File E100527
Project 89ME1009

May 25, 1989

REPORT

on

COMPONENT POWER SUPPLIES

Vicor Corporation
Andover, MA

R E P L A C E M E N T P A G E

The above referenced section of Procedure has been deleted from this volume, and transferred to Volume 3, Section 2.

DESCRIPTION

PRODUCT COVERED:

Component power supplies, Front End Series, Model Nos. VI-FaE6-bcX-xx may be followed by additional suffixes. VI may be replaced by IP for all models. Refer to Ill. 2.

GENERAL CHARACTER AND USE:

This product is a nonisolating ac to dc power supply, incorporating semiconductor components in its circuitry. It is provided with input and output terminals for connection to the the end use equipment. The power *supply has been investigated to UL 1244, Third Edition, The Standard for Electrical and Electronic Measuring and Testing Equipment and the Standard for Information Technology Equipment, Including Electrical Business Equipment, CAN/CSA C22.2 No.60950-00, UL60950, CAN/CSA C22.2 No. 950-95, UL1950, Third Edition. Based on the March 15, 1991 Industry Review and per the manufacturer's request, this section of this report was transferred to the category for Power Supplies For Use In Electronic Data Processing Equipment, and Power Supplies For Use In Information Technology Equipment Including Electrical Business Equipment.

NOMENCLATURE BREAKDOWN:

Model Number coding breakdown is specified in Ill. 2.

ELECTRICAL RATINGS:

Refer to Ill. 2 for nomenclature.

Model Differences:

Refer to Ill. 2

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

General - For use only in or with equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

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

*1. These components have been investigated to CSA 22.2 No. 60950 Standard for Information Technology Equipment including Electrical Business Equipment, Third Edition.

2. The power supply should be installed in compliance with the enclosure, mounting, spacing, casualty, and segregation requirements of the ultimate application.

3. Consideration should be given to measuring the temperatures on power electronic components, coils and transformer windings when the power supply is installed in the end-use equipment.

4. The output circuit has not been investigated for secondary interconnection or user accessibility.

5. A maximum external Listed fuse as specified below shall be provided in the ungrounded input of the end product. The need for fuse replacement markings shall be determined in the end product.

Model	Fuse Rating
VI-FxE6-xUX-xx	7 A
VI-FxE6-xQX-xx	12 A
VI-FxE6-xMX-xx	15 A

*6. These units have an earth leakage current which exceeds 3.5 mA at high frequency inputs. For units which operate at input frequencies higher than 63 Hz, the end-product must be provided with industrial type sockets or plugs and the cross-sectional area of the internal protective earthing conductor may not be less than 1.0 square mm, or the end-product must be additionally evaluated to determine acceptability with respect to leakage current requirements of UL 60950.

*7. If the end-product input frequency exceeds 63 Hz, the following marking must be provided:

"WARNING: HIGH LEAKAGE CURRENT - EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY."

9. The Normal Temperature Test was conducted with the unit laying flat in the following ambient:

VI-FxE6-xUX-xx	50°C
VI-FxE6-xQX-xx	50°C
VI-FxE6-xMX-xx	40°C

10. The input and output terminals are not acceptable 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 should be considered.

CONSTRUCTION DETAILS:

General - The design, shape, and arrangement of parts shall be as illustrated except where variations are specifically described. See Ill. 1 for schematic drawing.

Dimensions - All dimensions are approximate, unless otherwise noted.

Spacings - Min spacings between live parts of opposite polarity and between live and dead-metal parts shall be as indicated below.

*

*Potential Involved Volts V rms	Min Spacings, (mm) Creepage	Clearance
*0-50	1.2	0.7
*51-100	1.4	0.7
*101-150	1.6	0.7
*151-200	2.0	1.1
*201-250	2.5	1.6

*

Marking - All markings are located as described herein and provided on a Recognized Component (PGDQ2) Marking and Labeling Systems suitable for the *surface involved.

Identification - Includes Recognized Company's name or trademark and model designation.

Mechanical Assembly - Unless otherwise stated, all enclosure parts and component mounting assemblies are secured by welding or thread forming screws or machine screws provided with nuts and lockwashers.

Printed Wiring Boards - Unless otherwise specified, all boards are Recognized Components (ZPMV2), suitable for the solder time and temperature used by the manufacturer, and having a minimum flame rating of (94V-2) and an operating temperature rating of at least 105°C.

Corrosion Protection - Parts are of corrosion resistant material or plated or painted as corrosion protection.

Tolerances - Unless specified otherwise, all indicated dimensions are nominal.