GLC50 Commercial/GLM50 Medical
50 WATT 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)
- CE 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 μs typical response time for return to within 0.5% of final value for a 50% load step change. ∆i/∆t<0.2 A/μs. Maximum voltage deviation is 3.5%. Startup/shutdown overshoot less than 3%.

Voltage Adjustment
Built-in potentiometer adjusts V1 ±5%.

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

<table>
<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>
<tr>
<td>Commercial Leakage Current</td>
<td>160 μA 254 Vac @ 60 Hz input (with no deviations).</td>
</tr>
<tr>
<td>Medical Leakage Current</td>
<td>100 μA 264 Vac @ 60 Hz input (normal conditions).</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Commercial Model</th>
<th>Medical Model</th>
<th>Output No.</th>
<th>Output</th>
<th>Current</th>
<th>Minimum Load (B)</th>
<th>OVP Setpoint</th>
<th>Noise P-P</th>
<th>Total Regulation (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLC50A</td>
<td>GLM50A</td>
<td>1</td>
<td>+5.05 V</td>
<td>4 A</td>
<td>0.8 A</td>
<td>6.2 ± 0.6 V</td>
<td>50 mV</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>+12 V</td>
<td>2.5 A</td>
<td></td>
<td>4.8 V</td>
<td>120 mV</td>
<td>+10%,-5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>-12 V</td>
<td>0.2 A</td>
<td></td>
<td>120 mV</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>GLC50B</td>
<td>GLM50B</td>
<td>1</td>
<td>+5.05 V</td>
<td>4 A</td>
<td>0.8 A</td>
<td>6.2 ± 0.6 V</td>
<td>50 mV</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>+15 V</td>
<td>2.5 A</td>
<td></td>
<td>4.2 V</td>
<td>150 mV</td>
<td>+10%,-5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>-15 V</td>
<td>0.2 A</td>
<td></td>
<td>150 mV</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>GLC50D</td>
<td>GLM50 D</td>
<td>1</td>
<td>+5.05 V</td>
<td>4 A</td>
<td>0.8 A</td>
<td>6.2 ± 0.6 V</td>
<td>50 mV</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>+24 V</td>
<td>1.5 A</td>
<td></td>
<td>4.8 V</td>
<td>120 mV</td>
<td>+10%,-5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>-12 V</td>
<td>0.2 A</td>
<td></td>
<td>120 mV</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>GLC50G</td>
<td>GLM50G</td>
<td>1</td>
<td>+3.3 V</td>
<td>4 A</td>
<td>0.8 A</td>
<td>4.2 ± 0.6 V</td>
<td>33 mV</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>+12 V</td>
<td>2.5 A</td>
<td></td>
<td>4.2 V</td>
<td>120 mV</td>
<td>+10%,-5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>-12 V</td>
<td>0.2 A</td>
<td></td>
<td>120 mV</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>GLC50-3.3</td>
<td>GLM50-3.3</td>
<td>1</td>
<td>3.3 V</td>
<td>8 A</td>
<td>0.2</td>
<td>4.2 ± 0.6 V</td>
<td>66 mV</td>
<td>2%</td>
</tr>
<tr>
<td>GLC50-5</td>
<td>GLM50-5</td>
<td>1</td>
<td>5.1 V</td>
<td>8 A</td>
<td>0.4</td>
<td>6.2 ± 0.6 V</td>
<td>75 mV</td>
<td>2%</td>
</tr>
<tr>
<td>GLC50-12</td>
<td>GLM50-12</td>
<td>1</td>
<td>12 V</td>
<td>4.2 A</td>
<td>0.2</td>
<td>14 ± 1.1 V</td>
<td>120 mV</td>
<td>2%</td>
</tr>
<tr>
<td>GLC50-15</td>
<td>GLM50-15</td>
<td>1</td>
<td>15 V</td>
<td>3.3 A</td>
<td>0.16</td>
<td>18.5 ± 1.5 V</td>
<td>150 mV</td>
<td>2%</td>
</tr>
<tr>
<td>GLC50-24</td>
<td>GLM50-24</td>
<td>1</td>
<td>24 V</td>
<td>2.1 A</td>
<td>0.1</td>
<td>28 ± 2.5 V</td>
<td>240 mV</td>
<td>2%</td>
</tr>
<tr>
<td>GLC50-28</td>
<td>GLM50-28</td>
<td>1</td>
<td>28 V</td>
<td>1.8 A</td>
<td>0.09</td>
<td>34.5 ± 2.8 V</td>
<td>280 mV</td>
<td>2%</td>
</tr>
<tr>
<td>GLC50-48</td>
<td>GLM50-48</td>
<td>1</td>
<td>48 V</td>
<td>1.1 A</td>
<td>0.05</td>
<td>54 ± 3.0 V</td>
<td>480 mV</td>
<td>2%</td>
</tr>
</tbody>
</table>

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.

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### GLC50 MECHANICAL SPECIFICATIONS

**ENVIRONMENTAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Operating</th>
<th>Non-Operating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature (A)</td>
<td>0 TO 50°C</td>
</tr>
<tr>
<td>Humidity (A)</td>
<td>0 to 95% RH</td>
</tr>
<tr>
<td>Shock (B)</td>
<td>20 g</td>
</tr>
<tr>
<td>Altitude</td>
<td>-500 to 10,000 ft</td>
</tr>
<tr>
<td>Vibration (C)</td>
<td>1.5 g</td>
</tr>
</tbody>
</table>

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**SL Power:**

- GLM50D
- GLM50B
- GLM50A
- GLC50D
- GLC50B
- GLC50A
- GLC50G
- GLC50-5
- GLM50-12
- GLM50-24
- GLM50-28
- GLM50-15
- GLC50-12
- GLC50-15
- GLC50-3.3
- GLC50-24
- GLC50-28
- GLC50-48
- GLM50-3.3
- GLM50-5
- GLM50DG
- GLC50AG
- GLC50GG
- GLM50BG
- GLM50-12G
- GLC50-5G
- GLC50DG
- GLC50-3.3G
- GLM50AG
- GLC50-24G
- GLM50-28G
- GLC50BG
- GLC50-15G
- GLM50-3.3G
- GLC50-12G
- GLM50-15G
- GLM50-5G
- GLC50-28G
- GLC50-48G
- GLM50-24G
- GLM50-48
- GLM50G