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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832


Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



### MULTIPLE OUTPUT GLOBAL PERFORMANCE SWITCHERS

#### Summary:

- 65 Watt Wide Range Input
- High Efficiency (Up to 90%)
- Universal input 90-264 Vac
- 2-year warranty
- Also available in single outputs
- Conducted EMI complies with FCC Class B and CISPR 22 Class B (Commercial models) and CISPR 11 Class B (Medical models)
- Exempt from line harmonics standard EN61000-3-2
- Commercial Approved to UL1950, CSA-C22.2 No. 950,
- Medical Approved to UL2601-1, CSA 22.2 No. 601.1, and EN60601-1- Medical Approved to UL2601-1, CSA 22.2 No. 601.1,
- RoHS Compliant (G suffix)
-  marked to LVD




#### SPECIFICATIONS

| <p><b>Ac Input</b><br/>90-264 Vac, 47-63 Hz single phase.</p>  | <p><b>Minimum Load</b><br/>No minimum load required on any output. However, regulation limits may be exceeded if extreme conditions are applied. Contact factory for assistance.</p>  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
|--|---|-------------|--------------|---------------------------|------------------------------|---------------------------|------------------------------|------------------|----------------------|-------------------------|----------------------|------------------------|----------------------|----------------------|----------------------|-----------------------------|----------------------|-----------------------|--------------|--------------------------|---|
| <p><b>Output Power</b><br/>Total continuous output power is 60 W, 75 W peak for 60 s 10% duty cycle. Total continuous rating with 150 LFM of air is 70 W.</p>  | <p><b>Temperature Coefficient:</b> 0.03%/°C typical on all outputs.</p>   |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Input Current</b><br/>Units are exempt from input current harmonic requirements of EN61000-3-2 when output power is less than 62W. Maximum input current at minimum input voltage and output overload will be less than 2.0 A.</p>                       | <p><b>Voltage Adjustment</b><br/>Units provided with one potentiometer capable of adjusting all 3 outputs a minimum of +/- 5% from nominal setting.</p>   |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Inrush Current</b><br/>Inrush is limited by internal thermistor. The inrush at 240 Vac, averaged over the first ac half-cycle under cold start conditions will not exceed 37 A.</p>  | <p><b>EMI / EMC Compliance:</b><br/>All models include built-in EMI filtering to meet EMC requirements of IEC601-1-2.</p>   |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Input Protection</b><br/>Internal AC fuse provided on all units. Designed to blow only if a catastrophic failure occurs in the unit -- Fuse does not blow on short circuit or unsustained overload.</p>  | <table border="1"> <thead> <tr> <th>PERFORMANCE</th> <th>EMC STANDARD</th> </tr> </thead> <tbody> <tr> <td>Conducted Emissions GLC65</td> <td>EN55022 Class B; FCC Class B</td> </tr> <tr> <td>Conducted Emissions GLM65</td> <td>EN55011 Class B; FCC Class B</td> </tr> <tr> <td>Static Discharge</td> <td>EN61000-4-2, Level 3</td> </tr> <tr> <td>RF Field Susceptibility</td> <td>EN61000-4-3, Level 3</td> </tr> <tr> <td>Fast Transients/Bursts</td> <td>EN61000-4-4, Level 3</td> </tr> <tr> <td>Surge Susceptibility</td> <td>EN61000-4-5, Level 3</td> </tr> <tr> <td>Conducted RF Susceptibility</td> <td>EN61000-4-6, 3V, 80%</td> </tr> <tr> <td>Voltage Sags &amp; Surges</td> <td>EN61000-4-11</td> </tr> <tr> <td>Line Frequency Harmonics</td> <td>EN61000-3-2 Class A (&gt;62Wout)<br/>Exempt (&lt;62Wout)</td> </tr> </tbody> </table> | PERFORMANCE | EMC STANDARD | Conducted Emissions GLC65 | EN55022 Class B; FCC Class B | Conducted Emissions GLM65 | EN55011 Class B; FCC Class B | Static Discharge | EN61000-4-2, Level 3 | RF Field Susceptibility | EN61000-4-3, Level 3 | Fast Transients/Bursts | EN61000-4-4, Level 3 | Surge Susceptibility | EN61000-4-5, Level 3 | Conducted RF Susceptibility | EN61000-4-6, 3V, 80% | Voltage Sags & Surges | EN61000-4-11 | Line Frequency Harmonics | EN61000-3-2 Class A (>62Wout)<br>Exempt (<62Wout) |
| PERFORMANCE  | EMC STANDARD  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| Conducted Emissions GLC65  | EN55022 Class B; FCC Class B  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| Conducted Emissions GLM65  | EN55011 Class B; FCC Class B  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| Static Discharge   | EN61000-4-2, Level 3  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| RF Field Susceptibility  | EN61000-4-3, Level 3  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| Fast Transients/Bursts   | EN61000-4-4, Level 3  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| Surge Susceptibility   | EN61000-4-5, Level 3  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| Conducted RF Susceptibility  | EN61000-4-6, 3V, 80%  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| Voltage Sags & Surges  | EN61000-4-11  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| Line Frequency Harmonics   | EN61000-3-2 Class A (>62Wout)<br>Exempt (<62Wout)   |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Holdup Time</b><br/>Output voltage stays within regulation for 20 ms from loss of ac input at 65 W load, from 120 Vac input.</p>   | <p><b>Commercial Leakage Current</b><br/>Less than 500 µA @ 120 Vac. Less than 1.2 mA @ 240 Vac.</p>  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Efficiency</b><br/>80% minimum.</p>  | <p><b>GLM65 Medical - Safety</b><br/>Approvals: All models are certified to be in compliance with the applicable requirements of UL2601-1, CSA 22.2 No. 601.1, IEC 601-1 (1988), EN 60601-1: 1990.</p>  |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Overload Protection</b><br/>Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit and will automatically recover after removal of fault.</p>   | <p><b>Medical Leakage Current</b><br/>80 µA under normal conditions (132 Vac @ 60 Hz). Maximum under single fault conditions (264 Vac @ 60 Hz) is 180 µA.</p>   |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Overvoltage Protection</b><br/>Built in with firing point set. OVP firing reduces output to less than 50% of nominal voltage in less than 50 ms.</p>   |   |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Output Noise</b><br/>0.5% rms, 1% pk-pk, 20 MHz Bandwidth, differential mode. Measured with scope probe directly across output terminals of the power supply with load terminated with 1µF capacitor.</p>  |   |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |
| <p><b>Transient Response</b><br/>Main Output - 500 µs typical response time for return to within 0.5% of final value for a 50% load step within the regulation limits of minimum and maximum load, Δi/Δt &lt; 0.2 A/µs. Maximum voltage deviation is 3.5%.</p> |   |             |              |                           |                              |                           |                              |                  |                      |                         |                      |                        |                      |                      |                      |                             |                      |                       |              |                          |   |

| Commercial Model | Medical Model | Output No. | Output | Output Maximum (A) | Output Maximum (B) | Total Regulation (E) | V1 Adjustment Note (C) | OVP Set-point | Ripple/Noise |
|------------------|---------------|------------|--------|--------------------|--------------------|----------------------|------------------------|---------------|--------------|
| GLC65A           | GLM65A        | 1          | +5.0 V | 7 A                | 9 A                | 2%                   | ± 5%                   | 6.2 ± 0.6 V   | 1%           |
|                  |               | 2          | +12 V  | 3 A                | 5 A                | 5%                   | —                      | —             | 1%           |
|                  |               | 3          | -12 V  | 2.5 A              | 4 A                | 6%                   | —                      | —             | 1%           |
| GLC65B           | GLM65B        | 1          | +5.1 V | 7 A                | 9 A                | 2%                   | ± 5%                   | 6.2 ± 0.6 V   | 1%           |
|                  |               | 2          | +15 V  | 2.5 A              | 4 A                | 4%                   | —                      | —             | 1%           |
|                  |               | 3          | -15 V  | 2 A                | 3 A                | 5%                   | —                      | —             | 1%           |
| GLC65D           | GLM65D        | 1          | +5.0 V | 7 A                | 9 A                | 2%                   | ± 5%                   | 6.2 ± 0.6 V   | 1%           |
|                  |               | 2          | +24 V  | 1.5 A              | 2.5 A              | 3%                   | —                      | —             | 1%           |
|                  |               | 3          | -12 V  | 2.5 A              | 4 A                | 6%                   | —                      | —             | 1%           |
| GLC65E           | GLM65E        | 1          | +5.0 V | 7 A                | 9 A                | 2%                   | ± 5%                   | 6.2 ± 0.6 V   | 1%           |
|                  |               | 2          | +24 V  | 1.5 A              | 2.5 A              | 3%                   | —                      | —             | 1%           |
|                  |               | 3          | +12 V  | 2.5 A              | 4 A                | 6%                   | —                      | —             | 1%           |
| GLC65G           | GLM65G        | 1          | +5.0 V | 5 A                | 8 A                | 3%                   | ± 5%                   | 6.2 ± 0.6 V   | 1%           |
|                  |               | 2          | +3.3 V | 4 A                | 5 A                | 3%                   | —                      | —             | 1%           |
|                  |               | 3          | +12 V  | 2.5 A              | 4 A                | 6%                   | —                      | —             | 1%           |
| GLC65H           | GLM65H        | 1          | +3.3 V | 5 A                | 8 A                | 3.5%                 | ± 5%                   | 4.3 ± 0.8 V   | 1%           |
|                  |               | 2          | +5.0 V | 4 A                | 6 A                | 4.5%                 | —                      | —             | 1%           |
|                  |               | 3          | +12 V  | 2.5 A              | 3 A                | 6%                   | —                      | —             | 1%           |

**Notes:**

- A. Continuous individual output ratings for unrestricted convection cooling. Combination of individual output loads must not exceed total power rating.
- B. Peak rating for 60 s 10% duty cycle or continuous rating 150 LFM forced air cooling.
- C. Adjustment on V1 varies all outputs simultaneously (1% on V1 @ 1% on V2 & V3).
- D. Total combined current of V1 & V2 not to exceed 12 A. Combination of individual output loads must not exceed total power rating.
- E. Total regulation is defined as maximum deviation from the initial set point. With all other outputs at 50% load, output under test can be varied from 0 to 100% load and varied to any ac line voltage. Initial set point is 1% on V1, 2% on V2 and 3% on V3
- F. Add "G" suffix to model number for RoHS compliant model.

**GLC65 MECHANICAL SPECIFICATIONS**

INPUT J1:  
AMP P/N 640445-3, .156 [3.96mm] CTR,  
0.045 [1.14mm] SQUARE PIN HEADER

PIN 3) AC NEUTRAL  
PIN 2) NO PIN  
PIN 1) AC LINE

OUTPUT J2:  
AMP P/N 640445-6, .156 [3.96mm] CTR,  
0.045 [1.14mm] SQUARE PIN HEADER

PIN 1-3) OUTPUT  
PIN 4-6) COMMON  
GND: 0.250" FASTON TAB

SENSE J3:  
AMP P/N 640456-2, .100 [2.54mm] CTR,  
0.025 [0.64mm] SQUARE PIN HEADER

PIN 1) +SENSE  
PIN 2) -SENSE

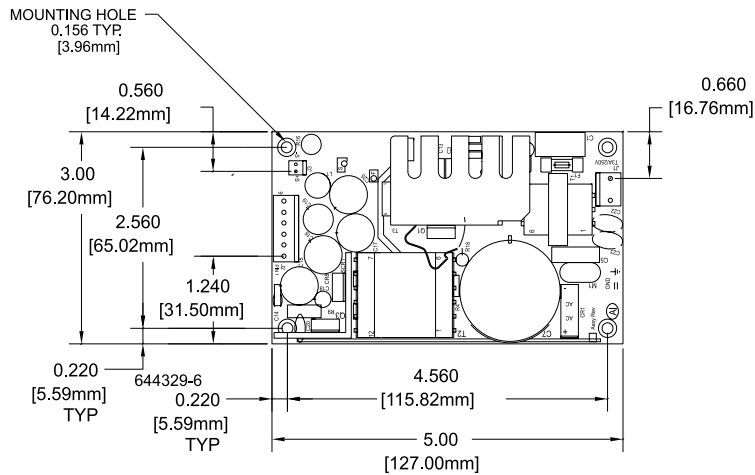
MATING CONNECTORS: AMP P/N

|        | HOUSING  | CONTACTS |
|--------|----------|----------|
| INPUT  | 640250-3 | 770476-1 |
| OUTPUT | 640250-6 | 770476-1 |
| SENSE  | 640440-2 | 770476-1 |

NOTE: 5A MAXIMUM RECOMMENDED CURRENT PER CONNECTOR PIN

WEIGHT: 5 OZ.  
[0.142 KG]

TOLERANCES:  
X.XX ± 0.030 (0.76MM)  
X.XXX ± 0.010 (0.25MM)



MAX. COMPONENT HEIGHT 1.20" [30.28mm]  
MAX. LEAD PROTRUSION 0.10" [2.54mm]

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. For operation in a confined space, moving air may be required. Under all conditions, the cooling vs. load profile should be such that heat sinks and/or heatsink temperatures do not exceed 90 °C for extended periods.

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.

| 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 |