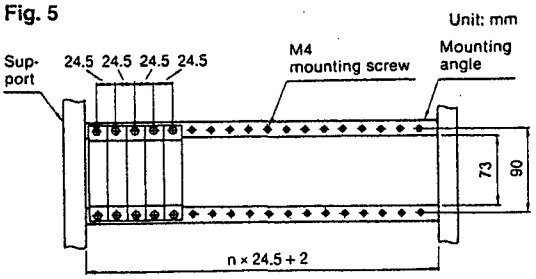


Fig. 4



DIN rail mounting

Fig. 5



Angle mounting dimensions

4. EXTERNAL WIRING

Wires can be connected to terminals by opening the converter terminal cover. It is recommended that very flexible twisted wires be used for wiring, and good and reliable round crimp-on terminals (JIS C2805) be used.

4.1 Signal cable

Nominal cross-sectional area of conductor:
0.5 to 0.75 mm²
Example of suitable cable:
Twisted vinyl cord (VSF) (JIS C 3306)

4.2 Power cable

Nominal cross-sectional area of conductor:
1.25 to 2.00 mm²
Example of suitable cable:
Twisted 600V vinyl cord (IV) (JIS C 3307)

4.3 Wiring

①See Fig. 9 for the terminal arrangement.
②Connect input signal cable to converter terminals 2(+) and 3(-).
③Connect converter output signal cable to its terminals 4(+) and 5(-).
④Connect 24V DC power cable to converter terminals 6(+) and 7(-). (See Fig. 10.)

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

①Make sure that 24V DC power cable of the converter is connected with the correct polarities (+) and (-).
②Confirm that the external wiring to the terminal board is correct.
③Check that the mounting conditions; ambient temperature, humidity, dust and vibration are suitable (e.g. within specification).
Confirm the above items before turning on the power supply. The converter needs 5 minutes warmup to meet its specified accuracy levels.

6. MAINTENANCE

〈Caution〉
Carry out the following calibration after warming up the converter for more than 5 minutes.

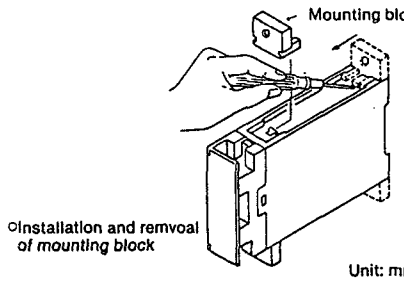
6.1 Calibration equipment

- Pulse generator (YHP model 3311A or equivalent) 1
- Counter or oscilloscope (Counter YHP model 5300A + 5308A or equivalent) 1
- Precision resistor (250Ω ±0.01%, 1W) 1 (in case of current output)

6.2 Calibration

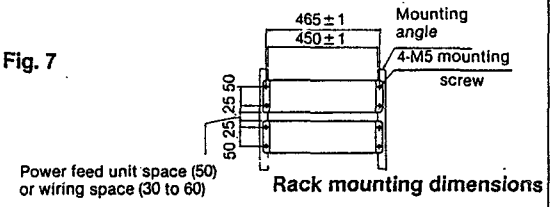
①Connect each unit of equipment as shown in Fig. 11.
②Input/output characteristic check
Use a pulse generator and counter to apply input signals equivalent to 0, 25, 50, 75 and 100% of input span to the converter. Check that corresponding converter outputs are 0, 25, 50, 75 and 100% of output span respectively and are within an accuracy rating range.
*If an output signal is out of tolerance, adjust it with the span adjustment and zero adjustment VRs on the front panel of the instrument.

Fig. 6



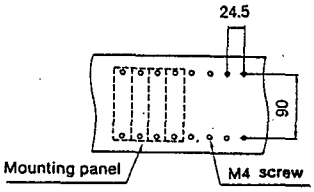
Unit: mm

Fig. 7



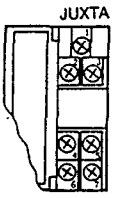
Rack mounting dimensions

Fig. 8



Panel (wall) mounting dimensions

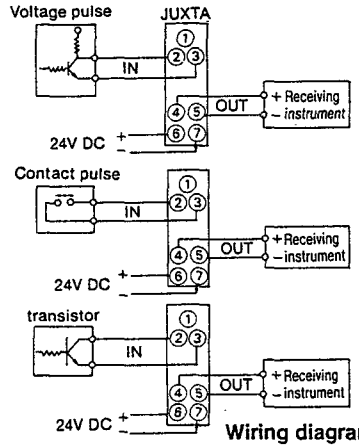
Fig. 9



Terminal		
1	INPUT	
2	INPUT	+
3	INPUT	−
4	OUTPUT	+
5	OUTPUT	−
6	SUPPLY	+
7	SUPPLY	−

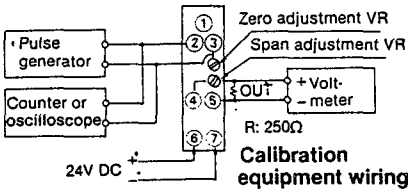
Terminal arrangement

Fig. 10



Wiring diagram

Fig. 11



Calibration equipment wiring

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

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