The ORTEC Model 428 Detector Bias Supply provides bias voltage of either polarity for two semiconductor detectors, and the current in each detector is externally monitored through jacks on the front panel. The outputs are short-circuit proof, with an impedance of approximately 1.3 MΩ, and each has a range from 0 to 1000 V. These outputs are selected independently by 10-turn direct-reading potentiometers. Constant bias voltage is supplied by high-grade circuits with <0.0002%, noise and ripple.

This detector bias supply is compatible with all ORTEC preamplifiers that have provisions for an external detector bias voltage.

Specifications

**PERFORMANCE**
- **NOISE AND RIPPLE** <0.0002%.
- **TEMPERATURE INSTABILITY** ≤±0.02%/°C, 0 to 50°C.
- **LINE INSTABILITY** Directly proportional to dc power supply instability (<±0.02% for 105 to 125 V ac when using one of the ORTEC Model 4002 Series Power Supplies).

**CONTROLS AND INDICATORS**
- **A/B (0–1000 V)** Front-panel 10-turn direct-readout potentiometers for bias control.
- **POS/OFF/NEG** Front-panel switch selects positive or negative outputs for both detectors.
- **CURRENT MONITOR** Front-panel jacks for accommodating external meter in each output circuit.

**OUTPUTS**
- **A/B** SHV connectors on front panel provide short-circuit-proof outputs for each detector; range 0–1000 V; positive or negative polarity for both detectors; impedance ~1.3 MΩ.

**ELECTRICAL AND MECHANICAL**
- **POWER REQUIRED** +24 V, 165 mA; –24 V, 165 mA.
- **WEIGHT**
  - Net 1.82 kg (4.0 lb).
  - Shipping 3.5 kg (7.75 lb).
- **DIMENSIONS** NIM-standard double-width module 6.90 X 22.13 cm (2.70 X 8.714 in.) per DOE/ER-0457T.

**Ordering Information**

To order, specify:

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>428</td>
<td>Detector Bias Supply</td>
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</tbody>
</table>

**OPTIONAL CABLE ACCESSORY**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-36-12</td>
<td>RG-59A/U 75-Ω Cable with two SHV female plugs, 12-ft length</td>
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</tbody>
</table>

Specifications subject to change