

Hybrid IC Isolation Amplifiers 20 Series

ISOLATION AMPLIFIER

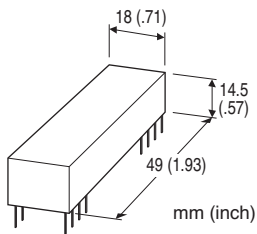
(top adjustment, input isolation)

Functions & Features

- Being used for printed wiring board installation
- Isolating between input, output and power
- Isolation between input and output up to 2000 V AC
- Power 15V DC

Typical Applications

- Isolating the field and input circuit of microprocessor to reduce noise from field
- Available for manufacturers of small-lot products to omit the development of isolation circuit



MODEL: 20VS1C-44-U

ORDERING INFORMATION

- Code number: 20VS1C-44-U

INPUT

Voltage

4: 0 - 10 V DC (Input resistance 1 MΩ min.)

OUTPUT

Voltage

4: 0 - 10 V DC (Load resistance 2 kΩ min.)

POWER INPUT

DC Power

U: 15 V DC

GENERAL SPECIFICATIONS

Construction: Hybrid IC

Housing material: Flame-resistant resin (black)

Isolation: Input or excitation to output or power supply

Zero adjustment: -1 to +1 % (top)

Span adjustment: 99 to 101 % (top)

INPUT SPECIFICATIONS

■ DC Voltage

Input : 0 - 10 V DC

Input resistance: $\geq 1 \text{ M}\Omega$ (10 kΩ in power failure)

Overload input voltage: 30 V DC continuous

Input bias current: 15 nA TYP. (@25°C)

OUTPUT SPECIFICATIONS

■ Voltage Output

Output range: 0 - 10 V DC

Load resistance: $\geq 2 \text{ k}\Omega$

Output impedance: $\leq 1 \Omega$

EXCITATION

Output voltage: $\pm 15 \text{ V DC} \pm 5 \%$ (when power supply is 15 V DC)

Load current: $\leq 5 \text{ mA}$

INSTALLATION

Power input

• DC: Operational voltage range: Rating $\pm 2 \%$; approx. 10 mA with no load; ripple 2 %p-p max.

Operating temperature: 0 to 60°C (32 to 140°F)

Operating humidity: 10 to 95 % RH (non-condensing)

Mounting: Soldering to the printed wiring board

Weight: 20 g (0.71 oz)

PERFORMANCE in percentage of span

Linearity: $\pm 0.05 \%$

Temp. coefficient: 70 ppm/°C

Frequency characteristics: Approx. 1 kHz, -3 dB

Response time: $\leq 450 \mu\text{sec}$. (0 - 90 %)

Gain adjustable range: $\times 1$ to $\times 10$

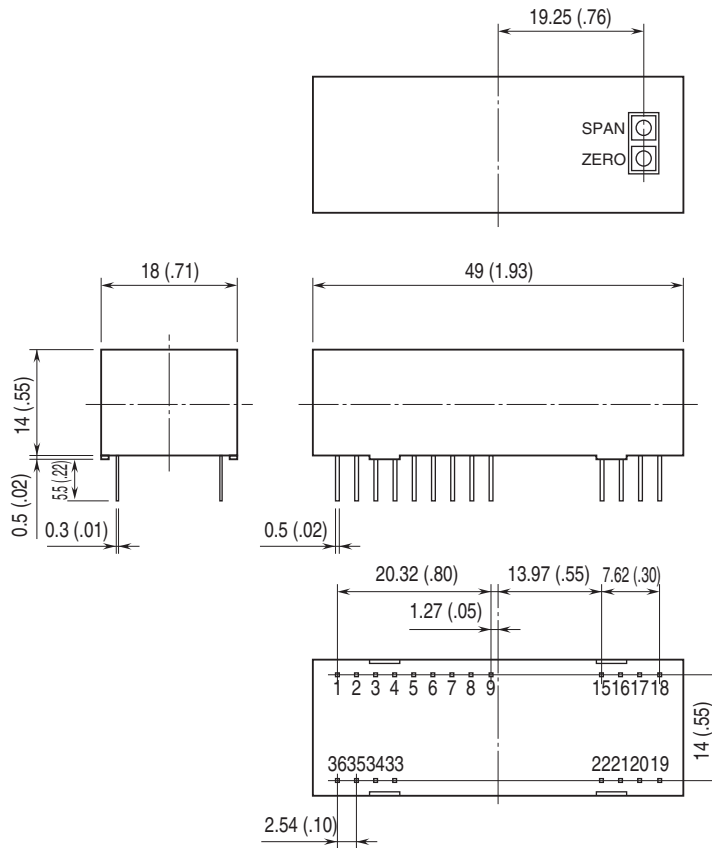
Line voltage effect: $\pm 0.05 \%$ over voltage range

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

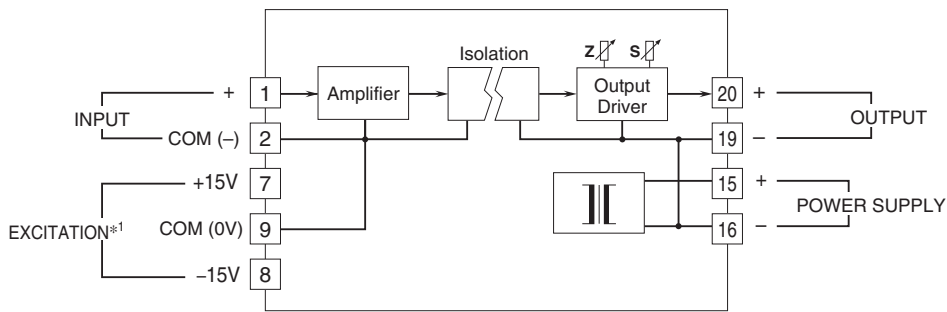
Dielectric strength: 2000 V AC @ 1 minute

(input or excitation to output or power supply)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*To be used in the printed wiring board on which the unit is mounted.

APPLICATION EXAMPLE

