



GLC65 Commercial/GLM65 Medical

65 Watt Multiple Output Global Performance Switcher



GLC65 Commercial



GLM65 Medical

Features:

- 65 Watt Wide Range Input
- High Efficiency (Up to 90%)
- Universal input 90-264 Vac
- 2-year warranty
- Also available in single outputs
- Commercial Approved to UL1950, CSA 22.2 No. 950, EN60950
- Medical Approval to UL2601, CSA 22.2 No. 601.1, EN60601-1
- marked to LVD

SPECIFICATIONS:

Output Power

Total continuous output power is 60 W, 75 W peak for 60 s 10% duty cycle. Total continuous rating with 150 LFM of air is 70 W.

AC Input

85-264 Vac, 47-63 Hz single phase

Input Current

Units are exempt from input current harmonic requirements of EN61000-3-2 when output power is less than 62W. Maximum input current at minimum input voltage and output overload will be less than 2.0 A.

Inrush Current

Inrush is limited by internal thermistor. The inrush at 240 Vac, averaged over the first ac half-cycle under cold start conditions will not exceed 37 A.

Holdup Time

Output voltage stays within regulation for 20 ms from loss of ac input at 65 W load, from 120 Vac input.

Efficiency

85% typical.

Overload Protection

Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit and will automatically recover after removal of fault.

Oversupply Protection

Built in with firing point set. OVP firing reduces output to less than 50% of nominal voltage in less than 50 ms.

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 μ F capacitor.

Transient Response

Main Output - 500 μ s 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/ps. Maximum voltage deviation is 3.5%.

Minimum Load

No minimum load required on any output. However, regulation limits may be exceeded if extreme conditions are applied. Contact factory for assistance.

Voltage Adjustment

Units provided with potentiometer capable of a minimum adjustment range of +/- 5% from nominal setting.

Reverse Voltage

All outputs protected against inadvertent application of reverse voltage up to 1 times rated current of the reverse output.

Temperature Range

0 to 50 °C at full rated output power. Above 50 °C, derate output power and current on all outputs by 2.5 % per °C For operation in a confined space, moving air may be required. Under all conditions, the cooling vs. load profile should be such that heat sinks and/or heatsink temperatures do not exceed 90 °C for extended periods.

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

Environmental

All models are designed to operate properly in the following environments:

Altitude

Operating: -500 to 10,000 ft. MSL
Non-Operating -500 to 40,000 ft MSL

Storage

-40 to +85 °C. Units should be allowed to warm-up under non-condensing conditions before application of power.

Shock and Vibration

All models are designed to meet the following specifications:

Random Vibration -

Operating: 0.003 g/Hz, 1.5 grms overall, 3 axes, 10 min. / axis
Non-Operating: 0.026 g/Hz, 5.0 grms overall, 3 axes, 1 hr. / axis

Shock -

Operating: Half-sine, 20 gpk, 10 ms, 3 axes, 6 shocks total
Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total

Overshoot

Less than 3% overshoot at turn-on under nominal conditions.

Turn-on Time

Less than 1 s at 115 Vac, 25 °C (amount of time is inversely proportionate to input voltage).



Condor D.C. Power Supplies, Inc./A subsidiary of SL Industries, Inc.
2311 Statham Parkway, Oxnard, CA 93033 800-235-5929 805-486-4565 FAX 805-487-8911

Input Protection

Internal AC fuse provided on all units. Designed to blow only if a catastrophic failure occurs in the unit -- Fuse does not blow on short circuit or unsustained overload.

Packaging

Each unit individually wrapped in anti-static bag and packaged in a rugged cardboard shipping box. Packaged units shall meet the requirements of ISTA, Project 1A.

GLC65 Commercial - Safety

Condor DC Power Supplies, Inc. declares under our sole responsibility that all models are in conformity with the applicable requirements of EN60950 following the provisions of the Low Voltage Directive 73/23/EEC. All models are approved to UL1950 (with no D3 deviations), CSA22.2 No. 950-95 3rd edition, Level 3, IEC950, EN60950. CB certificate available.

Leakage Current

Less than 500uA @ 120 Vac. Less than 1.2 mA @ 240 Vac.

GLC65 Commercial EMI Compliance

All models include built-in EMI filtering to meet or exceed the emissions requirements of EN55022 class B. Typical margins > 3 dB at all frequencies, line and load conditions. Units must be mounted to a grounded conductive base plate with electrical contact being made to all mounting holes. Wire routing and additional filtering may impact test results. Contact factory for assistance.

GLM65 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.

Classification: (In accordance with sub-clause 5 of IEC 601-1)

- (5.1) Protection against electric shock = Class I
- (5.2) Degree of protection against electric shock = Signal output or intermediate
- (5.3) Protection against harmful ingress of water = Ordinary (no protection)
- (5.5) Units have not been evaluated for use in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide. This evaluation is made on the end equipment by the OEM.
- (5.6) Mode of operation = Continuous

Leakage Current:

The maximum leakage current under single fault conditions will be as follows;

Model Normal Single Fault

GLM65's 40 μ A 170 μ A

Note 1: Normal Leakage current at 132 Vac @ 60 Hz input.

Note 2: Single fault condition, 264 Vac @ 60 Hz.

Patient sink leakage with 120 Vac, 60 Hz applied to any output with respect to the chassis will be less than 500 μ A when tested in accordance with the requirements of UL2601

GLM65 Medical EMI / EMC Compliance:

All models include built-in EMI filtering to meet the EMC requirements of IEC601-1-2. Unless otherwise stated, all tests are done at full load and 115 and 230 Vac input. If any test would be marginal at other conditions, testing may be done at other stated conditions. All tests are to be performed in accordance with the stated standard. Acceptance is based on the supply continuing to function properly. Under some conditions, the outputs may pass through some level of signal. Units must be mounted to a grounded conductive base plate with electrical contact being made to all mounting holes. Wire routing and additional filtering may impact test results. The following EMC requirements of Table 2 have been tested and written results are available - contact factory for further information.

Performance

Conducted Emissions	EN55011, Class B; FCC Class B
Static Discharge	EN61000-4-2, Level 3
RF Field Susceptibility	EN61000-4-3, Level 3
Fast Transients / Bursts	EN61000-4-4, Level 3
Surge Susceptibility	EN61000-4-5, Level 3
Conducted RF Susceptibility	EN61000-4-6, 3V, 80%
Voltage Sags & Surges	EN61000-4-11

Magnetic Emissions - Emissions will not exceed the limits of the Army curve in MIL-STD-461D, RE101 when measured at 7 cm from 30 Hz - 100 kHz over all nominal inputs and at full rated load.

GLC65 Commercial / GLM65 Medical 65 Watt Multiple Output

Commercial Model	Medical Model	Output No.	Output	Output Maximum (A)	Output Maximum (B)	Total Regulation (E)	V1 Adjustment Note (C)	OVP Setpoint	Ripple/Noise
GLC65A	GLM65A	1	+5.0 V	7 A	9 A	2%	+/-5%	6.2 ± 0.6 V	1%
		2	+12 V	3 A	5 A	5%	--	--	1%
		3	-12 V	2.5 A	4 A	6%	--	--	1%
GLC65B	GLM65B	1	+5.1 V	7 A	9 A	2%	+/-5%	6.2 ± 0.6 V	1%
		2	+15 V	2.5 A	4 A	4%	--	--	1%
		3	-15 V	2 A	3 A	5%	--	--	1%
GLC65D	GLM65D	1	+5.0 V	7 A	9 A	2%	+/-5%	6.2 ± 0.6 V	1%
		2	+24 V	1.5 V	2.5 A	3%	--	--	1%
		3	-12 V	2.5 A	4 A	6%	--	--	1%
GLC65E	GLM65E	1	+5.0 V	7 A	9 A	2%	+/-5%	6.2 ± 0.6 V	1%
		2	+24 V	1.5 A	2.5 A	3%	--	--	1%
		3	+12 V	2.5 A	4 A	6%	--	--	1%
GLC65G	GLM65G	1	+5.0 V	5 A	8 A	3%	+/-5%	6.2 ± 0.6 V	1%
		2	+3.3 V	4 A	5 A	3%	--	--	1%
		3	+12 V	2.5 A	4 A	6%	--	--	1%
GLC65H	GLM65H	1	+3.3 V	5 A	8 A	3%	+/-5%	4.3 ± 8 V	1%
		2	+5.0 V	4 A	6 A	3%	--	--	1%
		3	+12 V	2.5 A	3 A	6%	--	--	1%

Notes:

- A. Continuous individual output ratings for unrestricted convection cooling. Combination of individual output loads must not exceed total power rating.
- B. Peak rating for 60 s 10% duty cycle or continuous rating 150 LFM forced air cooling.
- C. Adjustment on V1 varies all outputs simultaneously (1% on V1 ± 1% on V2 & V3).
- D. Total combined current of V1 & V2 not to exceed 12 A. Combination of individual output loads must not exceed total power rating.
- E. Total regulation is defined as maximum deviation from the initial set point. With all other outputs at 50% load, output under test can be varied from 0 to 100% load and varied to any ac line voltage. Initial set point is 1% on V1, 2% on V2 and 3% on V3

GLC65/GLM65 MECHANICAL SPECIFICATIONS:

J1 INPUT: AMP P/N 640445-3, .156 [3.96mm] CTR, .045 [1.14mm] Square pin header

PIN 3) Ac Neutral
PIN 2) No Pin
PIN 1) Ac Line

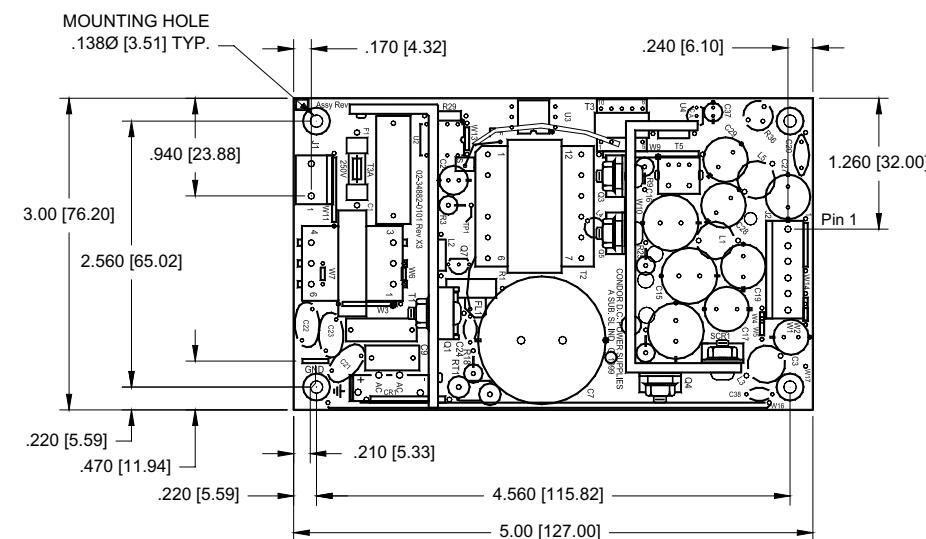
J2 OUTPUT: AMP P/N 640445-6, .156 [3.96MM] CTR .045 [1.14MM] Square pin header
PIN 1) Output #2
PIN 2) Output #1
PIN 3) Output #1
PIN 4) Common
PIN 5) Common
PIN 6) Output #3

GROUND: .250 X 0.32 Faston Tab

MATING CONNECTORS: AMP P/N Molex
INPUT Housing 644329-3 26-03-4030
OUTPUT Housing 644329-6 26-03-4060

WEIGHT: 6.5 OZ. [.182 KG]

NOTE: 5 A Maximum recommended current per connector pin convection, 7A with air.



MAX. COMPONENT HEIGHT 1.25 [31.75]
MAX. LEAD PROTRUSION 0.10 [2.54]