


### 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> 90-264 Vac, 47-63 Hz single phase.</p>	<p><b>Minimum Load</b> 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> 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> 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> Units provided with one potentiometer capable of adjusting all 3 outputs a minimum of +/- 5% from nominal setting.</p>																				
<p><b>Inrush Current</b> 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> All models include built-in EMI filtering to meet EMC requirements of IEC601-1-2.</p>																				
<p><b>Input Protection</b> 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) 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) Exempt (<62Wout)
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<p><b>Holdup Time</b> 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> Less than 500 µA @ 120 Vac. Less than 1.2 mA @ 240 Vac.</p>																				
<p><b>Efficiency</b> 80% minimum.</p>	<p><b>GLM65 Medical - Safety</b> 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> 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> 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> 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> 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> 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, <math>\Delta i/\Delta t &lt; 0.2</math> 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

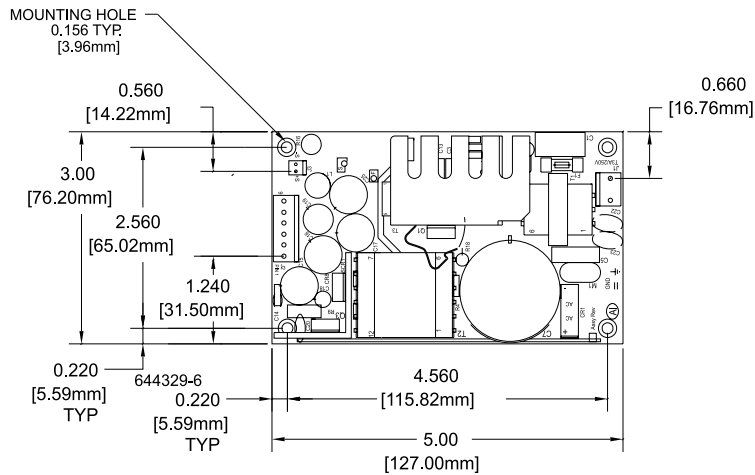
MATING CONNECTORS: AMP P/N

	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