PA14-180
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
- Frequency range DC...100 kHz
- High reliability operation
- Switch between Voltage and Current Mode
- Phase Shift (0° or 180°)
- Variable Gain Control
- Current Limit Control
- Temperature Protection
- Multifunction LCD Display

Description
The Power Amplifier Type PA14-180 has been developed to drive any type of exciter requiring a 180 VA power amplifier. It has a useable frequency range from 40 Hz to 10 kHz at full power or from DC to 100 kHz small signal; the harmonic distortion is hereby 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 application, we recommend using the product in voltage mode.

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Technical Data

General		
Power Output, max.	180 VA into a 0.8 Ohm resistive load	
Frequency Range	Full power Small signal (-20 dB)	40 Hz…10 kHz DC...100 kHz
Voltage Output, max.	12 V RMS	
Current Output	5 A RMS 12 A RMS 15 A RMS 12 A RMS	DC…10 Hz 10 Hz…40 Hz 40 Hz…10 kHz 10 kHz…15 kHz
Input Voltage	< 5 V	
Input Impedance	> 10 kOhm	
Power Supply (adjustable)	100 V or 120 V or 230 V ± 5 %, 50 Hz / 60 Hz by adjusting the fuse, single phase, AC mains supply, 580 VA power consumption	
Monitor Output	Voltage monitor Current monitor	0.1 V/V ± 3 %, 5 Hz...15 kHz 0.1 V/A ± 3 %, 5 Hz...15 kHz
Dimensions	Width Height Depth	482 mm (19 in), with flanges standard 19" rack 88 mm (3.5 in), corresponds to 2 U 450 mm (17.7 in)
Weight	14 kg (31 lb)	
Bandwidth - Voltage Mode		
Frequency Range	Full power Small signal (-20 dB)	40 Hz...10 kHz DC...100 kHz
Gain	Nominal ± 0.5 dB ± 3 dB	5 V/V 20 Hz...10 kHz 10 kHz...100 kHz
Total Harmonic Distortion	< 0.1 % < 0.2 %	40 Hz... 5 kHz, full power 5 kHz…10 kHz, full power
Signal-to-Noise Ratio	> 90 dB (full power, -0.5 dB)	
Bandwidth - Current Mode		
Frequency Range	Full power Small signal (-20 dB)	40 Hz...10 kHz DC...100 kHz
Gain	± 0.5 dB ± 3 dB	20 Hz...10 kHz 10 kHz...100 kHz
Total Harmonic Distortion	< 0.2 % < 0.8 %	40 Hz...2 kHz, full power 2 kHz…10 kHz, full power
Signal-to-Noise Ratio	> 90 dB (full power, -0.5 dB)	