D E S C R I P T I O N

PRODUCT COVERED:

* Component - Switching Power Supplies for use in Medical and Dental Equipment, Models MSP 1676, GPM225-5, -12, -15, -24, and -28.

ELECTRICAL RATING:

Input: Models GPM 225 Series:
100-240 V ac, 47-63 Hz, 5.5 A

* Model MSP 1676:
100-240 V ac, 47-63 Hz, 5.5 A

BN/BB:cj
SCDLS

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

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

* The products, models MSP 1676, GPM225-5, -12, -15, -24, and -28, were evaluated to the Second Edition of the Standard for Medical and Dental Equipment, UL 544; and the First Edition of the Standard For Medical Electrical Equipment, Part 1: General Requirements for Safety, UL 2601-1. An insulation diagram is provided as Ill. 4 and the manufacturer's installation instructions are provided as Ill. 1.

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

1.* The power supplies, models MSP 1676, GPM225-5, -12, -15, -24, and -28, have 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 2601-1, and the second edition of the Standard for Medical and Dental Equipment, UL 544, which covers the end use product for which the component is designed.

2. The device 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. All transformers comply with Class 155 limits.

4. Input and output connectors, when provided, are not acceptable for field connections, they are only intended for connection to mating connectors of internal wiring inside the end-use machine. The acceptability of the mating connectors relative to secureness, insulating materials, and temperature shall be considered.

5. The end-use product shall ensure that a fuse warning marking is provided adjacent to the primary fuse (F1). The marking shall include the following wording: "WARNING - For continued protection against risk of fire, replace only with the same type and ratings of fuse" and the fuse ratings. The minimum letter height 7/64 in.

6. The power supply should be properly bonded to ground in the end-use product.

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7. The power supply has been evaluated for patient care equipment, but not patient connected.

8. The output circuits have not been evaluated for direct patient connection (Type B, BF or CF).

9. This power supply has been evaluated for use in 25°C ambient. The end use product shall ensure that the airflow and power ratings listed in the installation instruction's electrical ratings output table are not exceeded (see Ill. 1).

10. Leakage current testing should be repeated in the end product application.

11. The UL 2601 power supplies were evaluated as Reinforced insulation between primary and secondary; basic insulation between primary to ground; and operational insulation only between secondary to ground.

12. The UL 2601 power supplies have 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.

13. Fusing in the end product shall be considered since only one fuse rated 7 A, 250 V is provided in the hot side of the input supply circuit.

14. For the UL 2601-1 power supplies, under normal and single fault conditions, the outputs do not exceed 25 V ac or 60 V dc.

CSA INTERNATIONAL

Certificate of Compliance

Certificate Number: LR 46516-143C

Revision: LR 46516-305C

Date Issued: July 13, 1999

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

Issued by: Shane Stevenson, AScT.

Signature:

PRODUCTS

5311 03 - POWER SUPPLIES - Component Type

Component power supplies for use with Information Processing and Business Equipment, where the suitability of the combination is to be determined by the Canadian Standards Association.

Model GPC225-5 and GPM225-5, (Level 5), input rated 100-240 V (continuous), 47-63 Hz, 5.5 A; dc output rated 5 V/45 A; 225 W with 26 cfm airflow, with or without cover; 170 W with convection cooling, 150 W with cover.

Model GPC225-12 and GPM225-12, (Level 5), input rated 100-240 V (continuous), 47-63 Hz, 5.5 A; dc output rated 12 V/19 A; 225 W with 26 cfm airflow, with or without cover; 190 W with convection cooling, 180 W with cover.

Model GPC225-15 and GPM225-15, (Level 5), input rated 100-240 V (continuous), 47-63 Hz, 5.5 A; dc output rated 15 V/15 A; 225 W with 26 cfm airflow, with or without cover; 190 W with convection cooling, 180 W with cover.

Model MSP1676, (Level 5), input rated 100-240 V (continuous), 47-63 Hz, 5.5 A; dc output rated 16.5 V/13.6 A; 225 W with 26 cfm airflow, with or without cover; 190 W with convection cooling, 180 W with cover.

Model GPC225-24 and GPM225-24, (Level 5), input rated 100-240 V (continuous), 47-63 Hz, 5.5 A; dc output rated 24 V/9.4 A; 225 W with 26 cfm airflow, with or without cover; 200 W with convection cooling, 190 W with cover.

Model GPC225-28 and GPM225-28, (Level 5), input rated 100-240 V (continuous), 47-63 Hz, 5.5 A; dc output rated 28 V/8 A; 225 W with 26 cfm airflow, with or without cover; 200 W with convection cooling, 190 W with cover.

Notes:

1. Maximum ambient temperature for continuous output power specified is 50°C.
2. Model numbers may be provided with suffix -C, denoting the optional cover.

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 234-M90 - Safety of Component Power Supplies

Certificate

No: B 99 06 14549 156

TÜV PRODUCT SERVICE

Condor DC Power Supplies Inc.

2311 Statham Parkway
Oxnard, CA 93033
USA

with production facilities
16784

is authorized to label the following products with the
certification mark E
as shown in the certification mark list. See also notes overleaf.

Product: **Netzgeräte für med. Verwendung**
Switching power supply unit

Model: **GPM225-5, GPM225-12, GPM225-15, GPM225-24, GPM225-28**
MSP 1676

Parameters:

Rate Input Voltage:	100 - 240 V AC
Rated Frequency:	47 - 63 Hz
Rated Input Current:	5.5 A
Rated Output Voltage:	See Attachment
Rated Output Current:	See Attachment
Protection Class:	I

The product meets the relevant safety requirements and was tested according to (report no.: SM1I953801):

EN60601-1:1990+A1:1993+A2:1995

Released with the above certificate number by the certification body of TÜV PRODUCT SERVICE GMBH.

R - (B 97 03 14549 110)

Department: SDGMED / GV

Date: 06-30-99

TÜV
PRODUCT SERVICE

Attachment to Condor DC Power Supplies Certificate BL 99 06 14549 156

Model	Volts	Maximum Output Amps And Watts			I_{sc}
		Convection Cooling		Forced Air Cooling (1)	
		Without Cover	With Cover	With & Without Cover	
GPM225-5	5	34.0A 170W	30.0A 150W	45.0A 225W	57.5A
GPM225-12	12	15.8A 190W	15.0A 180W	19.0A 225W	56.9A
GPM225-15	15	12.7A 190W	12.0A 180W	15.0A 225W	25.4A
GPM225-24	24	8.3A 200W	7.9A 190W	9.4A 225W	25.4A
GPM225-28	28	7.1A 200W	6.8A 190W	8.0A 225W	27.9A
MSP1676	16.5	11.5A 190W	10.9A 180W	13.6A 225W	25.4A

Notes:

1. Minimum airflow for forced air cooling is 26 cfm.
2. Maximum ambient temperature for continuous output power specified above is 50°C.
3. I_{sc} = Maximum output short circuit current.
4. Maximum operating Relative Humidity 96%, no condensation.

C. Luther

June 21, 1999

Project SM1I-9538-01