

## High-density Signal Conditioners 10-RACK

### RTD TRANSMITTER

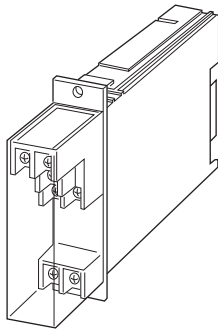
(field-programmable)

#### Functions & Features

- Accepting direct input from an RTD and providing two standard process signals
- Micro-processor based
- Field-programmable temperature range
- Linearization
- Burnout protection
- Loop testing via hand-held programmer PU-2x
- Optional second channel output available at the front terminals and at the Standard Rack connector

#### Typical Applications

- Ideal for quick spare part



### MODEL: 10JR-[1][2][3]-R[4]

#### ORDERING INFORMATION

- Code number: 10JR-[1][2][3]-R[4]

Specify a code from below for each of [1] through [4].

- (e.g. 10JR-4A6-R/BL/Q)
- Temperature range (e.g. 0 – 500°C)
- Specify the specification for option code /Q (e.g. /C01)

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

**1:** JPt 100 (JIS'89)

(Usable range: -200 to +500°C, -328 to +932°F; min.span: 30°C, 54°F)

**3:** Pt 100 (JIS'89)

(Usable range: -200 to +650°C, -328 to +1202°F; min.span: 30°C, 54°F)

**4:** Pt 100 (JIS'97, IEC)

(Usable range: -200 to +650°C, -328 to +1202°F; min.span: 30°C, 54°F)

**5:** Pt 50 Ω (JIS'81)

(Usable range: -200 to +500°C, -328 to +932°F; min.span: 60°C, 108°F)

**6:** Ni 508.4 Ω

(Usable range: -50 to +200°C, -58 to +392°F; min.span: 20°C, 36°F)

**0:** Specify

Note: Consult us for 2-wire RTD

#### [2] OUTPUT 1

Current

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

Voltage

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

#### [3] OUTPUT 2

**0:** None

Voltage

**6:** 1 – 5 V DC (Load resistance 5000 Ω min.)

#### POWER INPUT

DC Power

**R:** 24 V DC

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

#### [4] OPTIONS (multiple selections)

Burnout

**blank:** Upscale burnout

**/BL:** Downscale burnout

**blank:** none

**/Q:** With options (specify the specification)

#### SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to our web site.)

**/C01:** Silicone coating

**/C02:** Polyurethane coating

**/C03:** Rubber coating

#### RELATED PRODUCTS

- Programming Unit (model: PU-2x)
- PC configurator software (model: JXCON)

Downloadable at our web site.

A dedicated cable is required to connect the module to the PC. Please refer to the internet software download site or the users manual for the PC configurator for applicable cable types.

#### GENERAL SPECIFICATIONS

**Construction:** Rack-mounted; terminal access via screw terminals at the front and via card-edge connector at the rear; terminal cover provided

**Connection**

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

**Output:** Card-edge connector and M3.5 screw terminals (torque 0.8 N·m)

**Power input:** Supplied from card-edge connector

**Screw terminal:** Nickel-plated steel

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

**Isolation:** Input to output 1 to output 2 to power

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

**Linearization:** Standard

**Adjustments:** Programming Unit (model: PU-2x); RTD type (between Pt 100 and JPt 100 only), temp. range, zero and span, simulating output, etc.

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

## INPUT SPECIFICATIONS

**Maximum leadwire resistance:** 20  $\Omega$  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  $\Omega$  (JIS '81) 0 - 200°C

6: Ni 508.4  $\Omega$  0 - 100°C

## INSTALLATION

**Current consumption:** Approx. 60 mA with voltage output 1

Approx. 90 mA with current output 1

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

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

**Mounting:** Standard Rack 10BXx

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

## PERFORMANCE in percentage of span

**Accuracy:**  $\pm 0.1$  % or  $\pm 0.1^\circ\text{C}$  ( $\pm 0.18^\circ\text{F}$ ), whichever is greater

**Temp. coefficient:**  $\pm 0.015$  %/ $^\circ\text{C}$  ( $\pm 0.008$  %/ $^\circ\text{F}$ )

**Response time:**  $\leq 0.5$  sec. (0 - 90 %)

**Burnout response:**  $\leq 10$  sec.

**Line voltage effect:**  $\pm 0.1$  % over voltage range

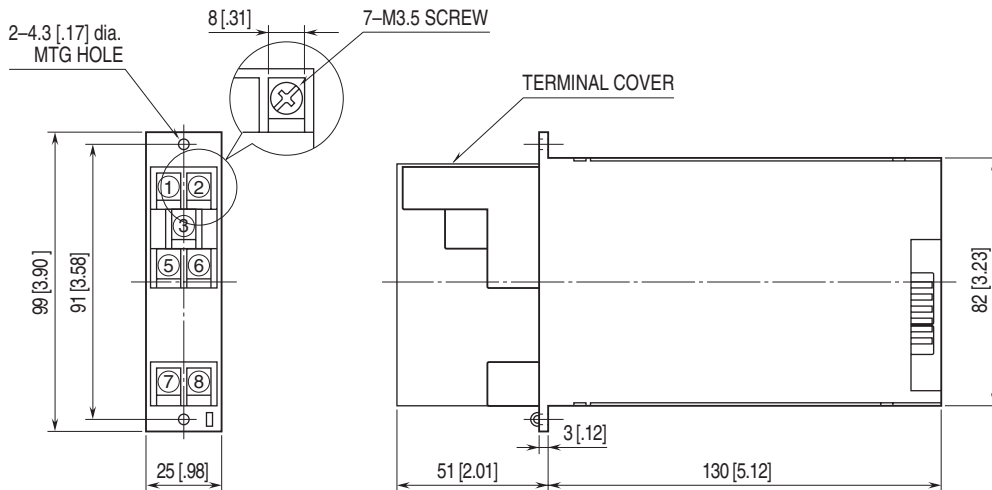
**Insulation resistance:**  $\geq 100$  M $\Omega$  with 500 V DC

**Dielectric strength:** 500 V AC @ 1 minute

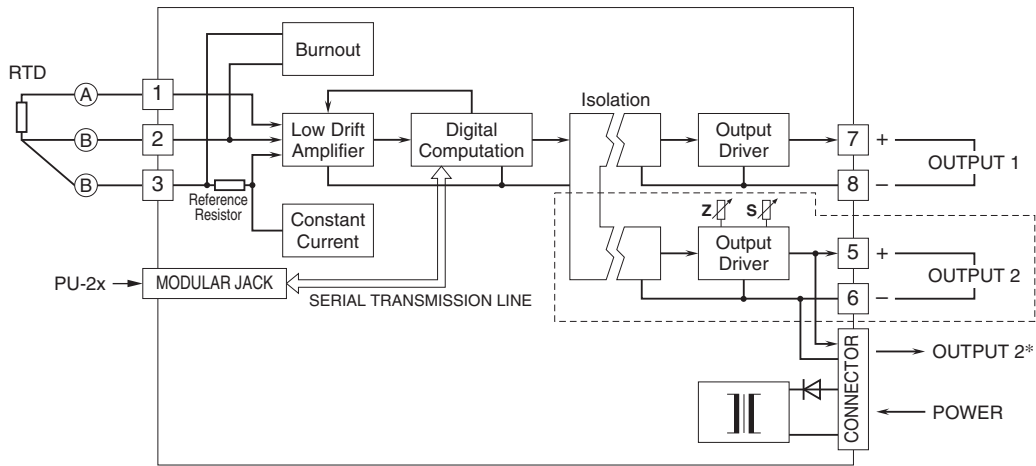
(input to output 1 to output 2 to power)

1500 V AC @ 1 minute (input or output or power to ground)

## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



\*1 output type has the output 1 connected to the card-edge connector in parallel.  
 Remark 1) The section enclosed by broken line is only for 2nd output channel.



Specifications are subject to change without notice.