**APS 145**

**Power Amplifier**

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**Applications**
- Power amplifier for modal testing shaker
- Power amplifier for environmental testing systems

**Range of Use**
- Research and development departments in industry
- Environment testing laboratories
- Universities and research institutes

**Features**
- Voltage or current amplifier mode
- Frequency range DC ... 50 kHz
- Current and voltage monitor output
- Gain control
- Current limit control
- Multifunction display
- Switch for phase inversion (0° or 180°)
- Control inputs for remote emergency shut down
- Control mute input
- Amplifier state outputs for integration in testing systems
- Overload protection
- Forced air cooling for continuous operation
- High reliability operation
Description

The Power Amplifier Type APS 145 has been designed to drive any vibration or modal exciter requiring a 810 VA power amplifier.

The rated AC output is 810 VA into a 2.5 Ohm exciter or resistive load. Harmonic content of the output is very small as heavy negative feedback is used.

The instrument can tolerate temperature and supply line variations while maintaining excellent stability.

Specifications

<table>
<thead>
<tr>
<th>General</th>
<th></th>
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<tbody>
<tr>
<td>Power Output, Max.</td>
<td>810 VA into a 2.5 Ohm exciter or resistive load, at 25°C, at 1 kHz and nominal mains voltage.</td>
</tr>
<tr>
<td>Voltage Output, Max.</td>
<td>45 V RMS, DC ... 15 kHz</td>
</tr>
<tr>
<td>Current Output, Max.</td>
<td>4 A DC</td>
</tr>
<tr>
<td></td>
<td>15 A RMS &gt; 0.1 Hz, Z = 1.5 Ohm</td>
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<tr>
<td></td>
<td>18 A RMS &gt; 0.1 Hz, Z = 2.5 Ohm − optimal impedance</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>0.1 Hz ... 10 kHz full power</td>
</tr>
<tr>
<td></td>
<td>DC ... 50 kHz small signal voltage (-20 dB)</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>&gt; 10 kOhm</td>
</tr>
<tr>
<td>Input Voltage, Max.</td>
<td>10 V RMS</td>
</tr>
<tr>
<td>Monitor Output</td>
<td>Voltage monitor: 0.1 V/V ± 3 %, 5 Hz ... 15 kHz</td>
</tr>
<tr>
<td></td>
<td>Current monitor: 0.1 V/A ± 3 %, 5 Hz ... 15 kHz</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>Single phase 100 V / 120 V / 230 V RMS, ± 10 %, 50 Hz ... 60 Hz (factory presetting) approx. 1,500 VA at full load</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Height: 3 U equivalent of 132 mm (5.2 in.)</td>
</tr>
<tr>
<td></td>
<td>Width: 482.6 mm (19 in.) with flanges for standard 19-inch rack mounting</td>
</tr>
<tr>
<td></td>
<td>Depth: 451 mm (17.8 in.)</td>
</tr>
<tr>
<td>Weight</td>
<td>22 kg (48.5 lb.)</td>
</tr>
</tbody>
</table>

Voltage Mode

<table>
<thead>
<tr>
<th>Frequency Response</th>
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</tr>
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<tbody>
<tr>
<td>DC Input:</td>
<td>10 kHz ± 0.5 dB</td>
</tr>
<tr>
<td>AC Input:</td>
<td>50 kHz ± 3.0 dB</td>
</tr>
<tr>
<td></td>
<td>small signal voltage (-20 dB)</td>
</tr>
<tr>
<td></td>
<td>50 kHz ± 3.0 dB</td>
</tr>
<tr>
<td></td>
<td>small signal voltage (-20 dB)</td>
</tr>
<tr>
<td></td>
<td>(2 separate BNC sockets at back panel)</td>
</tr>
<tr>
<td>Total Harmonic Distortion + Noise</td>
<td>&lt; 0.2 % (0.1 Hz ... 5 kHz)</td>
</tr>
<tr>
<td></td>
<td>&lt; 0.3 % (5 kHz ... 10 kHz)</td>
</tr>
<tr>
<td>Gain</td>
<td>18 V/V ± 2 dB</td>
</tr>
</tbody>
</table>

Current Mode

<table>
<thead>
<tr>
<th>Frequency Response</th>
<th></th>
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<tbody>
<tr>
<td>DC Input:</td>
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<td>AC Input:</td>
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<td></td>
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<td>small signal voltage (-20 dB)</td>
</tr>
<tr>
<td></td>
<td>(2 separate BNC sockets at back panel)</td>
</tr>
<tr>
<td>Total Harmonic Distortion + Noise</td>
<td>&lt; 0.3 % (0.1 Hz ... 2 kHz)</td>
</tr>
<tr>
<td></td>
<td>&lt; 0.8 % (2 kHz ... 10 kHz)</td>
</tr>
<tr>
<td>Gain</td>
<td>7.5 A/V ± 2 dB</td>
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</tbody>
</table>

All data are subject to change without notice

April 2011