

## Field-mounted Two-wire Signal Conditioners 6-UNIT

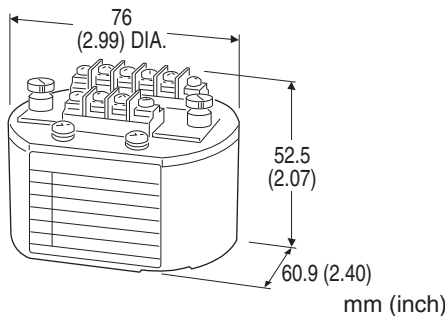
### INPUT LOOP POWERED ISOLATOR

#### Functions & Features

- Loop-powered design eliminates output loop power supply
- 500 V DC input-to-output isolation
- 350 Ω output drive with 4 - 20 mA
- Rugged enclosure

#### Typical Applications

- Isolation between control room and field instrumentation, between telemetering system and input device
- Eliminates ground problems in existing systems thanks to easiness of application without requiring additional power wiring



## MODEL: 6SN-[1]

### ORDERING INFORMATION

- Code number: 6SN-[1]
- Specify a code from below for [1].  
(e.g. 6SN-A)
- Mounting adapter (e.g. surface mounting adapter plate, model: A-01)
- Note: When a mounting adapter is required, specify mounting adapter. Not included without specifying.

### [1] INPUT

- A: 4 - 20 mA DC  
H: 10 - 50 mA DC

### RELATED PRODUCTS

- Outdoor enclosure (model: 6BX-E)

### PACKAGE INCLUDES...

- Mounting adapter  
surface mounting adapter plate (model: A-01)

Spring clip (model: A-02)

DIN rail mounting plate (model: A-31)

Note: When a mounting adapter is required, specify mounting adapter. Not included without specifying.  
When using in combination with outdoor enclosure (model: 6BX-E), use a spring clip (model: A-02).

### GENERAL SPECIFICATIONS

**Connection:** M3 screw terminals (torque 0.6 N·m)

**Screw terminal:** Nickel-plated steel

**Housing material:** Diecast aluminum

**Isolation:** Input to output

**Zero adjustment:** -0.5 to +0.5 % (behind the access cover)

**Span adjustment:** 98.5 to 101.5 % (behind the access cover)

### INPUT & OUTPUT

#### ■ Input 4 - 20 mA DC / Output 4 - 20 mA DC

**Equivalent input impedance:** 230 Ω + load resistance with 20 mA input

**Operational range:** 3 - 22 mA DC  
(Accuracy is assured within 4 - 22 mA)

**Load resistance:** 350 Ω maximum; min. 50 Ω required for adequate operation

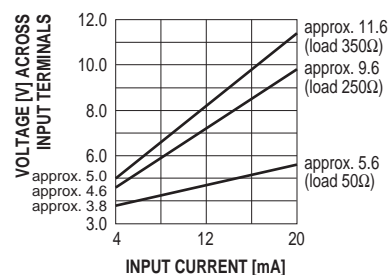
#### ■ Input 10 - 50 mA DC / Output 4 - 20 mA DC

**Equivalent input impedance:** 90 Ω + [load resistance x 0.16] with 50 mA input

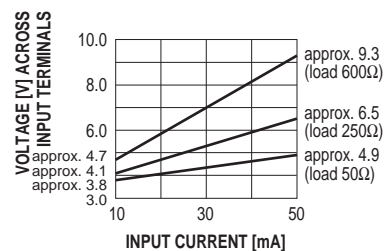
**Operational range:** 7 - 55 mA DC  
(Accuracy is assured within 8 - 55 mA)

**Load resistance:** 600 Ω maximum; min. 50 Ω required for adequate operation

#### • INPUT 4 - 20mA DC / OUTPUT 4 - 20 mA DC



#### • INPUT 10 - 50 mA DC / OUTPUT 4 - 20 mA DC



## INSTALLATION

**Operating temperature:** -5 to +70°C (23 to 158°F)

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

**Mounting:** DIN rail with mounting plate A-31; surface mounting with adapter plate A-01; spring clip A-02 for 3-inch hub

**Weight:** 220 g (0.49 lb)

## 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:** Approx. 15 msec. (0 - 90 %)

**Load effect** (The unit is calibrated with 250  $\Omega$  load at the factory.)

**•4 - 20 mA input:**

0.015 %/ $\Omega$  (50 - 150  $\Omega$ )

0.003 %/ $\Omega$  (150 - 350  $\Omega$ )

**•10 - 50 mA input:**

0.015 %/ $\Omega$  (50 - 100  $\Omega$ )

0.003 %/ $\Omega$  (100 - 600  $\Omega$ )

**Insulation resistance:**  $\geq 100\text{ M}\Omega$  with 500 V DC

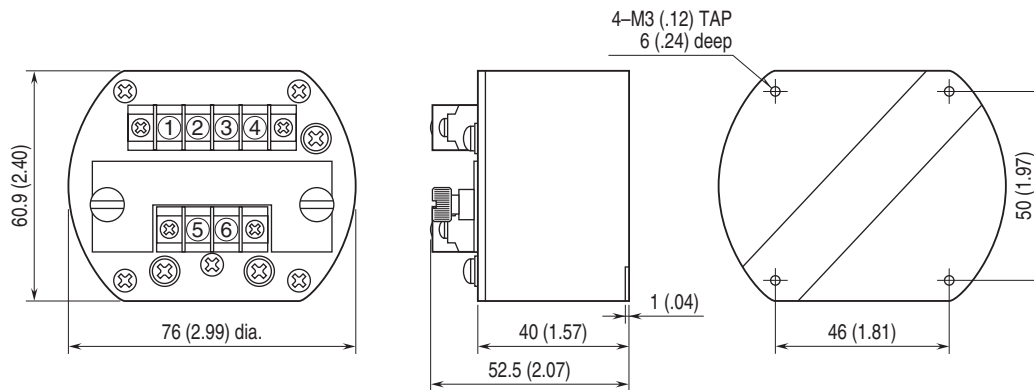
**Dielectric strength:** 500 V AC @ 1 minute

(input to output)

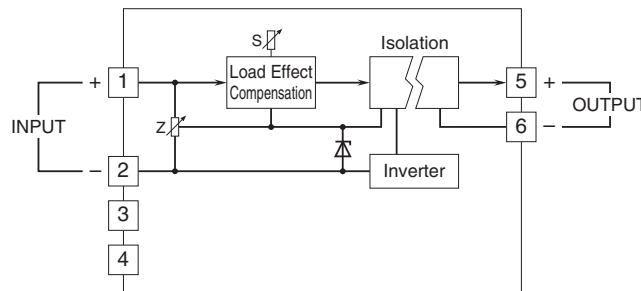
1500 V AC @ 1 minute

(input or output to ground)

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



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM





Specifications are subject to change without notice.