

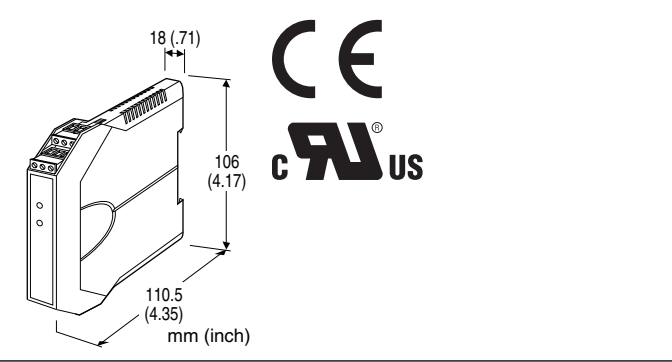
Space-saving Two-wire Signal Conditioners B3-UNIT

SIGNAL TRANSMITTER

(single-channel output loop powered isolator)

Functions & Features

- Converts a DC input into an isolated 4 – 20 mA DC signal
- Monitor terminals
- High-density mounting
- CE marking
- UL approval



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

ORDERING INFORMATION

- Code number: B3VS/1-[1][2]
- Specify a code from below for each [1], [2].
(e.g. B3VS/1-A)
- Special input range (For codes Z & 0)

[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] OPTIONS

Standards & Approvals

- blank: CE marking
- /UL: UL approval, CE marking

GENERAL SPECIFICATIONS

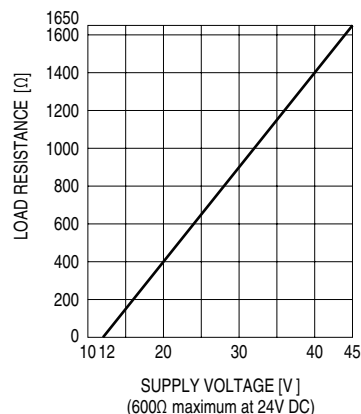
- Construction:** Small-sized front terminal structure
- Connection:** Euro type connector terminal
- Housing material:** Flame-resistant resin (gray)
- Isolation:** Input to output
- Zero adjustment:** -5 to +5 % (front)
- Span adjustment:** 95 to 105 % (front)

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 CE conformity; 60 V for UL approval)
- Minimum span:** 1 V
- Offset:** Max. 1.5 times span
- Input resistance:**
(Span) 1 – 2 V: 1M (Ω minimum)(≥ 80 kΩ with no supply voltage)
≥ 2 V: 1 M

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 – 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: 110g (0.24 lbs)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$

Temp. coefficient: $\pm 0.02\%/^{\circ}\text{C}$ ($\pm 0.01\%/^{\circ}\text{F}$)

Response time: ≤ 0.1 sec. (0 - 90 %)

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

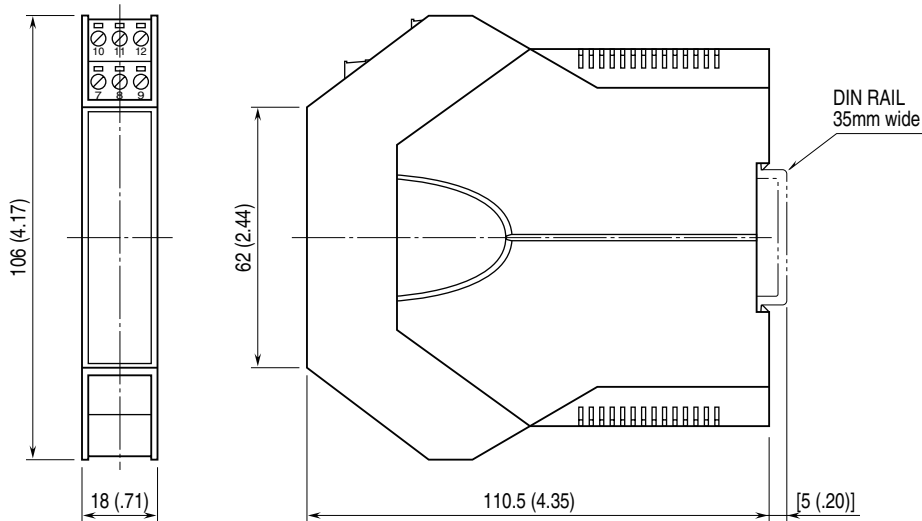
EMS EN 61000-6-2: 2005

Approval:

UL/C-UL general safety requirements

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

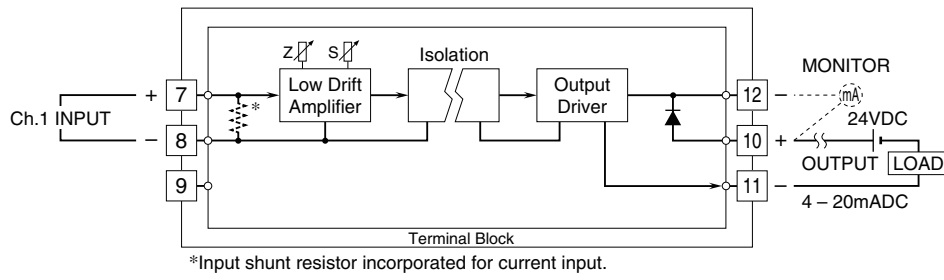
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.

