

## Hybrid IC Isolation Amplifiers 20 Series

### ISOLATION AMPLIFIER

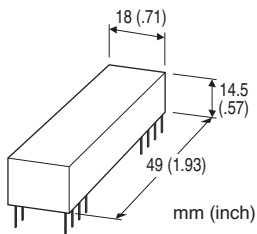
(top adjustment, input isolation)

#### 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  $\times 10$

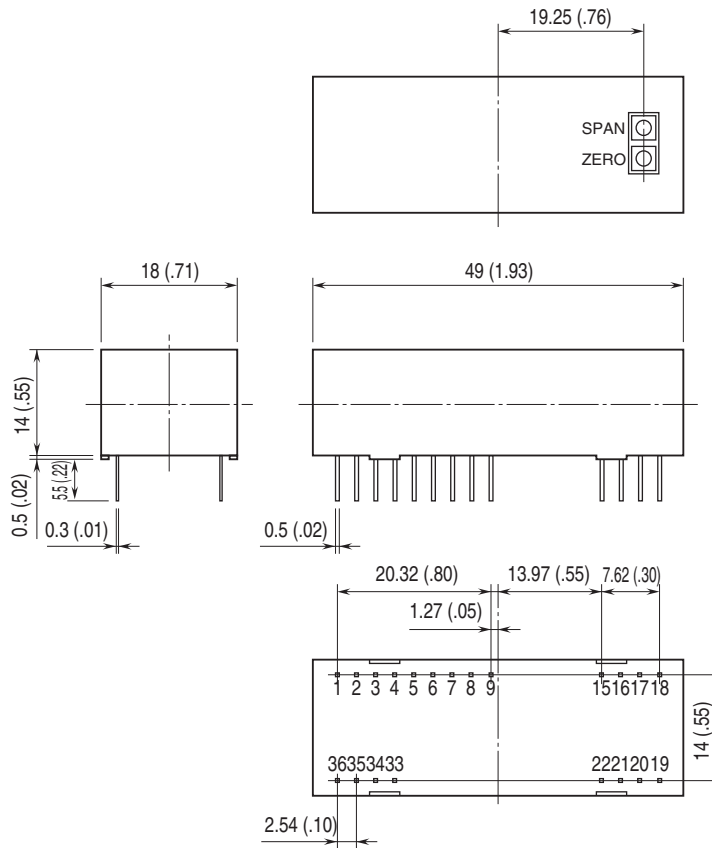
Line voltage effect:  $\pm 0.05 \%$  over voltage range

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

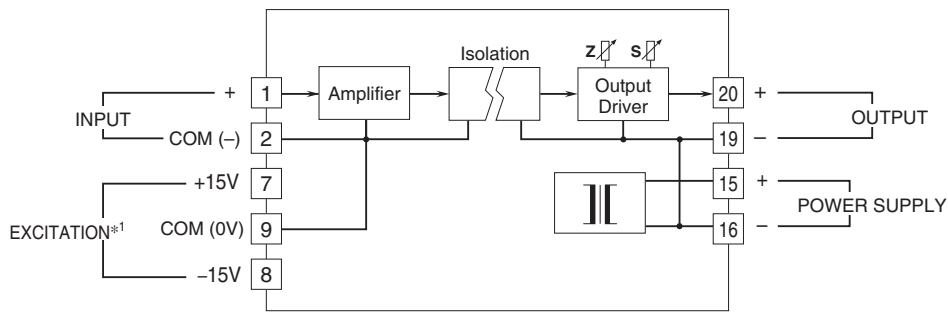
Dielectric strength: 2000 V AC @ 1 minute

(input or excitation to output or power supply)

## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

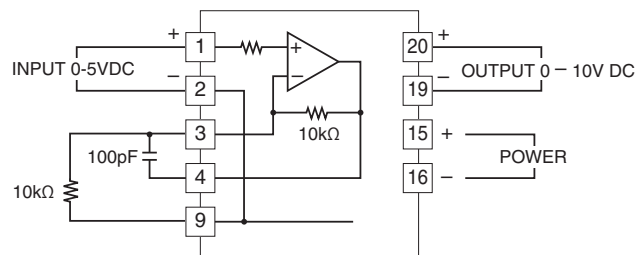


## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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

## APPLICATION EXAMPLE





Specifications are subject to change without notice.