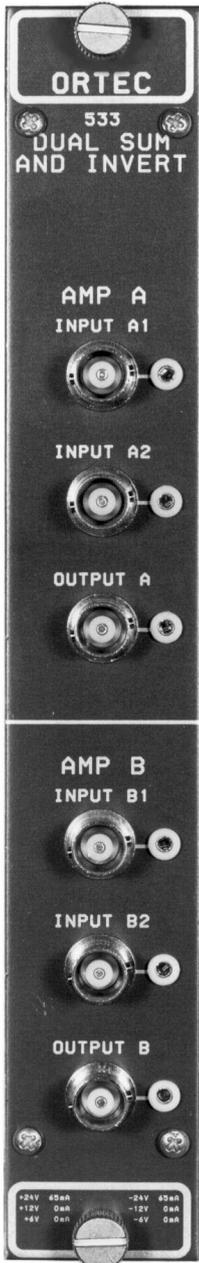


- Sums up to four linear inputs, inverting or noninverting
- Two independent amplifiers, each with a gain of -1
- Wide bandwidth, dc to 7 MHz
- Wide dynamic range, 0 to  $\pm 10$  V
- Excellent temperature stability



The ORTEC Model 533 Dual Sum and Invert Amplifier is a single-width NIM that incorporates two wideband unity-gain amplifiers. Amplifier A has four summing inputs and Amplifier B has two summing inputs. Both amplifiers invert the signals. If a non-inverting output is required, Amplifier A can be cascaded through Amplifier B to form the noninverting 4-input summing amplifier. By connecting A inputs in parallel and B inputs in parallel, the Model 533 can be used as a non-inverting amplifier with a gain of 1, 2, 3, 6, or 8.

The wide dynamic range and wide bandwidth make the ORTEC Model 533 useful for summing and/or inverting any signals that fall within the dc to 7 MHz bandwidth, such as most NIM-standard linear or logic signals. A convenient oscilloscope monitor test point is located next to each of the six front-panel connectors.

### Specifications

#### PERFORMANCE

**VOLTAGE GAIN** -1 for each input; tolerances  $\leq \pm 2\%$ .

**BANDWIDTH** DC to 7 MHz ( $t_r \leq 50$  ns).

**INTEGRAL NONLINEARITY**  $< \pm 0.05\%$ .

**TEMPERATURE INSTABILITY**

**Gain**  $\leq \pm 0.005\%/^{\circ}\text{C}$ .

**Output DC Level**  $\leq \pm 50 \mu\text{V}/^{\circ}\text{C}$ .

#### INPUTS

Four identical inputs for Amplifier A and two for Amplifier B; each accepts 0 to 10 V rated span, 12 V maximum, positive or negative, unipolar or bipolar;  $Z_{in} \sim 666 \Omega$ , dc-coupled; Inputs A1, A2, B1, and B2 on front panel, Inputs A3 and A4 on rear panel; all BNC connectors.

#### OUTPUTS

One output for each Amplifier, A and B, completely independent of each other; range 0 to  $\pm 10$  V linear;  $Z_o \sim 0.1 \Omega$ ; Outputs A and B on front panel; BNC connectors.

#### ELECTRICAL AND MECHANICAL

**POWER REQUIRED** +24 V, 65 mA; -24 V, 65 mA.

#### WEIGHT

**Net** 0.9 kg (2 lb).

**Shipping** 2.2 kg (5 lb).

**DIMENSIONS** Standard single-width NIM 3.43 X 22.13 cm (1.35 X 8.714 in.) per DOE/ER-0457T.

### Ordering Information

To order, specify:

Model	Description
533	Dual Sum and Invert Amplifier

Specifications subject to change  
100417