High-density Signal Conditioners 10-RACK

RTD TRANSMITTER

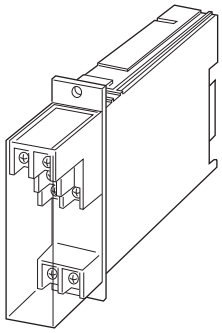
(field-programmable)

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 [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 M-System 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 M-System's web site.)
/C01: Silicone coating
/C02: Polyurethane coating
/C03: Rubber coating

RELATED PRODUCTS

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

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

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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 (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

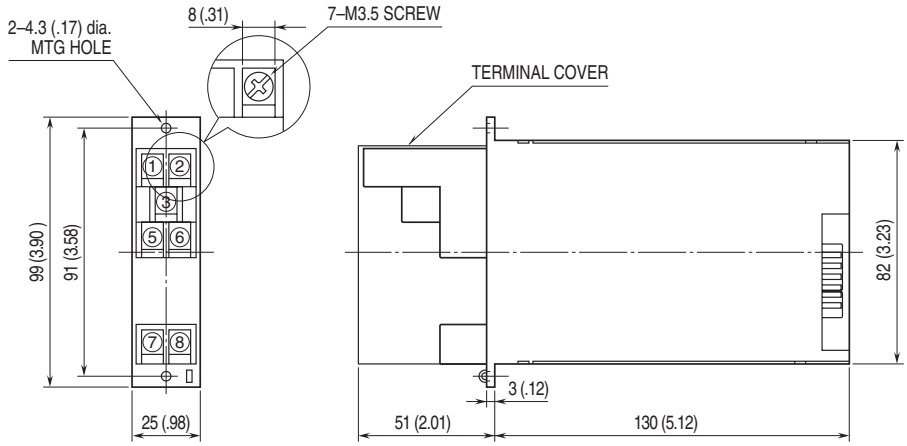
INSTALLATION

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: ±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: 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)



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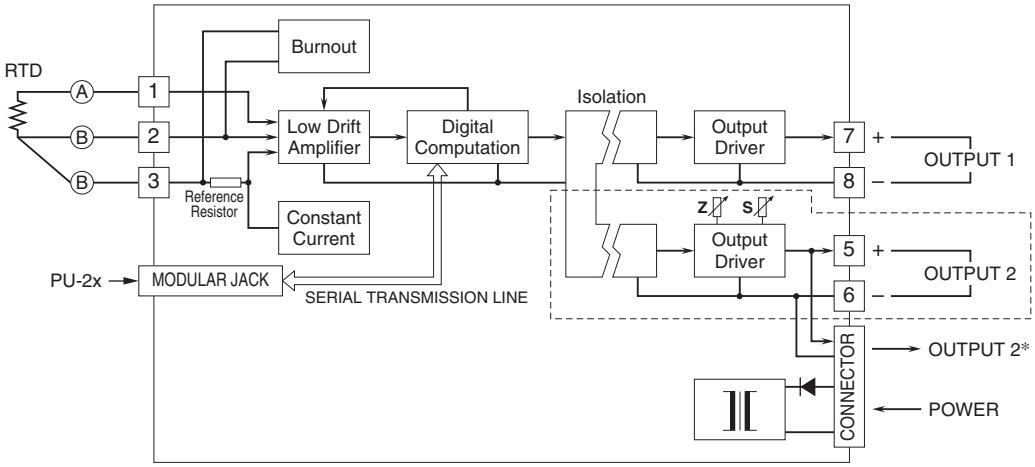
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*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.

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