

**Space-saving Two-wire Signal Conditioners *B-UNIT***

**SIGNAL TRANSMITTER (non-isolated)**

MODEL

**BV**

**MODEL & SUFFIX CODE SELECTION**

MODEL \_\_\_\_\_ **BV**-□  
 INPUT \_\_\_\_\_

<b>Current</b>	<b>Voltage</b>
<b>A</b> : 4 – 20mA DC	<b>2</b> : 0 – 100mV DC
<b>B</b> : 2 – 10mA DC	<b>3</b> : 0 – 1V DC
<b>C</b> : 1 – 5mA DC	<b>4</b> : 0 – 10V DC
<b>D</b> : 0 – 20mA DC	<b>5</b> : 0 – 5V DC
<b>E</b> : 0 – 16mA DC	<b>6</b> : 1 – 5V DC
<b>F</b> : 0 – 10mA DC	<b>0</b> : Specify voltage

**G** : 0 – 1mA DC  
**H** : 10 – 50mA DC  
**Z** : Specify current

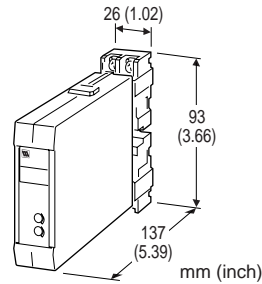
**OUTPUT**  
 4 – 20mA DC  
**SUPPLY VOLTAGE**  
 12 – 60V DC

**ORDERING INFORMATION**

Specify code number and variables.  
 • **Code number** (e.g. BV-6)  
 • **Special input range** (For codes Z & 0)

**GENERAL SPECIFICATIONS**

**Construction:** plug-in  
**Connection:** M3.5 screw terminals  
 (nickel-plated steel; torque ≤0.8 N·m)  
**Housing material:** flame-resistant resin (black)  
**Front adjustments:** zero and span; ±5%



**Functions & Features**

- Converting a DC input into a standard 4 – 20mA DC signal
- Monitor terminals
- High-density mounting

**Typical Applications**

- mV, voltage and current scaling

**INPUT & OUTPUT**

■ **INPUT**

- **DC Current:** shunt resistor attached to input terminals (0.5W)
- **Input resistance:** For resistance values other than listed below, specify when ordering.

Input	Input Resistance
4 – 20mA	: 250 (Ω)
2 – 10mA	: 500
1 – 5mA	: 1000
0 – 20mA	: 50
0 – 16mA	: 62.5
0 – 10mA	: 100
0 – 1mA	: 1000
10 – 50mA	: 100

- **DC Voltage:** 0 – 300V DC

**Minimum span:** 0.1V

**Zero suppression/elevation:** max. 0.25 times span

**Input resistance**

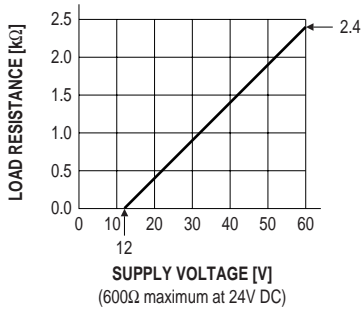
Input Span	Input Resistance
0.1 – 1V	: 100k (Ω, approx.)
1 – 10V	: 1M
≥10V	: 2M

■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 – 60V DC

Operating temperature: -5 to +60°C (23 to 140°F)

Operating humidity: 30 to 90% RH (non-condensing)

Mounting: surface or DIN rail; Standard Rack  
Mounting Frame BX-16H available

Dimensions: W26×H93×D137 mm (1.02"×3.66"×5.39")  
See General Spec. Sheet Figure A.

Weight: 150 g (0.33 lbs)

Terminal assignment: See General Spec. Sheet Figure B-2.

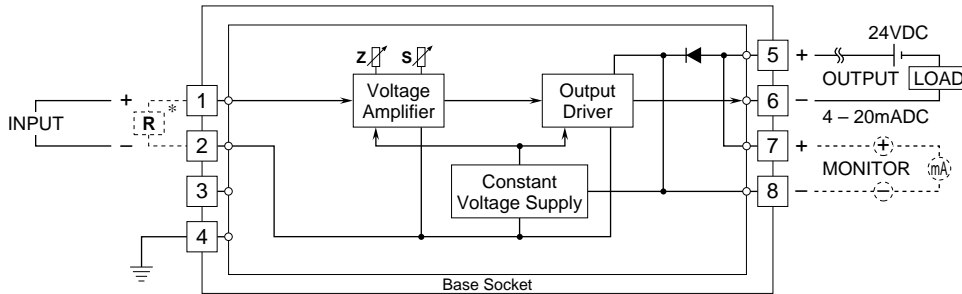
**PERFORMANCE in percentage of span**

Accuracy: ±0.1%

Temp. coefficient: ±0.05%/°C (±0.03%/°F)

Response time: ≤0.5 seconds (0 – 90%)

**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



\*Input shunt resistor attached for current input.