

GNT200

Front End Series 200W AC/DC

Universal Input Power Supply



2 Year Warranty

- Wide Range Input 100-240 VAC with PFC
- Inhibit, Enable, Power Signals and Remote Sense Standard
- Power Density 10-13W/in³
- Compact (3.0" x 5.0" x 1.25")
- High Efficiency: 90% Typical
- Main Output and Two Auxiliary Outputs
- Conducted EMI meets Class B
- Approved to CSA/EN/IEC/UL 60950-1, 2nd Edition for ITE
- Approved to EN/IEC/UL60601-1 and CSA 22.2 No. 601 for Medical
- Also Available in Class II (G2T200)
- CB Report Available (for IEC60601-1 standard)

International Safety Standard Approvals



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Specifications

All Specifications are typical at nominal input, full load at 25°C unless otherwise stated.

AC Input	100-240VAC, 50/60 Hz, single phase 80-270VAC, 45-65 Hz max	Turn On Time	500 ms max
Input Current	120VAC: 3A. 230VAC: 1.5A	Hold-up Time	See chart
Inrush Current	Limited by internal thermistor. The inrush at 240VAC, averaged over the first AC half-cycle under cold start conditions will not exceed 38A.	Thermal Considerations	Keeping the following components below these temps indicates sufficient cooling: Q1: 90°C max., T4: 110°C max
Input Fuses	F1 and F2, 4A/250V	Over/Undershoot	3.5% max
Power Factor	0.98 typical, 0.96 minimum	Overload Protection	Cycling type, 250W nominal limit
Leakage Current	100µA at 120VAC NC, 400µA at 264VAC, SFC	Overvoltage Protection	See chart
Output Power	200W continuous with 200lfm airflow See chart for convection ratings	Ripple and Noise	1% pk-pk max., 20MHz BW, 0.1µF and 10 µF caps on probe
Peak Output Power	240W for 1 minute, 10% duty cycle	ITE Safety Standards	CSA/EN/IEC/UL 60950-1, 2 nd Edition
Output Voltage	See chart	Medical Safety Standards	EN/IEC/UL 60601-1, CSA22.2 No. 601-1
Voltage Adjustability	Adjustable potentiometer, capable of ±5% change from the nominal setting	Switching Frequency	Output: 195kHz ±12kHz, PFC: 130kHz
Minimum Load	Not required	MTBF	300K hours per Telcordia
Total Regulation	See chart	Overtemperature Protection	Automatic
Transient Response	500µs to 1%, 50% load step, $\Delta i/\Delta t < 0.2A/\mu s$ Maximum voltage deviation is 3.5%	Efficiency	90% typical at 230VAC, 87% typical at 120VAC
Temperature Coefficient	0.03% per °C typical on all units	Operating Temperature	0 to 70°C (see chart)
Operating Altitude	-500 to 10,000 ft	Storage Temperature	-40 to +85°C
Non-operating Altitude	-500 to 40,000 ft	Relative Humidity	5% to 95%, non-condensing
Vibration	5 Hz – 500 Hz, 5 grms	Shock	MIL-STD-810E, 516.4 part IV

Model Number Key

GNT 2 XX X G

RoHS Compliant

Enclosure Options: Blank - no enclosure; F = Fan Cover with "U" channel; L = L bracket, no cover; T = Slotted cover with U channel; U = U channel, no cover.

Output Voltage: (See models chart below)

Output Power (Watts): "2" = 200W

Product Family (GNT = Class I input, G2T = Class II input)

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Model Number	Volts (V)	Output Current			Ripple & Noise	Total Regulation	OVP Threshold
		100Vac Convection	240Vac Convection	90-270VAC Fan Cooled			
GNT212G	12V	8.3A	12.5A	16.7A	120mV	±2%	14.0 ± 1V
GNT215G	15V	6.7A	10.0A	13.3A	150mV	±2%	17.6 ± 1V
GNT218G	18V	5.6A	8.3A	11.1A	180mV	±2%	20.8 ± 1V
GNT224G	24V	4.2A	6.3A	8.3A	240mV	±2%	27.5 ± 1V
GNT228G	28V	3.6A	5.4A	7.1A	280mV	±2%	32.0 ± 1V
GNT236G	36V	2.5A	3.9A	5.6A	360mV	±2%	42.0 ± 1V
GNT248G	48V	1.9A	2.9A	4.2A	480mV	±2%	55.0 ± 1V

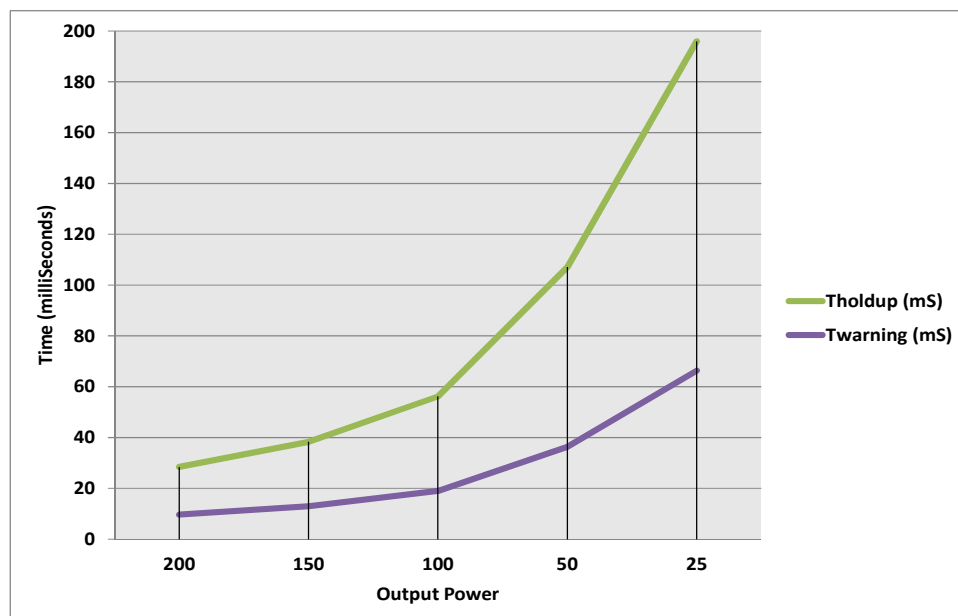
Notes:

1. When the input voltage is <90Vac, derate output power by approximately 20%.
2. Convection ratings shown are for 40°C ambient. Derate load 2.5%/°C to 70°C.
3. Fan cooled rating of 200W @ 50°C requires 200lfm of airflow over the unit.

General Specifications (continued from p. 1)

Signals	PS Off:	High to Inhibit
	Inhibit:	Low to Inhibit
	Pwr OK:	Goes high 100ms to 200 ms after DC OK signal
	Pwr OK:	Power fail low – 4ms warning
	DC OK:	High when output is >92% of nominal
	Aux. Output:	12Vdc @ 250mA
	Aux. Output:	5Vdc @ 100mA, always on
EMC/EMI Compliance	Conducted Emissions:	EN55011/22, Class B; FCC Class B
	Line Freq. Harmonics:	EN61000-3-2 Class A
	Voltage Fluctuations:	EN61000-3-3
	Static Discharge:	EN61000-4-2
	RF Field Susceptability:	EN61000-4-3 3 V/meter
	Fast Transients/Bursts EFT:	EN61000-4-4, 2 kV, 5 kHz – criteria B
	Surge Susceptability:	EN61000-4-5, criteria B
	Conducted Immunity:	EN61000-4-6, 3 Vrms
	Power Freq. Mag. Field:	EN61000-4-8, 3 A/m
	Voltage Dips Immunity:	EN61000-4-11 Contact factory

GNT200 Series Typical Holdup & Warning Time vs Output Power



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Mounting Options

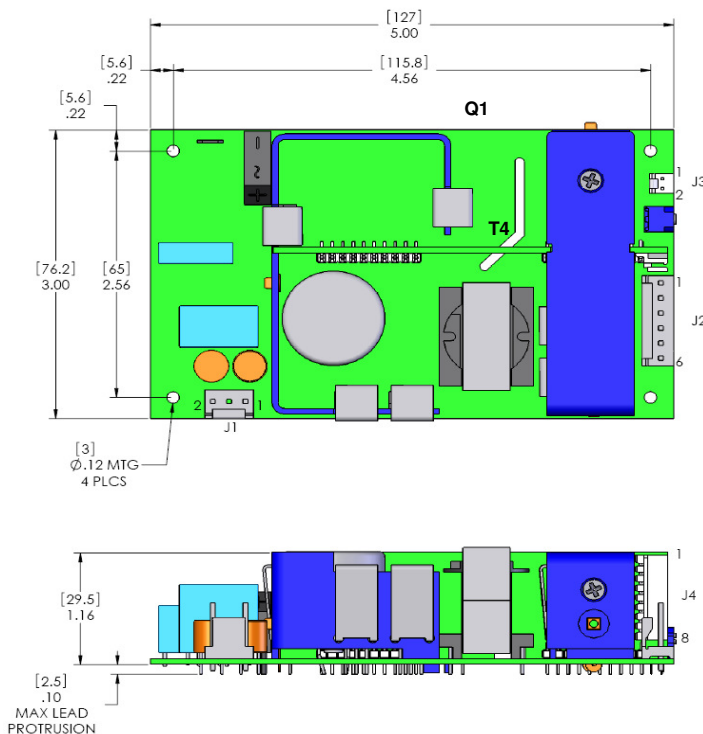
CONNECTOR INFORMATION

- J1:** AC INPUT - AMP# 640445-3
 PIN 1: AC LINE
 PIN 2: AC NEUTRAL
- J2:** DC OUTPUT - AMP# 640445-6
 PIN 1: +V out
 PIN 2: +V out
 PIN 3: +V out
 PIN 4: COMMON
 PIN 5: COMMON
 PIN 6: COMMON
- J3:** FAN OUTPUT - AMP# 640456-2
 PIN 1: +12Vdc @ 0.25A
 PIN 2: FAN RTN (COMMON)
- J4:** SIGNALS - MOLEX 22-05-7085
 PIN 1: PS OFF
 PIN 2: INHIBIT
 PIN 3: PWR OK
 PIN 4: DC OK
 PIN 5: SIGNAL RTN (COMMON)
 PIN 6: +5Vdc @ 0.1A
 PIN 7: -SENSE
 PIN 8: +SENSE

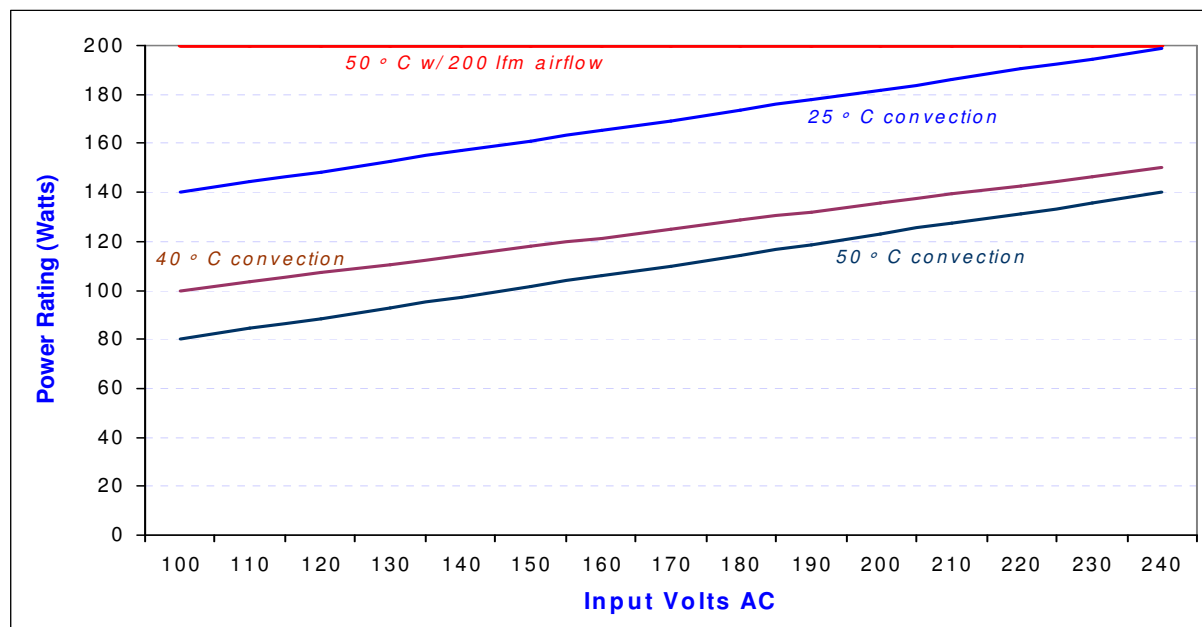
MATING CONNECTORS:

- J1:** MOLEX 09-50-3031, PINS: 08-52-0112
J2: MOLEX 09-50-3061, PINS: 08-52-0112
J3: AMP 1375820-2, PINS: 1375813-3
J4: MOLEX 50-37-5083, PINS: 08-70-1040

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 WEIGHT: 0.68 Lbs. (350g)



GNT200 Output Power vs. Line Voltage & Temperature



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