

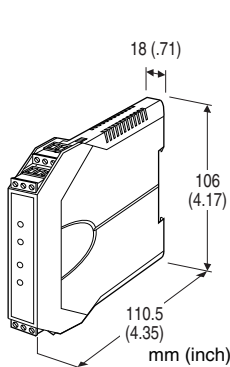
## Space-saving Two-wire Signal Conditioners B3-UNIT

### SIGNAL TRANSMITTER

(dual-channel output loop powered isolator)

#### Functions & Features

- Converts a DC input into an isolated 4 – 20 mA DC signal
- Dual channel
- Monitor terminals
- High-density mounting



## MODEL: B3VS/2-[1][2][3]

### ORDERING INFORMATION

- Code number: B3VS/2-[1][2][3]

Specify a code from below for each of [1] through [3].

- (e.g. B3VS/2-A6/UL/Q)
- Special input range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01)

### [1] CH. 1 INPUT

#### Current

- A:** 4 – 20 mA DC (Input resistance 250 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 250 Ω)
- F:** 0 – 10 mA DC (Input resistance 499 Ω)
- H:** 10 – 50 mA DC (Input resistance 100 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] CH. 2 INPUT

Same range availability as for Ch. 1.

### [3] OPTIONS (multiple selections)

#### Standards & Approvals

blank: CE marking

/UL: UL approval, CE marking

#### 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 (UL not available)

### GENERAL SPECIFICATIONS

**Construction:** Small-sized front terminal structure

**Connection:** Euro type connector terminal

(applicable wire size: 0.2 to 2.5 mm<sup>2</sup>, stripped length 8 mm)

**Housing material:** Flame-resistant resin (gray)

**Isolation:** Input to output; between channels

**Zero adjustment:** -5 to +5 % (front)

**Span adjustment:** 95 to 105 % (front)

### INPUT SPECIFICATIONS

■ **DC Current:** Input resistor incorporated

Specify input resistance value for code Z.

( $R \leq 0.25 \text{ W} \div [\text{F.S. Current}]^2$ )

■ **DC Voltage:** -100 – +100 V DC

(Max. voltage across the input terminals:

70 V for conform with EU Directive; 60 V for UL approval)

**Minimum span:** 1 V

**Offset:** Max. 1.5 times span

**Input resistance:**

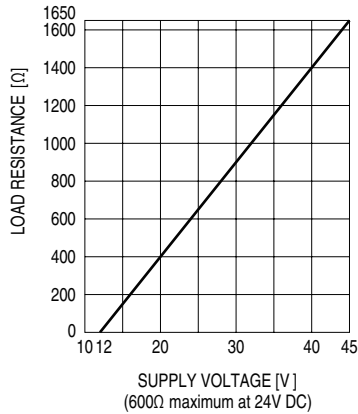
Span 1 – 2 V:  $\geq 1 \text{ M}\Omega$

Span  $\geq 2 \text{ V}$ :  $\geq 1 \text{ M}\Omega$

( $\geq 80 \text{ k}\Omega$  with no supply voltage)

**OUTPUT SPECIFICATIONS****Output:** 4 - 20 mA DC**Load resistance vs. supply voltage:**Load Resistance ( $\Omega$ ) = (Supply Voltage (V) - 12 (V))  $\div$  0.02

(A) (including leadwire resistance)

**INSTALLATION****Supply voltage:** 12 - 45 V DC**Operating temperature:**

-40 to +85°C (-40 to +185°F)

Max. 55°C (131°F) for UL approval

**Operating humidity:** 0 to 95 %RH (non-condensing)**Mounting:** DIN rail**Weight:** 110 g (0.24 lb)**PERFORMANCE in percentage of span****Accuracy:**  $\pm 0.1$  %**Temp. coefficient:**  $\pm 0.02$  %/°C ( $\pm 0.01$  %/°F)**Response time:**  $\leq 0.1$  sec. (0 - 90 %)**Insulation resistance:**  $\geq 100$  M $\Omega$  with 500 V DC**Dielectric strength:**

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

2000 V AC @1 minute (between channels)

**STANDARDS & APPROVALS****EU conformity:**

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

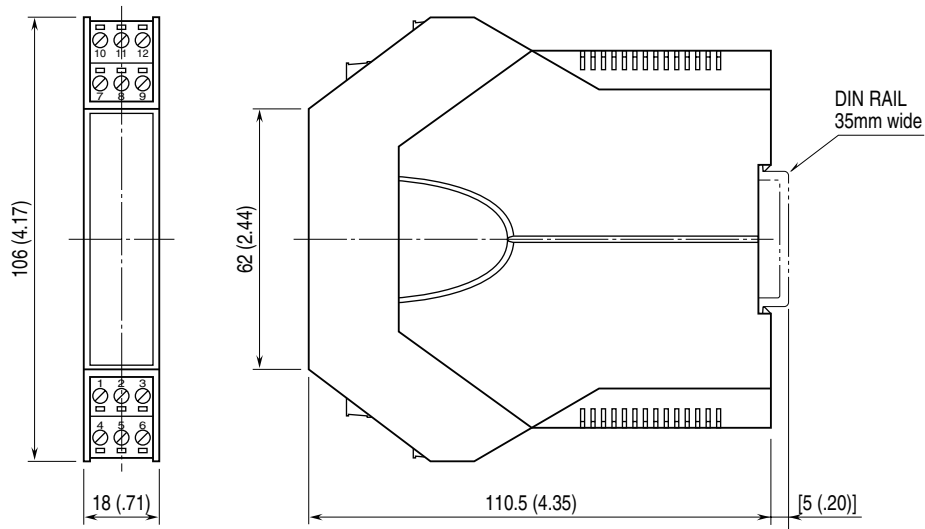
RoHS Directive

**Approval:**

UL/C-UL general safety requirements

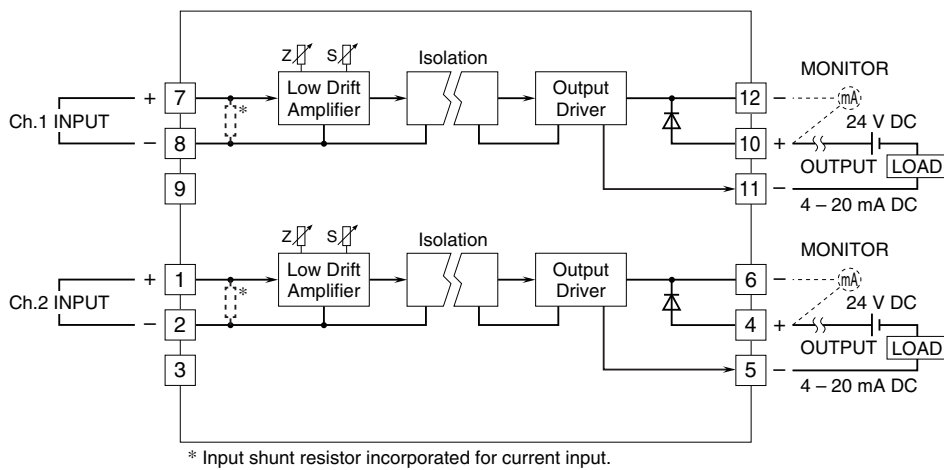
(UL 61010-1, CAN/CSA-C22.2 No.1010-1)

**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.