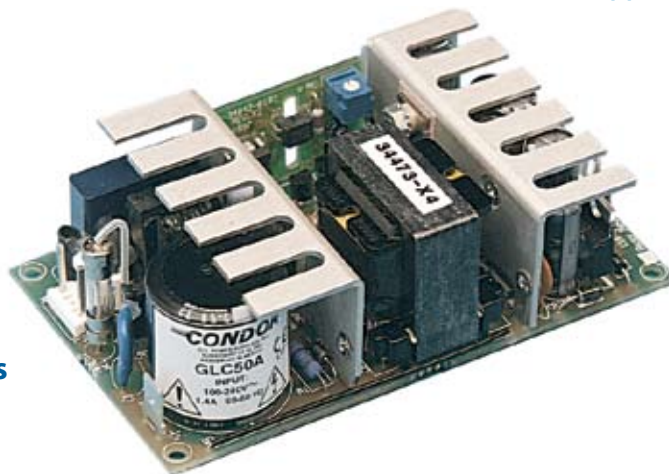


### GLOBAL PERFORMANCE SWITCHERS

#### 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

<b>Ac Input</b> 90-264 Vac, 47-63 Hz single phase..
<b>Input Current</b> Maximum input current at 120 Vac, 60 Hz with full rated output load: 1.5 A
<b>Hold-Up Time</b> 15 ms minimum from loss of ac input at full load, nominal line (115 Vac).
<b>Output Power</b> 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.
<b>Output Regulation</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.
<b>Overload Protection</b> 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.
<b>Efficiency</b> 70-85% at full rated load, nominal input voltage, depending on model and load distribution.
<b>Minimum Load</b> 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.
<b>Input Protection</b> 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.

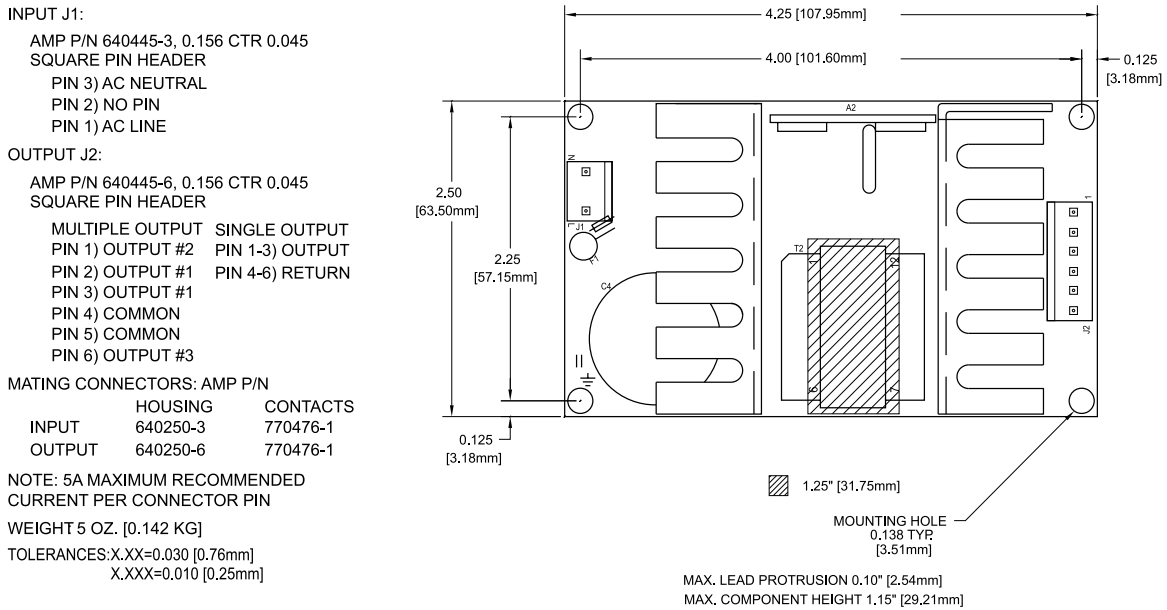
<b>Temperature Coefficient</b> 0.03%/°C typical on all outputs.														
<b>Output Noise</b> 0.5% rms, 1% pk-pk, 20 MHz bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply.														
<b>Transient Response</b> 500 $\mu$ s typical response 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%.														
<b>Voltage Adjustment</b> Built-in potentiometer adjusts V1 $\pm$ 5%.														
<b>EMI/EMC Compliance</b> All models include built-in EMI filtering to meet the following emissions requirements:														
<table border="1"> <thead> <tr> <th>EMI SPECIFICATIONS</th> <th>COMPLIANCE LEVEL</th> </tr> </thead> <tbody> <tr> <td>Conducted Emissions GLC</td> <td>EN55022 Class B; FCC Class B</td> </tr> <tr> <td>Conducted Emissions GLM</td> <td>EN55011 Class B; FCC Class B</td> </tr> <tr> <td>Static Discharge</td> <td>EN61000-4-2, 6 kV contact, 8 kV air</td> </tr> <tr> <td>RF Field Susceptibility</td> <td>EN61000-4-3, 3 V/meter</td> </tr> <tr> <td>Fast Transients/Bursts</td> <td>EN61000-4-4, 2 kV, 5 kHz</td> </tr> <tr> <td>Surge Susceptibility</td> <td>EN61000-4-5, 1 kV diff., 2 kV com.</td> </tr> </tbody> </table>	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.
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<b>Commercial Leakage Current</b> 160 $\mu$ A 254 Vac @ 60 Hz input (with no deviations).														
<b>Commercial Safety</b> All GLC models are approved to UL1950, CSA22.2 No. 234 Level 3, IEC950 and EN60950.														
<b>Medical Leakage Current</b> 100 $\mu$ A 264 Vac @ 60 Hz input (normal conditions).														
<b>Medical Safety</b> 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.