

# 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/in<sup>3</sup>
- 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, 2<sup>nd</sup> 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



### Specifications

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

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

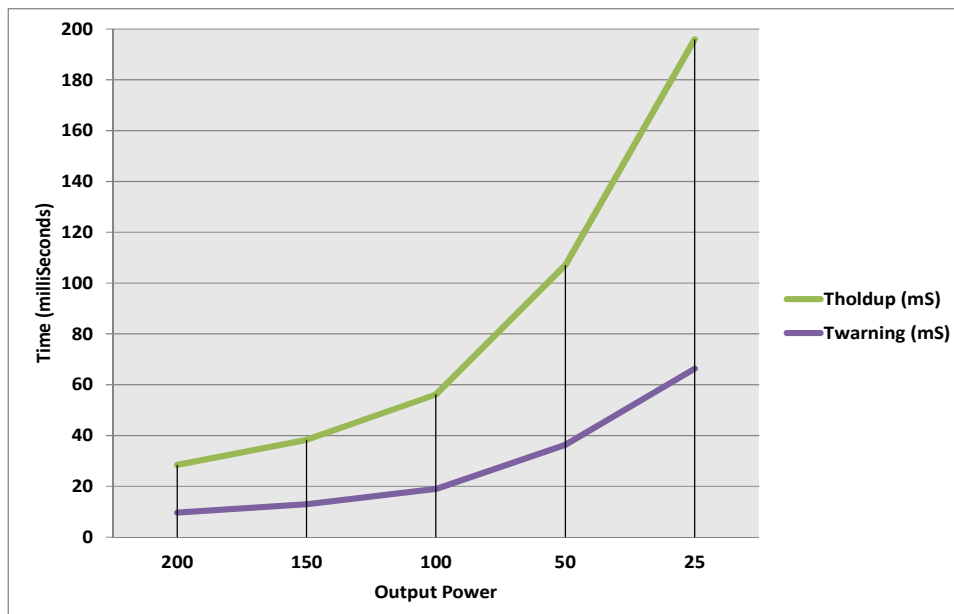
**Notes:**

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)**

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

**GNT200 Series Typical Holdup & Warning Time vs Output Power**



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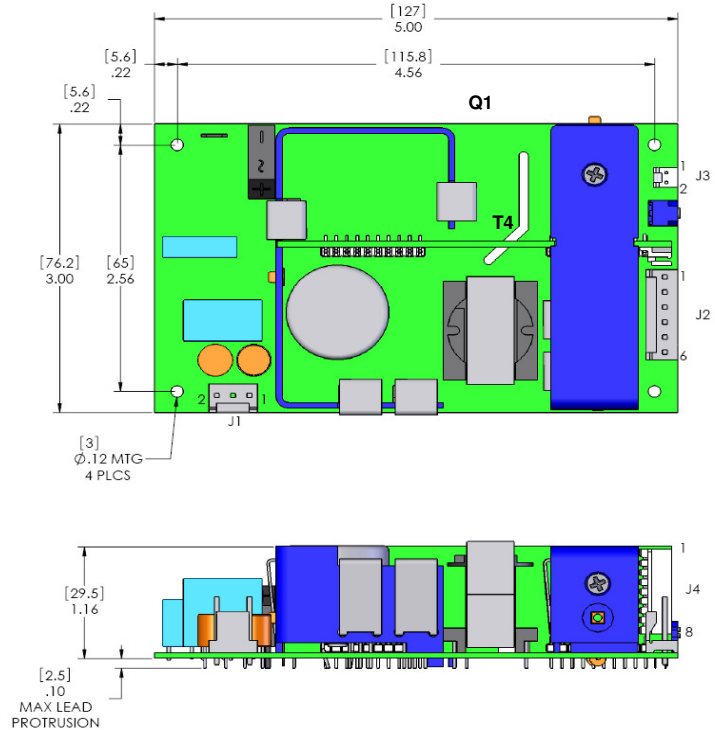
2 Year Warranty

## 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

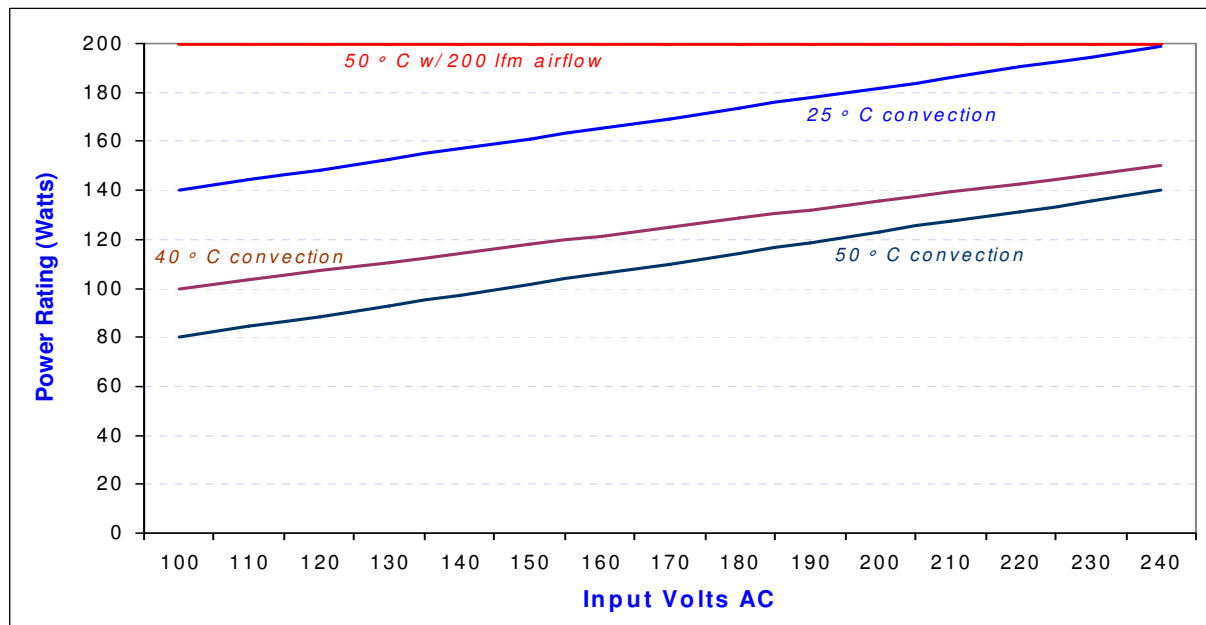
GNT200  
 WEIGHT: 0.68 Lbs. (350g)



### 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

## GNT200 Output Power vs. Line Voltage & Temperature



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