

## Space-saving Plug-in Signal Conditioners F-UNIT

### RTD TRANSMITTER

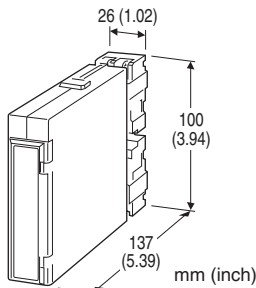
(field-programmable)

#### Functions & Features

- Accepting direct input from an RTD and providing a standard process signal
- Micro-processor based
- Field-programmable temperature range
- Linearization
- Burnout protection
- Loop testing via hand-held programmer PU-2x
- High-density mounting

#### Typical Applications

- Ideal for quick spare part



## MODEL: FJR-[1][2]-[3][4]

### ORDERING INFORMATION

- Code number: FJR-[1][2]-[3][4]
- Specify a code from below for each [1] through [4] (e.g. FJR-1A-K/BL)
- Temperature range (e.g. 0 - 500°C)

#### [1] INPUT RTD (2- or 3-wire)

- 1:** JPt 100 (JIS'89)  
(Usable range: -200 to +500°C, -328 to +932°F; min.span: 50°C, 90°F)
- 3:** Pt 100 (JIS'89)  
(Usable range: -200 to +650°C, -328 to +1202°F; min.span: 50°C, 90°F)
- 4:** Pt 100 (JIS'97, IEC)  
(Usable range: -200 to +650°C, -328 to +1202°F; min.span: 50°C, 90°F)
- 5:** Pt 50 Ω (JIS'81)  
(Usable range: -200 to +500°C, -328 to +932°F; min.span: 100°C, 180°F)
- 6:** Ni 508.4 Ω  
(Usable range: -50 to +200°C, -58 to +392°F; min.span: 30°C, 54°F)
- 0:** Specify

#### [2] OUTPUT

##### Current

A: 4 - 20 mA DC (Load resistance 600 Ω max.)

##### Voltage

6: 1 - 5 V DC (Load resistance 500 Ω min.)

#### [3] POWER INPUT

##### AC Power

K: 85 - 132 V AC

(Operational voltage range 85 - 132 V, 47 - 66 Hz)

L: 170 - 264 V AC

(Operational voltage range 170 - 264 V, 47 - 66 Hz)

##### DC Power

R: 24 V DC

(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

P: 110 V DC

(Operational voltage range 85 - 150 V, ripple 10 %p-p max.)

#### [4] OPTIONS

##### Burnout

blank: Upscale burnout

/BL: Downscale burnout

### RELATED PRODUCTS

- JX configurator connection kit (model: JXCON)
- Programming Unit (model: PU-2x)

### GENERAL SPECIFICATIONS

**Construction:** Plug-in

**Connection:** M3.5 screw terminals (torque 0.8 N·m)

**Screw terminal:** Nickel-plated steel

**Housing material:** Flame-resistant resin (black)

**Isolation:** Input to output to power

**Overrange output:** Approx. -10 to +120 % at 1 - 5 V

**Linearization:** Standard

**Adjustments:** Programming Unit (model: PU-2x);

(Refer to the users manual of JXCON for the adjustments configurable with JXCON.)

- RTD type (between Pt 100 and JPt 100 only)
- temp. range
- zero and span
- simulating output
- Others

### INPUT SPECIFICATIONS

**Maximum leadwire resistance:** 20 Ω per wire (3-wire)

**Sensing current:** 2 mA (Pt)

If not specified, the input range is shown below.

1: JPt 100 (JIS '89) 0 - 100°C

3: Pt 100 (JIS '89) 0 - 100°C



- 4: Pt 100 (JIS '97, IEC) 0 - 100°C
- 5: Pt 50 Ω (JIS '81) 0 - 200°C
- 6: Ni 508.4 Ω 0 - 100°C

## INSTALLATION

### Power input

- AC: Approx. 4.5 VA
- DC: 24 V approx. 70 mA
- 110 V approx. 20 mA

**Operating temperature:** -5 to +55°C (23 to 131°F)

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Mounting:** Surface or DIN rail; Standard Rack Mounting

Frame BX-16H available

**Weight:** 220 g (0.49 lbs)

## PERFORMANCE in percentage of span

**Accuracy:** ±0.1 % or ±0.1°C (±0.18°F), whichever is greater

**Temp. coefficient:** ±0.015 %/°C (±0.008 %/°F)

**Response time:** ≤ 0.5 sec. (0 - 90 %)

**Burnout response:** ≤ 10 sec.

**Line voltage effect:** ±0.1 % over voltage range

**Insulation resistance:** ≥ 100 MΩ with 500 V DC

### Dielectric strength

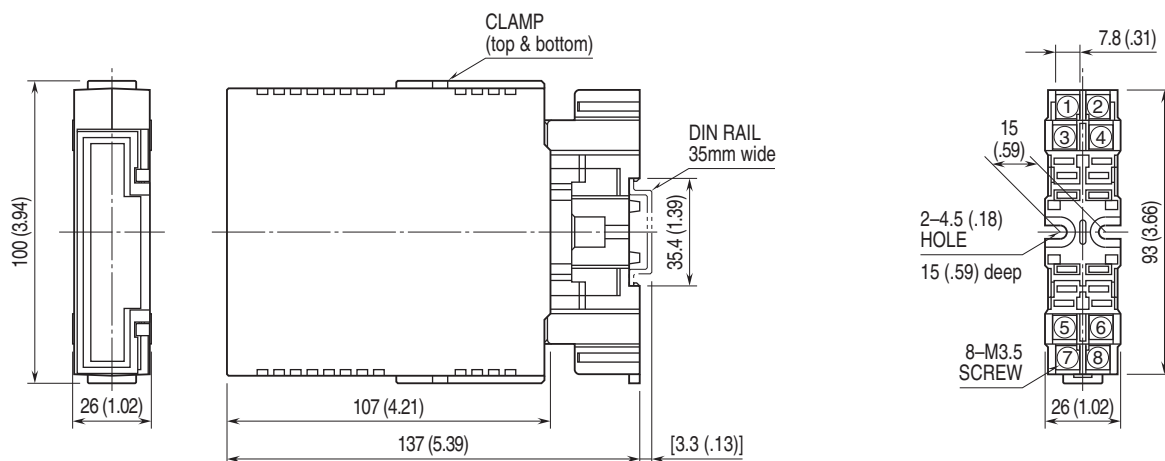
#### Power input code R:

- 1000 V AC @ 1 minute (input to output)
- 2000 V AC @ 1 minute (input or output or power to ground)
- 500 V AC @ 1 minute (I/O to power)

#### Power input code K, L, P:

- 1000 V AC @ 1 minute (input to output)
- 2000 V AC @ 1 minute (input or output or power to ground)
- 1500 V AC @ 1 minute (I/O to power)

## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



•When mounting, no extra space is needed between units.

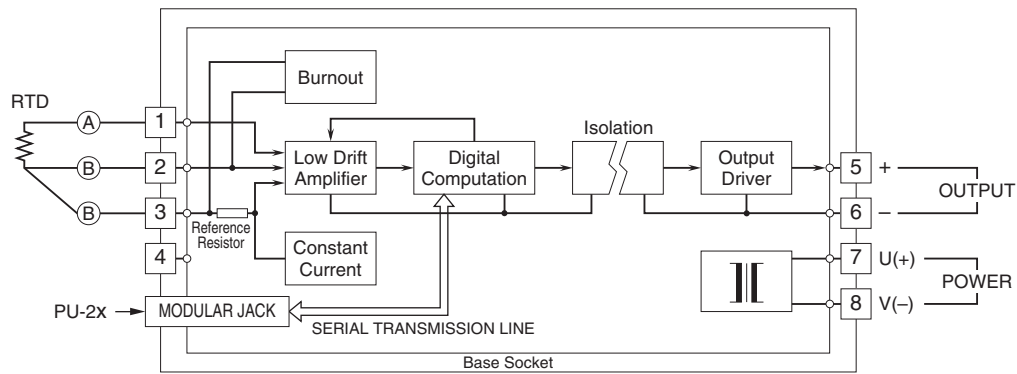


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**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.

