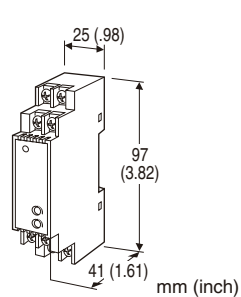


**Super-mini Two-wire Terminal Block
Signal Conditioners B5-UNIT**

SIGNAL TRANSMITTER

Functions & Features

- Converts a DC input into an isolated 4 - 20 mA DC signal
- Monitor terminals
- High-density mounting
- Power LED



MODEL: B5VS-[1][2]

ORDERING INFORMATION

- Code number: B5VS-[1][2]
- Specify a code from below for each [1] and [2].
(e.g. B5VS-4W/K/Q)
- Special input range (For codes Z & 0)
 - Specify the specification for option code /Q
(e.g. /C01)

[1] INPUT

Current

- A: 4 - 20 mA DC (Input resistance 249 Ω)
- B: 2 - 10 mA DC (Input resistance 499 Ω)
- C: 1 - 5 mA DC (Input resistance 1000 Ω)
- D: 0 - 20 mA DC (Input resistance 49.9 Ω)
- E: 0 - 16 mA DC (Input resistance 61.9 Ω)
- F: 0 - 10 mA DC (Input resistance 100 Ω)
- G: 0 - 1 mA DC (Input resistance 1000 Ω)
- H: 10 - 50 mA DC (Input resistance 10 Ω)
- Z: Specify current (See INPUT SPECIFICATIONS)

Voltage

- 3: 0 - 1 V DC (Input resistance 1 MΩ min.)
- 4: 0 - 10 V DC (Input resistance 1 MΩ min.)
- 5: 0 - 5 V DC (Input resistance 1 MΩ min.)
- 6: 1 - 5 V DC (Input resistance 1 MΩ min.)
- 4W: -10 - +10 V DC (Input resistance 1 MΩ min.)
- 5W: -5 - +5 V DC (Input resistance 1 MΩ min.)
- 0: Specify voltage (See INPUT SPECIFICATIONS)

[2] OPTIONS (multiple selections)

Response Time (0 - 90 %)

blank: Standard (≤ 0.5 sec.)

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

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: 95 to 105 % (front)

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

INPUT SPECIFICATIONS

■ **DC Current:** Input resistor incorporated

Specify input resistance value for code Z.

($R \leq 0.125 \text{ W} \div [\text{F.S. Current}]^2$)

■ **DC Voltage:** -30 - +30 V DC

Minimum span: 100 mV

Offset: Max. 1.5 times span

• **Input resistance**

Span 0.1 - 1 V : ≥ 100 kΩ

Span ≥ 1 V : ≥ 1 MΩ

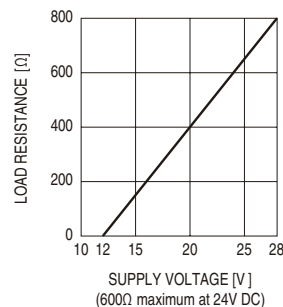
OUTPUT SPECIFICATIONS

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)

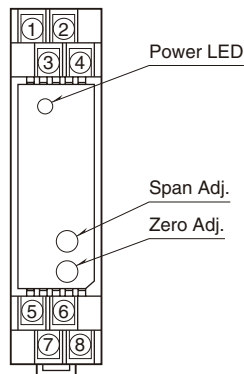
PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$
 Temp. coefficient: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)
 Insulation resistance: $\geq 100\text{ M}\Omega$ with 500 V DC
 Dielectric strength: 2000 V AC @1 minute
 (input to output to ground)

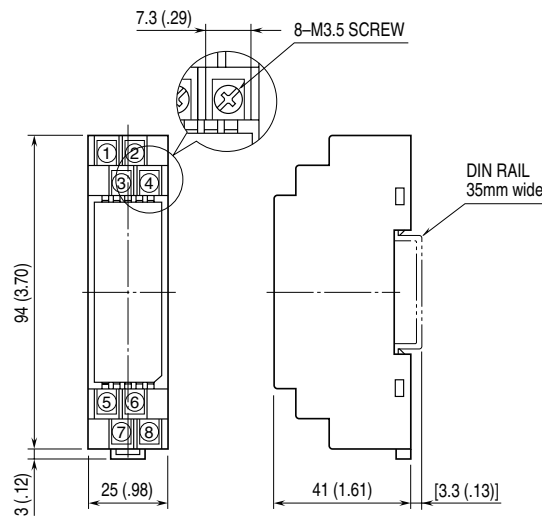
STANDARDS & APPROVALS

CE conformity:
 EMC Directive (2004/108/EC)
 EMI EN 61000-6-4: 2007
 EMS EN 61000-6-2: 2005

EXTERNAL VIEW



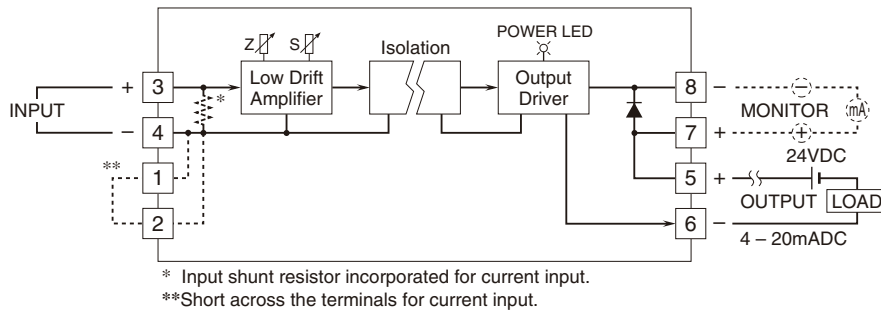
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.

