Instruction Manual

Model WPIP Pulse Repeater

JUXTA

1. PRECAUTION

Please read thorough this Manaual 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 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 Pulse Repeater.

2. GENERAL

This instrument receives contact pulse, voltage pulse or current pulse signals from the field and convert them into isolated transistor pulse signals.

Accessories:		
	Mounting block	2
	Tag number label	1
	Mounting screw M4	4

3. MOUNTING METHOD

JUXTA signal conditioners can be mounted on rack, wall or DIN rail.

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

3.2 Wall mounting
Use panel (FRK-16) to mount the instrument as shown in Fig.2 or directly mount the single unit on the wall. (See Figs.6 and 8 for mounting dimensions.)

3.3 DIN rail mounting
Insert DIN rail into the upper section of the DIN rail groove on the rear of instrument and fix the rail with the slidelock at the base of the instrument as shown in Fig.3.

3.4 Angle mounting
If single unit is mounted without using the panel (FRK-16), refer Fig.5 for its mounting.

3.5 Installation and removal of mounting block
Insert mounting block into instrument 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 (-) screwdriver and slide it along the groove.

4. EXTERNAL WIRING

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

Wires should be connected to M4 screw terminals after opening instrument terminal cover as shown in Fig.11~13. For wiring, flexible twisted wires and good contact of durable round crimp-on terminals are recommended to be used.

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

4.1 Wiring
① See Fig.10 for terminal arrangement.
② To receive voltage pulse by generating internal power supply, connect input cable to repeater terminals 4(+), 7(+), 8(-). (See Fig.11 : Diagram 1)

Fig.1 Rack Mounting

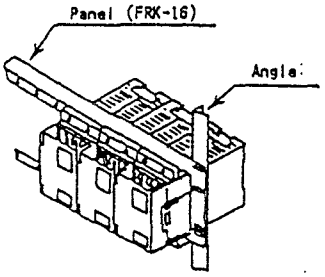


Fig.2 Wall Mounting

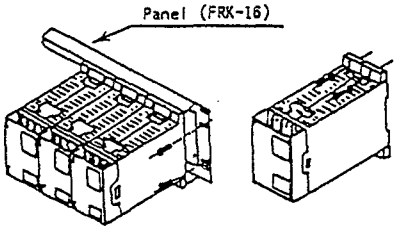


Fig.3 DIN Rail Mounting

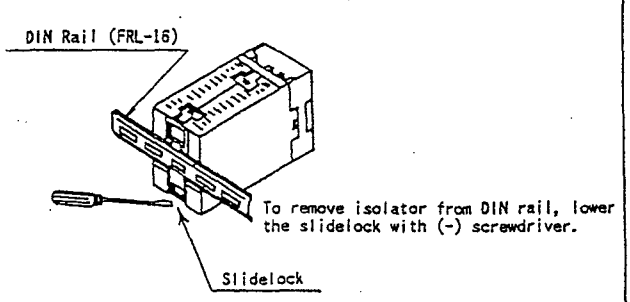


Fig.4 DIN Rail Mounting

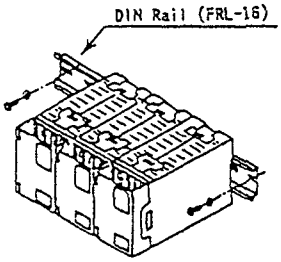
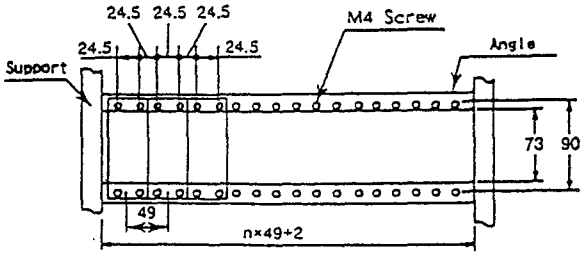


Fig.5 Angle Mounting Dimension

Unit : mm



③ To receive dry voltage contact pulse, connect input cable to repeater terminals 7(+), 8(-) (See Fig.12 : Diagram 2)
④ To receive current pulse by generating internal power supply, connect input cable to repeater terminals 4(+), 7(-). (See Fig.13 : Diagram 3)
⑤ Connect repeater output signal cable to its terminals 11(+) and 12(-).
⑥ When use of dual outputs, connect Output-2 signal cable to 9(+), 10(-).
⑦ Connect 85~265V AC or 24V DC power cable to repeater terminals 14(L+), 15(N-) and 16(G).

NOTE : Apart wiring of power and input/output cables from noise source. Otherwise, accuracy may not be warranted.

5. INSTALLATION AND HANDLING

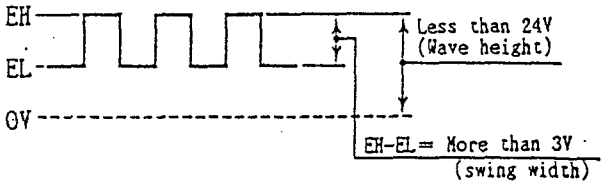
① Aviod installation in such environments as shock, vibration, corrosive gas, dust, water, oil, solvent, direct sunlight, radiation, powerful electric and magnetic fields.
② In order to protect repeater from inducement of thunder surges in power and signal cables, use arrester between pulse repeater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

6. CURRENT PULSE LOAD RESISTOR AND FILTER SETTING

In case of current pulse signal from generator, it is necessary to convert it into voltage by using current pulse load resistor. Set load resistor so as relation between current wave height value from generator i(p-p) and synthetic load resistor RL would satisfy swing width of i x RL≧3V. If there is noise in current pulse input, set filter (Switch 1) at ON. (See Fig.9)

Switch 1 : Filter setting ON/Off
Switch 2~4 : Current pulse load resistor setting

Resistance Value RL	2	3	4
200Ω	OFF	OFF	ON
510Ω	OFF	ON	OFF
1kΩ	ON	OFF	OFF
143Ω	OFF	ON	ON
167Ω	ON	OFF	ON
338Ω	ON	ON	OFF
126Ω	ON	ON	ON



7. 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

- Following items should be checked when turing power on. Use of instrument by ignoring the 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.
- In case of AC power supply, high voltage of 85~264V AC would be applied to 14 and 15 terminals during power on as shown in Fig.10. Do not touch terminals.

Fig.6 Mounting Block installation and removal

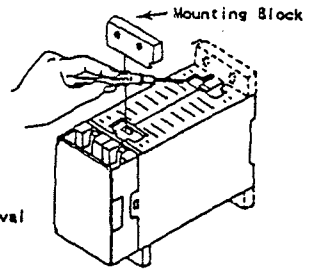


Fig.7 Rack Mounting Dimension

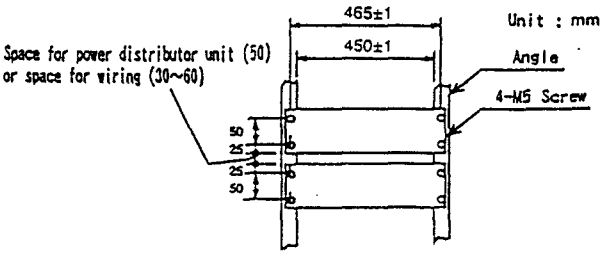


Fig.8 Panel (Wall) Mounting Dimension

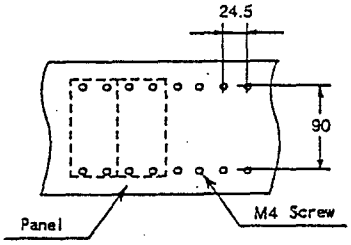


Fig.9 Setting of Current Pulse Load Resistor and Filter

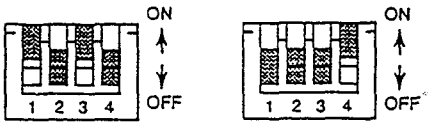
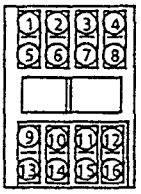


Fig.10 Terminal Arrangement



4	INPUT	(PS+)
5		
6		
7	INPUT	(+)
8	INPUT	(-)
9	OUTPUT-2	(+)
10	OUTPUT-2	(-)
11	OUTPUT-1	(+)
12	OUTPUT-1	(-)
13		
14	SUPPLY	(L+)
15	SUPPLY	(N-)
16	GND	(G)

Fig.11 Wiring Diagram 1

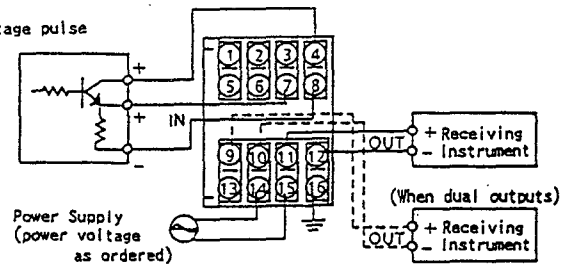
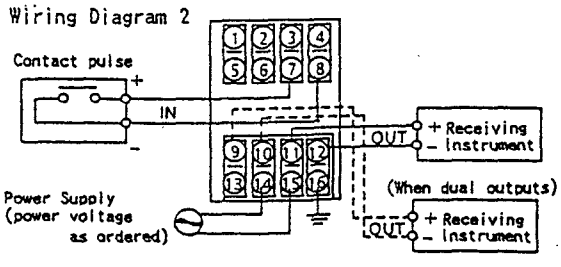


Fig.12 Wiring Diagram 2



8. CALIBRATION

Carry out the following calibration after warming up the instruments for more than 10～15 minutes.

8.1 Calibration equipment

- Pulse Generator 1
  (Hewlett Packard Model 3314A or equivalent)
- Counter or Osilloscope 1
  (Hewlett Packard Model 5334B or equivalent)
- Resistor 1kΩ, 1.6kΩ% & dry cell 6V 1 each

8.2 Calibration

① Connect each equipment as shown in Fig.14.

② Signal transmission characteristics check
Generate rectangular pulse of optional frequency of less than 6KHz by using Pulse Generator. (Connect Counter or Oscilloscope as per dashed line in the Fig.) Then connect Counter to terminals 11 and 12. Check that same frequency pulse is output.

Fig.13 Wiring Diagram 3

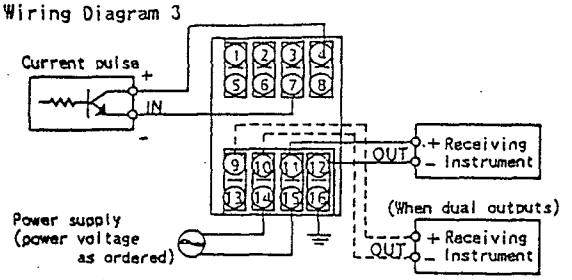
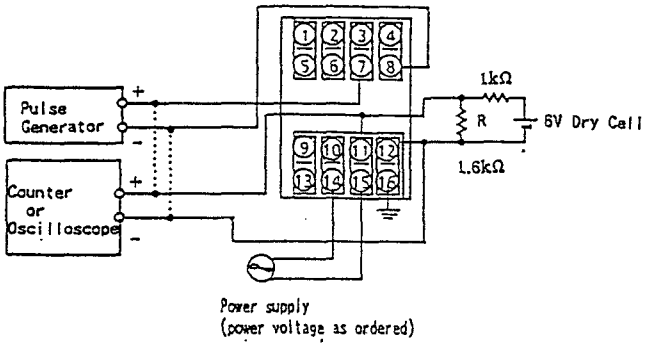


Fig.14 Wiring of Calibration Equipment



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

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