

### 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)
- $\text{C}\text{E}$  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.

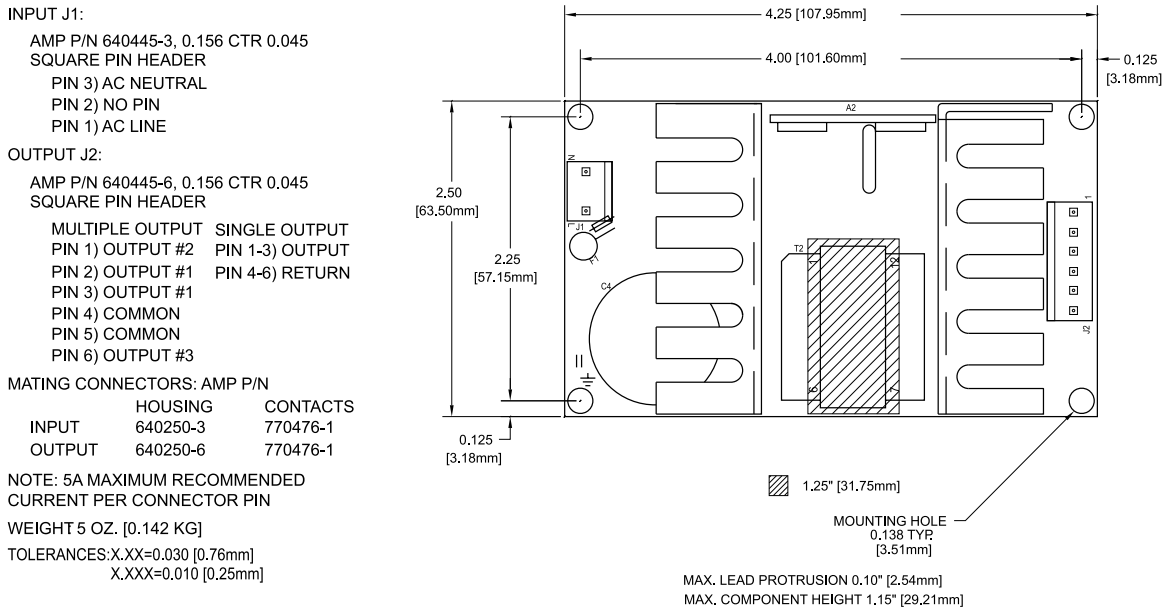
Temperature Coefficient 0.03%/°C typical on all outputs.	
Output Noise 0.5% rms, 1% pk-pk, 20 MHz bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply.	
Transient Response 500 $\mu$ s typical response time for return to within 0.5% of final value 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 Conducted Emissions GLM 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 kV, 5 kHz 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.