

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

**SIGNAL TRANSMITTER**

MODEL **B5VS**

**MODEL & SUFFIX CODE SELECTION**

MODEL \_\_\_\_\_ **B5VS**

INPUT \_\_\_\_\_

<b>Current</b>	<b>Voltage</b>
<b>A</b> : 4 – 20mA DC	<b>3</b> : 0 – 1V DC
<b>B</b> : 2 – 10mA DC	<b>4</b> : 0 – 10V DC
<b>C</b> : 1 – 5mA DC	<b>5</b> : 0 – 5V DC
<b>D</b> : 0 – 20mA DC	<b>6</b> : 1 – 5V DC
<b>E</b> : 0 – 16mA DC	<b>4W</b> : -10 – +10V DC
<b>F</b> : 0 – 10mA DC	<b>5W</b> : -5 – +5V DC
<b>G</b> : 0 – 1mA DC	<b>0</b> : Specify voltage
<b>H</b> : 10 – 50mA DC	
<b>Z</b> : Specify current	

**OUTPUT**  
4 – 20mA DC

**SUPPLY VOLTAGE**  
12 – 28V DC

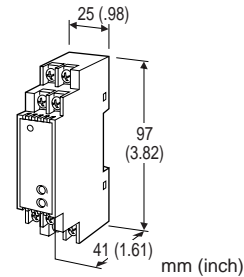
**OPTIONS**  
/K : Fast response

**ORDERING INFORMATION**

Specify code number and variables.  
 • **Code number** (e.g. B5VS-4W/K)  
 • **Special input range** (For codes Z & 0)

**GENERAL SPECIFICATIONS**

**Construction:** Terminal block  
**Connection:** M3.5 screw terminals  
 (nickel-plated steel; torque 0.8 N·m)  
**Housing material:** Flame-resistant resin (black)  
**Isolation:** Input to output  
**Front adjustments:** ±1% for zero; ±5% for span  
**Power LED:** Orange light turns on when the power is supplied.



**Functions & Features**

- Converting a DC input into an isolated 4 – 20mA DC signal
- Monitor terminals
- High-density mounting
- Power LED
- CE marking

**INPUT & OUTPUT**

**INPUT**

• **DC Current:** Input resistor incorporated (0.125W)  
**Input resistance:** For resistance values other than listed below, specify when ordering.

Input Span	Input Resistance
4 – 20mA	: 249 (Ω)
2 – 10mA	: 499
1 – 5mA	: 1000
0 – 20mA	: 49.9
0 – 16mA	: 61.9
0 – 10mA	: 100
0 – 1mA	: 1000
10 – 50mA	: 10

• **DC Voltage:** -30 – +30V DC

**Spans:** Min. 100mV, max. 30V

**Zero suppression/elevation:** Max. 1.5 times span  
**Input resistance**

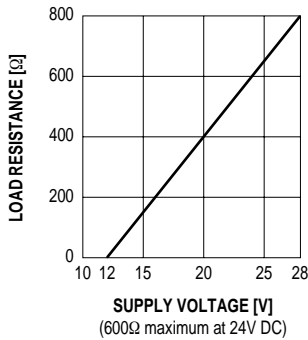
Input Span	Input Resistance
0.1 – 1V	: 100k (Ω minimum)
≥1V	: 1M

**OUTPUT: 4 – 20mA DC**

**Load resistance vs. supply voltage:**

$$\text{Load Resistance } (\Omega) = \frac{\text{Supply Voltage (V)} - 12 \text{ (V)}}{0.02 \text{ (A)}}$$

(including leadwire resistance)



**INSTALLATION**

- Supply voltage:** 12 – 28V DC
- Operating temperature:** -40 to +80°C (-40 to +176°F)
- Operating humidity:** 0 to 90% RH (non-condensing)
- Mounting:** DIN rail
- Dimensions:** W25×H94×D41 mm (0.98"×3.70"×1.61")  
See General Spec. Sheet Figure A-1.
- Weight:** 60 g (2.1 oz.)
- Terminal assignment:** See General Spec. Sheet Figure B-1.

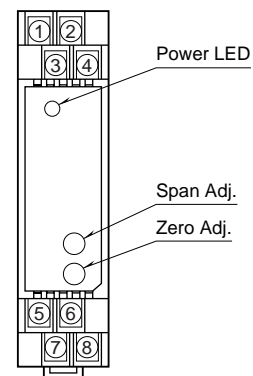
**PERFORMANCE in percentage of span**

- Accuracy:** ±0.1%
- Temp. coefficient:** ±0.015%/°C (±0.008%/°F)
- Response time:** ≤0.5 seconds (0 – 90%)  
approx. 25 milliseconds with option /K
- Insulation resistance:** ≥100MΩ with 500V DC
- Dielectric strength:** 2000V AC @1 minute  
(input to output to ground)

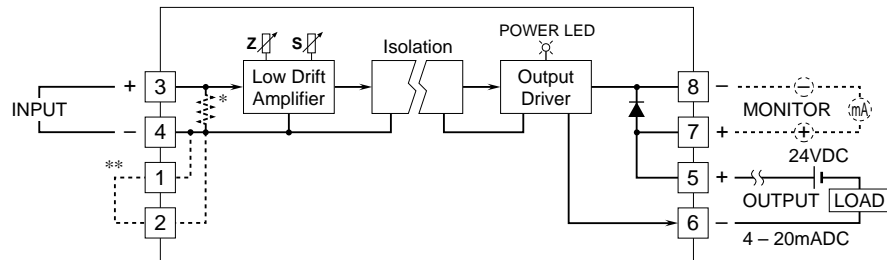
**STANDARDS & APPROVALS**

- CE conformity:** EMC Directive (89/336/EEC)
- EMI EN61000-6-4
- EMS EN61000-6-2

**FRONT PANEL CONFIGURATION**



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



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