PA 500 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…200 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 Power Amplifier PA 500 DM has been developed to drive any type of exciter requiring a 500 VA power amplifier with a load impedance of 4 Ω. It has a useable frequency range from 40 Hz to 60 kHz at full power or from DC to 200 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.	500 VA into a 4 Ω resistive load		
Rated load	4 Ω resistive load		
Voltage output, max.	45 V RMS		
Current output, max.	5 A (±0,5 A)		DC
	11 A Peak	0.1 Hz…10 Hz	AC signal
	10 A RMS	10 Hz…40 Hz	sine
	11.2 A RMS	40 Hz…20 kHz	sine
	9 A RMS	20 kHz…40 kHz	sine
	8 A RMS	40 kHz…60 kHz	sine
Input voltage	< 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, 1070 VA power consumption		
Monitor output	Voltage monitor:	0.1 V/V ±3 %	5 Hz…60 kHz
	Current monitor:	0.1 V/A ±3 %	5 Hz…60 kHz
Dimensions (H × W × L)	88 mm × 482 mm × 450 mm (3.5 in × 19 in × 17 in)		
Weight	18 kg (39.6 lbs)		

Technical data

Voltage Mode			
Frequency Range	**Range**	**Tolerance**	**Conditions**
	0.1 Hz … 60 kHz	±0.5 dB	sine
	60 kHz … 100 kHz	-3 dB	small signal (-20 dB)
	100 kHz … 200 kHz	-20 dB	small signal (-20 dB)
Gain	**Range**	**Value**	
	nominal	18 V/V	
Total Harmonic Distortion	**Range**	**Value**	**Conditions**
	40 Hz … 5 kHz	< 0.1 %	
	5 kHz … 20 kHz	< 0.2 %	
	20 kHz … 60 kHz	< 4.0 %	
	40 Hz … 80 kHz	< 0.2 %	small signal (-20 dB)
Signal-to-Noise Ratio	**Range**	**Value**	**Conditions**
	full power	> 90 dB	-0.5 dB

Current Mode			
Frequency Range @ 4 Ω resistive load	**Range**	**Tolerance**	**Conditions**
	0.1 Hz … 20 Hz	-3.0 dB	sine
	20 Hz … 15 kHz	-0.5 dB	sine
Gain	**Range**	**Value**	
	nominal	4.4 A/V	
Total Harmonic Distortion	**Range**	**Value**	**Conditions**
	40 Hz… 5 kHz	< 0.2 %	
	5 kHz… 15 kHz	< 0.8 %	
Signal-to-Noise Ratio	**Range**	**Value**	**Conditions**
	full power	> 90 dB	-0.5 dB