

GSM15 Medical

15 Watt Global Performance Medical Switcher

GLOBAL PERFORMANCE SWITCHERS

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, $\Delta i/\Delta t$ < 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;

Class II

| 132Va | 132Vac/60Hz UL2601-1 test method | | | | | |
|-------|------------------------------------|----------|----------------------|--------------|--|--|
| | | GND | Connection Normal | Single Fault | | |
| | | Class I | 75 μΑ | 105 μA | | |
| | | Class II | 39 µA | 54 µA | | |
| 264Va | 264Vac/50Hz IEC60601-1 test method | | | | | |
| | | GND | Connection Normal | Single Fault | | |
| | | Class I | 128 µA | 180 µA | | |
| | | | | | | |

66 µA

94 µA



| 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

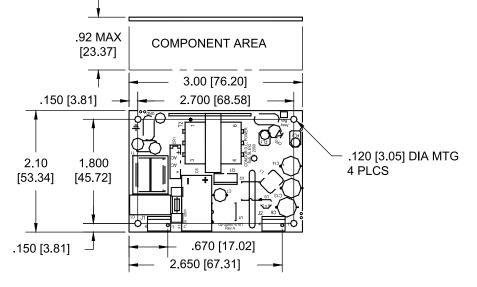
INPUT: J1 AMP P/N 640456-4 PIN 1) AC LINE PIN 2) N/C PIN 3) N/C PIN 4) AC NEUTRAL GND: 0.098 DIA. THRU HOLE

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

NOTE: MAX. LEAD PROTRUSION .12 [3.05]



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 g²/Hz | 5 g _{ms'} 0.026 g²/Hz |

A. Units should be allowed to warm up/operate under non-condensing conditions before application of power.

B. Shock testing—half-sinusoidal, 10 \pm 3 ms duration, \pm 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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