

Hybrid IC Isolation Amplifiers 20 Series

Input bias current: 0.5 nA TYP. (@25°C)

ISOLATION AMPLIFIER

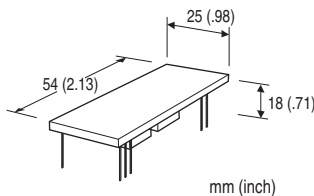
(general purpose input isolation)

Functions & Features

- Being used for printed wiring board installation
- Up to 2.5 kV isolation between input to output or power input
- Small stray capacitance between input and output
- Small installation area in printed wiring board
- Gain adjustable range $\times 1$
- Power 15 V 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



OUTPUT SPECIFICATIONS

- DC Voltage: -5 – +5 V DC
- Load resistance: $\geq 100 \text{ k}\Omega$
- Output impedance: $\leq 1 \text{ k}\Omega$

INSTALLATION

Power input

- DC: Operational voltage range: Rating 15 V \pm 1V DC, ripple 2 %p-p max.; approx. 7 mA with no load
- Operating temperature: -10 to +70°C (14 to 158°F)
- Operating humidity: 30 to 90 %RH (non-condensing)
- Mounting: Soldering to the printed wiring board
- Weight: 12 g (0.42 oz)

PERFORMANCE in percentage of span

- Linearity: $\pm 0.5 \%$
- Temp. coefficient: $\pm 150 \text{ ppm}/^\circ\text{C}$
- Frequency characteristics: Approx. 5 kHz, -3 dB
- Response time: $\leq 100 \mu\text{sec}$. (0 – 90 %)
- Conversion gain: $\times 1 \pm 1 \%$
- Gain adjustable range: $G = \times 1$
- Line voltage effect: $\pm 0.5 \%$ over voltage range
- Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC
- Dielectric strength: 2500 V AC @1 minute (input to output or power)
- CMRR: $\geq 100 \text{ dB}$ (500 V AC 50/60 Hz)

MODEL: 20VS7-205D-U

ORDERING INFORMATION

- Code number: 20VS7-205D-U

INPUT RANGE -5 – +5 V DC

OUTPUT RANGE -5 – +5 V DC

POWER INPUT

DC Power

U: 15 V DC

GENERAL SPECIFICATIONS

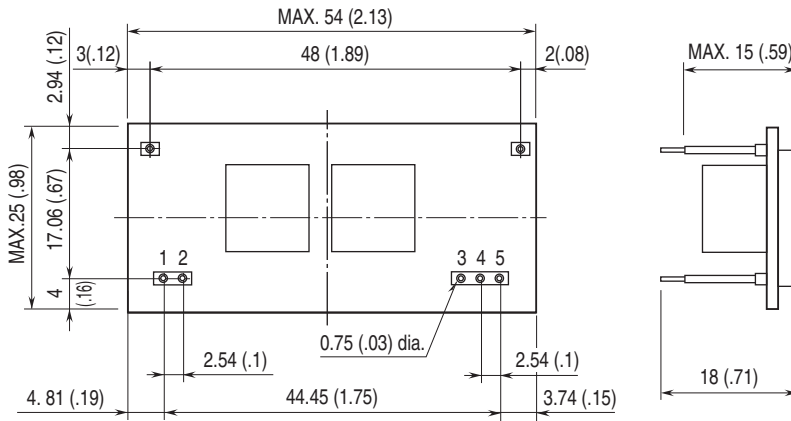
Construction: Hybrid IC

Isolation: Input to output or power

INPUT SPECIFICATIONS

- DC Voltage
- Input : -5 – +5 V DC
- Input resistance: $\geq 1 \text{ M}\Omega$ (10 k Ω in power failure)
- Overload input voltage: $\pm 30 \text{ V}$ DC continuous
- Input offset voltage: $\pm 15 \text{ mV}$

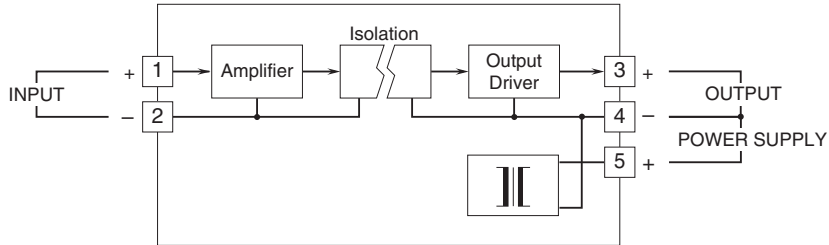
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



PIN ASSIGNMENT

| | |
|---|-------------------------------|
| 1 | INPUT (+) |
| 2 | INPUT (-) |
| 3 | OUTPUT (+) |
| 4 | OUTPUT (-) / POWER SUPPLY (-) |
| 5 | POWER SUPPLY (+) |

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.