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REPORT

on

COMPONENT - POWER SUPPLIES MEDICAL AND DENTAL

Astec Custom Power (Philippines) Inc
Pasig City 1605, Philippines

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DESCRIPTION

PRODUCT COVERED:

USR/CNR Power Supplies, Models LPS43-M, LPS44-M, LPS45-M for use in
Medical Electrical Equipment.

ELECTRICAL RATINGS:

<u>Model</u>	<u>Input</u>	<u>Maximum Output Current</u>	<u>Maximum Output Voltage</u>
LPS43-M	100-250 V ac 50/60 Hz 1.6 A 140-300 V dc 1.0 A	4.59 A	+12 V dc
LPS44-M	100-250 Vac 50/60 Hz 1.6 A 140-300 V dc 1.0 A	3.67 A	+15 V dc
LPS45-M	100-250 V ac 50/60 Hz 1.6 A 140-300 V dc 1.0 A	2.3 A	+24 V dc

ENGINEERING CONSIDERATIONS: (Not For Field Representative Use)

General - For use only in complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc. The product covered by this Report is Medical Electrical Equipment, intended for Use in Health Care Facilities.

In addition to UL 2601-1, the following standards were utilized during the investigation of the subject product:

CSA 22.2 No. 601.1

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

1. These components have been judged on the basis of the required creepages and clearances in the First Edition of the Standard for Medical Electrical Equipment, UL 2601-1, Subclause 57.10, which covers the end-use product for which the component was 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. The need for conducting leakage current tests is to be determined as part of the end-product evaluation.
4. The temperature test was conducted in a 30 CFM forced air box measuring 29.8 by 22.2 by 12.1 cm. See ILL. 1 (C9900679.I00) for details. 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. Transformer T1 employs a Class F electrical insulation system. Choke L3 employs a Class B electrical insulation system.
5. If the Fuse Replacement Marking is covered up on the Power Supply, then a Fuse Replacement Marking must be provided on the end-use product.
6. The input and output connectors are not acceptable for field connections and are only intended for connections to mating connectors of internal wiring inside the end-use product. The acceptability of these and the mating connectors relative to secureness, insulating materials, and temperatures shall be considered in the end-use product.

7. These power supplies have not been evaluated for patient connected applications.

8. The secondary output of transformer T1 is unearthed Safety Extra Low Voltage. Double Insulation, as described in Subclauses 57.9.4 and 57.10, separates the primary circuits from the secondary circuits in this power supply.

9. These power supplies have been evaluated for use in Class I, Type B, continuous operation, ordinary equipment and have not been evaluated for use in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide. An additional evaluation shall be made if the power supply is intended for use in other than Class I equipment.

10. This power supply has not been supplied with an enclosure. The suitability of the end-use enclosure shall be considered during the end-use evaluation.

11. The acceptability of the power supply mounting means shall be considered in the end-use evaluation.

12. These power supplies are not directly connected to earth ground of the branch circuit, they shall be properly bonded to earth ground in the end-use product.

13. Total output power is derated by 2.5% per °C from 50°C to 70°C ambient. The temperature test was conducted in natural convection cooling, output rating is "+12Vdc, 1.67A (for model: LPS43-m)", "+15Vdc, 1.34A (for model: LPS44-m)", "+24Vdc, 0.84A (for model: LPS45-m)", ambient temperature is 70 degree C.