



Ref. Certif. No.

US/8650/UL

IEC SYSTEM FOR CONFORMITY TESTING AND CERTIFICATION OF ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ESSAIS DE CONFORMITE ET DE CERTIFICATION DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

# CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product  
Produit

Name and address of the applicant  
Nom et adresse du demandeur

Name and address of the manufacturer  
Nom et adresse du fabricant

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

Rating and principal characteristics  
Valeurs nominales et caractéristiques principales

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

Model / Type Ref.  
Ref. de type

Additional information (if necessary)  
Information complémentaire (si nécessaire)

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

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

## Power Supply

Condor D C Power Supplies Inc.  
2311 Statham Pky  
Oxnard, CA 93033, USA

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Oxnard, CA 93033, USA

- Industrias SI, S.A. de C.V.  
Costa Rica No. 60, Col. Cuahutemoc, Mexicali, B.C. Mexico
- Flash Electronics Inc. (Shanghai), No. 2 Gutang Road, W E D Z  
Wujiang City, Suzhou Jiangsu Province, China
- Shanghai Ges Information Technology Co., Ltd.  
Zhangjiang Hi Tech Park, 668 Li Shi Zhen Rd., 201203 Shanghai, China

Input: 100-240 Vac, 50/60 Hz, 3.0 A  
Output: 5 thru 28 V, 20 thru 4 A  
70 W max. for 5-11 V, 75 W max. for 12-28 V (with convection cooling)  
100 W max. for 5-11 V, 110 W max. for 12-28 V (with 26 CFM forced air cooling).

Not applicable

GLM75-X, where X is any number from 5 to 28, which represents the output voltage rating. May be followed by suffix -L to indicate optional chassis bracket.

This report comprises 6 enclosures.

PUBLICATION

EDITION

IEC 60601-1 (1988) Second Edition, with Amendment No. 1 (1991) and No. 2 (1995) with the exception of: Clause 36, Electromagnetic Compatibility, Clause 48, Biocompatibility, and Clause 52.1, Programmable Electronic Systems. Inclusive of CENELEC Common Modifications. See Test Report for National Differences.

E116994-A15-CB-1

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



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Date: Issued: 2004 September 1

Signature:

Jolanta M. Wroblewska

File E116994  
Project 97SC11830

1997-10-17

REPORT

ON

COMPONENT - POWER SUPPLIES,  
MEDICAL AND DENTAL EQUIPMENT

Condor D C Power Supplies Inc.  
Oxnard, California

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## DESCRIPTION

## PRODUCT COVERED:

\* Component - Switching Power Supply, Medical and Dental, Models GLM75-X where X is any number from 5 thru 28. May or may not be followed by -L and/or -V.

## ELECTRICAL RATINGS:

\*Input: 100-240 V ac, 3.0 A, 50/60 Hz

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

**70 W max for output voltages from 5 thru 11 V with convection cooling**

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

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

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

## 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 First Edition of the Standard For Medical Electrical Equipment, Part 1: General Requirements for Safety, UL **60601-1**. An Insulation Diagram is provided as ILL. 1.

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 First Edition of 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.
5. The output circuits have not been evaluated for direct patient connection (Type B, BF or CF).
6. The component should be properly bonded to ground in the end-use equipment.
7. The Temperature Test was performed in a raised ambient of 50°C, without forced air cooling with a 75 W output load condition, and with a 26 CFM fan, 2.1 in. above unit center, blowing down with a 110 W output load condition.
8. The main isolation transformer, T3, complies with Class 155°C limits.
9. Leakage current testing should be repeated in the end product application.
10. The power supply was evaluated as reinforced insulation between primary and secondary; basic insulation between primary to ground; and operational insulation only between secondary to ground.

11. The power supplies have been evaluated as Class I, continuous operation, ordinary equipment and have not been evaluated for use in the presence of a flammable anaesthetic mixture with air, oxygen, or nitrous oxide.
12. Fusing in the end-product shall be considered since primary fusing of both sides on the mains supply line was not provided (3.5 A fuse provided on input line side).
13. Under normal and single fault conditions, the outputs do not exceed 25 V ac or 60 V dc.



# Statement of Compliance

Condor Report: 230

Master Contract: 150684 (LR 46516C)

Edition: 2

Date Issued: August 11, 2004

Issued by: **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*



Issued by: Ross Sacolles

Signature: Ross Sacolles

## PRODUCTS

CLASS 5311 20 - POWER SUPPLIES - For Use in Medical Equipment

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

**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.

Input: 100-240 V ac, 3.0 A, 50/60 Hz

Output: 5 thru 28 V, 20 thru 4 A (L3M1)

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

Notes:

1. Maximum Operating Ambient Temperature 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.

This is to certify that the equipment indicated above has been tested, evaluated and found to comply to all relevant CSA International requirements. This equipment is eligible to bear the CSA Mark as authorized by the CSA Category Certification Program under Master Contract No. 150684 (LR 46516C).

## APPLICABLE REQUIREMENTS

CAN/CSA Standard C22.2 No. 601.1-M90 - Medical Electrical Equipment

## 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, 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 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.



*Supplement to Statement of Compliance*

**Condor Report:** 230

**Master Contract:** 150684 (LR 46516C)

**Edition:** 2

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



**Issued by:** Ross Sacolles

**Signature:** Ross Sacolles

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

**CSA Category Certification Product History Record**

<b>Edition</b>	<b>Date</b>	<b>Description</b>	<b>CSA Reviews</b>
1	July 25, 2002	Original Certification. (Re-issued Report LR 46516-259C/Report No. 1113663 Edition 1/Condor Report No. 162 Rev. D as Condor Report No. 230 Edition 1, updated to revise model designations, and upgrade to CSA 601.1-M90).	
2	August 11, 2004	Deleted Model MSP1690 and updated transformer construction with 2L – Kapton or Tefzel magnet wires.	
3			
4			



# CERTIFICATE

No. B 04 08 14549 042



**Holder of Certificate:** Condor DC Power Supplies, Inc.

2311 Statham Parkway  
Oxnard, CA 93033  
USA

**Certification Mark:**



**Product:** Power supply for medical use  
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,** 2004-08-30



134916

Page 1 of 4

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

**CERTIFICATE**  
**No. B 04 08 14549 042**



**Model(s):** **GLM75 Series**  
**See attachment for additional models.**

**Parameters:**

Rated Input Voltage:	100 - 240 V AC
Rated Frequency:	50 / 60 Hz
Rated Input Current:	See attachment
Rated Output Voltage:	See attachment
Rated Output Current:	See attachment
Protection Class:	I
Degree of Protection(IP):	IPX0

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

See attachment for additional information.

**Tested according to:** EN 60601-1/A13:1996

**Production Facility(ies):** 16784

A handwritten signature in black ink, appearing to be 'V. H. H.', located below the production facility information.



PRODUCT SERVICE

ATTACHMENT TO CERTIFICATE NO. B 04 08 14549 042
FOR CONDOR DC POWER SUPPLIES, INC

GLM75 Series

\*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

Table with 3 columns: Output, Standard & -L, With Chassis/Cover (Note 5). Rows show Maximum Continuous Power, total of all outputs at ambient of 50°C for 26 CFM and 0 CFM airflow.

Main table with columns: \*Model, Output #1, Output #2, Output #3, Output #4. Each output column has sub-columns for Note 2 and Note 3. Rows list models from GLM75A to GLM75A-103 with their respective voltage and current ratings.

\*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.

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**ATTACHMENT TO CERTIFICATE NO. B 04 08 14549 042  
FOR CONDOR DC POWER SUPPLIES, INC**

**\*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

Certificate with Attachment issued under Project # SI400305-126  
Department: MHSUSSD/HP

