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