

Field-mounted Two-wire Signal Conditioners 6-UNIT

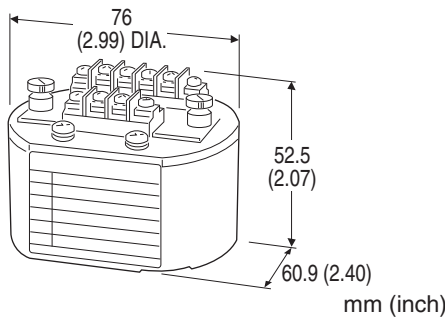
INPUT LOOP POWERED ISOLATOR

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

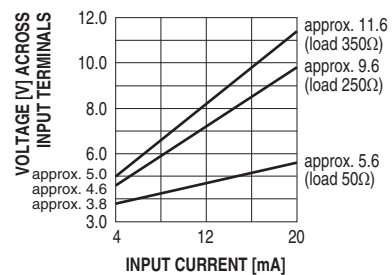
■ Input 10 - 50 mA DC / Output 4 - 20 mA DC

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

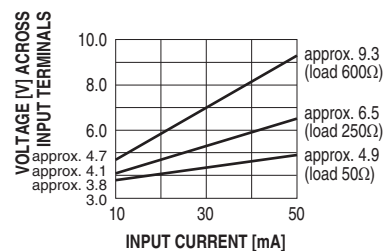
Operational range: 7 - 55 mA DC
(Accuracy is assured within 8 - 55 mA)

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

4 - 20 mA DC input: Approx. 45 msec. (0 - 90 %, 50 Ω load)

10 - 50 mA DC input: Approx. 15 msec. (0 - 90 %, 50 Ω load)

Load effect (The unit is calibrated with 250 Ω load at the factory.)

•4 - 20 mA input:

0.015 %/ Ω (50 - 150 Ω)

0.003 %/ Ω (150 - 350 Ω)

•10 - 50 mA input:

0.015 %/ Ω (50 - 100 Ω)

0.003 %/ Ω (100 - 600 Ω)

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

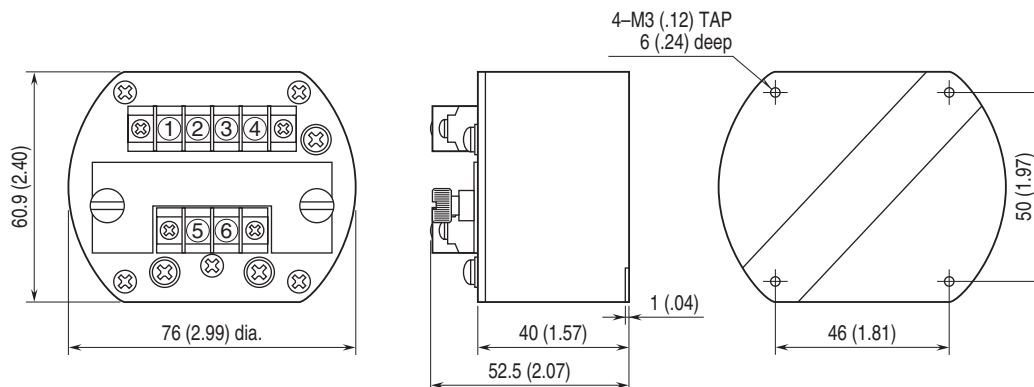
Dielectric strength: 500 V AC @ 1 minute

(input to output)

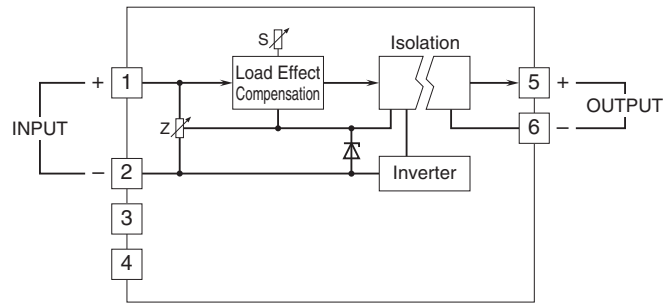
1500 V AC @ 1 minute

(input or output to ground)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.