GSC25 Commercial/GSM25 Medical

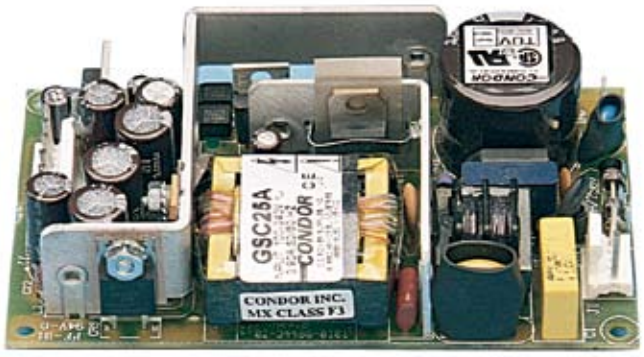
25 WATT GLOBAL PERFORMANCE SWITCHERS

GLOBAL PERFORMANCE SWITCHERS

CONDOR DC Power Supplies

Features:

- **Industry's smallest 25 W switcher**
- **2.50 x 4.25 x 0.86"**
- **Conducted EMI exceeds FCC Class B and CISPR 22 Class B (Commercial models) and CISPR 11 Class B (Medical models)**
- **Overvoltage protection standard**
- **Commercial Approved to UL1950, CSA-C22.2 No.950, EN60950**
- **Medical Approved to UL2601-1, IEC60601-1 EN60601-1 and CSA-C22.2 No. 601-1**
- **RoHS Compliant (G suffix)**
- **CE marked to LVD**



SPECIFICATIONS

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

Input Current
Maximum input current at minimum 120 Vac, 60 Hz with full rated output load is 0.6 A.

Hold-up Time
15 ms minimum from loss of ac input at full load, nominal line (120 Vac).

Output Power
Normal continuous output power is 25 W, 28 W peak for 60 sec. maximum duration, 10% duty cycle. Factory set to begin power limiting at approximately 30 W.

Output Regulation
Regulation from initial setpoint measured by changing load from 5% load to 50% load or 50% load to full load in either direction. Initial setpoint tolerance is measured at 50% load. A minimum load of 5% of the output current on the +5.1 V output (125 mA) is required to maintain proper regulation.

Overload Protection
Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit

Output Noise
0.5% rms, 1% pk-pk, 20 MHz bandwidth, differential mode. Measured with scope probe directly across output terminals of the power supply with load terminated with 0.1 uF capacitor.

Transient Response
Main output: 750 µs typical response time for return to within 0.5% of final value for a 50% load step within the regulation limits of minimum and maximum load, $\Delta I/\Delta t$ <0.2 A/µs. Maximum voltage deviation is 3.5%. Startup/shutdown overshoot less than 2%.

Overvoltage Protection
Built in with firing point set per ratings table. OVP firing reduces voltage to less than 50% of nominal voltage in 50 ms.

Voltage Adjustment
Factory set with fixed resistors to maximize reliability.

Efficiency
70% minimum at full rated load, nominal input voltage.

Input Protection
Internal ac fuse provided on all units.

Inrush Current
Inrush is limited by internal thermistor. The inrush at 230 Vac, averaged over the first ac half-cycle under cold start conditions will not exceed 32 A.

Temperature Coefficient
0.03%/°C typical on all outputs.

Environmental
Designed for 0 to 50°C operation at full rated output power; derate output current and total output power by 2.5% per °C between 50 - 70°C. See Environmental and Packaging Specifications on next page.

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

EMI SPECIFICATIONS	COMPLIANCE LEVEL
Conducted Emissions GSC25	EN55022 Class B; FCC Class B
Conducted Emissions GSM25	EN55011 Class B; FCC Class B
Static Discharge	EN61000-4-2, 6 kV contact, 8 kV air
RF Field Susceptibility	EN61000-4-3, 3 V/meter
Fast Transients/Bursts	EN61000-4-4, 2 kV, 5 kHz
Surge Susceptibility	EN61000-4-5, 1 kV diff., 2 kV com.

Commercial Safety:
Condor D.C. Power Supplies, Inc. declares under our sole responsibility that all GSC models are in conformity with the applicable requirements of EN60950 following the provisions of the Low Voltage Directive 73/23/EEC. All GSC models are approved to UL1950, CSA-C22.2 No.950, EN60950.

GSM25 Medical Model Earth Leakage Current
Leakage current measured in the Gnd wire connection when measured per UL2601-1 or IEC60601-1 is as follows:

Model	Normal Leakage	Fault Leakage	Test Voltage	Test Method
GSM25	50 µA	78 µA	132 Vca/60 Hz	UL2601-1
GSM25	94 µA	150 µA	264 Vca/50 Hz	IEC60601-1

Medical Safety
Condor D.C. Power Supplies, Inc. declares under our sole responsibility that all GSM models are in conformity with the applicable requirements of UL2601-1 Patient Care Equipment, CSA-C22.2 No.601.1, IEC60601-1, EN 60601-1.

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

Commercial Model	Medical Model	Output No.	Output	Current	Load Regulation	Initial Setpoint Tolerance	OVP Setting	Ripple and Noise	Notes
GSC25A	GSM25A	1	+ 5.1 V	2.5 A	1%	1%	6.2 ± 0.6 V	1%	A
		2	+12 V	1.5 A	4%	3%		1%	A
		3	- 12 V	0.2 A	1%	4%		1%	B
GSC25B	GSM25B	1	+ 5 V	2.5 A	1%	1%	6.2 ± 0.6 V	1%	A
		2	+15 V	1.5 A	4%	3%		1%	A
		3	- 15 V	0.2 A	1%	4%		1%	B
GSC25D	GSM25D	1	+5.1 V	2.5 A	1%	1%	6.2 ± 0.6 V	1%	A
		2	+24 V	1.0 A	4%	3%		1%	A
		3	-12 V	0.2 A	1%	4%		1%	B

A. To maintain proper regulation on output 2, +5.1 V current must be at least 1/4 and not greater than 5 times V2 current. V1 must be adjusted within 1% of 5.1 V to maintain full load regulation on V2.
B. Thermal foldback type current limit
C. Add "G" suffix to model number for RoHS compliant model.

GSC25/GSM25 MECHANICAL SPECIFICATIONS

INPUT: J1

AMP P/N: 640445-3
W/CENTER PIN REMOVED: 0.156 CTR HEADER

PIN 1	AC LINE
PIN 2	AC NEUTRAL

GND
0.250 FASTON TAB

OUTPUT: J2

AMP P/N: 640445-6
0.156 CTR HEADER

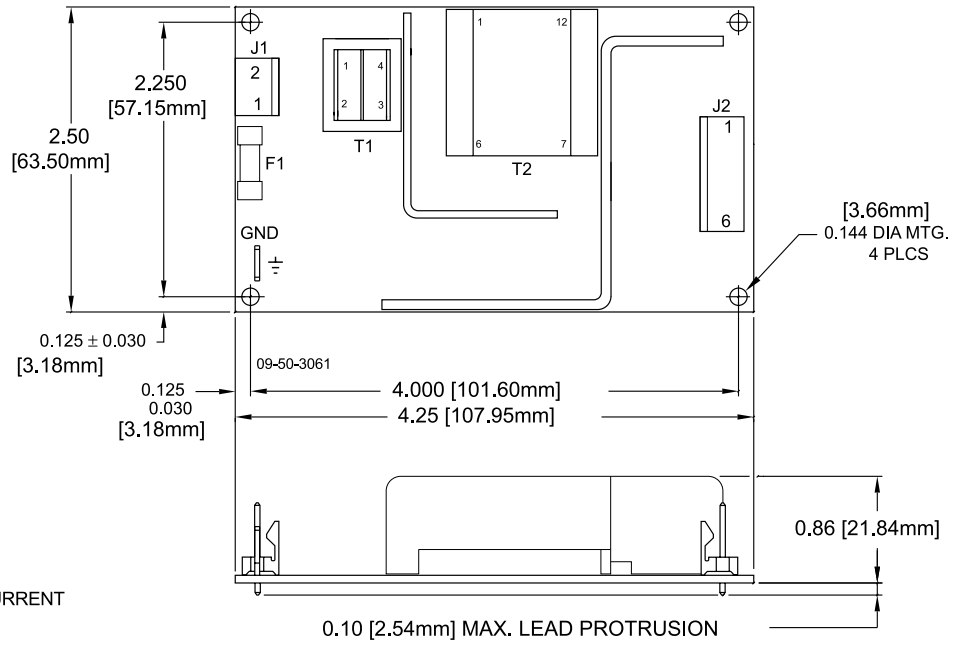
PIN #	⎓ OUTPUT
1	OUTPUT #2
2	OUTPUT #1
3	OUTPUT #1
4	COMMON
5	COMMON
6	OUTPUT #3

MATING CONNECTOR AMP P/N'S

	HOUSING	CONTACT
INPUT J1	640250-3	770476-1
OUTPUT J2	640250-6	770476-1

NOTE: 5A MAXIMUM RECOMMENDED CURRENT PER CONNECTOR PIN.

TOLERANCES:
X.XX =± 0.030 (0.76MM)
X.XXX =± 0.010 (0.25MM)



ENVIRONMENTAL SPECIFICATIONS	OPERATING	NON-OPERATING
Temperature (A)	See individual specs.	-40 to +85°C
Humidity (A)	0 to 95% RH	0 to 95% RH
Shock (B)	20 g_{pk}	40 g_{pk}
Altitude	-500 to 10,000 ft	-500 to 40,000 ft
Vibration (C)	1.5 g_{rms}, 0.003 g^2/Hz	5 g_{rms}, 0.026 g^2/Hz

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

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GSC25AG GSC25DG