## GPC200 Commercial/GPM200 Medical 200 Watt Global Performance Switchers



## SPECIFICATIONS:

Ac Input
85-264 Vac, 47-63 Hz single phase.

## Input Current

Maximum input current at $120 \mathrm{Vac}, 60 \mathrm{~Hz}$ with full rated output load: 5.5 A

## Hold-Up Time

20 ms minimum from loss of ac input at full load, nominal line (115 Vac).

## Output Power

150 W convection; 200 with 26 cfm air; 220 W peak. Peak ratings are for 60 s maximum duration, $10 \%$ duty cycle. During peak oad condition, output regulation may exceed total regulation limits.

## Overload Protection

Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit on outputs $1 \& 2$; foldback type on outputs 3 \& 4. Recovery after fault is automatic. See output ratings chart for additional notes or conditions.

## Overvoltage Protection

Main outputs: $124 \% \pm 12 \%$ typical.

## Efficiency

Minimum 65\% at full rated load, nominal input voltage, depending on model and load distribution

## Input Protection

Internal ac fuse provided. Designed to blow only if a catastrophic failure occurs in the unit.

## Inrush Current

Inrush is limited by internal thermistors. Inrush at 240 Vac under cold start conditions will not exceed 60 A .

## Temperature Coefficient

$0.03 \% /{ }^{\circ} \mathrm{C}$ typical on all outputs.

## Thermal Shutdown

Provided as a standard feature. Designed to protect unit from prolonged overtemperature.

## Environmental

Designed for 0 to $50^{\circ} \mathrm{C}$ operation at full rated output power; derate output current and total output power by $2.5 \%$ per ${ }^{\circ} \mathrm{C}$ above $50^{\circ} \mathrm{C}$. See Environmental and Packaging Specifications on next page.

## FEATURES:

- Wide-range ac input 85-264 Vac
- 2-year warranty
- Conducted EMI exceeds FCC Class B and CISPR 22 Class B (Commercial models) and CISPR 11 Class B (Medical models)
- Commercial Approved to UL1950, IEC950 and CSA22.2-234 L3
- Medical Approved to UL2601-1, IEC601-1 and CSA22.2 No. 601
- Multiple outputs
- C $\in$ marked to LVD


## Power Fail

TTL- or CMOS-compatible output goes low ( $<0.5 \mathrm{~V}$ ) 5 ms before output voltage drops more than $4 \%$ below nominal voltage upon loss of ac power. The signal is factory set to trip on 84 to 94 Vac brown-out depending upon incoming line impedance and distortion. Other settings are available to the user through adjustment of built-in potentiometer.

## Output Noise

$0.5 \% \mathrm{rms}, 1 \%$ pk-pk, 20 MHz bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply.

## Transient Response

Main output- $500 \mu \mathrm{~s}$ typical response time for return to within $0.5 \%$ of final value for a $50 \%$ load step change. $\Delta \mathrm{i} / \Delta \mathrm{t}<0.2 \mathrm{~A} / \mu \mathrm{s}$. Maximum voltage deviation is $3.5 \%$. Startup/shutdown overshoot less than $3 \%$.

## Remote Sense

Provided as a standard feature on main 5 V output.

## Voltage Adjustment

Built-in potentiometer adjusts voltage $\pm 5 \%$ on output 1 \& 2 .

## EMI/EMC Compliance

All models include built-in EMI filtering to meet the following emissions requirements:

EMI SPECIFICATIONS
Conducted Emissions GPC200
COMPLIANCE LEVEL
Conducted Emissions GPM200
Static Discharge
RF Field Susceptibility
Fast Transients/Bursts
Surge Susceptibility
EN55022 Class B; FCC Class B
EN55011 Class B; FCC Class B
EN61000-4-2, 6 kV contact, 8 kV air
EN61000-4-3, 3 V /meter
EN61000-4-4, $2 \mathrm{kV}, 5 \mathrm{kHz}$
EN61000-4-5, 1 kV diff., 2 kV com.
Commercial Leakage Current
$0.95 \mathrm{~mA} 254 \mathrm{Vac} @ 60 \mathrm{~Hz}$ input (with no deviations).
Commercial Safety
Approved to UL1950, CSA22.2 No. 234 Level 3, IEC950 and EN60950. UL file \#E135803 commercial; CSA \#LR46516 all models. The output(s) are intended for safety earthed Signal Output and Intermediate Circuits only. All dc outputs are SELV under normal and single fault conditions.

## Medical Leakage Current

 $60 \mu \mathrm{~A} 254 \mathrm{Vac}$ @ 60 Hz input.Medical Safety
Approved to UL2601-1, CSA-C22.2 No. 601 Level 3 and IEC601. UL file E116994; CSA \#LR46516. The output(s) are intended for safety earthed Signal Output and Intermediate Circuits only. The output(s) are not acceptable for patient connection without additional isolation. All dc outputs are SELV under normal and single fault conditions.

## GPC200 Commercial/GPM200 Medical 200 Watt Multiple Output

| Commercial | Medical <br> Model | Output No. | Output | Output <br> Minimum | Output <br> Maximum (B) | Output <br> Maximum (C) | Output Peak |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | Noise P-P | Regulation (A) |
| :--- |

A. Total regulation is defined as the maximum deviation from the nominal voltage for all steady-state conditions of initial voltage setting, input line voltage and output load.
B. Ratings for unrestricted natural convection cooling; outputs $1 \& 2$ combined load not to exceed 22A continuous;total power-150W.
C. Ratings with 26 cfm forced air cooling; outputs 1 \& 2 combined load not to exceed 32A continuous;total power-200W.
D. Isolated output which may be referenced as a positive or negative voltage.

## GPC200/GPM200 MECHANICAL SPECIFICATIONS

INPUT TB1
TERMINAL BLOCK $.375 \times 6-32$
PIN 1) AC LINE
PIN 2) AC NEUTRAL
PIN 3) AC GROUND
SIGNALS J2
AMP P.C.B. HEADER P/N 640456-4
MATING CONNECTOR P/N 640440-4
PIN 1) POWER FAIL
PIN 2) - SENSE
PIN 3) + SENSE
PIN 4) N/C

## OUTPUTTB2

TERMINAL BLOCK . $375 \times 6$ 6-32
PIN 1) OUTPUT \#1
PIN 2) OUTPUT \#1
PIN 3) COMMON
PIN 4) COMMON
PIN 5) COMMON
PIN 6) OUTPUT \#2
PIN 7) OUTPUT\#3
PIN 8) OUTPUT(+)\#4
PIN 9) OUTPUT(-)\#4
OPTIONAL COVER AVALLABLE, ORDER P/N 08-30466-1200 WEIGHT: 3.90 LBS MAX.[1.77 kg MAX.]
TOLERANCES: $\mathrm{X} . \mathrm{XX}=0.030[0.76 \mathrm{~mm}]$ X. XXX=0.010 [0.25mm]


| Environmental <br> Specification | Operating | Non-operating |
| :--- | :---: | :---: |
| Temperature (A) | See individual specs | -40 to $+85^{\circ} \mathrm{C}$ |
| Humidity (A) | 0 to $95 \% \mathrm{RH}$ | 0 to $95 \% \mathrm{RH}$ |
| Shock (B) | $20 \mathrm{~g}_{\mathrm{pk}}$ | $40 \mathrm{~g}_{\mathrm{pk}}$ |
| Altitude | -500 to $10,000 \mathrm{ft}$ | -500 to $40,000 \mathrm{ft}$ |
| Vibration (C) | $1.5 \mathrm{~g}_{\mathrm{rms}}, 0.003 \mathrm{~g}^{2} / \mathrm{Hz}$ | $5 \mathrm{~g}_{\mathrm{rms}}, 0.026 \mathrm{~g}^{2} / \mathrm{Hz}$ |

A. Units should be allowed to warm up/operate under non-condensing conditions before application of power.
B. Random vibration- 10 to $2000 \mathrm{~Hz}, 6 \mathrm{~dB} /$ cctave roll-off from 350 to $2000 \mathrm{~Hz}, 3$ orthogonal axes. Tested for 10 min ./axis operating and 1 hr ./axis non-operating.
C. Shock testing-half-sinusoidal, $10 \pm 3 \mathrm{~ms}$ duration, $\pm$ direction, 3 orthogonal axes, total 6 shocks.

