

# APS 125

## Power Amplifier



### 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 ... 150 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

# APS 125

## Power Amplifier

### Description

The Power Amplifier Type APS 125 has been designed to drive any vibration or modal exciter requiring a 500 VA power amplifier.

The rated AC output is 500 VA into a 4 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.

The APS 125 can be used as a voltage generator with low output impedance and a flat voltage frequency response, or as a current generator with high output impedance and a flat current frequency response.

The RMS output-current limit is adjustable.

### Specifications

| General                           |  |
|-----------------------------------|--|
| Power Output, Max.                | 500 VA into a 4 Ohm exciter or resistive load, at 25°C, at 1 kHz and nominal mains voltage.  |
| Voltage Output, Max.              | 45 V RMS, DC ... 15 kHz  |
| Current Output, Max.              | + 4 / - 5 A DC<br>5 A RMS, 0.1 Hz ... 1 Hz<br>9 A RMS, 1 Hz ... 20 Hz<br>11 A RMS, 20 Hz ... 15 kHz  |
| Frequency Range                   | 20 Hz ... 15 kHz full power<br>DC ... 150 kHz small signal voltage (-20 dB)  |
| Input Impedance                   | > 10 kOhm  |
| Input Voltage, Max.               | < 5 V RMS  |
| Monitor Output                    | Voltage monitor: 0.1 V/V $\pm$ 3 %, 0.1 Hz ... 15 kHz<br>Current monitor: 0.1 V/A $\pm$ 3 %, 0.1 Hz ... 15 kHz   |
| Power Requirements                | Single phase 100 V / 120 V / 230 V RMS, $\pm$ 5 %, 50 Hz ... 60 Hz.<br>Approx. 1 000 VA at full load   |
| Dimensions                        | Height: 2 U equivalent of 88 mm (3.5 in.)<br>Width: 482.6 mm (19 in.) with flanges for standard 19" rack mounting<br>Depth: 450 mm (17.7 in.)  |
| Weight                            | 21 kg (46 lb.)   |
| Voltage Mode                      |  |
| Frequency Response                | DC Input: DC ... 15 kHz $\pm$ 0.5 dB<br>DC ... 150 kHz $\pm$ 3.0 dB small signal voltage (-20 dB)<br>AC Input: 5 Hz ... 15 kHz $\pm$ 0.5 dB<br>2 Hz ... 150 kHz $\pm$ 3.0 dB small signal voltage (-20 dB)<br>(2 separate BNC sockets at back panel) |
| Total Harmonic Distortion + Noise | < 0.1 % (40 Hz ... 5 kHz)<br>< 0.2 % ( 5 kHz ... 15 kHz)   |
| Gain                              | 18 V/V ( $\pm$ 2 dB) at 1 kHz  |
| Current Mode                      |  |
| Frequency Response                | DC Input:: DC ... 15 kHz $\pm$ 0.5 dB<br>DC ... 60 kHz $\pm$ 3.0 dB small signal voltage (-20 dB)<br>AC Input:: 5 Hz ... 15 kHz $\pm$ 0.5 dB<br>2 Hz ... 60 kHz $\pm$ 3.0 dB small signal voltage (-20 dB)   |
| Total Harmonic Distortion + Noise | < 0.2 % (40 Hz ... 2 kHz)<br>< 0.8 % ( 2 kHz ... 15 kHz)   |
| Gain                              | 5.5 A/V ( $\pm$ 2 dB) at 1 kHz   |