

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

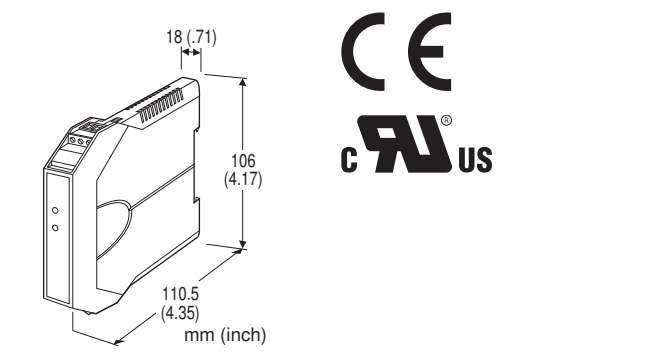
Refer to the instruction manual for details.

**SIGNAL TRANSMITTER**

(field-configurable)

**Functions & Features**

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



**MODEL: B3FV[1]**

**ORDERING INFORMATION**

- Code number: B3FV[1]

Specify a code from below for [1]

- (e.g. B3FV/UL)
- Input range (e.g. 0 – 10 V DC)
- If you need the transmitter to be calibrated to a specific range, please specify when ordering. Non-specified orders will be shipped at default factory setting (4 – 20 mA input)

**[1] OPTIONS**

**Standards & Approvals**

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

**GENERAL SPECIFICATIONS**

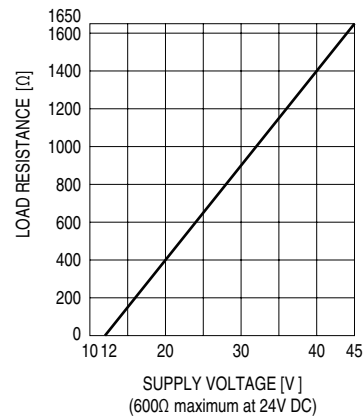
- Construction:** Small-sized front terminal structure
- Connection:** Euro type connector terminal
- Housing material:** Flame-resistant resin (gray)
- Isolation:** Input to output
- Configuration:** DIP switch
- Setting:**
  - Input Type
  - Input Range
  - Others

**INPUT SPECIFICATIONS**

- **DC Current:** Input resistor incorporated
- Input resistance:** 250 Ω (4 – 20 mA)
- Usable range:**
  - Max. range:** -30 to +30 mA DC
  - Span:** Min. 16 μA, Max. 60 mA
  - Offset:** -100 to +80 % of the selected range
- **DC Voltage**
- Input resistance**
  - Span 4 mV – 3 V :** ≥ 1 MΩ (≥ 40 kΩ with no supply voltage)
  - Span ≥ 3 V :** ≥ 1 MΩ
- Usable range:**
  - Max. range:** -100 to +100 V DC
  - Span:** Min. 4m V, Max. 100 V
  - Offset:** -100 to +80 % of the selected range (Max. input voltage across the terminals conforming CE is limited to 70 V. Max. input voltage across the terminals approved for UL is limited to 60 V.)

**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:** 80 g (2.8 oz)



**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:  $\leq 0.5$  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)

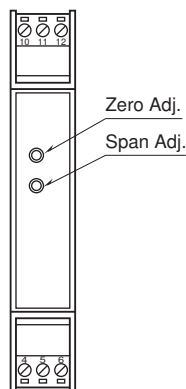
**STANDARDS & APPROVALS**

CE conformity:  
 EMC Directive (2004/108/EC)  
 EMI EN 61000-6-4: 2007  
 EMS EN 61000-6-2: 2005

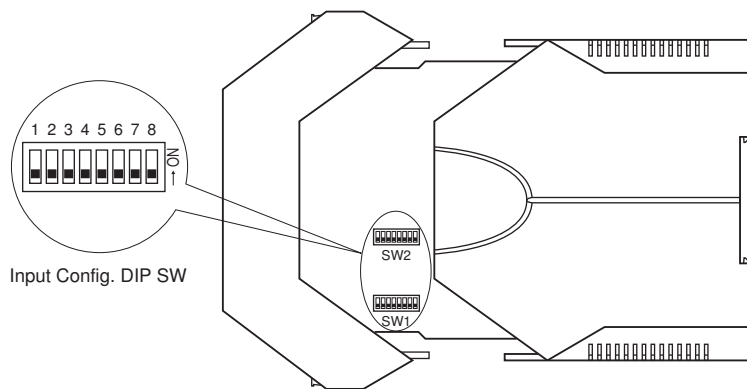
Approval:  
 UL/C-UL general safety requirements  
 (UL 61010-1, CAN/CSA-C22.2 No.1010-1)

**EXTERNAL VIEW**

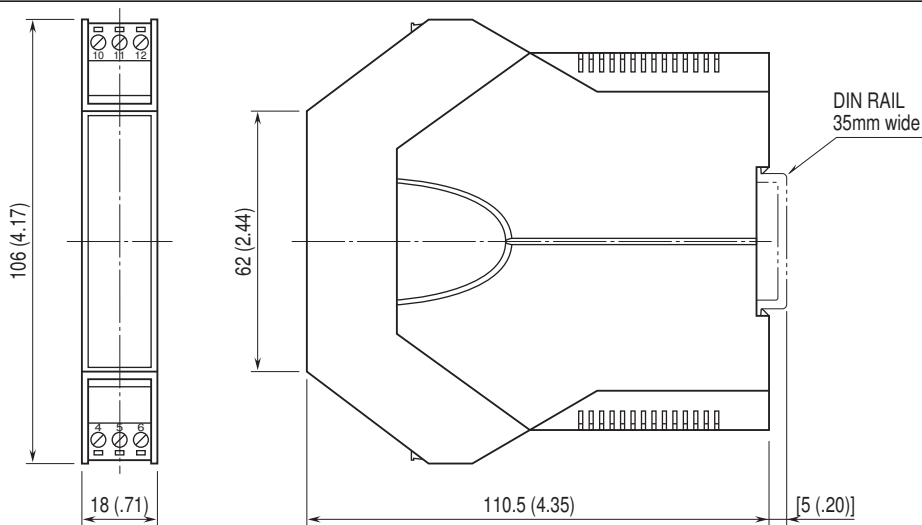
FRONT VIEW



SIDE VIEW



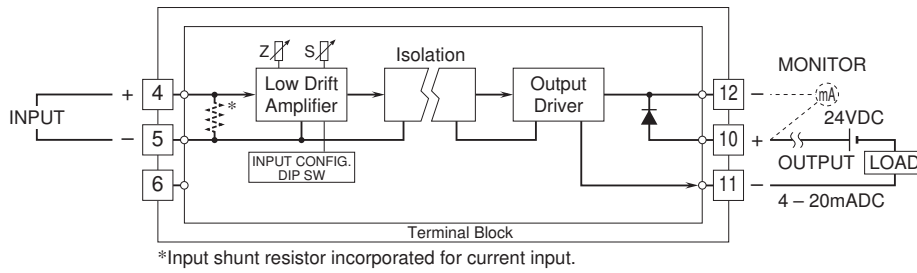
**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)**



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



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.

