

Hybrid IC Isolation Amplifiers 20 Series

Input offset voltage: ± 15 mV
 Input bias current: 15 nA TYP. (@25°C)

ISOLATION AMPLIFIER

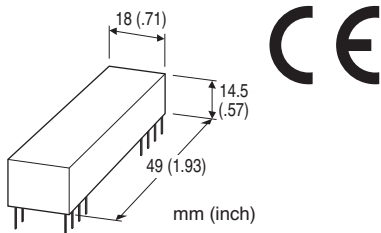
(input isolation)

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
- CE marking

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: 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 M Ω (10 k Ω in power failure)
 Overload input voltage: 30 V DC continuous

OUTPUT SPECIFICATIONS

DC Voltage: -10 - +10 V DC
 Load resistance: ≥ 2 k Ω
 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)

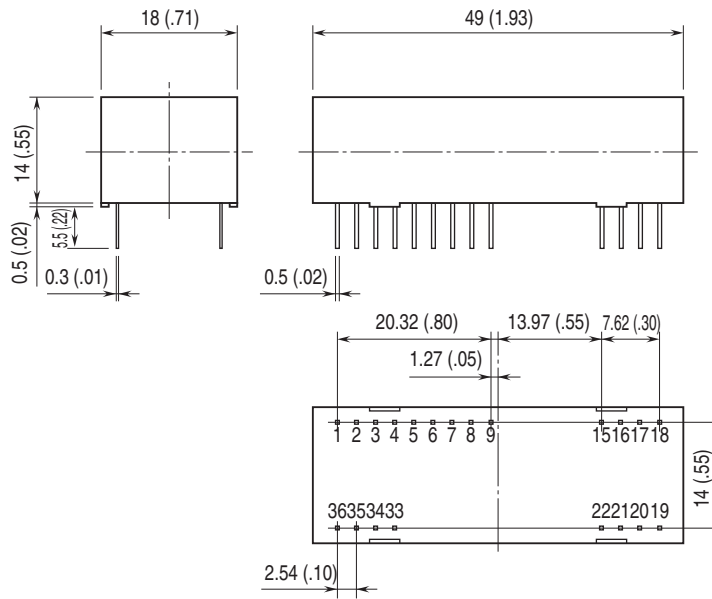
PERFORMANCE in percentage of span

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 μ sec. (0 - 90 %)
 Conversion gain: $\times 1 \pm 1$ %
 Line voltage effect: ± 0.05 % over voltage range
 Insulation resistance: ≥ 100 M Ω with 500 V DC
 Dielectric strength: 2000 V AC @ 1 minute
 (input or reference voltage source to output or power supply)

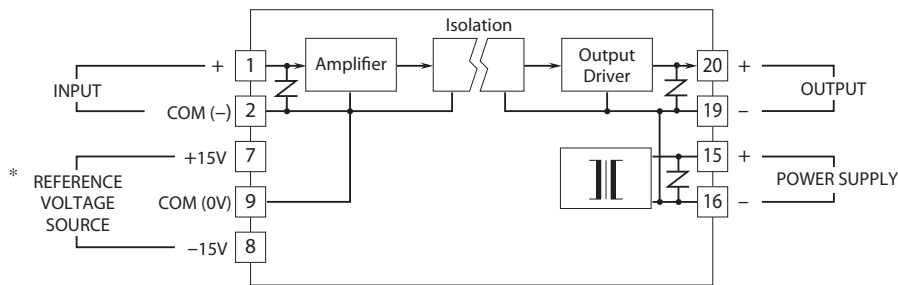
STANDARDS & APPROVALS

CE conformity:
 EMC Directive (2004/108/EC)
 EMI EN 61000-6-4: 2007
 EMS EN 61000-6-2: 2005

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

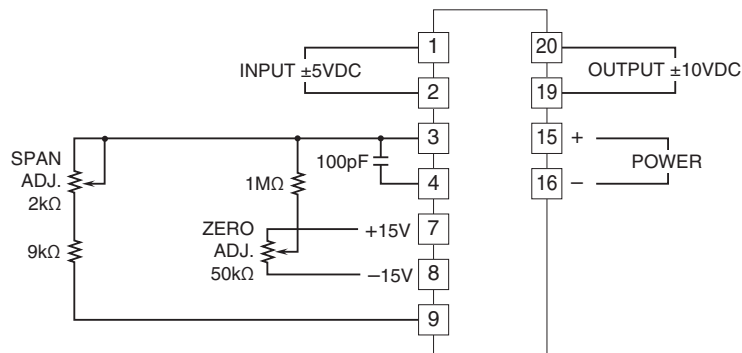
External circuit of zero/span adjustment

Input: $\pm 5V$ DC

Output: $\pm 10V$ DC

Zero adjustments: approx. $\pm 1.5\%$

Span adjustments: approx. $\pm 5\%$



Specifications are subject to change without notice.