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SL POWER ELECTRONICS

GSM15 Medical

15 Watt Global Performance Medical Switcher

GLOBAL PERFORMANCE SWITCHERS

CONDOR DC Power Supplies

FEATURES:

- **Industry's smallest 15 W medically approved switcher**
- **Compact size (3.00" x 2.10" x 0.92")**
- **Wide-range ac input: 90-264 Vac**
- **Less than 75 µA leakage current @ 120 Vac**
- **Approved to UL2601-1, EN60601-1**
- **EMI to FCC, CISPR 11 Class B**
- **Overvoltage protection standard**
- **RoHS compliant models available (G suffix)**
- **CE marked to LVD**

SPECIFICATIONS

Ac Input
90-264 Vac, 47-63 Hz single phase. Class I or class II grounding.

Input Current
Maximum input current at 90 Vac, 60 Hz with full rated output load not to exceed 0.6 A.

Input Protection
Internal ac fuse provided on all units. Designed to blow only if a catastrophic failure occurs in the unit -- Fuse does not blow on unsustained overload or short circuit.

Inrush Current
Inrush is limited by internal thermistors. The inrush at 240 Vac, averaged over the first ac half-cycle under cold start conditions will not exceed 37 A.

Efficiency
69-85% depending on model.

Overload Protection
Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit. Factory set to begin power limiting at 23 W.

Overvoltage Protection
Built in OVP on all models. Approximately 120-140% of output voltage.

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
Main Output - 500 µs max. response time for return to within 0.5% of final value for a 50% load step change, Δi/ Δt< 0.2 A/µs. Maximum voltage deviation is 3.5%.

Hold-up Time
10 ms minimum from loss of ac input voltage at full load, nominal line (120 Vac).

Temperature Coefficient
0.03% / °C typical.

EMI/EM Compliance
All models include built-in EMI filtering to meet the following EMC requirements of IEC601-1-2.

Performance Requirement	EMC Standard	Typical Margin
Conducted Emissions	EN55011, Class B; FCC Class B	2 dB Class II Gnd 6 dB Class I Gnd
Surge Discharge	EN61000-4-2, Level 3	2 kV
RF Field Susceptibility	EN61000-4-3, Level 3	2 V
Fast Transients/Bursts	EN61000-4-4, Level 3	500 V
Surge Susceptibility	EN61000-4-5, Level 3	500 V
Conducted RF Susceptibility	EN61000-4-6	25%
Voltage Sags & Surges	EN61000-4-11	5%

Medical Safety Approvals
All models are Certified to be in compliance with the applicable requirements of UL2601-1, IEC60601-1, CSA-C22.2 No. 601-1, EN60601-1.

Leakage Current
The maximum leakage current for GSM15 series will be as follows;

132Vac/60Hz UL2601-1 test method

	GND	Connection Normal	Single Fault
	Class I	75 µA	105 µA
	Class II	39 µA	54 µA

264Vac/50Hz IEC60601-1 test method

	GND	Connection Normal	Single Fault
	Class I	128 µA	180 µA
	Class II	66 µA	94 µA

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

Medical Model	Voltage Output	Min.	Normal (A)	Peak (B)	Initial Set Point	OVP Setpoint	Total Regulation	Ripple and Noise
GSM15-5	5.1 V	0 A	2.35 A	3 A	2.5%	7.2 V	2%	1%
GSM15-12	12 V	0 A	1.25 A	1.5 A	2.5%	16 V	2%	1%
GSM15-15	15 V	0 A	1.0 A	1.2 A	2.5%	21 V	2%	1%
GSM15-24	24 V	0 A	0.625 A	0.75 A	2.5%	32 V	2%	1%
GSM15-28	28 V	0 A	0.54 A	0.64 A	2.5%	280 V	2%	1%

Notes:
A. Rating with unrestricted convection cooling.
B. Peak Power for 60 sec. 10% duty cycle or continuous rating with 150 LFM of airflow.
C. Output voltages preset at factory, not user adjustable.
D. Add "G" suffix to model nuber for RoHS compliant model.

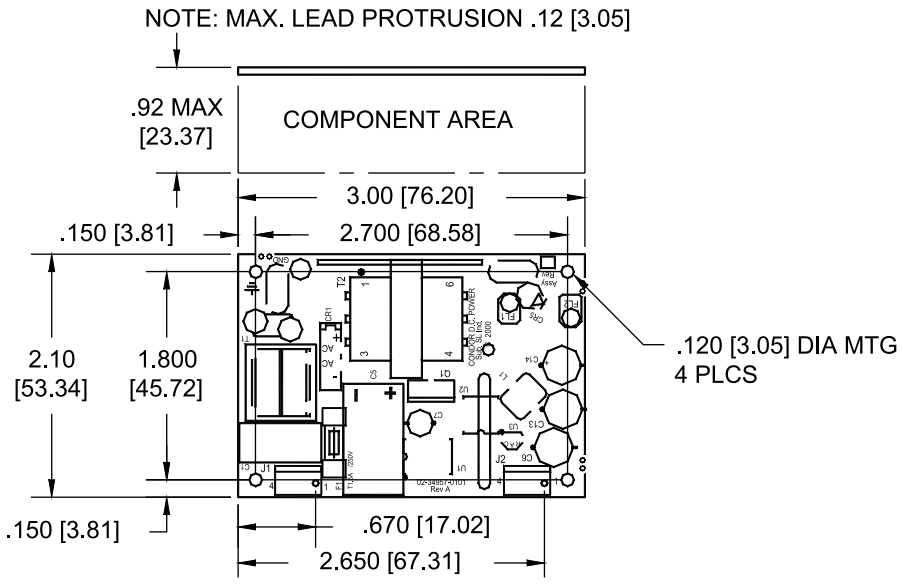
GSM15 MECHANICAL SPECIFICATIONS

INPUT: J1 AMP P/N 640456-4
PIN 1) AC LINE
PIN 2) N/C
PIN 3) N/C
PIN 4) AC NEUTRAL
GND: 0.098 DIA. THRU HOLE

OUTPUT: J2 AMP P/N 640456-4
PIN 1) COMMON Return
PIN 2) COMMON Return
PIN 3) OUTPUT #1 + Vout
PIN 4) OUTPUT#1 +Vout

MATING CONNECTOR AMP P/N
MTA – 100 Recepticle

NOTE: 3A MAXIMUM RECOMMENDED
CURRENT PER CONNECTOR PIN



Overall Dimensions:
3.00 x 2.10 x .92 inches
76.20mm x 53.34mm x 23.37mm
Weight: 0.25 LBS. [.113 kg]
MAX.

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.

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.

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