DESCRIPTION

PRODUCT COVERED:

Component - Switching Power Supplies for Use in Information Technology Equipment, Models GPM40A, GPM40B, GPM40D, GPC40A, GPC40B, GPC40D, GPC40-X and GPM40-X where X is any number from 3.3 through 28. May be followed by suffix –XXX where XXX may be any number from 001 thru 999, and/or suffix G.

ELECTRICAL RATINGS:

Input -100-240 V ac, 50/60 Hz, 1.3 A,
Output -

Model	V1	A1	V2	A2	V3	A3
GPM40A, GPC40A	12	2	5.1	4	-12	0.4
GPM40B, GPC40B	15	2	5.1	4	-15	0.4
GPM40D, GPC40D	24	1	5.1	4	-12	0.4
GPC40-3.3	3.3	8				
GPM40-5, GPC40-5	5	8				
GPC40-9	9	4.4				
GPM40-12, GPC40-12	12	3.4				
GPM40-15, GPC40-15	15	2.7				
GPM40-24, GPC40-24	24	1.7				
GPM40-28, GPC40-28	28	1.5				

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

This product was investigated under the U.S. and Canadian (Bi-National) Standard for Safety of Information Technology Equipment – Safety – Part 1: General Requirements, CSA C22.2 No. 60950-1-03 * UL 60950-1, First Edition.

This product is for use only in (or with) complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

The equipment is considered: Class I (earthed), intended for use on a TN power system.

Conditions of Acceptability - When installed in the end-use equipment, considerations shall be given to the following:

1. **This component has been judged on the basis of the required spacings in the Standard for Information Technology Equipment, Sub-clause 2.10, which would cover the component itself if submitted for unrestricted Listing.**

2. This power supply shall be installed in compliance with the enclosure, mounting, creepage, clearance, casualty, markings and segregation requirements of the end-use application.

3. The need for conducting leakage current tests is to be determined as part of the end-product evaluation.

4. This power supply has only been evaluated for use in a Pollution Degree 2 environment.

5. The input and output connectors have not been evaluated for field connections and are only intended for connection to mating connectors of internal wiring inside the end-use machine. The acceptability of these and the mating connectors relative to secureness, insulating materials, and temperature shall be considered.

6. **This power supply shall be properly bonded to earth in the end-use product as this unit was investigated for Class I construction as defined in UL 60950-1. The bonding terminal has not been investigated as a protective earthing terminal. An additional evaluation shall be made if the power supply is intended for use in other than Class I equipment.**

7. The secondary outputs of this power supply are considered SELV and non-energy hazardous energy levels.

8. This power supply was evaluated under the assumption that the power source is a TN-S system as defined by UL 60950-1.

9. This power supply has been evaluated for use in a 25°C and a 50°C ambient. An additional evaluation should be made if the power supply is intended to be used in an elevated ambient.

10. The end use product shall ensure that a fuse replacement warning for Fuse F1, Fig. 1, Item 2 is provided.

11. All power supplies, except Models GPC40-3.3, GPM40-3.3, GPC40-5, and GPM40-5 comply with the Limited Power Source requirement in Clause 2.5 of UL 60950-1.

12. All tests were conducted with an internal UL Listed fuse, rated T2.0 A, 250 V, and a 20 A external circuit breaker. Fuse located on the line side of the input.

13. The end-product Electric Strength Test is to be based upon a maximum working voltage of 442 Vpk maximum between Primary and Earthed Dead Metal, and 645 Vrms maximum between primary and secondary.

CONSTRUCTION DETAILS:

Internal Wiring - Unless otherwise noted, Listed or (AVLV2), rated minimum 105°C, 300 V, PVC, TFE, PTFE, FEP, or neoprene or surface marked "VW-1." All wiring routed away from sharp edges and moving parts.

Printed Wiring Boards - See Section General. The general appearance of the foil pattern shall not change from that detailed in ILL. 1.

Insulating Tubing/Sleeving - (YDPU2), (YDRY2) or (UZFT2), rated 105°C, 300 V.

Nameplate Marking - Recognized Company's name, model number, and (optional) electrical ratings.

Marking is located on the equipment in an area where tools are not necessary for gaining access to the marking and the part on which the marking is located is not likely to be discarded or lost.

Model Differences - Models GPC40A, B, D, and GPM40A, B, D are identical, except for output ratings. Each model has three outputs. The GPC models differ from the GPM models by the values of the Line-to-ground capacitors, and EMI Inductor.

Models GPC40-X, and GPM40-X are identical, except for output ratings. These are single output power supplies. The GPC models differ from the GPM models by the values of the line-to-ground capacitors, and EMI inductor.

Installation Instructions - Each model is provided with installation instructions as shown in ILL. 4.

Alternate construction – Power supplies built exactly the same as power supplies GPM40A, B, or D, except units are labeled as GPC40A, B, or D. GPC40A, B, D, and GPM40A, B, D models previously differ only in components T1 (EMI Inductor), and C3 & C4 (Y capacitors). Alternate components are described on the following pages.

Models followed by the suffix –XXX represents value added configurations that have no impact on safety.

Models followed by the suffix G indicates compliance to RoHS. (RoHS compliance has not been evaluated by UL)

CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1747735 (LR 46516-128C) **Master Contract:** 150684

Project: 1747735 **Date Issued:** 2006/01/30

Issued to: **Condor D.C. Power Supplies Inc.**

2311 Statham Pky
Oxnard, CA 93033
USA
Attention: Mr. Ross Sacolles

The products listed below are eligible to bear the CSA Mark shown

Issued by: Eugen Velea, MASc. E.Eng.

Authorized by: Shane Stevenson, Product Group Manager

PRODUCTS

CLASS 5311 07 - POWER SUPPLIES - Component Type - (CSA 60950-1-03)
CLASS 5311 20 - POWER SUPPLIES - Component Type - For Use in Medical Equipment

CLASS 5311 07 - POWER SUPPLIES - Component Power supplies for use in other equipment where the acceptability of the combination is to be determined by CSA International.

Model Numbers:

GPC40A, GPC40B, GPC40D, and GPC40-X, where X represents the output voltage, which may be any number from 3.3 through 28. Models may or may not be followed by suffix –XXX and/or G, where XXX may be any number from 001 thru 999. The –XXX suffix are used for value added configurations that have no impact on safety and suffix G indicates compliance to RoHS (lead-free).

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CSA INTERNATIONAL

Certificate: 1747735 (LR 46516-128C) **Master Contract:** 150684

Project: 1747735 **Date Issued:** 2006/01/30

Ratings:

Input: 100-240 V ac, 1.3 A, 50/60 Hz

Outputs: (L3M1) 40 W max or see table for standard output voltage models.

Model	Watts(1)	Output 1	Output 2	Output 3
GPC40A	40	+5.1 V dc 4 A	+12 V dc 2 A	-12 V dc 0.4 A
GPC40B	40	+5.1 V dc 4 A	+15 V dc 2 A	-15 V dc 0.4 A
GPC40D	40	+5.1 V dc 4 A	+24 V dc 1 A	-12 V dc 0.4 A
GPC40-3.3	26.4	+3.3 V dc 8 A		
GPC40-5	40	+5.0 V dc 8 A		
GPC40-9	40	+9.0 V dc 4.4 A		
GPC40-12	40	+12.0 V dc 3.4 A		
GPC40-15	40	+15.0 V dc 2.7 A		
GPC40-24	40	+24.0 V dc 1.7 A		
GPC40-28	40	+28.0 V dc 1.5 A		

Notes

1. Maximum ambient temperature for rated total 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.

CLASS 5311 20 - POWER SUPPLIES - Component power supplies for use in medical equipment where the suitability of the combination is to be determined by CSA International.

Model Numbers:

GPM40A, GPM40B, GPM40D, MSP1524, and GPM40-X, where X represents the output voltage, which may be any number from 3.3 through 28. Models may or may not be followed by suffix –XXX and/or G, where XXX may be any number from 001 thru 999. The –XXX suffix are used for value added configurations that have no impact on safety and suffix G indicates compliance to RoHS (lead-free).

CSA INTERNATIONAL

Certificate: 1747735 (LR 46516-128C) **Master Contract:** 150684

Project: 1747735 **Date Issued:** 2006/01/30

Ratings:

Input: 100-240 V ac, 1.3 A, 50/60 Hz

Outputs: (L3M1) 40 W max or see table for standard output voltage models.

Model	Watts(1)	Output 1	Output 2	Output 3
GPM40A	40	+5.1 V dc 4 A	+12 V dc 2 A	-12 V dc 0.4 A
GPM40B	40	+5.1 V dc 4 A	+15 V dc 2 A	-15 V dc 0.4 A
GPM40D	40	+5.1 V dc 4 A	+24 V dc 1 A	-12 V dc 0.4 A
GPM40-3.3	26.4	+3.3 V dc 8 A		
GPM40-5	40	+5.0 V dc 8 A		
GPM40-9	40	+9.0 V dc 4.4 A		
GPM40-12	40	+12.0 V dc 3.4 A		
GPM40-15	40	+15.0 V dc 2.7 A		
GPM40-24	40	+24.0 V dc 1.7 A		
GPM40-28	40	+28.0 V dc 1.5 A		
MSP1524	40	+24.0 V dc 1.7 A		

Notes

1. Maximum ambient temperature for rated total 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.

4. All outputs are intended for Signal Output and Intermediate Circuits only. The output is not acceptable for patient connection without additional isolation.

5. The outputs are SELV during normal and single fault conditions.

6. The isolation voltage from primary to secondary is 4000 V ac. The creepage distance between primary and secondary circuits is 8 mm minimum.

7. External overcurrent protection on the Neutral side of the line is required.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No 60950-1-03 Safety of Information Technology Equipment, Part 1: General Requirements

CAN/CSA-C22.2 No. 601.1-M90 Medical Electrical Equipment, Part 1: General Requirements for Safety

ZERTIFIKAT • CERTIFICATE • 認証書 • СЕРТИФИКАТ • CERTIFICADO • CERTIFICAT

CERTIFICATE

No. B 05 12 14549 263

Holder of Certificate: **Condor DC Power Supplies, Inc.**
2311 Statham Parkway
Oxnard, CA 93033
USA

Production Facility(ies): 16784

Certification Mark:

Product: **Power supplies**
AC/DC Switching Power Supply

Model(s): **GPC40 Series**

Parameters:

Rated Input Voltage:	100 - 240 VAC
Rated Frequency:	50 / 60 Hz
Rated Input Current:	1.3
Rated Output Voltage:	+5.1 VDC, +12 VDC, -12 VDC
Rated Output Current:	4 A, 2A, 0.4 A
Protection Class:	I (at end-use)
Maximum output power:	40 W see attachment.

See attachment for model details and
Conditions of Acceptability

Tested according to: EN 60950-1/A11:2004

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.: SI500149-129

Date, 2006-01-09

William A Weinstein

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TÜV AMERICA INC. • 5 Cherry Hill Drive • Danvers MA 01923 USA
TÜV Süddeutschland Group

ATTACHMENT TO CERTIFICATE NO. B 05 12 14549 26
FOR Condor DC Power Supplies, Inc.

MODEL NUMBERS: GPC40A, GPC40B, GPC40D, and GPC40-X, where X represents the output voltage, which may be any number from 3.3 through 28. Models may or may not be followed by suffix - XXX and/or G, where XXX may be any number from 001 thru 999. The XXX suffix are used for value added configurations that have no impact on safety and suffix G indicates compliance to RoHS (lead-free).

RATINGS:

Input: 100-240 V ac, 1.3 A, 50/60 Hz

Outputs: 40 W max or see table for standard output voltage models.

Model	Watts[1]	Output #1	Output #2	Output #3
GPC40A	40	+5.1 V dc 4 A	+12 V dc 2 A	-12 V dc 0.4 A
GPC40B	40	+5.1 V dc 4 A	+15 V dc 2 A	-15 V dc 0.4 A
GPC40D	40	+5.1 V dc 4 A	+24 V dc 1 A	-12 V dc 0.4 A
GPC40-3.3	26.4	3.3 V dc 8 A		
GPC40-5	40	5.0 V dc 8 A		
GPC40-9	40	9.0 V dc 4.4 A		
GPC40-12	40	12.0 V dc 3.4 A		
GPC40-15	40	15.0 V dc 2.7 A		
GPC40-24	40	24.0 V dc 1.7 A		
GPC40-28	40	28.0 V dc 1.5 A		

Notes:

1. Maximum continuous output power at 50 °C - Total of all Outputs.
2. Maximum 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 model requires:

1) A suitable fire enclosure at end use.
2) A reliable ground (Protective Earth) connection at end use.
3) Maximum operating ambient of 50°C.