

## COVER PAGE FOR TEST REPORT

Product Category:	Power Supplies, Medical and Dental
Product Category CCN:	QQHM2, QQHM8
Test Procedure:	Component Recognition
Product:	Power Supply
Model/Type Reference:	GPMP900-XXY-CF-ZZZ G Series and GPMP1000-XXY-ZZZ G Series, where XX is any number from 24 to 48, which represents the output voltage rating, Y is Option "B" or "T", CF is optional Cover/Fan, ZZZ represents non-Safety related options such as Power Fail, Power Good and Inhibit and the optional letter "G" indicates ROHS compliance (ROHS compliance has not been evaluated by UL.), and Model GPMP900-24-101G.
Rating(s):	<p>GPMP900-XXY-CF-ZZZ G Input: 100-240 Vac, 50/60 Hz, 12-6 A Output: 24 V minimum, 48 V maximum, 37.5 A/39.5 A* maximum, 18.8 A/20.8 A* minimum, 900 W maximum with integral fans or with 54 CFM customer supplied airflow through the unit. Option CF is supplied with 40 CFM airflow (one fan on top). Evaluated at ambient of 50°C.</p> <p>GPMP900-24-101G Input: 100-240 Vac, 50/60 Hz, 12-6 A Output: Output is a duty cycle of 24 V/0.833A (20W) for 5 minutes followed by 24 V/37.5A (900W) for 30 seconds. Convection Cooled. Evaluated at ambient 40°C</p> <p>GPMP1000-XXY-CF-ZZZ G Input: 200-240 Vac, 50/60 Hz, 7-3.5 A Output: 24 V minimum, 48 V maximum, 41.7 A/42.7 A* maximum, 20.8 A/22.8 A* minimum, 1000 W maximum with integral fans or with 54 CFM customer supplied airflow through the unit. Option CF is supplied with 40 CFM airflow (one fan on top). Evaluated at ambient of 50°C.</p> <p>* Peak current is for a maximum duration of 60 seconds with a 10% duty cycle.</p>
Standards:	UL 60601-1, 1st Edition, 2006-04-26 (Medical Electrical Equipment, Part 1: General Requirements for Safety) CAN/CSA-C22.2 No. 601.1-M90, 2005 (Medical Electrical Equipment - Part 1: General Requirements for Safety)
Applicant Name and Address:	SL POWER ELECTRONICS, CORP. 6050 KING DR. BLDG A VENTURA, CA 93003 USA

This Report includes the following parts, in addition to this cover page:

1. Specific Technical Criteria
2. Clause Verdicts
3. Critical Components
4. Test Results
5. Enclosures

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow -Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of Underwriters Laboratories Inc. ('UL') in accordance with the Follow -Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow -Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

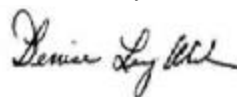
Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Report By:



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Reviewed By:



Denise Leung Klinker  
Staff Engineer  
Underwriters Laboratories Inc.

## SPECIFIC TECHNICAL CRITERIA

<b>TEST REPORT UL 60601-1 Medical Electrical Equipment Part 1: General requirements for safety</b>	
Report Reference No .....	E116994-A24-UL-1
Compiled by .....	Ahmad Daoudi
Reviewed by .....	Denise Leung Klinker
Date of issue .....	2005-12-02
Standards .....	UL 60601-1, 1st Edition, 2006-04-26 (Medical Electrical Equipment, Part 1: General Requirements for Safety) CAN/CSA-C22.2 No. 601.1-M90, 2005 (Medical Electrical Equipment - Part 1: General Requirements for Safety)
Test procedure .....	Component Recognition
Non-standard test method .....	N/A
<b>Test item</b> description .....	Power Supply
Trademark .....	CONDOR
Model and/or type reference .....	GPMP900-XXY-CF-ZZZ G Series and GPMP1000-XXY-ZZZ G Series, where XX is any number from 24 to 48, which represents the output voltage rating, Y is Option "B" or "T", CF is optional Cover/Fan, ZZZ represents non-Safety related options such as Power Fail, Power Good and Inhibit and the optional letter "G" indicates ROHS compliance (ROHS compliance has not been evaluated by UL.), and Model GPMP900-24-101G.
Rating(s) .....	GPMP900-XXY-CF-ZZZ G Input: 100-240 Vac, 50/60 Hz, 12-6 A Output: 24 V minimum, 48 V maximum, 37.5 A/39.5 A* maximum, 18.8 A/20.8 A* minimum, 900 W maximum with integral fans or with 54 CFM customer supplied airflow through the unit. Option CF is supplied with 40 CFM airflow (one fan on top). Evaluated at ambient of 50°C.  GPMP900-24-101G Input: 100-240 Vac, 50/60 Hz, 12-6 A Output: Output is a duty cycle of 24 V/0.833A (20W) for 5 minutes followed by 24 V/37.5A (900W) for 30 seconds. Convection Cooled. Evaluated at ambient 40°C  GPMP1000-XXY-CF-ZZZ G Input: 200-240 Vac, 50/60 Hz, 7-3.5 A Output: 24 V minimum, 48 V maximum, 41.7 A/42.7 A* maximum, 20.8 A/22.8 A* minimum, 1000 W maximum with integral fans or with 54 CFM customer supplied airflow through the unit. Option CF is

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supplied with 40 CFM airflow (one fan on top). Evaluated at ambient of 50°C.

\* Peak current is for a maximum duration of 60 seconds with a 10% duty cycle.

<b>GENERAL INFORMATION</b>		
<b>Test item particulars (see also clause 5):</b>		
Classification of installation and use .....	For building-in	
Supply connection .....	Terminal Block	
Accessories and detachable parts included in the evaluation .....	None	
Options included .....	None	
<b>Possible test case verdicts:</b>		
- test case does not apply to the test object .....	N / A	
- test object does meet the requirement .....	P(Pass)	
- test object does not meet the requirement .....	F(Fail) (acceptable only if a corresponding, less stringent national requirement is "Pass")	
Abbreviations used in the report:		
- normal condition .....	N.C. - single fault condition .....	S.F.C.
- operational insulation .....	OP - basic insulation .....	BI
- basic insulation between parts of opposite polarity:	BOP - supplementary insulation .....	SI
- double insulation .....	DI - reinforced insulation .....	RI
<b>General remarks:</b>		
- "(see Enclosure #)" refers to additional information appended to the Test Report		
- "(see appended table)" refers to a table appended to the Test Report		
- Throughout the Test Report a point is used as the decimal separator		

<b>General Product Information:</b>	
CA1.0	<b>Report Summary</b>
CA1.1	N/A
CB1.0	<b>Product Description</b>
CB1.1	<p>The equipment (DC power supplies) covered by this report, are components, which are intended for use in end-product equipment used in a hospital or related health care facility, evaluated to standard Medical Equipment.</p> <p>The GPMP900/1000 is designed for building-in to an end piece of equipment. It is designed with 2 end-mounted integral fans rated at 27 CFM each (54 CFM total). Rated Ambient is 50°C.</p> <p>The units with the -CF Option have had the 2 end mounted fans replaced with a single cover mounted fan rated at 40 CFM.</p>

CC1.0	<b>Model Differences</b>	
CC1.1	<p>The GPMP900-XXY-ZZZ G units are similar to each other except for Main Power Transformers and minor component changes in the secondary circuits.</p> <p>The GPMP1000-XXY-ZZZ G units are similar to each other except for Main Power Transformers and minor component changes in the secondary circuits.</p> <p>The GPMP900 and GPMP1000 Series are nearly identical to each other. The major differences are the Power FETS, which are more robust in the GPMP900 Series.</p> <p>The -CF models are identical to the models without -CF except that the end plate with a pair of 27 CFM fans has been removed and left open. The top cover has been replaced with one with an integral fan rated 40 cfm.</p> <p>The GPMP900-24-101G is identical to the base model GPMP900-24 except that the fan/cover have been removed and replaced with a slotted cover. The ambient has been reduced to 40°C and the output has changed from 900W continuous to a duty cycle of 5 minutes at 20 W followed by 30 seconds at 900W.</p>	
CD1.0	<b>Additional Information</b>	
CD1.1	The schematics for these models are kept on file at the CB Testing Laboratory mentioned in the first page of this test report, and can be provided by the applicant upon request by CBTL's.	
CE1.0	<b>Technical Considerations</b>	
CE1.1	The product was investigated to the following additional standards:	EN 60601-1: 1990 + A1:1993 + A2:1995 + A13:1996, CAN/CSA C22.2 No. 601.1-M90 (R1997), CAN/CSA C22.2 No. 601.1S1-94, and CAN/CSA C22.2 No. 601.1B-98 (National Differences for Canada)(except EMC limitations, EN 60601-1-2, Biocompatibility, EN 10993-1, Programmable Electronic Systems, IEC 60601-1-4)
CE1.2	The product was not investigated to the following standards or clauses:	Clause 36, Electromagnetic Compatibility (IEC 601-1-2), Clause 48, Biocompatibility (ISO 10993-1), Clause 52.1, Programmable Electronic Systems (IEC 601-1-4)
CE1.3	The product is Classified only to the following hazards:	Casualty, Shock, Fire
CE1.4	The degree of protection against harmful ingress of water is:	Ordinary
CE1.5	The following accessories were investigated for use with the product:	None
CE1.6	The mode of operation is:	Continuous
CE1.7	Software is relied upon for meeting safety requirements related to mechanical, fire and shock:	No

CE1.8	The product is suitable for use in the presence of a flammable anesthetics mixture with air or oxygen or with nitrous oxide:	No
CE2.0	The Accompanying Documents referred to by this standard refer to the Installation Instructions. The installation instructions are not shipped with this unit. They can be found on the company website. <a href="http://www.condorpower.com">http://www.condorpower.com</a> or can request for a copy by writing to Condor at: 2311 Statham Parkway, Oxnard, CA 93033.	--
CF1.0	<b>Engineering Conditions of Acceptability</b>	
CF1.1	For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.  When installed in an end-product, consideration must be given to the following:	
CF2.0	This power supply has been evaluated as Class I, continuous operation, ordinary equipment and has not been evaluated for use in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.	--
CF2.1	This component has been judged on the basis of the required spacings in the First Edition of the Standards for Medical Equipment, Part 1: General Requirements for Safety, UL60601-1 and CSA 22.2 No. 601.1, which covers the end use product for which the component is designed.	--
CF2.2	The component shall be installed in compliance with the enclosure, mounting, spacings, casualty markings and segregation requirements of the end-use application.	--
CF2.3	Consideration should be given to measuring the temperature on power electronic components and transformer windings when the power supply is installed in the end-use equipment.	--
CF2.4	The input/output are not acceptable for field connection, they are only intended for connection to mating connectors of internal wiring inside the end-use machine. the output circuits have not been evaluated for direct patient connection (Type B, BF or CF).	--
CF2.5	The component should be properly bonded to the ground in the end-use equipment.	--
CF2.6	The temperature test was performed in a raised ambient of 50°C for base models and models with -CF suffix. and 40°C for Model GPMP900-	--



	24-101G.	
CF2.7	Leakage Current testing should be repeated in the end-product application.	--
CF2.8	The main Power Transformer (T6) and Bias Transformer (T7), comply with Class F (155°C) limits.	--
CF2.9	Additional fusing should be considered in the end product since this power supply was tested with only one UL R/C internal fuse, rated T 15A, 250 V.	--