



Ref. Certif. No.

CA/7052/CSA

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME D'ETAT D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Component Type Switching Power Supplies

Name and address of the applicant
Nom et adresse du demandeur

Condor DC Power Supplies, Inc.
2311 Statham Parkway
Oxnard, CA 93033 USA

Name and address of the manufacturer
Nom et adresse du fabricant

Same as applicant

Name and address of the factory
Nom et adresse de l'usine

Industrias SL, S.A. de C.V., Costa Rica No. 60,
col. Cuahutemoc, Mexicali B.C. Mexico

Note: When more than one factory, please report on page 2
Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Additional Information on page 2

Trademark (if any)
Marque de fabrique (si elle existe)



Model / Type Ref.
Ref. De type

GLM75A, GLM75B, GLM75C, GLM75D, GLM75E,
GLM775F, GLM75H, GLM75J, GLM75P.
Model may be followed by suffix -L for chassis bracket, -C or -
LC for chassis/cover, or -V for Voltage Adj. Pot (+5.1 V).

Additional information (if necessary may also be reported on page 2)
Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

PUBLICATION EDITION
IEC 60601-1 2:1988
Amendment No 1 (1991) and Amendment No 2 (1995),
excluding requirements for Electromagnetic Compatibility
(Clause 36), Biocompatibility (Clause 48) and Programmable
Electronic Systems (Clause 52.1)
Including National Differences: AU, CA, DK, IL, KR, US, per
CB Bulletin 107A

As shown in the Test Report Ref. No. which forms part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

CB 150684 - 1288951 (1748157)

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification



CSA International
178 Rexdale Boulevard
Toronto, ON M9W 1R3

Date: January 16, 2006

Signature: Timo Venalainen, P. Eng.

Rating and Principal Characteristics

Rating.....: Input: 100-240 V ac, 50/60 Hz, 3.1 A

Outputs:

Output: Maximum Continuous Power, total of all outputs at ambient of 50°C.	Standard & -L option		With Chassis/Cover (Note 5)	
	26 CFM	0 CFM	26 CFM	0 CFM
	110 Watts	75 Watts	110 Watts	65 Watts

MODEL	Outputs			Outputs		
		Note 2	Note 3		Note 2	Note 3
GLM75A	1) +5.1 V	8 A	10 A	2) +12 V	2.5 A	3.0 A
	3) -12 V	1.0 A	1.0 A	4) +12 V	2.5 A	3.0 A
GLM75B	1) +5.1 V	8 A	10 A	2) +12 V	2.5 A	3.0 A
	3) -5 V	1.0 A	1.0 A	4) +12 V	2.5 A	3.0 A
GLM75C	1) +5.1 V	8 A	10 A	2) +12 V	2.5 A	3.0 A
	3) -15 V	1.0 A	1.0 A	4) +15 V	2.5 A	3.0 A
GLM75D	1) +5.1 V	8 A	10 A	2) +24 V	2.5 A	2.5 A
	3) -12 V	1.0 A	1.0 A	4) +12 V	2.5 A	3.0 A
GLM75E	1) +5.1 V	8 A	10 A	2) +24 V	2.5 A	2.5 A
	3) -15	1.0 A	1.0 A	4) +15 V	2.5 A	3.0 A
GLM75F	1) +5.1 V	8 A	10 A	2) +15 V	2.5 A	3.0 A
	3) -5 V	1.0 A	1.0 A	4) -15 V	2.5 A	3.0 A
GLM75H	1) +5.1 V	8 A	10 A	2) +15 V	2.5 A	3.0 A
	3) -15 V	1.0 A	1.0 A	4) +15 V	2.5 A	3.0 A
GLM75J	1) +5.1 V	8 A	10 A	2) +12 V	2.5 A	3.0 A
	3) -12 V	1.0 A	1.0 A	4) 5 V	2.0 A	3.0 A
GLM75P	1) +5.1 V	8 A	10 A	2) +24 V	4.0 A	4.0 A
	3) -12 V	1.0 A	1.0 A	4) +12 V	2.5 A	3.0 A

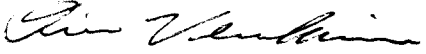
Notes:

1. Maximum operating ambient is 50 °C.
2. Maximum ratings for 0 CFM airflow without chassis/cover.
3. Maximum ratings for 26 CFM airflow.

Additional information (if necessary)

Information complémentaire (si nécessaire)

Date: January 16, 2006

Signature:  Timo Venalainen, P. Eng.

File E116994
Project 96SC12407

Issued: November 26, 1996
Revised: October 19, 2006

REPORT

ON

COMPONENT - POWER SUPPLIES, MEDICAL AND
DENTAL EQUIPMENT

SL Power Electronics Corp.
Ventura, California

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DESCRIPTION

PRODUCT COVERED:

Component - Switching Power Supplies, Medical and Dental, Models GLM75 followed by suffixes A, A-103, B, C, D, E, F, H, H-101, J, or P, may or may not be followed by -L, -C or -LC, and/or -V. May or may not be followed by an Optional "G", which indicates compliance with RoHS. (RoHS compliance has not been evaluated by UL.)

ELECTRICAL RATINGS:

Input: 100-240 V ac, 50/60 Hz, 3.1 A.

Output: Maximum Continuous Power, total of all outputs at ambient of 50 °C.	Standard & -L option		With Chassis/Cover (Note 5)	
	26 CFM	0 CFM	26 CFM	0 CFM
	110 Watts	75 Watts	110 Watts	65 Watts

MODEL	Output #1			Output #2			Output #3			Output #4		
		Note 2	Note 3		Note 2	Note 3		Note 2	Note 3		Note 2	Note 3
GLM75A	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75A-103	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A				-12 V	2.5 A	3.0 A
GLM75B	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-5 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75C	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75D	+5.1 V	8 A	10 A	+24 V	2.5 A	2.5 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75E	+5.1 V	8 A	10 A	+24 V	2.5 A	2.5 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75F	+5.1 V	8 A	10 A	+15 V	2.5 A	3.0 A	-5 V	1.0 A	1.0 A	-15 V	2.5 A	3.0 A
GLM75H	+5.1 V	8 A	10 A	+15 V	2.5 A	3.0 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75H-101	+5.1 V	8 A	10 A	+15 V	2.5 A	3.0 A	-15 V	1.0 A	1.0 A	+16 V	2.5 A	3.0 A
GLM75J	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-12 V	1.0 A	1.0 A	5 V	2.0 A	3.0 A
GLM75P	+5.1 V	8 A	10 A	+24 V	4.0 A	4.0 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A

Notes:

- Model may be followed by -L for chassis bracket, -C or -LC for chassis/cover, or -V for Voltage Adj. Pot (+5.1V).
- Maximum ratings for 0 CFM airflow without chassis/cover.
- Maximum ratings for 26 CFM airflow.
- Maximum Operating Relative Humidity 96 %, no condensation.
- Contact Condor Technical Support for airflow requirements when using chassis/cover option.
- Storage: -40 to +85 °C. Units should be allowed to warm-up under non-condensing conditions before application of power.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

For use in product where the acceptability of the combination is determined by Underwriters Laboratories Inc.

This product was evaluated to the Standard For Medical Electrical Equipment, Part 1: General Requirements for Safety, UL 60601-1. An insulation diagram is provided as ILL. 3.

Condition of Acceptability - When installed in the end-use equipment, the following are among the considerations to be made:

1. **This component has been judged on the basis of the required spacings in the Standards for Medical Electrical Equipment, Part 1: General Requirements for Safety, UL 60601-1, which covers the end use product for which the component is designed.**
2. The component shall be installed in compliance with the enclosure, mounting, spacing, casualty markings and segregation requirements of the end-use application.
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.
4. The input/output connectors are not acceptable for field connections, 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).
5. The component should be properly bonded to ground in the end-use equipment.

- 6.* The Temperature Tests were as performed in a raised ambient of 50°C.,
7. The main isolation transformer, T3, complies with Class 155 limits.
8. Leakage current testing should be repeated in the end product application.
9. The power supply was evaluated as Reinforced insulation between primary and secondary; basic insulation between primary to ground and secondary to ground.
10. 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 anaesthetic mixture with air, oxygen, or nitrous oxide.
11. Fusing in the end-product shall be considered since primary fusing of both sides on the mains supply line was not provided (3.15 A fuse provided on input line side).
12. Under normal and single fault conditions, the outputs do not exceed 25 V ac or 60 V dc.

Certificate of Compliance

Certificate: 1288950 (LR 46516C)

Master Contract: 150684

Project: 1469263

Date Issued: August 18, 2003

Issued to: **Condor D.C. Power Supplies Inc.**
2311 Statham Parkway
Oxnard, CA 93033
USA

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US'




Issued by: Kourosh Saysan,
 Engineering Technologist



Authorized by: Terry Nagy,
 Operations Manager

PRODUCTS

CLASS 5311 20 - POWER SUPPLIES - For Use in Medical Equipment
 CLASS 5311 96 - POWER SUPPLIES - Component Acceptance - Certified to US Standards

Component Power Supply for use in Medical Equipment, where the suitability of the combination is to be determined by CSA International.

Input: 100-240 V ac, 3.1 A, 50/60 Hz

Output: Maximum Continuous Power, total of all outputs at ambient of 50°C.	Standard & -L option		With Chassis/Cover (Note 5)	
	26 CFM 110 Watts	0 CFM 75 Watts	26 CFM 110 Watts	0 CFM 65 Watts

The 'C' and 'US' indicators adjacent to the CSA Mark signify that the product has been evaluated to the applicable CSA and ANSI/UL Standards, for use in Canada and the U.S., respectively. This 'US' indicator includes products eligible to bear the 'NRTL' indicator. NRTL, i.e. National Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognised to perform certification to U.S. Standards.

Certificate: 1288950 (LR 46516C)
Project: 1469263

Master Contract: 150684
Date: August 18, 2003

MODEL	Output #1			Output #2			Output #3			Output #4		
		Note 2	Note 3		Note 2	Note 3		Note 2	Note 3		Note 2	Note 3
GLM75A	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75A-103	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A				-12 V	2.5 A	3.0 A
GLM75B	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-5 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75C	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75D	+5.1 V	8 A	10 A	+24 V	2.5 A	2.5 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75E	+5.1 V	8 A	10 A	+24 V	2.5 A	2.5 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75F	+5.1 V	8 A	10 A	+15 V	2.5 A	3.0 A	-5 V	1.0 A	1.0 A	-15 V	2.5 A	3.0 A
GLM75H	+5.1 V	8 A	10 A	+15 V	2.5 A	3.0 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75H-101	+5.1 V	8 A	10 A	+15 V	2.5 A	3.0 A	-15 V	1.0 A	1.0 A	+16 V	2.5 A	3.0 A
GLM75J	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-12 V	1.0 A	1.0 A	5 V	2.0 A	3.0 A
GLM75P	+5.1 V	8 A	10 A	+24 V	4.0 A	4.0 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A

Notes:

1. Model may be followed by -L for chassis bracket, -C or -LC for chassis/cover, or -V for Voltage Adj. Pot (+5.1 V).
2. Maximum ratings for 0 CFM airflow without chassis/cover.
3. Maximum ratings for 26 CFM airflow.
4. Maximum Operating Relative Humidity 96%, no condensation.
5. Contact Condor Technical Support for airflow requirements when using chassis/cover option.
6. Storage: -40 to +85°C. Units should be allowed to warm-up under non-condensing conditions before application of power.

APPLICABLE REQUIREMENTS

- CAN/CSA Standard C22.2 No. 601.1-M90 - Medical Electrical Equipment
 UL Standard 2601-1, 2nd Edition - Medical Electrical Equipment, Part 1: General Requirement for Safety

Certificate: 1288950 (LR 46516C)

Master Contract: 150684

Project: 1469263

Date: August 18, 2003

CONDITIONS OF ACCEPTABILITY

1. This component has been judged on the basis of the required spacings in the Standard for Medical Electrical equipment, Part 1: General Requirements for Safety, CAN/CSA-C22.2 No. 601.1-M90 and UL 2601-1, which covers the end-use product for which the component is designed.
2. The enclosure provided with this equipment does not meet the applicable requirements for Fire or Electrical enclosures. Suitable enclosure to be provided in the end-use equipment.
3. The input/output connectors are not acceptable for field connections, they are only intended for connection to mating connectors of internal wiring inside the end-use equipment.
4. The main isolation transformer (T3) is provided with Class F insulation.
5. The output circuits have not been evaluated for direct patient connection (Type B, BF or CF).
6. The power supply has been evaluated for patient care equipment, but not patient connected.
7. The temperature tests were performed in a raised ambient of 50°C.
8. The power supply was evaluated for Reinforced insulation between primary and secondary, and Basic insulation between primary and ground, based on min 250 V ac.
9. The power supply has been evaluated as Class I equipment, 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.
10. Under normal and single fault conditions, the outputs do not exceed 25 V ac or 60 V dc.
11. The internal fuse is located in the phase lead only. CAN/CSA-C22.2 No. 601.1-M90, and UL 2601-1 requires that both supply leads (phase and neutral) be protected against overcurrent except for permanently installed equipment. Complete overcurrent protection must be provided in the end-use equipment. Fuse ratings must not exceed that specified for the internal fuse.



CSA INTERNATIONAL

Supplement to Certificate of Compliance

Certificate: 1288950 (LR 46516C)

Master Contract: 150684

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Edition	Date	Description
1	March 1, 2002	Original Certification. (Re-issued Report LR 46516-244C as Report 1288950 and updated to add Models GLM75F, GLM75H and GLM75J).
2	September 26, 2002	Added Model GLM75H-101 and made minor corrections to the report. (1352174)
3	August 18, 2003	Update report to add Model GLM75A-103. (1469263)



CERTIFICATE

No. B 03 08 14549 013

Holder of Certificate: Condor DC Power Supplies, Inc.

2311 Statham Parkway
Oxnard, CA 93033
USA

Certification Mark:



Product: Switching power supply unit

The product was tested on a voluntary basis and complies with the essential requirements.
The certification mark shown above can be affixed on the product. See also notes overleaf.

Test report no.: SI303210-103

Date, 2003-08-21



Page 1 of 4



CERTIFICATE

No. B 03 08 14549 013

Model(s): **GLM75 Series**
MSP 1690
see attachment 1 for additional models

Parameters:

Rated Input Voltage:	100-240 V AC
Rated Frequency:	50/60Hz
Rated Input Current:	see attachment
Rated Output Voltage:	see attachment
Rated Output Current:	see attachment
Protection Class:	I
Degree of Protection(IP):	IPXO

Remarks: When installing the equipment, all requirements of the standard must be met.

See attachment 1 for additional information

Tested according to: **EN 60601-1: 1990** **+A13: 1996**

Production Facility(ies): **16784**

A handwritten signature in black ink, appearing to be 'H. He'.



Attachment to Condor DC Power Supplies, Inc. Certificate B 03 08 14549 013 GLM75 Series and MSP1690

***Model Numbers:** Special conditions/options apply for most models below. Please reference Notes section and refer to Installation Instructions for additional information. Rated Input Current: 3.1 A

Output:				Standard & -L				With Chassis/Cover (Note 5)				
Maximum Continuous Power, total of all outputs at ambient of 50°C				26 CFM 110 Watts		0 CFM 75 Watts		26 CFM 110 Watts		0 CFM 65 Watts		
*Model	Output #1			Output #2			Output #3			Output #4		
	+V	I _{max}	I _{max}	+V	I _{max}	I _{max}	+V	I _{max}	I _{max}	+V	I _{max}	I _{max}
GLM75A	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75B	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-5 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75C	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75D	+5.1 V	8 A	10 A	+24 V	2.5 A	2.5 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75E	+5.1 V	8 A	10 A	+24 V	2.5 A	2.5 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75F	+5.1 V	8 A	10 A	+15 V	2.5 A	3.0 A	-5 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75H	+5.1 V	8 A	10 A	+15 V	2.5 A	3.0 A	-15 V	1.0 A	1.0 A	+15 V	2.5 A	3.0 A
GLM75J	+5.1 V	8 A	10 A	+12 V	2.5 A	3.0 A	-12 V	1.0 A	1.0 A	5 V	2.0 A	3.0 A
GLM75P	+5.1 V	8 A	10 A	+24 V	4.0 A	4.0 A	-12 V	1.0 A	1.0 A	+12 V	2.5 A	3.0 A
GLM75H-101	+5.1V	8 A	10 A	+15V	2.5 A	3.0 A	-15V	1.0 A	1.0 A	+16V	2.5 A	3.0 A
GLM75A-103	+5.1V	8 A	10 A	+12V	2.5 A	3.0 A	N/A	N/A	N/A	-12V	2.5 A	3.0 A

***Notes:**

1. Model may be followed by -L for chassis bracket, -C or -LC for chassis/cover, -V for Voltage Adj. Pot (+5.1 V) or -CV for Both -V and -CV options.
2. Maximum ratings for 0 CFM airflow without chassis/cover.
3. Maximum ratings for 26 CFM airflow.
4. Maximum Operating Relative Humidity 96%, no condensation.
5. Contact Condor Technical Support for airflow requirements when using chassis/cover option.
6. Wattage ratings are maximum continuous power, total of all outputs at ambient of 50°C
7. Storage: -40°C to +85°C. Units should be allowed to warm-up under non-condensing conditions before application of power.
8. Degree of protection against electric shock = Signal output or intermediate.
9. Mode of operation: Continuous
10. This model of power supplies has not been evaluated for applied part outputs for accessible parts circuits.
11. The end application shall have the line a neutral fused
12. The point on the power supply that is designated as earth-ground shall be connected to a protective earth in the end-use device.



*Single Output

***Model Numbers:** Model GLM75-X where “X” represents the output voltage, which may be any number from 5 thru 28. Models may be followed by suffix -L for chassis bracket.

***Rated Input Current:** 3.0 A

***Output:** 5 thru 28 V, 20 thru 4 A

70 W maximum for output voltages from 5- thru 11 V with convection cooling

75 W maximum for output voltages from 12 thru 28 V with convection cooling

100 W maximum for output voltages from 5 thru 11 V with 26 CFM forced air cooling

110 W maximum for output voltages from 12 thru 28 V with 26 CFM forced air cooling

MSP1690


Rated Input Current: 3.0 A

Output: 18 V dc/4.2A with convection cooling or 18 V dc/6.1 A with 26 CFM forced air cooling

Certificate with Attachment issued under ACT project report # SI303210-103 to replace B 02 09 14549 251.

Department: MHSUSSD/BJA

Date: August 21, 2003


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Report SI303210-103