## Hybrid IC Isolation Amplifiers 20 Series

## ISOLATION AMPLIFIER

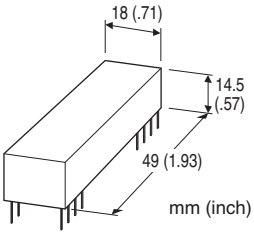
(input isolation)

**Functions & Features**

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

**Typical Applications**

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




## MODEL: 20VS2–1–U

## ORDERING INFORMATION

- Code number: 20VS2-1-U

INPUT RANGE -10 – +10 V DC
OUTPUT RANGE -10 – +10 V DC

## POWER INPUT

DC Power
**U**: 15 V DC

## GENERAL SPECIFICATIONS

**Construction**: Hybrid IC
**Housing material**: Flame-resistant resin (black)
**Isolation**: Input or reference voltage source to output or power supply

## INPUT SPECIFICATIONS

■ **DC Voltage**
**Input** : -10 – +10 V DC
**Input resistance**: ≥ 1 MΩ (10 kΩ in power failure)
**Overload input voltage**: 30 V DC continuous
**Input offset voltage**: ±15 mV
**Input bias current**: 15 nA TYP. (@25°C)

## OUTPUT SPECIFICATIONS

■ **DC Voltage**: -10 – +10 V DC
**Load resistance**: ≥ 2 kΩ
**Output impedance**: ≤ 1 Ω

## REFERENCE VOLTAGE SOURCE

**Output voltage**: ±15 V DC ±5 %
**Load current**: ≤ 5 mA

## INSTALLATION

**Power input**
•**DC**: Operational voltage range: Rating ±2 %; approx. 10 mA with no load; ripple 2 %p-p max.
**Operating temperature**: 0 to 60°C (32 to 140°F)
**Operating humidity**: 30 to 90 %RH (non-condensing)
**Mounting**: Soldering to the printed wiring board
**Weight**: 20 g (0.71 oz)

## PERFORMANCE in percentage of span

**Linearity**: ±0.05 %
**Temp. coefficient**:
Offset drift 40 ppm/°C
Span drift 50 ppm/°C
**Frequency characteristics**: Approx. 1 kHz, -3 dB
**Response time**: ≤ 450 µsec. (0 – 90 %)
**Conversion gain**: ×1 ±1 %
**Line voltage effect**: ±0.05 % over voltage range
**Insulation resistance**: ≥ 100 MΩ with 500 V DC
**Dielectric strength**: 2000 V AC @ 1 minute
(input or reference voltage source to output or power supply)

## STANDARDS & APPROVALS

**EU conformity**:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive



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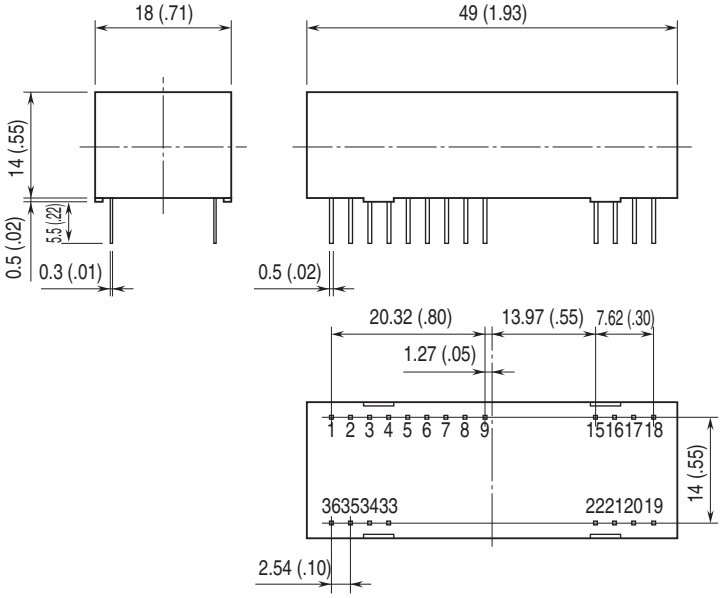
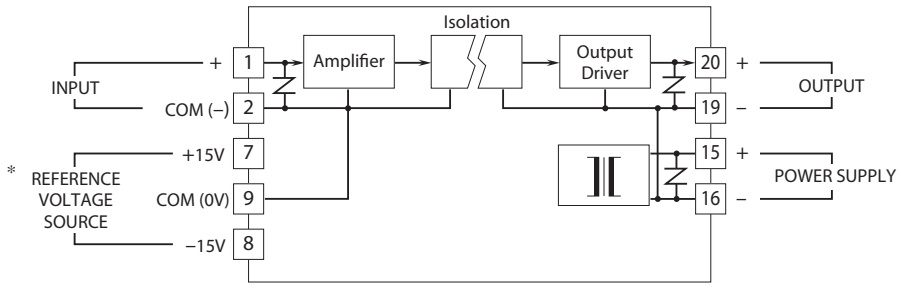
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



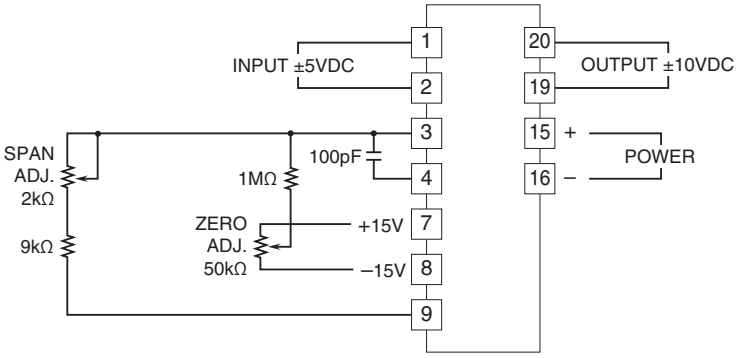

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM




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

## APPLICATION EXAMPLE

■ **External circuit of zero/span adjustment**
**Input:** ±5V DC
**Output:** ±10V DC
**Zero adjustments:** approx. ±1.5%
**Span adjustments:** approx. ±5%




⚠ Specifications are subject to change without notice.



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