



## General description:

The HVA models are high-voltage amplifiers that provide output levels of up to  $800V_{pp}$  and currents of  $2A_{RMS}$ . They are suitable for the excitation of piezoelectric transducers, EMATs, MEMs and many other applications. The HVA amplifiers can work with capacitive loads and are able to provide the strong current demanded by these loads when operating at high voltages and high frequencies. Two different models are available: the HVA-400-A with an output voltage of  $400V_{pp}$  and the HVA-800-A with  $800V_{pp}$ .

### Main features:

- Very high voltage
- High current
- Continuous wave operation.
- Very high slew rate
- Wide bandwidth
- Stable with capacitive loads
- Linear amplification with low distortion
- Four-quadrant output operation
- Over-temperature protection

## Specifications:



### Input


Parameter	HVA-400-A	HVA-800-A
Input coupling	AC	AC
Useful range of input voltage	±1V	±1V
Input protection	Up to ±16V	Up to ±16V
Input impedance <sup>(1)</sup>	50Ω	50Ω
Input connector	BNC	BNC

Note 1: For different values of input impedance, please contact us.



### Output

Maximum output voltage	±200V	±400V
Voltage gain	x 200	x 400
Maximum output current	2A <sub>RMS</sub>	2A <sub>RMS</sub>
Maximum peak output current	4A	4A
Output protection	Overcurrent, short-circuit, overvoltage	Overcurrent, short-circuit, overvoltage
Output connector	BNC	BNC
Full power bandwidth	10kHz – 1MHz	10kHz – 1MHz
Slew rate	18000V/μs	36000V/μs
Output impedance	20Ω + 66μH	20Ω + 68μH
Total harmonic distortion	-48dB (@100kHz, 100V <sub>p</sub> )	-44dB (@100kHz, 200V <sub>p</sub> )
Input referred noise density	51.8nV/√Hz (@100kHz)	51.6nV/√Hz (@100kHz)
Input referred voltage noise	115.2μV <sub>RMS</sub>	114.8μV <sub>RMS</sub>



### Electrical and mechanical

Dimensions	48.2cm x 39cm x 13.3cm (19" rack 3U)	
Weight	7kg	9kg
Power supply	Universal 85~264VAC, 47~440Hz	
Power consumption	580W	1120W
Operating conditions	10 to 40°C, 20-90% RH non-condensing	
Cooling	Forced air	

### Safety considerations:

- **This product is designed to operate with high voltages (up to 800V<sub>pp</sub>) and currents (2A). These conditions represent a highly dangerous risk of electrical shock which can be lethal for the user in case of unsafe use of the amplifier and the devices connected to it.**
- **Do not turn on the amplifier without cables connected to the output port or with cables having their other end unconnected.**
- It is advised to turn off the amplifier before connecting or removing cables from its terminals.
- The user must not block the air flow from the rear and front faces of the amplifier. It is recommended to periodically check the proper functioning of the ventilation.
- This product is intended for research purposes only and in an indoor class II environment. Only qualified and experimented users should be authorized to use this product.
- The power supplied to this product must be from a mains connection with protective earth.



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