

GNT200

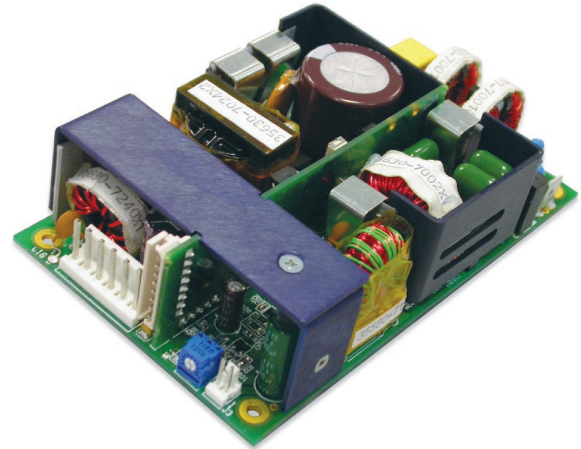
Front End Series 200 Watt AC/DC



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 Aux Outputs
- Conducted EMI Class B
- Approved to CSA/EN/IEC/UL 60950-1 for ITE
- Approved to EN/IEC/UL 60601-1 and CSA22.2 No. 601.1 for Medical
- Also Available in Class II (G2T200)
- CB Report Available (for IEC60601-1 Standard)



International Safety Standard Approvals



RoHS



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, 3 A. 230VAC, 1.5 A.	Hold-up Time 20 ms at 200 W.
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.	Over/Undershoot 3.5% max.
Input Fuses F1 and F2, T4A/250V.	Overload Protection Cycling type, 250 W nominal limit.
Power Factor 0.98 typical, 0.96 minimum.	Oversvoltage Protection See chart.
Earth Leakage Current 100 uA at 120VAC NC, 400 uA at 264VAC SFC.	Ripple and Noise 1% pk-pk max., 20 MHz BW, 0.1 µF and 10 µF caps on probe.
Output Power 200 W continuous with 200 lfm airflow. See chart for convection ratings.	ITE Safety Standards CSA/EN/IEC/UL 60950-1.
Peak Output Power 240 W for 1 minute, 10% duty cycle.	Medical Safety Standards EN/IEC/UL 60601-1, CSA 22.2 No. 601.1.
Output Voltage See chart.	Thermal Considerations Keeping the following components below these temperatures indicates amount of cooling is sufficient: Q1: 90°C max, T4: 110°C max.
Voltage Adjustability Adjustable potentiometer capable of ±5% change from nominal setting.	Switching Frequency Output 195 kHz +/-12 kHz, PFC 130 kHz.
Minimum Load Not required.	MTBF 300K hours per Telcordia.
Total Regulation See chart.	Overtemperature Protection Automatic.
Transient Response 500 µs to 1%, 50% load step, Δi/Δt<0.2 A/µs. Maximum voltage deviation is 3.5%.	Efficiency 90% typical at 230VAC, 87% typical at 120VAC.

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Model Number	Volts	Output Current 100VAC Convection	Output Current 240VAC Convection	90-270VAC Fan Cooled	Ripple & Noise	Total Regulation	OVP Threshold
GNT212G	12 V	8.3 A	12.5 A	16.7 A	120 mV	+/-2%	14.0 V +/-1 V
GNT215G	15 V	6.7 A	10.0 A	13.3 A	150 mV	+/-2%	17.6 V +/-1 V
GNT218G	18 V	5.6 A	8.3 A	11.1 A	180 mV	+/-2%	20.8 V +/-1 V
GNT224G	24 V	4.2 A	6.3 A	8.3 A	240 mV	+/-2%	27.5 V +/-1 V
GNT228G	28 V	3.6 A	5.4 A	7.1 A	280 mV	+/-2%	32.0 V +/-1.5 V
GNT236G	36 V	2.5 A	3.9 A	5.6 A	360 mV	+/-2%	42.0 V +/-1.5 V
GNT248G	48 V	1.9 A	2.9 A	4.2 A	480 mV	+/-2%	55.0 V +/-2 V

Note

1. When input voltage <90 Vac, 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 200 W @ 50°C requires 200 lfm airflow over unit.

General Specifications (continued from p. 1)

Temperature Coefficient

0.03%/°C typical on all outputs.

Signals

PS Off - High to Inhibit.
Inhibit - Low to Inhibit.
Pwr OK - High 100 - 200 ms after DC OK.
Pwr OK - Power fail low 4 ms warning.
DC OK - High when output >92%.
Aux Output - 12 Vdc @ 250mA.
Aux Output - 5 V @ 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	6 kV contact, 8kV air
RF Field Susceptibility	EN61000-4-3	3 V/meter
Fast Transients/Bursts EFT	EN61000-4-4	2 kV, 5 kHz -criteria B
Surge Susceptibility	EN61000-4-5	1 kV diff., 2 kV com. -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

Environmental Specifications

Operating Temperature

0 to 70°C (see chart).

Storage Temperature

-40 to +85°C.

Operating Altitude

-500 to 10,000 ft.

Non-operating Altitude

-500 to 40,000 ft.

Relative Humidity

5% - 95%, non condensing.

Vibration

5 Hz - 500 Hz, 5 g_{rms}.

Shock

MIL-STD-810E, 516.4 part IV.

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Mounting Options

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WEIGHT: 0.68 Lbs (350g)

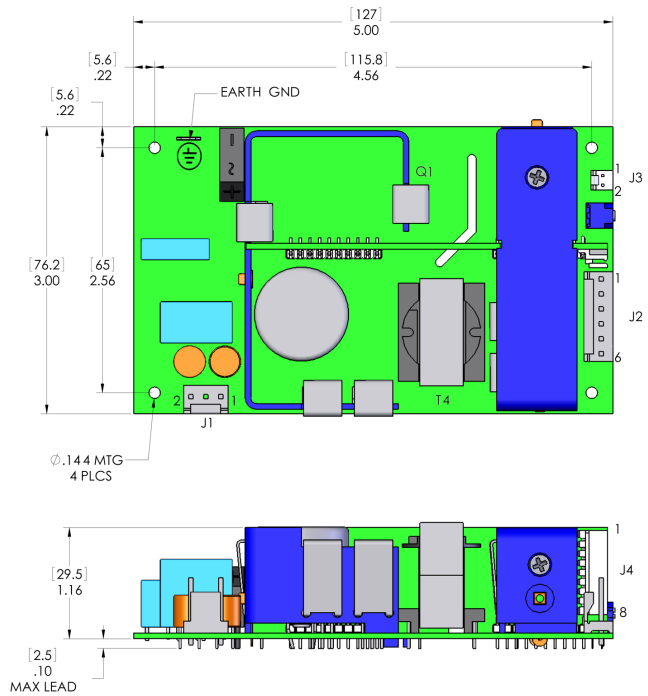
J1: AC INPUT AMP 640445-3
 PIN 1) AC LINE
 PIN 2) AC NEUTRAL
 MATING CONNECTOR: MOLEX 09-50-3031
 MATING PINS: MOLEX 08-52-0112

J2: DC OUTPUT AMP 640445-6
 PIN 1) +Vout
 PIN 2) +Vout
 PIN 3) +Vout
 PIN 4) COMMON
 PIN 5) COMMON
 PIN 6) COMMON
 MATING CONNECTOR: MOLEX 09-50-3061
 MATING PINS: MOLEX 08-52-0112

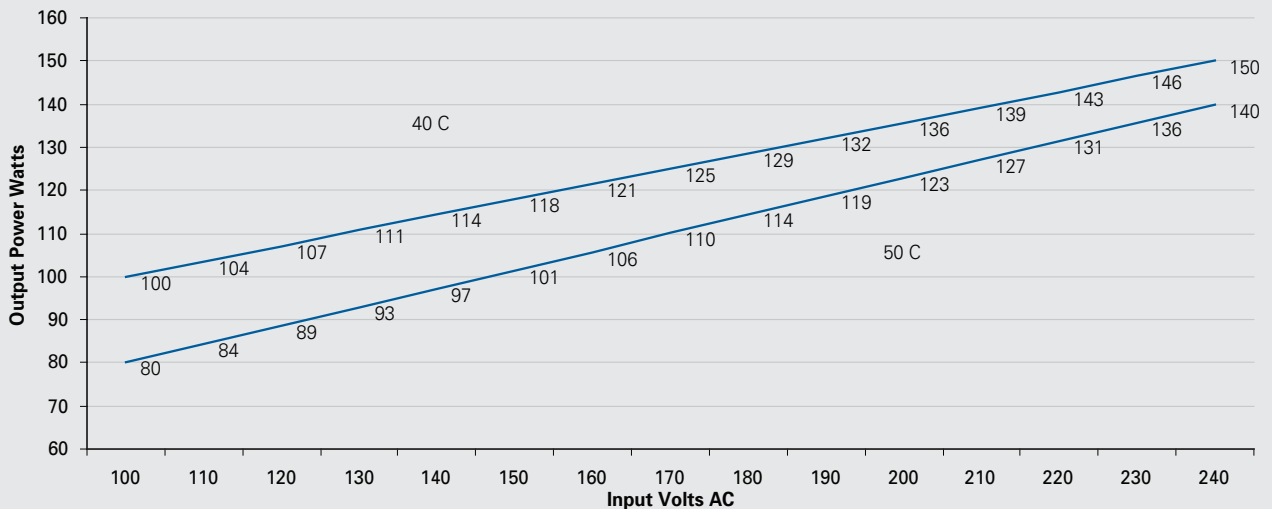
J3: FAN OUTPUT AMP 640456-2
 PIN 1) +12V @ 0.25A
 PIN 2) FAN RTN (COMMON)
 MATING CONNECTOR: AMP 1375820-2
 MATING PINS: AMP 1375813-3

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) +5V @ 0.1A
 PIN 7) -SENSE
 PIN 8) +SENSE
 MATING CONNECTOR: MOLEX 50-37-6083
 MATING PINS: MOLEX 08-70-1040

EARTH GROUND: 0.25" x 0.032" FASTON TAB



Convection Power vs. Line Voltage & Temperature



* With 200 lfm air flow unit rated at 200 W.