

GSM7 Medical

7 Watt Single Output Global Performance Switchers



FEATURES:

- World's smallest medically approved 7 W supply
- 2.00" x 2.28" x 0.56"
- Wide-range ac input (85-264 Vac)
- Medical Approval to UL2601-1 and EN60601-1
- EMI conducted to CISPR11 Class B
- Ideal for ultra-compact applications
- CE marked to LVD

SPECIFICATIONS:

Ac Input

85-264 Vac, 47-63 Hz single phase.

Holdup Time

16 ms minimum from loss of ac.

Output Power

Normal continuous output power is 7 W, 9 W peak for 60 s maximum duration, 10% duty cycle. Factory set to begin power limiting at approximately 9 W.

Output Regulation

Regulation from initial setpoint measured by changing load from no-load to 50% load or 50% load to full load in either direction. Initial setpoint tolerance is measured at 50% load. No minimum load is required to maintain proper regulation.

Overload Protection

Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit.

No Load Turn-on/Standby

Full regulation at no load.

Output Noise

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 0.1 uF capacitor.

Voltage Adjustment

Factory set with fixed resistors to maximize reliability.

Efficiency

72% minimum for the 5.0 V model at full rated load, nominal input voltage. Efficiency increases as output voltage increases.

Input Protection

Internal ac fuse provided on all units. Designed to open only if catastrophic failure occurs in the unit; fuse does not blow on overload or short circuit. Internal 320 Vac MOV included. Units will not be damaged when tested for input transients in accordance with the following standards:

- ESD—IEC1000-4-2 Level III
- Fast Transient—IEC1000-4-4 Level III

Environmental

Designed for 0 to 50°C operation at full rated output power; derate output current and total output power by 2.5% per °C above 50°C. See Environmental specification on next page.

Medical EMI/EMC Compliance

All models include built-in EMI filtering to meet the following emissions requirements:

EMI SPECIFICATIONS	COMPLIANCE LEVEL
Conducted Emissions	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.

Medical Safety

Condor D.C. Power Supplies, Inc. declares under our sole responsibility that all GSM7 models are in conformity with the applicable requirements of EN60601-1 following the provisions of the Low Voltage Directive 73/23/EEC.

All GSM7 models are certified to be in compliance with the applicable requirements of UL2601-1 (Patient Care Equipment), CSA 22.2 No. 234 (with additional tests to C22.2 No 601.1 per T.I.L. CA-08), EN 60601-1. Classification (in accordance with sub-clause 5 of EN60601-1):

- (5.1) Protection against electric shock = class II
- (5.2) Degree of protection against electric shock = signal output or intermediate
- (5.3) Protection against harmful ingress of water = ordinary (no protection)
- (5.5) Not suitable for use in the presence of flammable anesthetic mixture
- (5.6) Mode of operation = continuous

Earth Leakage Current

Leakage current measured in ground wire connection to output common.

Model	Leakage Current*	Leakage Current**	Test Voltage	Test Method
GSM7	32 μ A	50 μ A	132 Vac/60 Hz	UL2601-1
GSM7	55 μ A	85 μ A	264 Vac/50 Hz	IEC601-1

* Normal condition **Single fault condition



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GSM7 Medical 7 Watt Single Output

Model	Output	Current	Load Regulation	Initial Setpoint Tolerance	OVP Setpoint	Ripple and Noise
GSM7-5	5.1 V	1.4 A	0.75%	2.5%	6.2 ± 0.6 V	1%
GSM7-12	12 V	0.6 A	0.75%	2.5%	14 ± 1.1 V	1%
GSM7-15	15 V	0.5 A	0.75%	2.5%	18.5 ± 1.5 V	1%
GSM7-24	24 V	0.3 A	0.75%	2.5%	28 ± 2.5 V	1%
GSM7-28	28 V	0.3 A	0.75%	2.5%	34 ± 2.8 V	1%

GSM7 MECHANICAL SPECIFICATIONS

INPUT: J1

MOLEX P/N: 22-43-8030

W/CENTER PIN REMOVED: 0.098 CTR HEADER

PIN1 AC NEUTRAL
PIN3 AC LINE

MOLEXP/N: 22-43-8020
0.098 CTR HEADER

OUTPUT: J2

PIN1 +V
PIN2 RETURN

MATING CONNECTOR MOLEX P/N'S

	HOUSING	CONTACT
INPUT: J1	50-37-5033	08-70-1040
OUTPUT:	50-37-5023	08-70-1040

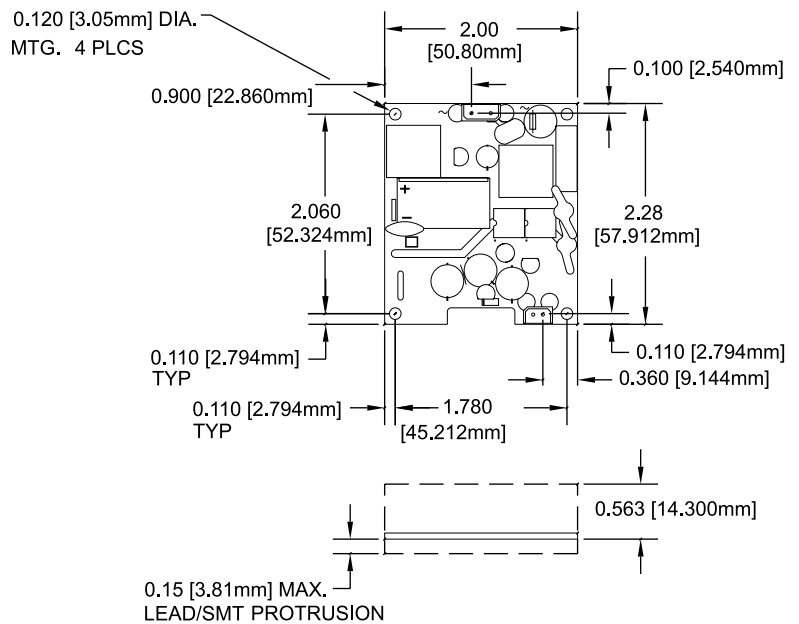
NOTE: 2A MAX. RECOMMENDED CURRENT PER CONNECTOR PIN.

WEIGHT 2 OZ. MAX. (0.057kg)

TOLERANCES:

X.XX ± 0.030 (0.76MM)

X.XXX ± 0.010 (0.25MM)



Environmental Specification	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

- Units should be allowed to warm up/operate under non-condensing conditions before application of power.
- 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.
- Shock testing—half-sinusoidal, 10 ± 3 ms duration, ± direction, 3 orthogonal axes, total 6 shocks.



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