

Head-mounted Two-wire Signal Conditioners 26-UNIT

THERMOCOUPLE TRANSMITTER

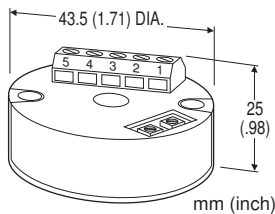
(isolated)

Functions & Features

- Accepts direct input from a thermocouple and provides a standard 4 – 20 mA DC signal
- Linearization and burnout
- High-accuracy cold junction compensation
- Wide operating temperature range suitable for harsh environments

Typical Applications

- Mounting in a sensor connection head minimizes noise effect and signal degradation



MODEL: 26TS1-[1][2]

ORDERING INFORMATION

- Code number: 26TS1-[1][2]
- Specify a code from below for each of [1] and [2].
(e.g. 26TS1-2/K/BL)
- Temperature range (e.g. 0 – 800°C)

[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] OPTIONS (multiple selections)

Response Time (0 – 90 %)

blank: Standard (≤ 0.5 sec.)

/K: Fast Response (Approx. 25 msec.)

Burnout

- blank: Upscale burnout
- /BL: Downscale burnout
- /BN: No burnout

GENERAL SPECIFICATIONS

- Construction:** Sensor head-mounting
- Connection:** Euro type terminal
- Applicable wire size:** 0.14 – 1.5 mm², stripped length 6 mm
- Housing material:** Flame-resistant resin (black)
- Isolation:** Input to output
- Zero adjustment:** -0.5 to +0.5 % (front)
- Span adjustments:** 99.5 to 100.5 % (front)
- Linearization:** Standard
- Cold junction compensation:** CJC sensor attached to the input terminals

INPUT SPECIFICATIONS

- Minimum span:** 3 mV
- Input resistance:** 20 kΩ min.
- Burnout sensing:** 0.1 μA

Lower temperature range & span (in °C)

- (PR): Lower range 0 to 880°C; min. span 370°C
- K (CA): Lower range -270 to +1200°C; min. span 75°C
- E (CRC): Lower range -270 to +750°C; min. span 50°C
- J (IC): Lower range -210 to +800°C; min. span 60°C
- T (CC): Lower range -270 to +325°C; min. span 75°C
- B (RH): Lower range 0 to 1040°C; min. span 780°C
- R: Lower range -50 to +550°C; min. span 360°C
- S: Lower range -50 to +550°C; min. span 380°C
- N: Lower range -270 to +1100°C; min. span 110°C

Lower temperature range & span (in °F)

- (PR): Lower range 32 to 1616°F; min. span 670°F
- K (CA): Lower range -454 to +2192°F; min. span 140°F
- E (CRC): Lower range -454 to +1382°F; min. span 90°F
- J (IC): Lower range -346 to +1472°F; min. span 110°F
- T (CC): Lower range -454 to +617°F; min. span 140°F
- B (RH): Lower range 32 to 1904°F; min. span 1450°F
- R: Lower range -58 to +1022°F; min. span 680°F
- S: Lower range -58 to +1022°F; min. span 700°F
- N: Lower range -454 to +2012°F; min. span 200°F

Note: The described accuracy may be partially not satisfied when the temperature ranges below 0°C. Consult M-System.

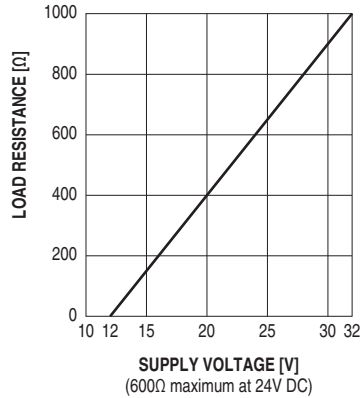
OUTPUT SPECIFICATIONS

Output: 4 - 20 mA DC

Load resistance vs. supply voltage:

Load Resistance (Ω) = (Supply Voltage (V) - 12 (V)) \div 0.02

(A) (including leadwire resistance)



EMS EN 61000-6-2

RoHS Directive

INSTALLATION

Supply voltage: 12 - 32 V DC

Operating temperature: -40 to +85°C (-40 to +185°F)

Operating humidity: 0 to 90 %RH (non-condensing)

Mounting: Head-mounting (DIN type B head)

Weight: 40 g (1.4 oz)

PERFORMANCE in percentage of span

Accuracy (whichever is greater)

K, E, J: ± 0.1 % of FS or ± 0.2 °C (± 0.36 °F)

T, N: ± 0.2 % of FS or ± 0.2 °C (± 0.36 °F)

PR, B, R, S: ± 0.3 % of FS

(at over 400°C for R, S and PR; over 770°C for B)

Cold junction compensation error

K: ± 1 °C max. at 0 - 85°C

0.2°C @25°C + 0.035°C/°C at -40 - 0°C

J: ± 2 °C max. at 0 - 85°C

0.2°C @25°C + 0.06°C/°C at -40 - 0°C

E, T, N: ± 3 °C max. at 0 - 85°C

0.2°C @25°C + 0.14°C/°C at -40 - 0°C

PR, R, S: ± 4 °C max. at 0 - 85°C

0.2°C @25°C + 0.25°C/°C at -40 - 0°C

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

Burnout response: ≤ 10 sec.

Insulation resistance: ≥ 100 M Ω with 500 V DC

Dielectric strength: 1500 V AC @1 minute

(input to output to ground)

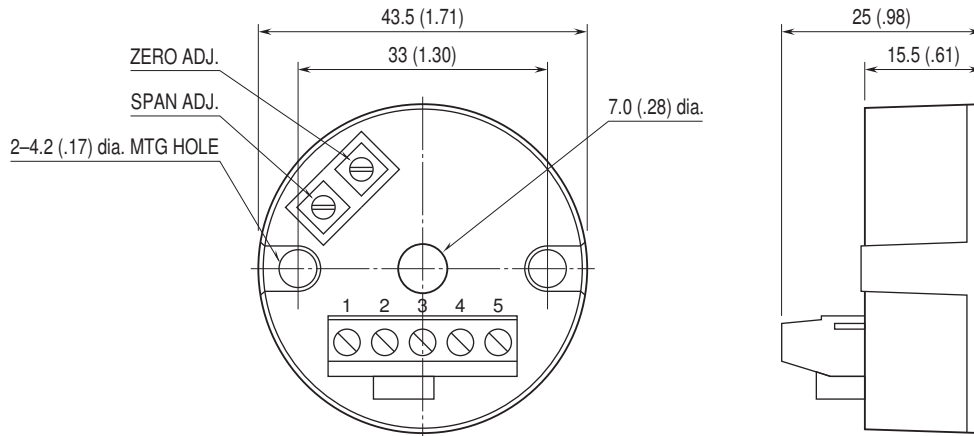
STANDARDS & APPROVALS

EU conformity:

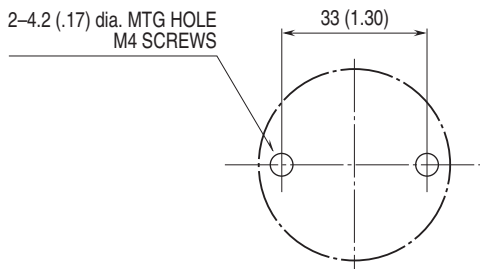
EMC Directive

EMI EN 61000-6-4

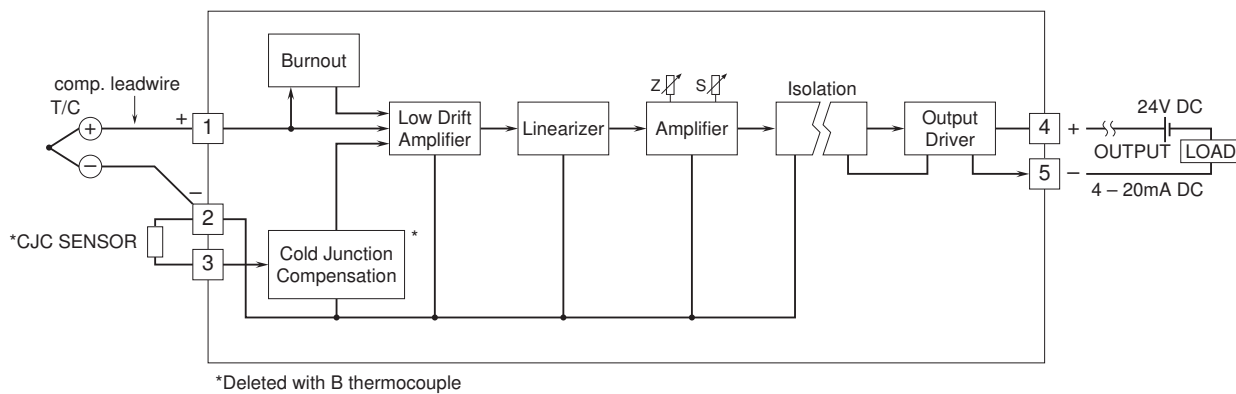
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



MOUNTING REQUIREMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.