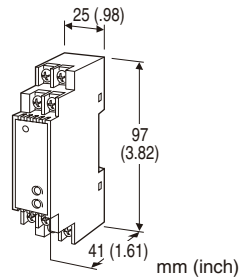


## Super-mini Two-wire Terminal Block Signal Conditioners B5-UNIT

### 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 of [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 ( $\leq 0.5$  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 LED 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 :  $\geq 100 \text{ k}\Omega$

Span  $\geq 1 \text{ V}$  :  $\geq 1 \text{ M}\Omega$

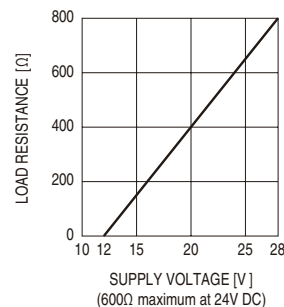
#### OUTPUT SPECIFICATIONS

**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)



## 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

EU conformity:

EMC Directive

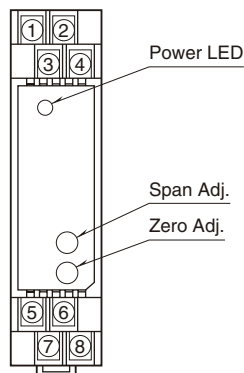
EMI EN 61000-6-4

EMS EN 61000-6-2

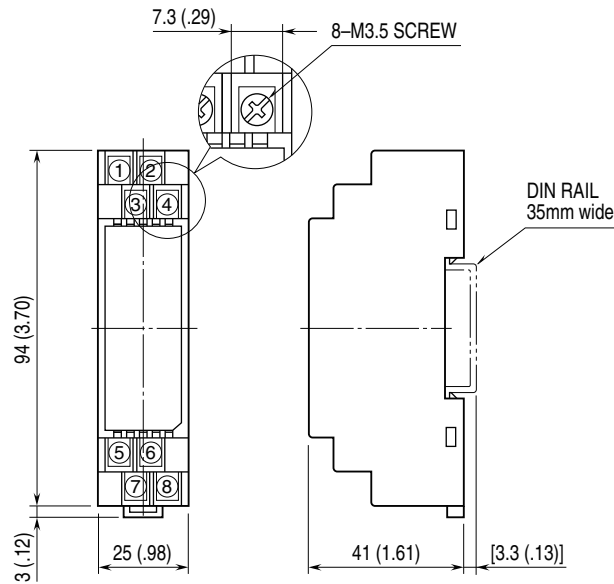
RoHS Directive

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## EXTERNAL VIEW

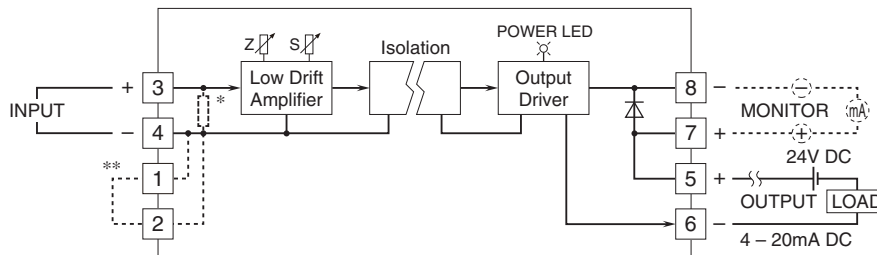


**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)**



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

**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



\* Input shunt resistor incorporated for current input.  
 \*\*Short across the terminals for current input.



Specifications are subject to change without notice.