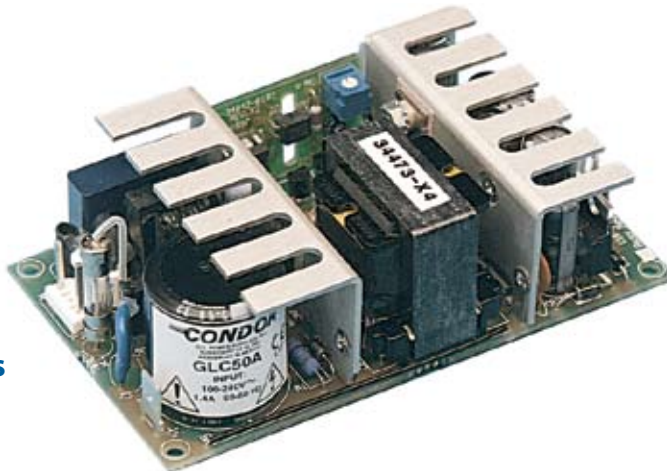


GLOBAL PERFORMANCE SWITCHERS

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 μ 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/ μ 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: | | | | | | | | | | | | | | |
| <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. |
| 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 μ 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 μ A 264 Vac @ 60 Hz input (normal conditions). | | | | | | | | | | | | | | |
| Medical Safety All GLM50 models are approved to UL/EN/IEC60601-1, CSA22.2 No. 601. | | | | | | | | | | | | | | |

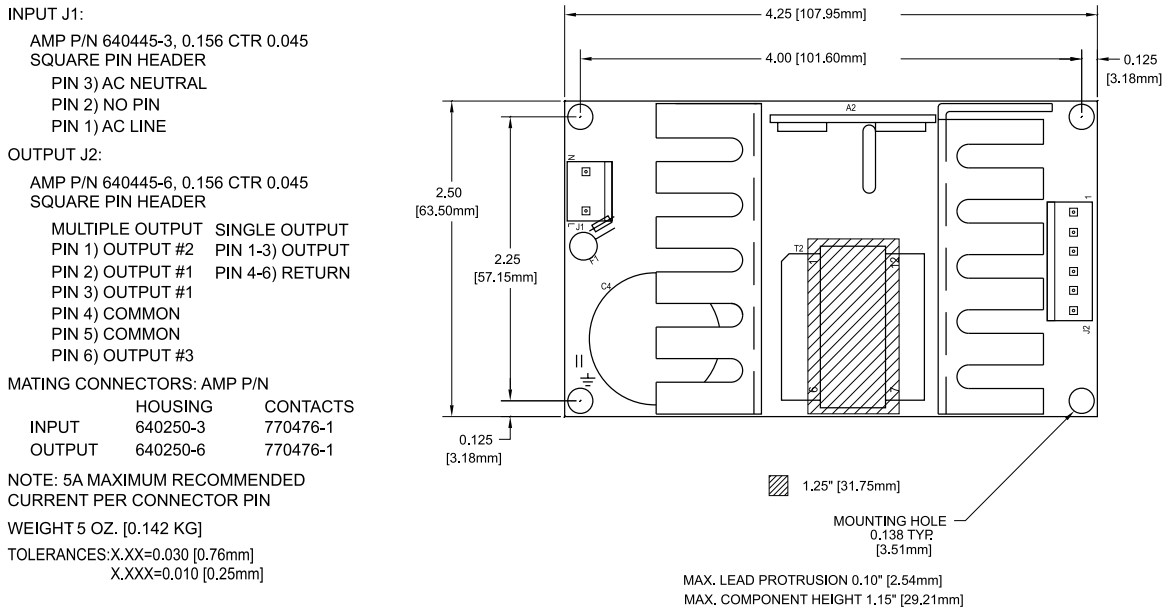
All specifications are typical at nominal input, full load at 25°C unless otherwise stated

| 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 | 12 V | 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 _{pk} | 40 g _{pk} |
| Altitude | -500 to 10,000 ft | -500 to 40,000 ft |
| Vibration (C) | 1.5 g _{rms} 0.003 g ² /Hz | 5 g _{rms} 0.026 g ² /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.