

### GLOBAL PERFORMANCE SWITCHERS

#### Features:

- Cost-effective power source
- Universal input 90-264 Vac
- 2-year warranty
- Compact (4.25" x 2.50" x 1.25"; meets 1U applications)
- Overload and overvoltage protection
- Conducted EMI exceeds FCC Class B and CISPR 22 Class B (Commercial models) and CISPR 11 Class B (Medical models)
- Commercial UL/CSA/IEC60950-1, EN60950 approvals
- Medical UL/EN/IEC60601-1, CSA22.2 No. 601,
- RoHS compliant models available (G suffix)
- $\text{C}\text{C}$  marked to LVD



### SPECIFICATIONS

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

**Input Current**  
Maximum input current at 120 Vac, 60 Hz with full rated output load: 1.5 A

**Hold-Up Time**  
15 ms minimum from loss of ac input at full load, nominal line (115 Vac).

**Output Power**  
50 W continuous, 60 W peak. Peak ratings are for 60 s maximum duration, 10% duty cycle. During peak load condition, output regulation may exceed total regulation limits.

**Output Regulation**  
To maintain specified regulation on multi-output models, output #1 load power must be at least 1/5th of, and not greater than 5 times output #2 load power.

**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 output 3. Recovery after fault is automatic. See output ratings chart for additional notes or conditions.

**Efficiency**  
70-85% at full rated load, nominal input voltage, depending on model and load distribution.

**Minimum Load**  
Operating without minimum load will not degrade reliability, but regulation may be affected. Multiple output models require 20% minimum load on V1 for proper regulation. Single models require 5% minimum load when a transient load greater than 30% is applied or removed, but will operate without load.

**Input Protection**  
Internal ac fuse provided. Designed to blow only if a catastrophic failure occurs in the unit—fuse does not blow on overload or short circuit.

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

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

**Output Noise**  
0.5% rms, 1% pk-pk, 20 MHz bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply.

**Transient Response**  
500  $\mu$ s 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/ $\mu$ s. Maximum voltage deviation is 3.5%. Startup/shut-down overshoot less than 3%.

**Voltage Adjustment**  
Built-in potentiometer adjusts V1  $\pm$ 5%.

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

EMI SPECIFICATIONS	COMPLIANCE LEVEL
Conducted Emissions GLC	EN55022 Class B; FCC Class B
Conducted Emissions GLM	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 Leakage Current**  
160  $\mu$ A 254 Vac @ 60 Hz input (with no deviations).

**Commercial Safety**  
All GLC models are approved to UL1950, CSA22.2 No. 234 Level 3, IEC950 and EN60950.

**Medical Leakage Current**  
100  $\mu$ A 264 Vac @ 60 Hz input (normal conditions).

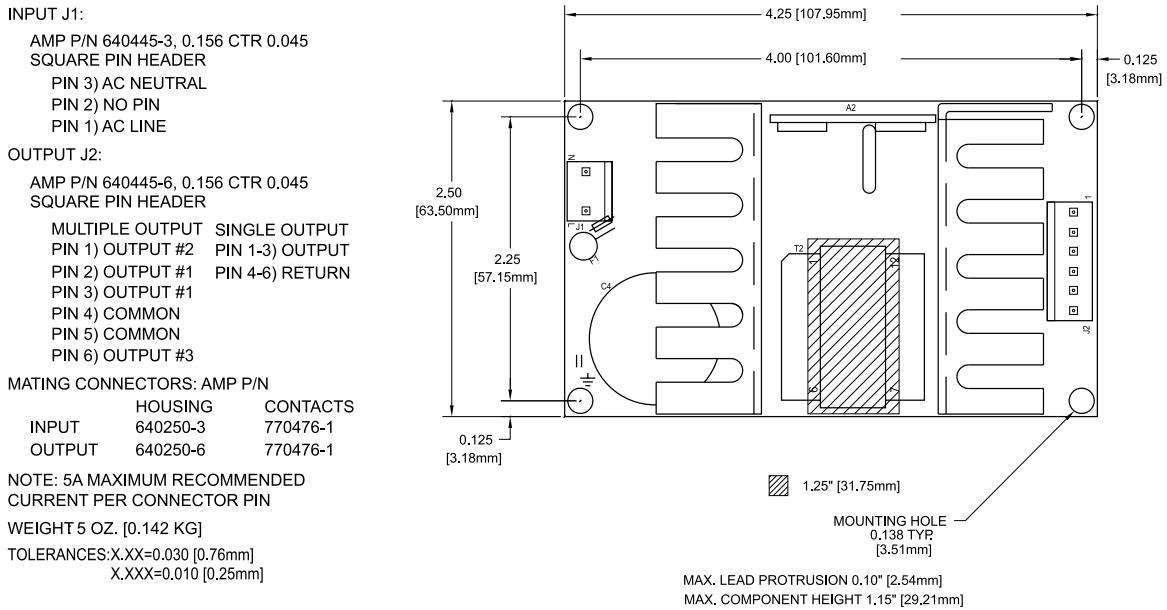
**Medical Safety**  
All GLM50 models are approved to UL/EN/IEC60601-1, CSA22.2 No. 601.

Commercial Model	Medical Model	Output No.	Output	Current	Minimum Load (B)	OVP Setpoint	Noise P-P	Total Regulation (A)
GLC50A	GLM50A	1	+5.05 V	4 A	0.8 A	6.2 ± 0.6 V	50 mV	2%
		2	+12 V	2.5 A			120 mV	+10%,-5%
		3	-12 V	0.2 A			120 mV	3%
GLC50B	GLM50B	1	+5.05 V	4 A	0.8 A	6.2 ± 0.6 V	50 mV	2%
		2	+15 V	2.5 A			150 mV	+10%,-5%
		3	-15 V	0.2 A			150 mV	3%
GLC50D	GLM50 D	1	+5.05 V	4 A	0.8 A	6.2 ± 0.6 V	50 mV	2%
		2	+24 V	1.5 A			240 mV	+10%,-5%
		3	-12 V	0.2 A			120 mV	3%
GLC50G	GLM50G	1	+3.3 V	4 A	0.8 A	4.2 ± 0.6 V	33 mV	2%
		2	+12 V	2.5 A			120 mV	+10%-5%
		3	-12 V	0.2 A			120 mV	3%
GLC50-3.3	GLM50-3.3	1	3.3 V	8 A	0.2	4.2 ± 0.6 V	66 mV	2%
GLC50-5	GLM50-5	1	5.1 V	8 A	0.4	6.2 ± 0.6 V	75 mV	2%
GLC50-12	GLM50-12	1	12V	4.2 A	0.2	14 ± 1.1 V	120 mV	2%
GLC50-15	GLM50-15	1	15 V	3.3 A	0.16	18.5 ± 1.5 V	150 mV	2%
GLC50-24	GLM50-24	1	24 V	2.1 A	0.1	28 ± 2.5 V	240 mV	2%
GLC50-28	GLM50-28	1	28 V	1.8 A	0.09	34.5 ± 2.8 V	280 mV	2%
GLC50-48	GLM50-48	1	48 V	1.1 A	0.05	54 ± 3.0 V	480 mV	2%

Notes:

- 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. To maintain specified regulation on multi-output models, output #1 load power must be at least 1/5th of, and not greater than 5 times output #2 load power.  
 C. Add "G" suffix to model number for RoHS compliant model.

### GLC50 MECHANICAL SPECIFICATIONS



ENVIRONMENTAL SPECIFICATIONS	OPERATING	NON-OPERATING
Temperature (A)	0 TO 50°C	-40 to +85°C
Humidity (A)	0 to 95% RH	0 to 95% RH
Shock (B)	20 g <sub>pk</sub>	40 g <sub>pk</sub>
Altitude	-500 to 10,000 ft	-500 to 40,000 ft
Vibration (C)	1.5 g <sub>rms</sub> 0.003 g <sup>2</sup> /Hz	5 g <sub>rms</sub> 0.026 g <sup>2</sup> /Hz

- A. Units should be allowed to warm up/operate under non-condensing conditions before application of power. derate output current and total output power by 2.5% per °C above 50°C.  
 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.