

# CERTIFICATE

No. U8V 12 04 59743 102



America

Holder of Certificate: **SL Power Electronics, Corp.****CONDOR**6050 King Drive Bldg A  
Ventura CA 93003  
USA

Production Facility(ies): 76551, 76079

Certification Mark:

Product: Power supplies  
(Component - AC/DC Switch Mode Power Supply)

Model(s): GPFM115-X-YYY G, where X represents the output voltage which may be any number from 3.3 through 48. May be followed by suffix -C to indicate optional cover/fan or -E to indicate optional slotted cover is provided. -YYY is any number 000 through 999 that denotes value added options that have no impact on safety and the G suffix denotes compliance with RoHS.

Parameters: Rated Input Voltage: 100 - 240 V AC  
Rated Input Frequency: 50 / 60 Hz  
Rated Input Current: 2.3 A max.  
Rated Output: See attachment  
Protection Class: I  
See attachment for further information.Tested according to: CAN/CSA C22.2 No. 60601-1:2008  
UL 60601-1:2006-04  
EN 60601-1/A11:2011  
ANSI/AAMI ES60601-1/A2:2010

The product was voluntarily tested according to the relevant safety requirements noted above. It can be marked with the certification mark above. The mark must not be altered in anyway. This product certification system operated by TÜV SÜD America Inc. most closely resembles system 3 as defined in ISO/IEC Guide 67. Certification is based on the TÜV SÜD "Testing and Certification Regulations".

Test report no.: SI1203253-000

Date, 2012-05-17

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## ATTACHMENT TO CERTIFICATE NO. U8V 12 04 59743 102 FOR SL POWER ELECTRONICS CORP.

### General product information:

The GPFM115 Series power supplies are Class I type open-frame AC/DC switch mode power supplies, designed for building-in to an end-product.

This series is provided with 2 MOOP Pri-Sec and 1 MOOP Pri-Gnd.

### Model Differences:

The power supplies in the GPFM115 Series are similar to each other and differ only in minor component changes in the secondary circuit and the number of secondary windings turns and gage for T4 to accommodate for the different output voltage and amps.

### Summary of testing:

All applicable tests comply with the requirements except for the following:

- 1) The risk management requirements of the standard were not addressed (refer to IEC60601-1 Medical Electrical Equipment Task Force guidelines) and must be considered at end use.
- 2) EMC requirement must be addressed at end use.

### Output rating:

- 3.3 Vdc Minimum, 48 Vdc maximum,  
20 A or 115 W maximum, with a minimum 150 LFM, with or without optional cover.
- 12 A or 80 W maximum, with no airflow and no cover.
- 8.8 A or 50 W maximum, with no airflow and suffix -E.

Fan output is 12 Vdc, 0.1 A.



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### GPFM115 SERIES INSTALLATION INSTRUCTIONS

**MODEL NUMBERS:** GPFM115-X-YYY-C G, where X represents the output voltage, which may be any number from 3.3 through 48, -YYY is a value added option not related to Safety. May be followed by optional Suffixes: -C, when used, indicates optional cover/fan is provided, "G" indicates compliance with RoHS.

**RATINGS:**

Input: 100-240 V ac, 2.3 A, 50/60 Hz

Output:

20 A or 115 W maximum, with a minimum of 150 LFM without cover, or with suffix -C.

12 A or 80 W maximum, with no airflow and no cover.

Fan output is 12 V dc, 0.1 A (provided for connection of fan only)

Notes: 1. Maximum ambient temperature for rated output power is 50 °C.

2. Maximum Operating Relative Humidity 96%, no condensation.

3. Storage: -40 to +85 °C. Units should be allowed to warm-up under non-condensing conditions before application of power.

**CERTIFICATION:** All models are Certified to be in compliance with the applicable requirements of UL 60601-1, CSA 22.2 No. 601.1, IEC/EN 60601-1 2nd Ed., and ANSI/AAMI ES60601-1:2005, CSA C22.2 No. 60601-1:08, EN/IEC 60601-1 3rd Ed.

**CLASSIFICATION:**

Protection against electric shock = Class I

Degree of protection against electric shock = Not acceptable for applied part without additional isolation (contact factory for details)

Protection against harmful ingress of water = Ordinary (no protection)

Have not been evaluated for use in the presence of a flammable anaesthetic mixture with air, oxygen, or nitrous oxide. This evaluation is to be made on the end equipment by the OEM.

Mode of operation = Continuous



**SAFETY DECLARATION:** SL Power Electronics declares under our sole responsibility that all models listed above are in conformity with the applicable requirements of EN60950 following the provisions of the Low Voltage Directive 2006/95/EC.

**GROUNDING:** Protection Class I requires that the ground terminal be bonded to Protective Earth in the end application. Using this terminal for the primary system earthing terminal is not recommended.

**OUTPUTS:** Output common or return should be connected to Protective Earth in the end application. The output is intended for Protectively Earthed Signal Output and Intermediate Circuits only. The output is not acceptable for patient connection without additional isolation. The DC output is SELV under normal and single fault conditions.

**OVERVOLTAGE PROTECTION:** The output is monitored for an overvoltage condition. In some applications where an overvoltage condition could result in a hazard as defined in applicable safety standards, redundant or additional overvoltage protection may be required. Consult factory for details.

**CAUTION:** When performing Dielectric Strength Tests, catastrophic failure of the unit may result if a Dielectric Strength test voltage greater than 1800 V ac is applied between primary and secondary circuits. The components providing isolation from primary to secondary cannot be tested while installed in the power supply without overstressing basic (primary to ground) insulation. All isolating components are individually 100 % tested at 4800 V ac prior to installation.

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## GPFM115 SERIES INSTALLATION INSTRUCTIONS

**TEMPERATURES:** The maximum operating temperatures of certain safety components, as defined in the applicable safety standards, must not be exceeded after installation to preserve the intended safety. The output power, ambient air temperature and the availability, amount, direction and/or restriction of airflow influence the temperatures of these components.

**OVERCURRENT PROTECTION:** The internal fuse is located in the phase lead only. EN 60601-1 requires that both supply leads (phase and neutral) be protected against overcurrent. Complete overcurrent protection must be provided in the host equipment. Fuse ratings must not exceed that specified for the internal fuse, must meet the requirements of EN 60601-1, and be acceptable for the country in which the host equipment is to be installed.

**WARNING! RISK OF FIRE!** A blown internal fuse is an indication of catastrophic failure of circuit component(s). Refer to fuse marking on the supply for rating. Repair must be performed by Condor authorized personnel.

**WARNING! SHOCK HAZARD!** Dangerous voltages are present on some components, printed wiring traces and heatsinks.

**ISOLATION / MEANS OF PROTECTION (MOP):** The creepage distance between primary and ground is 4 mm minimum (1 MOOP); between primary and secondary circuits is 8 mm minimum (2 MOOP). Secondary to ground creepage is not defined or controlled. The output common is bypassed to ground using a 4700 pF, 1 kV capacitor. The required creepage and clearance distances from primary circuits to ground and secondary circuits must be maintained after installation to preserve the intended safety.

EXPLANATION OF SYMBOLS	
	Alternating Current
	Direct Current
	Attention, Consult Accompanying Documents
	Consult Operating Instructions
	Attention, Dangerous Voltages
	Earth (Ground)

### CONNECTIONS

J1 Pin	AC Input	J3 Pin	DC Output	J2 Pin	DC Output	J4	12 V Fan Output
1	Line	1	+ Output	1	Power Fail	2	Fan Return
3	Neutral	2	+ Output	2	- Sense	1	+ Fan
5	Ground	3	+ Output	3	- Sense		
		4	+ Output	4	Common		
		5	- Output				
		6	- Output				
		7	- Output				
		8	- Output				

### MATING CONNECTORS

J1	Amp 640250-5 Contact 770476-1
J2	Amp MTA-100 Receptacle
J3	Amp 640250-8 Contact 770476-1
J4	Amp MTA-100 Receptacle

CAUTION: Do not exceed 5 A per contact on J3.

SL Power Electronics will not be liable for the safety, reliability or performance of these power supplies if a) any changes, modifications or repairs are carried out by other than authorized agents of SL Power Electronics, or b) the installation of the supply is not in accordance with these installation instructions and the applicable UL, CSA, and EN/IEC safety standards.

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