

# 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
- $\text{CE}$  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 $\mu$ A	50 $\mu$ A	132 Vac/60 Hz	UL2601-1
GSM7	55 $\mu$ A	85 $\mu$ 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

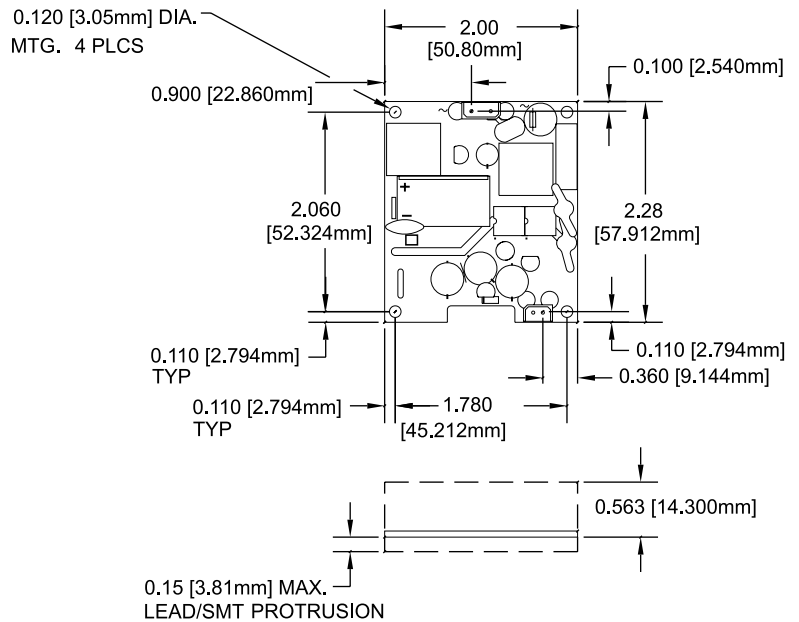
NOTE: 2A MAX. RECOMMENDED CURRENT PER CONNECTOR PIN.

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 <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

- 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.

