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REPORT

On

COMPONENT - POWER SUPPLIES, INFORMATION TECHNOLOGY EQUIPMENT

Astec International Ltd Philippines Branch
Quezon City, Philippines

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component – Switching Power Supply, Models LPS103-M, LPS105-M, LPS102-M, LPS104-M, LPS108-M **and LPS109-M**.

ELECTRICAL RATINGS:

MODEL	INPUT	OUTPUT
LPS103-	AC 100 V – 250 V 50/60 Hz, 2.5A	150W Forced Air Cooling DC +12 V, 12.5 A max DC +12 V_fan, 1 A max
	DC 120 Vmin – 300 Vmax, 2 A	100W Convection Cooling DC +12 V, 8.3 A max DC +12 V_fan, 0.5 A max
LPS105-	AC 100 V – 250 V 50/60 Hz, 2.5A	150W Forced Air Cooling DC +24 V, 6.25 A max DC +12 V_fan, 1 A max
	DC 120 Vmin – 300 Vmax, 2 A	100W Convection Cooling DC +24 V, 4.15 A max DC +12 V_fan, 0.5 A max
LPS102-	AC 100 V – 250 V 50/60 Hz, 2.5A	120W Forced Air Cooling DC +5 V, 24 A max DC +12 V_fan, 1 A max
	DC 120 Vmin – 300 Vmax, 2 A	80W Convection Cooling DC +5 V, 16 A max DC +12 V_fan, 0.5 A max
LPS104-	AC 100 V – 250 V 50/60 Hz, 2.5A	150W Forced Air Cooling DC +15 V, 10 A max DC +12 V_fan, 1 A max
	DC 120 Vmin – 300 Vmax, 2 A	100W Convection Cooling DC +15 V, 6.67 A max DC +12 V_fan, 0.5 A max

LPS108-M	AC 100 V – 250 V 50/60 Hz, 2.5A	150W Forced Air Cooling DC +48 V, 3.1 A max DC +12 V_fan, 1 A max
	DC 120 Vmin – 300 Vmax, 2 A	100W Convection Cooling DC +48 V, 2.09 A max DC +12 V_fan, 0.5 A max
LPS109-M	**AC 100 V – 250 V** **50/60 Hz, 2.5A**	**150W Forced Air Cooling** **DC +54 V, 2.77 A max** **DC +12 VFAN, 1 A max**
	DC 120 Vmin – 300 Vmax, 2 A	**100W Convection Cooling** **DC +54 V, 1.85A max** **DC +12 VFAN, 0.5 A max**

Maximum Continuous Output Power is 100 W for LPS103-M, LPS105-M, LPS104-M and LPS108-M **and LPS109-M**, 80 W for LPS102-M with convection Cooling.

Maximum Continuous Output Power is 150 W for LPS103-M, LPS105-M, LPS104-M and LPS108-M **and LPS109-M**, 120 W for LPS102-M with 200LFM forced-air cooling.

See ILL. 3 for Cooling Diagram for details.

Total output power is derated by 2.5% per °C from 50°C to 70°C ambient.

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

General – The unit is for use in product where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Both USR and CNR indicate investigation to the Standard for Safety of Information Technology Equipment, UL 60950-1, Second Edition**, dated October 14, 2014** and CAN/CSA-C22.2 No. 60950-1-07, Second Edition**, dated October 14, 2014**.

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 Safety of Information Technology Equipment, UL 60950-1, Second Edition**, dated October 14, 2014** and CAN/CSA C22.2 No. 60950-1-07, Second Edition**, dated October 14, 2014**, Sub-clause 2.10 and Annex G (altitude requirement), which covers the end-use product for which the component was designed. The functional insulation has been evaluated by conducting Component Failure Test per Sub-clause 5.3.4(c) of UL 60950-1, Second Edition**, dated October 14, 2014** and CAN/CSA C22.2 No. 60950-1-07, Second Edition**, dated October 14, 2014**.

2. This component has only been evaluated for use in pollution degree 2 environment.

3. These power supplies have been evaluated with the assumption that the power source is a TN power system as defined by UL 60950-1, Second Edition**, dated October 14, 2014** and CAN/CSA C22.2 No. 60950-1-07, Second Edition**, dated October 14, 2014**.

4. A suitable electrical, mechanical and fire enclosure shall be provided by end use equipment.

5. These power supplies have been evaluated for use in Class I equipment as defined in UL 60950-1, Second Edition**, dated October 14, 2014** and CAN/CSA C22.2 No. 60950-1-07, Second Edition**, dated October 14, 2014** and shall be properly earthed or bonded to earth in the end-use. An additional evaluation shall be made if the power supply is intended for use in other than Class I equipment.

6. The input and output connectors have not been evaluated 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 are classified as Level 3 as defined by UL60950-1, **Second Edition, dated October 14, 2014** and CAN/CSA-C22.2 No. 60950-1-07, Second Edition**, dated October 14, 2014**.

8. Transformers T1 and T2 employ Class 155(F) electrical insulation system.

9. These power supplies are not evaluated for end system mounting. When installed in the end system, the proper evaluation should be considered.

10. The outputs of these power supplies are SELV and are non-hazardous energy levels.

11. The Clearances and Creepage Distances have additionally been assessed for suitability up to 3963 m elevation

12. These power supplies have been evaluated for use up to 50°C ambient. Total output power is derated by 2.5% per °C from 50°C to 70°C ambient.

13. The following cautionary markings shall be provided in the servicing instructions: Caution: Double Pole / Neutral Fusing

14. Additional UL Recognized Fuse, rated 300 Vdc, 2.5A suitable for DC application must be provided in the end-system for DC input.

15. The power supplies main output voltage is adjustable for +/- 10% **except for Model LPS109-M where main output voltage is adjustable for +5.5%/-10%.**