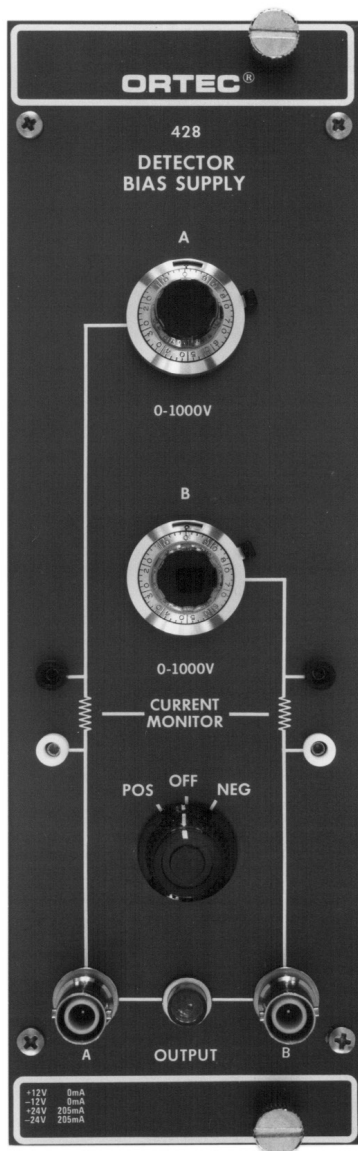


- For use with silicon surface barrier detectors
- 0 to ± 1 kV
- Two individually adjustable outputs
- 1.3 M Ω output impedance
- Current monitoring capability
- Precision dials

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 M Ω , 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 $\pm 0.02\%$ /°C, 0 to 50°C.

LINE INSTABILITY Directly proportional to DC power supply instability (< $\pm 0.02\%$ 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 M Ω .

ELECTRICAL AND MECHANICAL

POWER REQUIRED +24 V, 205 mA; –24 V, 205 mA.

WEIGHT

Net 1.82 kg (4.0 lb).

Shipping 3.3 kg (7.25 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

Model	Description
428	Detector Bias Supply
C-36-12	RG-59A/U 75- Ω Cable with two SHV female plugs, 12-ft length