

GNT400

Front End Series 400 Watt AC/DC



Universal Input Power Supply

2 Year Warranty

- Compact 4" x 7" x 1.5" U Channel (1U Compatible)
- 9.5 W/in³
- 100-240 VAC Input with Active PFC
- 12 to 48 V DC Output at 400 W
- 5 Vdc 100 mA Standby Output
- 12 V DC Fan Output
- Approved to UL, CSA and EN/IEC Standards
- 300 W Convection Rating
- Less than 100 μ A Leakage
- Compliance to EN55011/22 Conducted Noise B
- RoHS Compliant-Category 6



The GNT400 provides 400 W of DC output power in a compact package. Standby, control and monitoring inputs and outputs provide all the essential elements for a variety of applications including, single board computers, running motors, pumps, and solenoids. Approval to EN60601-1 and EN60950 improves design-in time and reduces end system compliance costs.



Specifications

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

Input Voltage Range Universal input, 80 - 270 VAC (See note).	Transient Response 500 μ s to 1%, 0.2 A/ μ s, 3.5% for 50% step load change.						
Input Frequency 45 - 65 Hz	Turn On Time 500 ms max.						
Input Current 120 VAC, 4.2 A. 230 VAC, 2.1 A.	Hold-up Time 20 ms at 400 W.						
Inrush Current Active circuit, 37 A max. peak.	Over/Undershoot 3.5% max.						
Input Fuse F1,F2, 6.3 A for line and neutral.	Overload Protection Cycling type, 470 W typical.						
Power Factor 0.99 typical, 0.96 minimum.	Overvoltage Protection See chart.						
Earth Leakage Current 100 μ A at 120 Vac, 60 Hz Normal. 400 μ A at 264 V, 50 Hz Single fault.	Ripple and Noise 1% pk-pk max., 20 MHz BW.						
Output Power 400 W with fan cooling. See derating chart for other conditions.	Remote Sense Compensates for up to 500 mV.						
Peak Output Power 450 W for 1 minute, 10% duty cycle.	Commercial Safety Standards UL/EN/CSA 60950-1.						
Output Voltage See chart.	Medical Safety Standards UL/EN/IEC60601-1						
Voltage Adjustability +/- 5% minimum.	Thermal Considerations						
Minimum Load Not required.	<table border="0"> <tr> <td>Component</td> <td>Recommended Max. Temperature</td> </tr> <tr> <td>T5 cover indentation</td> <td>90°C</td> </tr> <tr> <td>T1 Inside coil</td> <td>100°C</td> </tr> </table>	Component	Recommended Max. Temperature	T5 cover indentation	90°C	T1 Inside coil	100°C
Component	Recommended Max. Temperature						
T5 cover indentation	90°C						
T1 Inside coil	100°C						
Total Regulation See chart.	Switching Frequency Output 170 kHz +/-8 kHz. PFC 140 kHz +/-8 kHz.						

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Model Number	Volts	Fan Cooled Amps	Convection Amps	Ripple & Noise	Total Regulation	OVP Threshold
GNT412ABG	12 V	33.3 A	25 A	120 mV	+/-2%	14 V +/-0.75 V
GNT424ABG	24 V	16.7 A	12.5 A	240 mV	+/-2%	26.5 V +/-1 V
GNT428ABG	28 V	14.3 A	10.7 A	280 mV	+/-2%	34 V +/-1 V
GNT436ABG	36 V	11.1 A	8.3 A	360 mV	+/-2%	39 V +/-1 V
GNT448ABG	48 V	8.4 A	6.3 A	480 mV	+/-2%	55 V +/-2 V

Note

1. When the input voltage is <90 Vac, derate output power to 300 W fan cooled or 250 W convection.
2. Using E or T cover options allows for 400 W continuous operation up to 40°C.
3. For 400W @ 50°C, use 100 lfm fan cooling.

General Specifications (continued from p. 1)

MTBF

300K hours per Telcordia.

Overtemperature Protection

Automatic.

Efficiency

typical 88% @ 120VAC, 91% @ 240.

Signals

PS On - Low to Inhibit.

PS Off - TTL Hi to Inhibit.

Pwr OK - Hi when AC is OK 100-200 ms delay.

Pwr OK - PF Low 4 ms warning.

DC OK - Hi when output is > 95 %.

Fan Output

12 Vdc @ 250 mA (turns off during Inhibit).

5 V Standby Voltage

Always on, up to 100 mA.

EMC/EMI Information

Conducted Emissions	EN55011/22	Class B
Radiated Emissions	EN55011/22	Class A
Line freq. Harmonics	EN61000-3-2	Class A
Voltage Fluctuations	EN61000-3-3	Complies
ESD	EN61000-4-2	Cont. 6 kV, Air 8 kV
Radiated Immunity	EN61000-4-3	3 V/m
Fast Transients (EFT)	EN61000-4-4	2 kV 5 kHz
Line Surge Immunity	EN61000-4-5	2 kV CM, 1 kV Dif.
Conducted Immunity	EN61000-4-6	3 Vrms
Power Freq. Mag. Field	EN61000-4-8	3 A/m
Voltage Dip 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%.

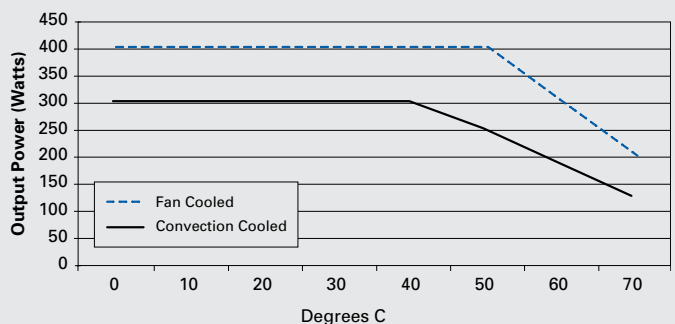
Vibration

5 Hz- 500 Hz, 2.5 g_{rms}.

Shock

MIL-STD-810E, 516.4 part IV.

Output Power Derating Curve



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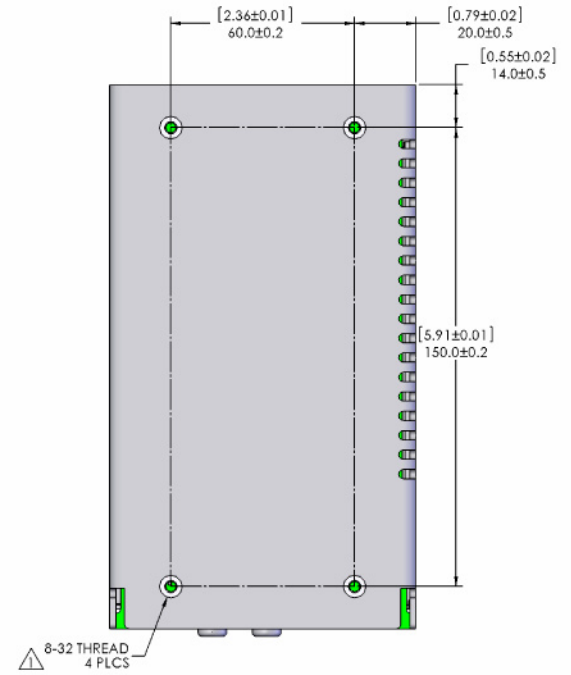
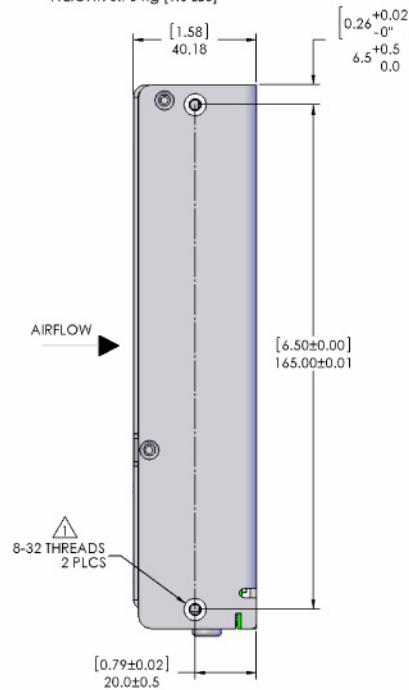
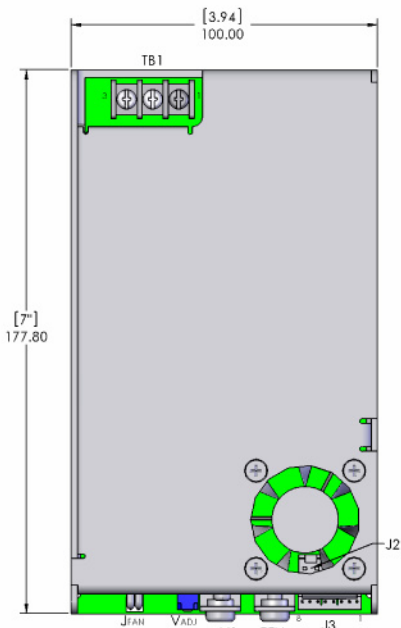
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Mounting Options (continued from p.3)

"T" OPTION

WEIGHT: 0.75 Kg [1.6 LBS]



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