8300 Series

AE Techron's Revolutionary Switch-Mode Design, With Half the Power at a Lower Cost

AE Techron's 8300 Series amplifiers are 200Vp, low-noise, DC-to-50 kHz switch-mode amplifiers. The 8300 series provides a unique combination of switch-mode and linear amplifiers. Switch-mode efficiency is combined with a low noise floor and THD, while also benefitting from high slew rates and wide bandwidth. The 8300 series is also able to safely drive both reactive and resistive loads of varying impedances with no loss in rated output power.

This combination of features makes the 8300 series an ideal solution for a wide range of high-current, low-voltage applications that require both DC power and quick surges or drop-outs, like those found in conducted immunity testing of DC-powered systems in the automotive and aviation markets.

Bandwidth	DC to 50 kHz
Slew rate	Up to 65V/µs
Voltage	0 to 140 V_{RMS} 0 to 200 VDC
Current	Up to 65 to 300 A_{RMS}*
Distortion	<0.2%
Power	2 kW, up to 10 kVA*

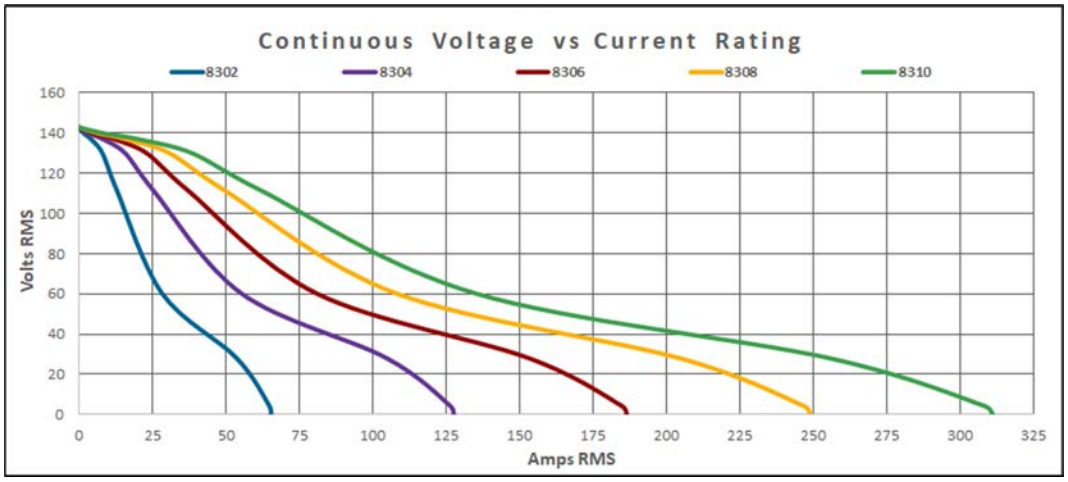
Power levels up to 5X rated power when driving reactive loads

Drives loads PF 0 to 1

*Models available with output power from 2 kW to 10 kW (capable of up to 50 kVA).

	Continuous Output Current *				
	8302	8304	8306	8308	8310
13.5 VDC	65A	115A	175A	230A	292A
24 VDC	50A	90A	135A	180A	225A
48 VDC	30A	54A	81A	108A	135A
60 VAC	28A	50A	75A	100A	125A
90 VAC	17A	30A	46A	61A	76A
120 VAC	10A	18A	27A	36A	45A

*Power ratings shown are for 240V or 208V units. Contact AE Techron for performance ratings for alternate AC voltage units.



Specifications

8302

Maximum Continuous Output Current: $65A_{RMS}$
Surge Rating: 2X power at up to 200 V_P or 150A
Apparent Power Rating: Up to 5X continuous power rating at up to 200 V_P or 65A
Supply Voltage: 120V ±10% 20A, 208V ±10% 20A, or 240V ±10% 20A, 50/60 Hz
Dimensions (HxWxD): 5.25 x 19.0 x 25.26 in. (13.34 x 48.26 x 64.16 cm)
Weight: Approximately 84 lbs. (38.1 kg)

8304

Maximum Continuous Output Current: $125A_{RMS}$
Surge Rating: 2X power at up to 200 V_P or 300A
Apparent Power Rating: Up to 5X continuous power rating at up to 200 V_P or 115A
Supply Voltage: Three-phase 208V ±10%, 20A, 50/60 Hz; 400V ±10%, 20A version available.
Dimensions (HxWxD): 35.05 x 22.56 x 31.56 in. (89.03 x 57.3 x 80.16 cm)
Weight: Approximately 290 lbs. (131.5 kg)

8306

Maximum Continuous Output Current: $180A_{RMS}$
Surge Rating: 2X power at up to 200 V_P or 450A
Apparent Power Rating: Up to 5X continuous power rating at up to 200 V_P or 175A
Supply Voltage: Three-phase 208V ±10%, 20A, 50/60 Hz; 400V ±10%, 20A version available.
Dimensions (HxWxD): 35.05 x 22.56 x 31.56 in. (89.03 x 57.3 x 80.16 cm)
Weight: Approximately 370 lbs. (167.8 kg)

8308

Maximum Continuous Output Current: $240A_{RMS}$
Surge Rating: 2X power at up to 200 V_P or 600A
Apparent Power Rating: Up to 5X continuous power rating at up to 200 V_P or 230A
Supply Voltage: Three-phase 208V ±10%, 40A, 50/60 Hz; 400V ±10%, 40A version available.
Dimensions (HxWxD): 42.05 x 22.56 x 31.56 inches (106.81 x 57.3 x 80.16 cm)
Weight: Approximately 460 lbs. (208.7 kg)

8310

Maximum Continuous Output Current: $300A_{RMS}$
Surge Rating: 2X power at up to 400 V_P or 750A
Apparent Power Rating: Up to 5X continuous power rating at up to 200 V_P or 750A
Supply Voltage: Three-phase 208V ±10%,40A, 50/60 Hz; 400V ±10%, 40A version available.
Dimensions (HxWxD): 45.80 x 22.56 x 31.56 inches (116.33 x 57.3 x 80.16 cm)
Weight: Approximately 540 lbs. (244.9 kg)

Common Data (all models)

Operating Modes: AC, DC and AC + DC
Frequency, AC Mode Output (-3 dB): DC – 50 kHz
Max Voltage Ranges (no load),
AC: 0 – 140 V_{RMS}
AC + DC: 0 – ±200 V_P
Load Regulation (full scale): <0.025%, DC to 100 Hz; <0.05%, 100 Hz to 10 kHz
Line Regulation (full scale): <0.1% for 10% line change
External Sense: Voltage-drop compensation sense line
Harmonic Distortion (80 kHz, low-passed): Less than 0.3% from 10 Hz to 30 kHz; 0.5% up to 50 kHz
Harmonic Distortion (30 kHz, low-passed): Less than 0.1% from 10 Hz to 50 kHz
DC Offset: <10 mV
Distortion: <0.2%
Voltage Slew Rate: Load dependent; up to 60V per µs, typically 10 µs to 30 µs for 10% to 90% of full-scale change, depending on load and power
Efficiency: 85%, typical
Power Factor: .72, typical
Source Impedance: 3 mΩ + 3 µH
Cooling: Internal forced-air fans
Protection: Over/under voltage, over current, over temperature
Input, Signal In: BNC connector (unbalanced); terminal strip (balanced)
Output: 3/8-inch high-current post connectors
Operating Environment,
Temperature: 5 °C to 50 °C (41 °F to 122 °F); Maximum output power de-rated above 30 °C (86 °F)
Humidity: Maximum relative humidity 80% for temperatures up to 31 °C decreasing linearly to 50% relative humidity at 40 °C
Altitude: 3000 m Maximum
Environment: Indoor Use Only, Pollution degree 2
Equipment Class: Group 1 Class A
Transient Overvoltage: Overvoltage Category II

CE **This product bears the CE mark**