PA 800 DM

Power amplifier

Applications

- modal testing shakers
- environmental testing systems
- calibration systems

Range of Use

- research and development departments in industry
- environment testing laboratories
- calibration laboratories
- universities and research institutes

Features

- frequency range DC … 25 kHz
- high reliability operation
- switch between voltage and current mode
- phase shift (0° or 180°)
- variable gain control
- current limit control
- temperature protection
- multifunction OLED display

Specification

The SPEKTRA Power Amplifier PA 800 DM has been developed to drive any type of exciter requiring a 810 VA power amplifier with a load impedance of 2.5 Ω. It has a useable frequency range from 20 Hz to 15 kHz at full power or from DC to 25 kHz small signal; the harmonic distortion is very small. The power amplifier can tolerate temperature and supply line variations while maintaining excellent stability. Thereby, the product 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 maximum RMS output-current limit is adjustable. For standard applications, we recommend using the product in voltage mode.

Technical data

General			
Power output, max.	810 VA into a 2.5 Ω resistive load		
Rated load	2.5 Ω resistive load		
Voltage output, max.	45 V RMS		
Current output, max.	10 A	0 Hz	DC
	15 A RMS	0.1 Hz … 20 Hz	sine
	18 A RMS	20 Hz … 15 kHz	sine
	9 A RMS	15 kHz … 25 kHz	sine
Input voltage	< 2.5 V		
Input impedance	> 10 kΩ		
Power supply (adjustable)	100 V / 120 V / 230 V ±5 %, 50 Hz / 60 Hz by adjusting the fuse + voltage selector, single phase, AC mains supply, 1400 VA power consumption		
Monitor output	Voltage monitor:	0.1 V/V ±3 %	1 kHz
	Current monitor:	0.1 V/A ±3 %	1 kHz
Dimensions (H × W × L)	88 mm × 482 mm × 450 mm (3.5 in × 19 in × 17 in)		
Weight	20 kg (44 lbs)		

Technical data

Voltage Mode			
Frequency Range	**Range**	**Tolerance**	**Conditions**
	20 Hz … 15 kHz 15 kHz … 25 kHz	+0.5 dB/-1 dB -6 dB	sine small signal
Gain	**Range**	**Value**	
	nominal	18 V/V	
Total Harmonic Distortion	**Range**	**Value**	**Conditions**
	40 Hz … 1 kHz 1 kHz … 5 kHz 5 kHz … 10 kHz 10 kHz … 25 kHz	< 0.1 % < 0.2 % < 0.5 % < 1.0 %	
Signal-to-Noise Ratio	**Range**	**Value**	**Conditions**
	full power	> 90 dB	-0.5 dB

Current Mode			
Frequency Range **@ 2.5 Ω resistive load**	**Range**	**Tolerance**	**Conditions**
	20 Hz … 15 kHz	+0.5 dB/-1 dB	sine
Gain	**Range**	**Value**	
	nominal	4.4 A/V	
Total Harmonic Distortion	**Range**	**Value**	**Conditions**
	40 Hz … 1 kHz 1 kHz … 5 kHz 5 kHz … 10 kHz 10 kHz … 15 kHz	< 0.2 % < 0.4 % < 0.7 % < 1.0 %	@1 kHz U_{in} = 2.5 V RMS I_{out} = 18 A RMS
Signal-to-Noise Ratio	**Range**	**Value**	**Conditions**
	full power	> 84 dB	-0.5 dB