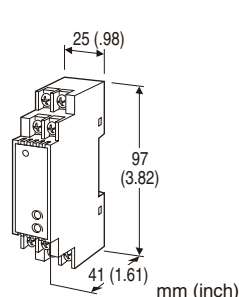


Super-mini Two-wire Terminal Block Signal Conditioners B5-UNIT

RTD TRANSMITTER

Functions & Features

- Accepts direct input from a RTD and provides an isolated 4 – 20 mA signal
- Linearization and burnout
- Monitor terminals
- High-density mounting
- Power LED



MODEL: B5RS-[1][2]

ORDERING INFORMATION

- Code number: B5RS-[1][2]
Specify a code from below for each of [1] and [2].
(e.g. B5RS-4/K/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: 50°C, 90°F)

3: Pt 100 (JIS'89)

(Usable range: -200 to +650°C, -328 to +1202°F; min.span: 50°C, 90°F)

4: Pt 100 (JIS'97, IEC)

(Usable range: -200 to +850°C, -328 to +1562°F; min.span: 50°C, 90°F)

5: Pt 50 Ω (JIS'81)

(Usable range: -200 to +500°C, -328 to +932°F; min.span: 100°C, 180°F)

6: Ni 508.4 Ω

(Usable range: -50 to +200°C, -58 to +392°F; min.span: 30°C, 54°F)

0: Specify

Note: Consult M-System for 2-wire RTD

[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

Other Options

blank: none

/Q: Option other than the above (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

GENERAL SPECIFICATIONS

Construction: Terminal block

Connection: M3.5 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

Isolation: Input to output

Zero adjustment: -1 to +1 % (front)

Span adjustment: 98 to 102 % (front)

Burnout: Upscale standard;downscale optional

Linearization: Standard

Power LED: Orange LED turns on when the power is supplied.

INPUT SPECIFICATIONS

Maximum leadwire resistance: 20 Ω per wire (3-wire)

Sensing current: 0.7 mA (Pt); 0.35 mA (Ni 508.4 Ω)

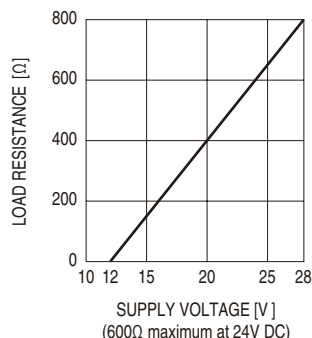
OUTPUT SPECIFICATIONS

Output: 4 – 20 mA DC

Load resistance vs. supply voltage:

Load Resistance (Ω) = (Supply Voltage (V) – 12 (V)) ÷ 0.02

(A) (including leadwire resistance)



INSTALLATION

Supply voltage: 12 – 28 V DC

Operating temperature: -40 to +80°C (-40 to +176°F)

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

Mounting: DIN rail

Weight: 60 g (2.1 oz)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.2\%$

Temp. coefficient: $\pm 0.02\%/^{\circ}\text{C}$ ($\pm 0.01\%/^{\circ}\text{F}$)

Burnout response: ≤ 10 sec.

Insulation resistance: $\geq 100\text{ M}\Omega$ with 500 V DC

Dielectric strength: 2000 V AC @1 minute
(input to output to ground)

STANDARDS & APPROVALS

EU conformity:

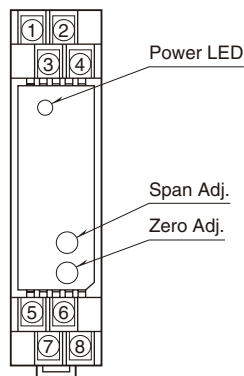
EMC Directive

EMI EN 61000-6-4

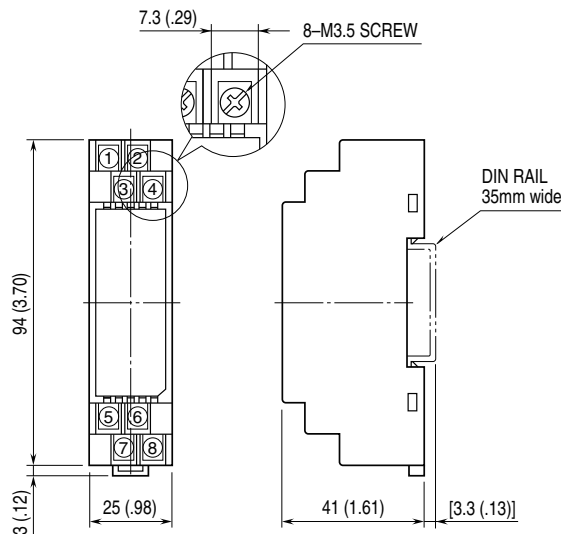
EMS EN 61000-6-2

RoHS Directive

EXTERNAL VIEW

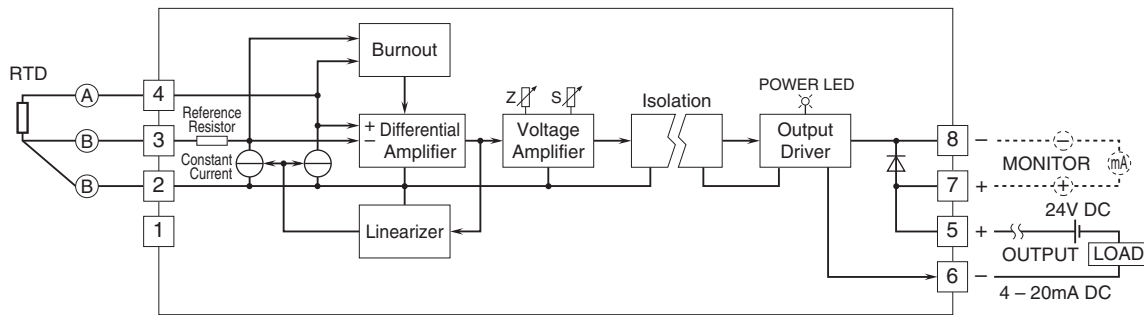


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



• When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.