

Model 7796 DC-Coupled AC Amplifier



Application

The Model 7796 is our new top of the line precision linear amplifier; it combines everything we have learned in over 40 years of building high power linear amplifiers.

The AT Techron 7796 Amplifier is a high-powered unit designed to provide clean, reliable power for gradient coils in magnetic resonance imaging systems or in applications that require both significant short term (burst) and long-term (continuous) power. A single 7796 has an output capability of over 210 amperes peak at its rated voltage. If more power is needed, up to four amplifiers can be combined in series or parallel and operate as a single large system. The 7796 operates in either voltage or current mode and features DC-coupling, robust output devices and a power range of over 6600 watts RMS.

Features

- Over 9,300 watts peak output; 6600 watts rms into a 1.5 ohm load.
- 40 mSec pulses of up to 210 amperes peak into a 1 ohm load.
- System output of 650 volts and 250 amperes maximum are possible with multiple, interconnected amplifiers.
- Frequency bandwidth of DC to 50 kHz at rated power, DC to 100 kHz at reduced power.
- Rugged chassis for stand alone or rack mounted operation. No additional power supplies required.
- Protection circuitry protects the AE Techron 7796 from input overloads, improper output connection (including shorted and improper loads), over temperature, over current, and supply voltages that are too high or too low.
- Shipped ready to operate from 208 volt, three-phase AC mains. Operation from 380 or 415 volt AC mains are available on request

Indicators and Controls

- Front panel LEDs indicate ready, standby and fault conditions in the output stage.
- Front panel display lists type of fault condition and gives suggested corrective action.
- Front panel soft touch switch to places amplifier in run or standby.
- Front Panel is user configurable for up to four simultaneous displays reporting one, two or all four of the following: Voltage Peak, Voltage RMS, Current Peak, Current RMS.



Performance

Frequency Response

DC - 30kHz +0.1 - 0.5dB

Phase Response

+/- 8.3 degrees (10Hz - 10kHz)

Unit to Unit Phase Error

+/- 0.1 degrees at 60Hz

Maximum continuous output power

6600 watts rms

Output offset current

Less than 10 milliamperes dc

Input

Balanced with ground: three terminal barrier block connector 20k ohm differential.

Unbalanced: BNC connector, 10k ohm single ended.

Gain

20 volts/volt (voltage mode)

20 amperes/volt (current mode)

Residual Noise

DC to 30kHz Less than 75 microvolts

DC to 100kHz Less than microvolt

Slew Rate

41 volts per microsecond

40mS Pulse Power Rating

Load	Voltage RMS	Amps RMS	Watts RMS	Voltage Peak	Amps Peak	Watts Peak
None	128			181		
2	111	56	6146	157	79	12403
1.5	105	70	7304	148	99	14652
1	99	99	9803	140	140	19600
0.5	74	148	10,952	106	209	22154

1 Hour Continuous Power Rating

Load	Voltage RMS	Amps RMS	Watts RMS	Voltage Peak	Amps Peak	Watts Peak
None	128			181		
16	113	7.1	798	159	10	1590
8	109	13.6	1485	154	19	2926
4	108	27	2916	152	38	5776
2	100	50	5000	141	71	10011
1	50	50	2500	70.7	71	5020
0.5	45	90	4050	127	63	8001

Physical Characteristics

Chassis

All aluminum construction designed for stand alone, or rack mounted, operation with light pearl front panel and black chassis. The Amplifier occupies seven EIA 19-inch-wide rack units.

Weight

153 lbs. (69 kg)

AC Power

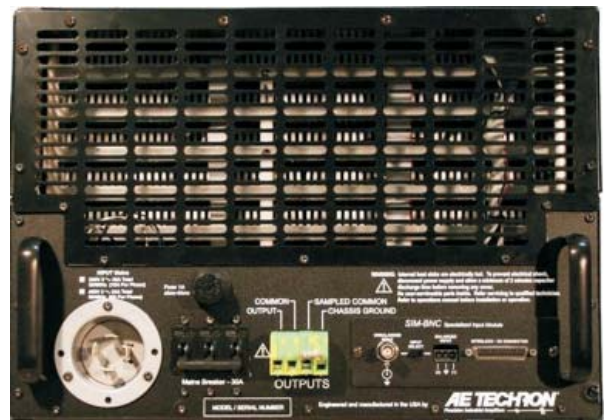
Three phase, 208 volts, 47-60 Hz, 30 amperes AC service.

Cooling

Forced air, 500 cfm

Dimensions

19 in. x 12.25 in. x 22.8 in (48.3 cm x 311.2 cm x 579.1 Cm)



Support

When you purchase an AE Techron amplifier, a full complement of technical and factory support personnel join your team. AE Techron inc. provides:

- Applications engineering for your technical questions and customized product needs.
- A one year limited warranty to protect your equipment investment.
- A fully equipped service center to keep your amplifier operating at original performance requirements.