

Rack-mounted Power Transducers 17-RACK

RTD CONVERTER

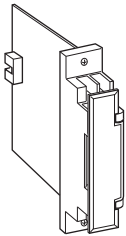
(fast response)

Functions & Features

- Accepting direct input from an RTD and providing a standard process signal
- Linearization
- Burnout protection
- "Active bridge" circuit containing two constant current sources allows leadwire resistances up to 20 Ω

Typical Applications

- Converting into a standard signal
- Combination with intrinsic safety barriers



MODEL: 17RK-[1]6-R[2]

ORDERING INFORMATION

- Code number: 17RK-[1]6-R[2]
- Specify a code from below for each of [1] and [2].
(e.g. 17RK-16-R/BL)
- Temperature range (e.g. 0 - 100°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: 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

OUTPUT

Voltage

6: 1 - 5 V DC (Load resistance 2000 Ω min.)

POWER INPUT

DC Power

R: 24 V DC

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

[2] OPTIONS

Burnout

blank: Upscale burnout

/BL: Downscale burnout

GENERAL SPECIFICATIONS

Construction: Rack-mounted; terminal access via screw terminals on the front and connector on the rear; terminal cover provided

Connection:

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

Output: Connector

Power input: Supplied from connector

Screw terminal: Nickel-plated steel

Isolation: Input to output to power

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

Linearization: Standard

INPUT SPECIFICATIONS

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

Sensing current: 2 mA

INSTALLATION

Current consumption: Approx. 35 mA

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

Operating humidity: 40 to 85 % RH (non-condensing)

Mounting: Standard Rack 17BXE

Weight: 150 g (0.33 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.3 %

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

Response time: Approx. 25 msec. (0 - 90 %)

Burnout response: ≤ 10 sec.

Line voltage effect: ±0.1 % over voltage range

Insulation resistance: ≥ 100 MΩ with 500 V DC

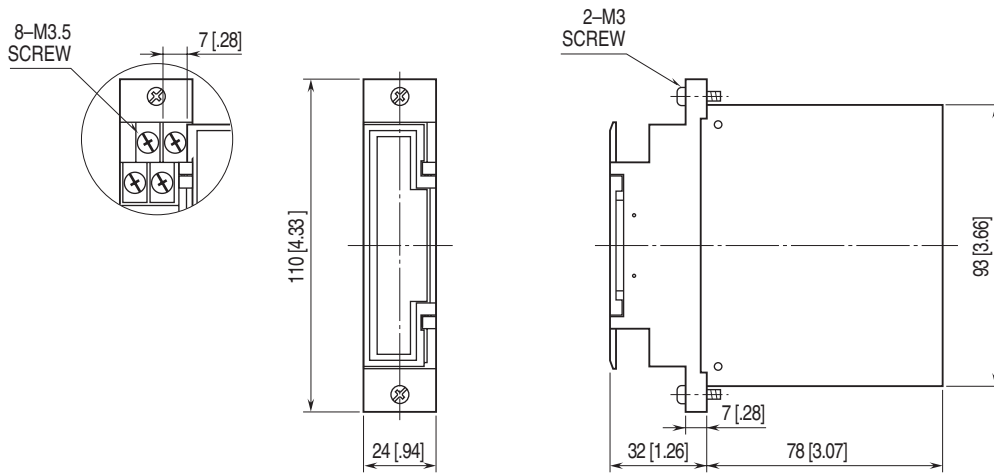
Dielectric strength: 1500 V AC @ 1 minute

(input to output or power)

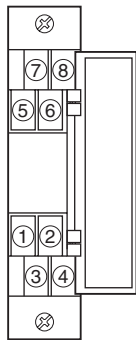
500 V AC @ 1 minute (output to power)

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

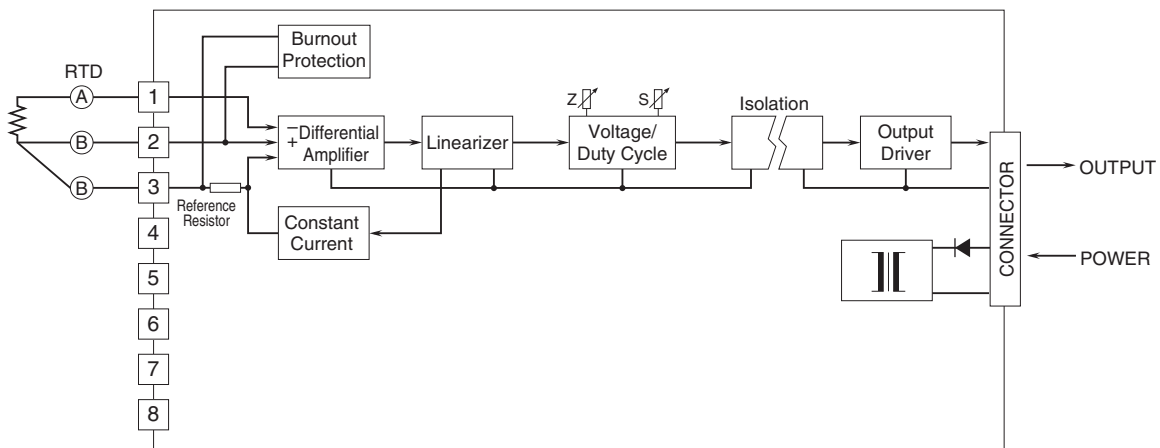
DIMENSIONS unit: mm (inch)



TERMINAL ASSIGNMENTS



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.