

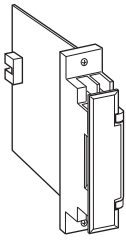
Rack-mounted DCS Signal Conditioners 18K-RACK

THERMOCOUPLE CONVERTER

(field-programmable)

Functions & Features

- Module can be retracted without removing wiring for an insulation test
- Input specifications (thermocouple type and range) are freely configurable via programming unit



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

ORDERING INFORMATION

- Code number: 18KJT-[1]66-R[2]
- Specify a code from below for each of [1] and [2].
(e.g. 18KJT-266-R/BL)
- Temperature range (e.g. 0 – 800°C)
- Default setting will be used if not otherwise specified.
K thermocouple setting will be used if the input code is not specified.

[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

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

/BN: No burnout

RELATED PRODUCTS

- Programming Unit (model: PU-2x)
- PC configurator software (model: JXCON)

Downloadable at our web site.

A dedicated cable is required to connect the module to the PC. Please refer to the internet software download site or the users manual for the PC configurator for applicable cable types.

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) and connector

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

Cold junction compensation: CJC sensor attached to the field 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 k Ω min.

Burnout sensing: 0.1 μ A

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

Note: 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

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

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

Mounting: Standard Rack 18KBXx

Weight: 150 g (0.33 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 %)

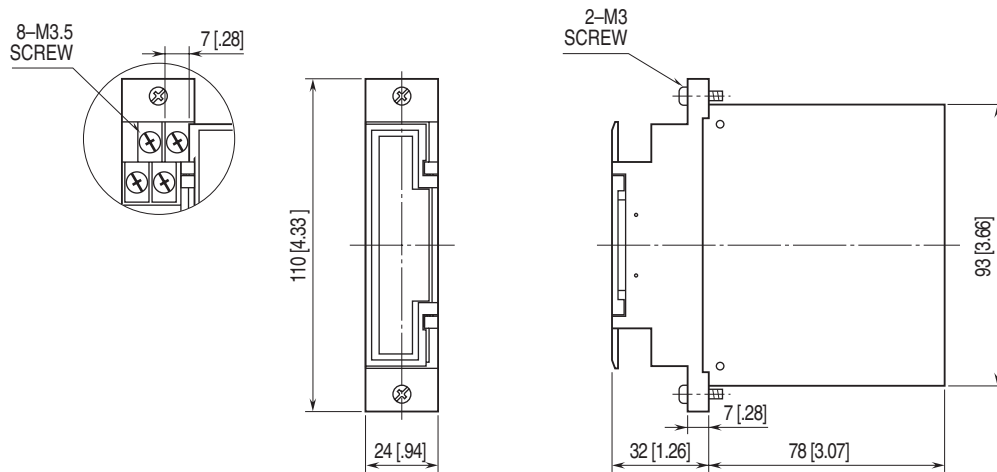
Burnout response: ≤ 10 sec.

Line voltage effect: ± 0.1 % over voltage range

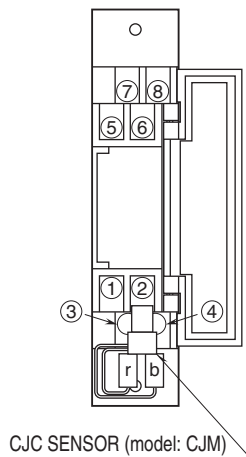
Insulation resistance: ≥ 100 M Ω with 500 V DC

Dielectric strength: 500 V AC @ 1 minute (input to output 1 to output 2 to power to ground)

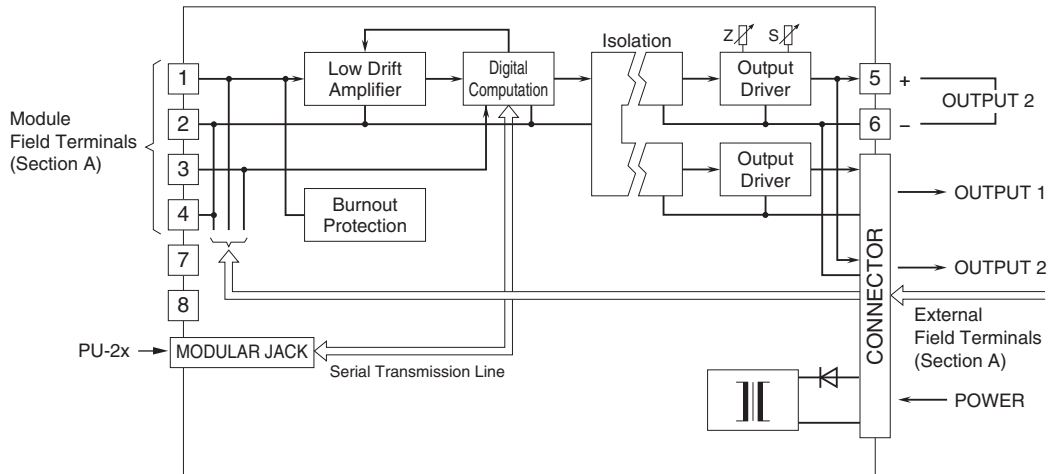
EXTERNAL DIMENSIONS unit: mm [inch]



TERMINAL ASSIGNMENTS

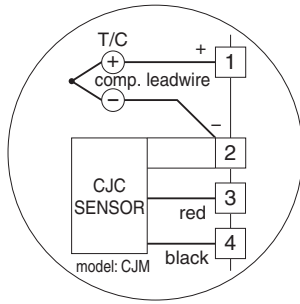


SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Use either of module or external field terminals.

Section A. Field Terminals



Specifications are subject to change without notice.