

## High-density Signal Conditioners 10-RACK

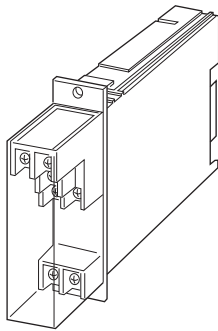
### RTD TRANSMITTER

#### Functions & Features

- Accepting direct input from an RTD and providing two standard process signals
- Linearization
- Burnout protection
- Optional second channel output available at the front terminals and at the Standard Rack connector

#### Typical Applications

- Converting into standard signals
- Power plant



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

#### ORDERING INFORMATION

- Code number: 10RS-[1][2][3]-R[4]
- Specify a code from below for each of [1] through [4].  
(e.g. 10RS-1A6-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.)
- B:** 2 – 10 mA DC (Load resistance 1200 Ω max.)
- C:** 1 – 5 mA DC (Load resistance 2400 Ω max.)
- D:** 0 – 20 mA DC (Load resistance 600 Ω max.)
- E:** 0 – 16 mA DC (Load resistance 750 Ω max.)
- F:** 0 – 10 mA DC (Load resistance 1200 Ω max.)
- G:** 0 – 1 mA DC (Load resistance 12 kΩ max.)
- Voltage
- 1:** 0 – 10 mV DC (Load resistance 10 kΩ min.)
- 2:** 0 – 100 mV DC (Load resistance 100 kΩ min.)
- 3:** 0 – 1 V DC (Load resistance 100 Ω min.)
- 4:** 0 – 10 V DC (Load resistance 1000 Ω min.)
- 5:** 0 – 5 V DC (Load resistance 500 Ω min.)
- 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
- Other Options
- blank:** none
- /Q:** Option other than the above (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

#### 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  
**Zero adjustment:** -5 to +5 % (front)  
**Span adjustment:** 95 to 105 % (front)  
**At burnout:** Downscale  $\leq$  -10 %, Upscale  $\geq$  110 %  
**Linearization:** Standard

## INPUT SPECIFICATIONS

**Maximum leadwire resistance:** 20  $\Omega$  per wire (3-wire)  
**Sensing current:** 2 mA

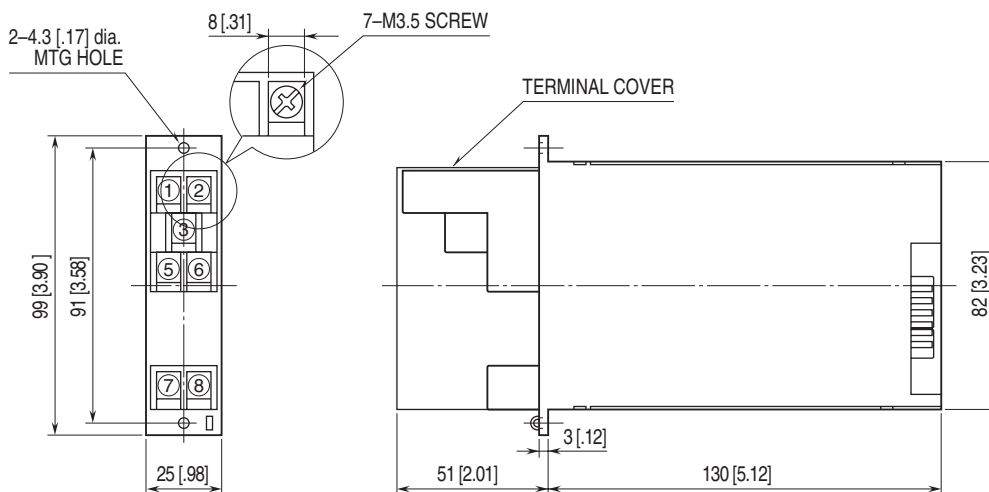
## INSTALLATION

**Current consumption:** Approx. 35 mA with voltage output 1  
 Approx. 55 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:** 200 g (0.44 lb)

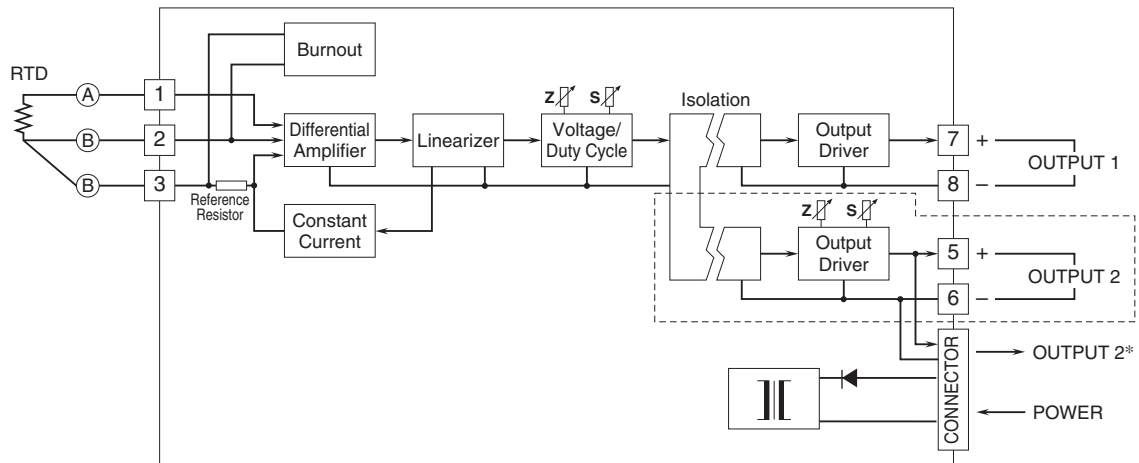
## PERFORMANCE in percentage of span

**Accuracy:**  $\pm 0.2$  %  
**Temp. coefficient:**  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°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.