

**Hybrid IC Isolation Amplifiers 20 Series**

**ISOLATION AMPLIFIER**

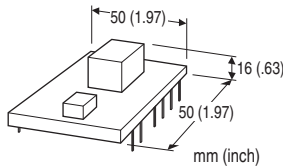
(4-port isolation)

**Functions & Features**

- Being used for printed wiring board installation
- Isolating between input, output and output 2
- Dielectric strength 1500 V AC between input, output and output 2
- Power 18 V DC

**Typical Applications**

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



**MODEL: 20VS1E-5W5W-U2**

**ORDERING INFORMATION**

- Code number: 20VS1E-5W5W-U2

**INPUT**

**Voltage**

5W: -5 - +5 V DC (Input resistance 1 MΩ min.)

**OUTPUT**

**Voltage**

5W: -5 - +5 V DC (Load resistance 2 kΩ)

**POWER INPUT**

**DC Power**

U2: 18 V DC

**GENERAL SPECIFICATIONS**

**Construction:** Hybrid IC

**PWB coating:** Silicone

**Isolation:** Input or A output to output or B output to C output to power

**INPUT SPECIFICATIONS**

■ **DC Voltage**

Input : -5 - +5 V DC

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

Overload input voltage: 30 V DC continuous

Input offset voltage:  $\pm 10 \text{ mV}$

**OUTPUT SPECIFICATIONS**

■ **DC Voltage:** -5 - +5 V DC

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

Output impedance:  $\leq 1 \Omega$

**A, B, C OUTPUT VOLTAGE**

For 18 V power

Load current:

• A output:  $\pm 15 \text{ V } 5 \text{ mA}$  (4.7μF in connection)

• B output:  $\pm 15 \text{ V } 15 \text{ mA}$  (10μF in connection)

• C output:  $25 \text{ V } 30 \text{ mA}$  (4.7μF in connection)

**Output voltage setting accuracy:**

•  $\pm 15 \%$  (A, B) (25°C @ 18 V DC power; with total load)

•  $\pm 15 \%$  (C) (25°C @ 18 V DC power; with total load)

**INSTALLATION**

**Power input**

• DC: Rating  $\pm 5 \%$ ; approx. 40 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:** 30 g (1.1 oz)

**PERFORMANCE in percentage of span**

Unless otherwise specified, G = 1.

**Linearity:**  $\pm 0.05 \%$

**Temp. coefficient:** 80 ppm/°C TYP.

**Frequency characteristics:** Approx. 200 Hz (-3 dB minimum)

**Response time:**  $\leq 2 \text{ ms}$  (0 - 90 %)

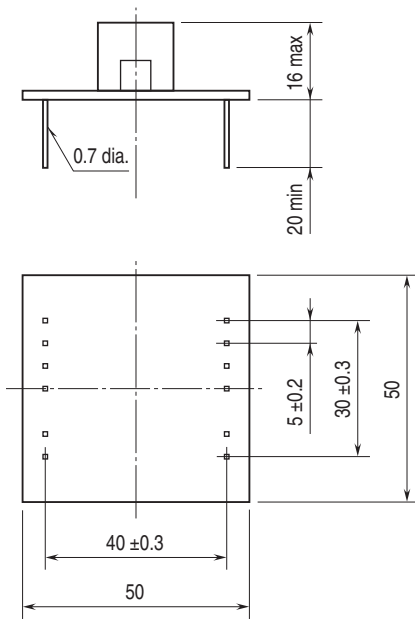
**Conversion gain:**  $\times 1 \pm 2 \%$

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

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

**Dielectric strength:** 1500 V AC @ 1 minute (input or A output to output or B output to C output to power)

**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm**

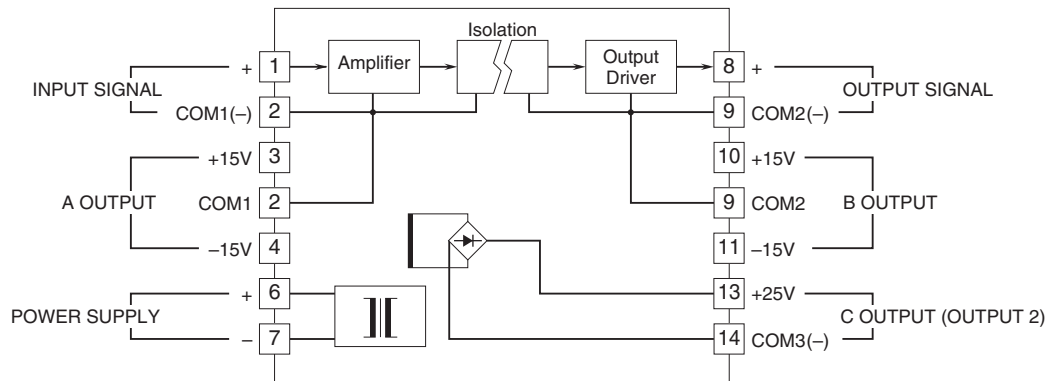


PIN ASSIGNMENT

INPUT SIGNAL (+)	1	8	OUTPUT SIGNAL (+)
A OUTPUT COM1 (-)	2	9	B OUTPUT COM2 (-)
A OUTPUT +15V	3	10	B OUTPUT +15V
A OUTPUT -15V	4	11	B OUTPUT -15V
POWER SUPPLY (+)	6	13	C OUTPUT +25V
POWER SUPPLY (-)	7	14	C OUTPUT COM3 (-)

(BOTTOM VIEW)

**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.