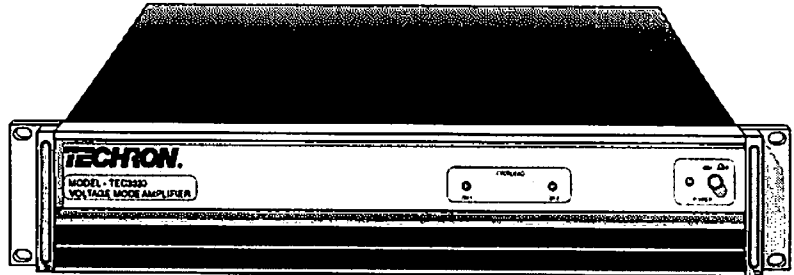


TEC3620 Dual-Channel Voltage-Mode Power Amplifier

This versatile dual-channel amplifier supplies high power with very low noise, distortion, and differential phase error.



Features

The TEC3620 is a high power, precision industrial amplifier. Important features of this amplifier include the following:

- ❑ A dc-coupled input and a floating (no ground reference) output.
- ❑ The channels can be combined for greater maximum voltage or current. Bridged-Mono configuration doubles the available voltage. Parallel-Mono doubles the available current.
- ❑ Internal circuitry protects from input overload, thermal overload, or improper load impedance (including short and open circuit).
- ❑ A Ground Lift switch allows isolation of the phone jack signal ground from the chassis (ac) ground.
- ❑ The amplifier installs easily into a standard 19" rack and occupies 2U of rack space.
- ❑ The TEC3620 operates from a 120 V (100 or 230 V optional), 1-phase, ac power source.
- ❑ Our patented grounded, full-bridge output topology with floating, internal power supply operates in the AB+B mode.
- ❑ All Techron amplifiers are designed and manufactured in the U.S.A. and are backed by a limited, 1-year warranty.
- ❑ Techron fully supports the TEC3620 with application engineering, service facilities, and complete technical information.

Electrical Specifications*

Output

Maximum Output Voltage: 101 V rms into 25 Ω
33.6 V rms into 4 Ω

Maximum Output Current: 3.9 A rms into 25 Ω
8.5 A rms into 4 Ω

Maximum Output Power: 393 W rms into 25 Ω
286 W rms into 4 Ω

Output Impedance: less than 10 m Ω in series
with less than 2 μ H

Output Load Constraints: 24 Ω minimum
impedance (0 to 90° phase angle)

DC Output Offset Voltage: <10 mVdc peak

Residual Noise: 0.94 mV peak (dc-100 kHz)

Input

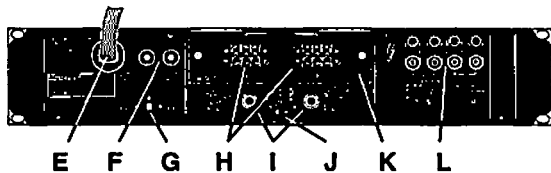
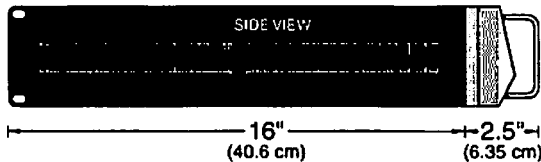
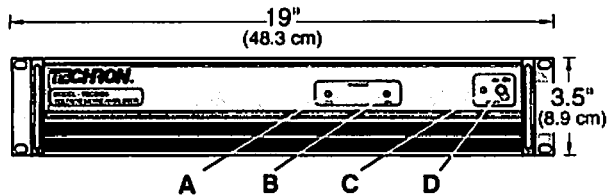
CMRR: -70 dB minimum (40 to 600Hz)

Differential Input Resistance: 20 k Ω

Input Power Requirements: 120 V, 1-phase,
60 Hz, 15 A, ac (100 or 230 Vac, 50-60 Hz, is
optional)

(*Per channel; both channels driven. Tests used 1 kHz sine wave. Specifications depend on load and waveform and are subject to manufacturing change.)

Mechanical Specifications



Weight: 56 lbs (25.4 kg)

Cooling: Forced air (from front to side panels, with removable air filter in the front grill)

Finish: Black steel chassis and aluminum front panel finished in light pearl

Indicators, Controls and Connectors:

- (A) Overload Indicator, channel 1
- (B) Overload Indicator, channel 2
- (C) Power Indicator
- (D) AC Power Switch
- (E) AC Power Cable (NEMA 3-prong plug)
- (F) Circuit Breaker Reset Switches
- (G) Dual/Mono Switch
- (H) Input Barrier Blocks (balanced)
- (I) Alternate Inputs (balanced phone jacks)
- (J) Ground Lift Switch
- (K) P.I.P. Accessory Module
- (L) Output Jacks (5-way binding posts)

Techron fully supports every product by providing

- application engineering for your technical questions and customized product needs.
- a 1-year limited warranty.
- comprehensive technical manuals and related product information.
- a fully equipped service facility and experienced service technicians.

Performance*

Frequency Response: dc to 20 kHz (much higher frequencies attainable depending on application needs)

Maximum Slew Rate: 31 V/ μ s

Differential Phase Error: $<0.1^\circ$ @ 60 Hz

Phase Response: $\pm 10^\circ$ (10 Hz to 20 kHz at 1 W)

THD plus noise: $<0.10\%$ @ 600 Hz, full output power

IMD: $<0.05\%$ (10 mW to full rated output)

Voltage Gain: 50 V/V $\pm 0.2\%$

(*Per channel; both channels driven. Tests used 1 kHz sine wave. Specifications depend on load and waveform and are subject to manufacturing change.)

Applications

Since 1951 our amplifiers have powered many industrial and medical applications.

Techron is the leading maker of gradient drivers—amplifier systems used to power gradient coils in magnetic resonance imaging.

Power utility industries use Techron amplifiers in power system simulation, magneto-optic current transducer interfaces, and testing of protective relays, current transformers, voltage transformers, fuses, capacitors, and cable harnesses.

Other uses of Techron amplifiers include chemical analysis, space exploration, vibration test systems, radar installations, particle acceleration studies, noise reduction research, magnetostrictive actuators, electromagnetic compatibility testing, bioresearch, communications, materials testing, sonar, degaussing, electroplating, and electrolysis.

Support

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