The ORTEC Model 9302 is a fast Amplifier and Discriminator in a single-wide NIM-standard module designed for use with photomultiplier or electron multiplier tubes in photon, ion, or electron counting applications. Features of the Model 9302 include a wideband, high-gain amplifier and an integral discriminator capable of counting rates up to 100 MHz.

Incorporated into the module is a rate monitor system. This facility can be used to perform external switching when the pulse counting rate is modulated. At counting rates equal to or above those selected by the monitor rate discriminator, a voltage of >+2 will be present at the signal monitor connector. At counting rates below the rate selected, 0 V will be present at the connector. The threshold value is selected by the front-panel switch.

The amplifier section of the Model 9302 is ac-coupled with input and output impedances of 50 Ω. The amplifier has a rise time of typically 3 ns at a gain setting of 200 and <2 ns when the gain is set at 20.

The discriminator section of the Model 9302 is a leading-edge discriminator whose level can be adjusted through a range from 50 mV to 1 V.

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Amplifier Discriminator

**SIGNAL MONITOR** Rear-panel BNC connector provides 0 ±0.2 V when discriminator count rate is below threshold and ≥+2 V when it is above threshold.

**PREAMP POWER** Amphenol 17-10090 rear-panel connector provides necessary power for 9301 Fast Preamplifier.

**ELECTRICAL AND MECHANICAL**

**POWER REQUIRED** +12 V, 140 mA; −12 V, 205 mA; +24 V, 85 mA; −24 V, 90 mA.

**WEIGHT**

Net  0.9 kg (2.0 lb).

Shipping  2.25 kg (5.0 lb).

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

**Ordering Information**

To order, specify:

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<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>9302</td>
<td>Amplifier Discriminator</td>
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Specifications subject to change

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