

Rack-mounted DCS Signal Conditioners 18-RACK

RTD CONVERTER

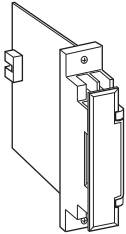
(field-programmable)

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
- Second channel output available at the front terminals and at the Standard Rack connector

Typical Applications

- Ideal for quick spare part



MODEL: 18JR-[1]66-R[2]

ORDERING INFORMATION

- Code number: 18JR-[1]66-R[2]
- Specify a code from below for each [1] and [2] (e.g. 18JR-166-R/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: 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 M-System for 2-wire RTD

OUTPUT 1

Voltage

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

OUTPUT 2

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

RELATED PRODUCTS

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

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 1: Connector

Output 2: M3.5 screw terminals (torque 0.8 N·m) and connector

Power input: Supplied from connector

Screw terminal: Nickel-plated steel

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 Ω per wire (3-wire)

Sensing current: 2 mA

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 consumption

•DC: Approx. 60 mA

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

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

Mounting: Standard Rack 18BXx or 18KBXx

Weight: 150 g (0.33 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: 1500 V AC @ 1 minute

(input to output 1 or output 2 or power)

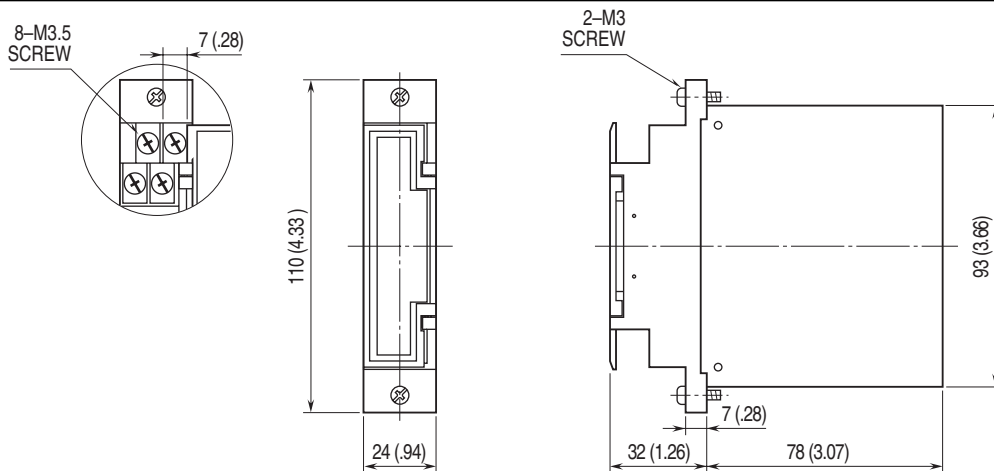
500 V AC @ 1 minute

(output 1 to output 2 to power)

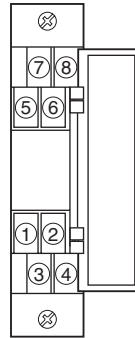
1500 V AC @ 1 minute

(input or output or power to ground)

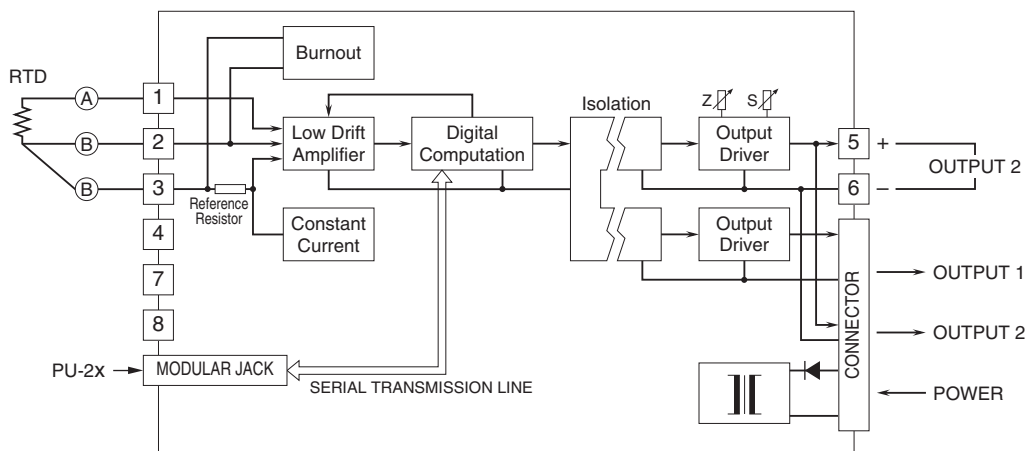
DIMENSIONS unit: mm (inch)



TERMINAL ASSIGNMENTS



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.

