



GPFC125 Commercial/GPFM125 Medical 125 Watt Global Performance Switchers



FEATURES:

- Compact 125 watt multiple output
- Power density of 4 watts per cubic inch
- Power Factor Correction to meet EN61000-3-2
- Small package 6.00 x 3.5 x 1.5 inches
- 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, CSA22.2 No. 950 and EN60950.
- Medical approved to UL2601-1, IEC601-1, CSA22.2 No. 601.1, EN60601-1
- CE marked to LVD

SPECIFICATIONS:

Ac Input

90-264 Vac, 47-63 Hz single phase.

Input Current

Maximum input current 2A at 90 Vac, 60 Hz with full rated load. Input current harmonic content meets the requirements of IEC1000-3-2. Active circuitry provides high power factor as listed at .96 min., .99 typical. All data taken with full output loading.

DC Output Power

125 W with 150 LFM of air, 50 W convection cooled, 80 W convection cooled with unit mounted to min. 12 x 12 x .125 in. thick aluminum plate. Peak ratings are for 60 s maximum duration, 10% duty cycle. With optional cover installed, 125 W, 200 LFM airflow is required (-C suffix).

Inrush Current

Inrush 240 Vac is less than 37 A, averaged over the first ac half-cycle under cold start conditions. Limiting provided by internal thermistors.

Input Protection

Internal ac fuse provided on all models. Fuse does not blow on overload or short circuit — fuse blows only if a catastrophic failure occurs in the unit.

Efficiency

72 to 85% at full rated load. Depending upon model and load distribution.

Minimum Load

Supply will function with no load on any output. To maintain regulation with full load on V2, 3 and 4 output V1 requires a minimum load of (2A + V4 current). Lower minimum load may be obtained if less than full load is drawn from auxiliary outputs.

Overload Protection

Fully protected against short circuit and output overload. Total output power limited to approximately 150 Watts. Cycling type limits on output 1, 2 & 3, linear fold back on output 4. Recovery after fault is automatic.

Overvoltage Protection

Built in on all models - See Output table for individual model output limits.

Output Noise

0.5% rms, 1% pk-pk, 20 MHz Bandwidth, differential mode.

Transient Response

500 ms typical response time for return to within 0.5% of final value for a 50% load step change, $\Delta i/\Delta t < 0.2$ A ms. Maximum voltage deviation is 3.5%.

Temperature Coefficient

0.03% / °C typical on all outputs.

Remote Sense

Provided as a standard feature on V1 of all models.

Temperature Range

0 to 50 °C at full rated output power. For operation above 50 °C, derate output power and current by 2.5 % per °C.

Altitude

Operating: -500 to 10,000 ft. MSL

Non-Operating -500 to 40,000 ft MSL

Shock and Vibration

All models are designed to meet the following specifications;

Random Vibration -

Operating: 0.003 g²/Hz, 1.5 g_{rms} overall, 3 axes, 10 min. / axis

Non-Operating: 0.026 g²/Hz, 5.0 g_{rms} overall, 3 axes, 1 hr. / axis

Shock -

Operating: Half-sine, 20 g_{pk}, 10 ms, 3 axes, 6 shocks total

Non-Operating: Half-sine, 40 g_{pk}, 10 ms, 3 axes, 6 shocks total

EMI/EMC Compliance

All models include built-in EMI filtering to meet the EMC requirements below.

EMI SPECIFICATIONS	COMPLIANCE LEVEL
Conducted Emissions-GPFC125	EN55022, Class B; FCC Class B
Conducted Emissions-GPFM125	EN55011, Class B; FCC Class B
Static Discharge	EN61000-4-2, 6 kV contact 8 kV air
RF Field Susceptibility	EN61000-4-3, 3V/meter
Fast Transients / Bursts	EN61000-4-4, 2 kV, 5 kHz
Surge Susceptibility	EN61000-4-5, 1 kV diff., 2 kV com.
Conducted RF Susceptibility	EN61000-4-6, 3V
Voltage Sags & Surges	EN61000-4-11
Line Frequency Harmonics	EN61000-3-2 Class A

Commercial Safety Approvals

All models are approved to UL1950, CSA22.2 No. 950-95, IEC950, EN60950. CB certificate available. Exceeds FCC and CISPR22 Class B conducted emissions requirement

Medical Safety Approvals

All models are Certified to be in compliance with the applicable requirements of UL2601, CSA 22.2 No. 601.1-M90, IEC 601-1 (1988), EN 60601-1: 1990. CB certificate available.

Leakage Current

The maximum leakage current is as follows:

Test Condition	Normal	Single Fault
132 Vac @ 60 Hz input	70 μ A	120 μ A
264 Vac @ 50 Hz input	130 μ A	240 μ A



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GPFC125 Commercial/GPFM125 Medical 125 Watt Multiple Output

Commercial Model	Medical Model	Voltage Output No.	Output Voltage	Output Current (A)	Output Current (B)	Voltage Adjustment	OVP	Total Regulation	Ripple/ Noise
GPFC125A	GPFM125A	1	+5 V	9 A	16 A	±5%	6.2 ±0.6 V	1%	1%
		2	+12 V	4 A	7 A	±5%	--	1%	1%
		3	12 V (C)	2.5 A	4 A	--	--	1%	1%
		4	-12 V	0.3 A	1 A	--	--	1%	1%
GPFC125B	GPFM125B	1	+5 V	9 A	16 A	±5%	6.2 ±0.6 V	1%	1%
		2	+12 V	4 A	7 A	±5%	--	1%	1%
		3	12 V (C)	2.5 A	4 A	--	--	1%	1%
		4	-5 V	0.3 A	1 A	--	--	1%	1%
GPFC125C	GPFM125C	1	+5 V	9 A	16 A	±5%	6.2 ±0.6 V	1%	1%
		2	+12 V	4 A	7 A	±5%	--	1%	1%
		3	15 V (C)	2.5 A	4 A	--	--	1%	1%
		4	-15 V	0.3 A	1 A	--	--	1%	1%
GPFC125D	GPFM125D	1	+5 V	9 A	16 A	±5%	6.2 ±0.6 V	1%	1%
		2	+24 V	3 A	4.5 A	±5%	--	1%	1%
		3	12 V (C)	2.5 A	4 A	--	--	1%	1%
		4	-12 V	0.3 A	1 A	--	--	1%	1%
GPFC125E	GPFM125E	1	+5 V	9 A	16 A	±5%	6.2 ±0.6 V	1%	1%
		2	+24 V	3 A	4.5 A	±5%	--	1%	1%
		3	15 V (C)	2.5 A	4 A	--	--	1%	1%
		4	-15 V	0.3 A	1 A	--	--	1%	1%
GPFC125F	GPFM125F	1	+5 V	9 A	16 A	±5%	6.2 ±0.6 V	1%	1%
		2	+15 V	3.5 A	6 A	±5%	--	1%	1%
		3	15 V (C)	2.5 A	4 A	--	--	1%	1%
		4	-5 V	0.3 A	1 A	--	--	1%	1%
GPFC125G	GPFM125G	1	+5 V	9 A	16 A	±5%	6.2 ±0.6 V	1%	1%
		2	+3.3 V	7 A	10 A	±5%	4.2 ±0.6 V	1%	2%
		3	12 V (C)	2.5 A	4 A	--	--	1%	1%
		4	-12 V	0.3 A	1 A	--	--	1%	1%
GPFC125H	GPFM125H	1	+3.3 V	9 A	16 A	±5%	4.2 ±0.6 V	1%	2%
		2	+5 V	4 A	7 A	±5%	6.2 ±0.6 V	1%	1%
		3	12 V (C)	2.5 A	4 A	--	--	1%	1%
		4	-12 V	0.3 A	1 A	--	--	1%	1%

Notes:

- A. Continuous rating for unrestricted convection cooling.
- B. Peak rating or continuous rating with 150 LFM air cooling.
- C. Output 3 is isolated. Can be connected as + or - output.

GPFC125/GPFM125 MECHANICAL SPECIFICATIONS

INPUT: J1 AMP P.C.B. HEADER P/N 640445-5

- PIN 1) AC LINE
- PIN 2) N/C
- PIN 3) AC NEUTRAL
- PIN 4) N/C
- PIN 5) AC GROUND

MATING CONNECTOR AMP P/N

- HOUSING 640250-5
- CONTACT 770476-1

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) COMMON

OUTPUT: J3 AMP P.C.B. HEADER P/N 1-640445-3

- PIN 1) -V4OUT
- PIN 2-4) +V1OUT
- PINS 5-9) COMMON
- PIN 10,11) +V2 OUT
- PIN 12) +V3OUT
- PIN 13) -V3RTN
- MATING CONNECTOR AMP P/N
- HOUSING 1-640250-3
- CONTACT 770476-1

OPTIONAL COVER P/N 08-30466-2125

WEIGHT: 1.25 LBS [.56 KG]

