

High-density Signal Conditioners 10-RACK

THERMOCOUPLE TRANSMITTER

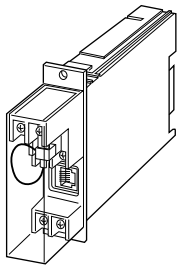
(field-programmable)

Functions & Features

- Accepting direct input from a thermocouple and providing two standard process signals
- Microprocessor based
- Field-programmable T/C type and temperature range
- Linearization
- Burnout protection
- High accuracy cold junction compensation
- 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
- High-accuracy cold junction compensation benefits narrow span measurements
- 0.1µA burnout sensing enables long distance transmission with minimum offset drifts
- Electric furnace (isolation)
- No burnout type can connect to a single T/C in parallel with a recorder



MODEL: 10JT-[1][2][3]-R[4]

ORDERING INFORMATION

- Code number: 10JT-[1][2][3]-R[4]
- Specify a code from below for each [1] through [4].
(e.g. 10JT-2A6-R/BL/Q)
- Temperature range (e.g. 0 - 800°C)
- K thermocouple setting will be used if the input code is not specified.
- Specify the specification for option code /Q
(e.g. /C01)

[1] INPUT THERMOCOUPLE

- 1: (PR) (Usable Range 0 to 1760°C, 32 to 3200°F)
- 2: K (CA) (Usable range -270 to +1370°C, -454 to +2498°F)

- 3: E (CRC) (Usable range -270 to +1000°C, -454 to +1832°F)
- 4: J (IC) (Usable range -210 to +1200°C, -346 to +2192°F)
- 5: T (CC) (Usable range -270 to +400°C, -454 to +752°F)
- 6: B (RH) (Usable range 0 to 1820°C, 32 to 3308°F)
- 7: R (Usable range -50 to +1760°C, -58 to +3200°F)
- 8: S (Usable range -50 to +1760°C, -58 to +3200°F)
- N: N (Usable range -270 to +1300°C, -454 to +2372°F)
- 0: Specify

[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

/BN: No 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)



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Website : www.xintop.com

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

Cold junction compensation: CJC sensor attached to the input terminals

Adjustments: Programming Unit (model: PU-2x); (Refer to the users manual of JXCON for the adjustments configurable with JXCON.)

- T/C type
- temp. range
- zero and span
- simulating output
- Others

INPUT SPECIFICATIONS

Minimum span: 3 mV

Offset: Max. 3 times span

Input resistance: 20 kΩ min.

Burnout sensing: 0.1 μA

Minimum span

(PR): 370°C, 670°F

K (CA): 75°C, 140°F

E (CRC): 50°C, 90°F

J (IC): 60°C, 110°F

T (CC): 75°C, 140°F

B (RH): 780°C, 1410°F

R: 360°C, 650°F

S: 380°C, 690°F

N: 110°C, 200°F

Remark: The described accuracy may be partially not satisfied when the temperature ranges below 0°C. Consult factory.

If not specified, the input range is shown below.

(PR): 0 to 1600°C

K (CA): 0 to 1000°C

E (CRC): 0 to 500°C

J (IC): 0 to 500°C

T (CC): 0 to 300°C

B (RH): 0 to 1800°C

R: 0 to 1600°C

S: 0 to 1600°C

N: 0 to 1000°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 %

Linearization accuracy: ±0.05 %

Cold junction compensation error: ±0.5°C or ±0.9°F
(at 20°C ±10°C or 68°F ±18°F)

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

Response time: ≤ 0.8 sec. (0 - 90 %)

Burnout response: ≤ 10 sec.

Line voltage effect: ±0.1 % over voltage range

Insulation resistance: ≥ 100 MΩ with 500 V DC

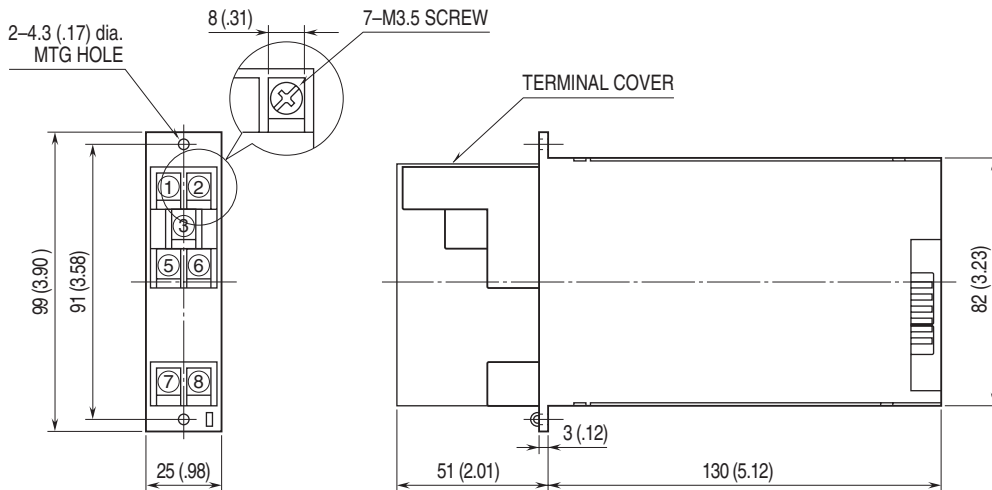
Dielectric strength: 500 V AC @ 1 minute

(input to output 1 to output 2 to power)

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

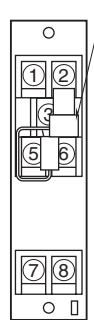


DIMENSIONS unit: mm (inch)

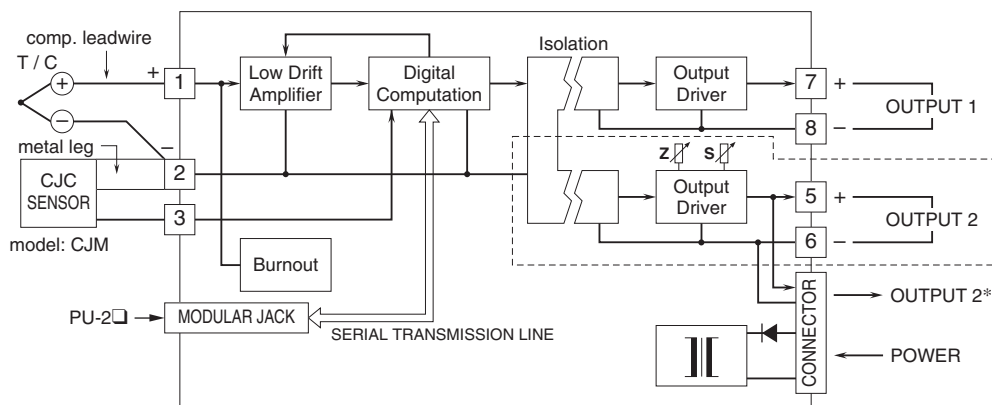


TERMINAL ASSIGNMENTS

CJC SENSOR
(model: CJM)



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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