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Project 08CA05722

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REPORT

On

COMPONENT - POWER SUPPLIES, INFORMATION TECHNOLOGY EQUIPMENT

Astec International Ltd Philippines Branch
Quezon City, Philippines

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DESCRIPTION

PRODUCT COVERED:

USR, CNR Component - DC-DC Converter, Models DS550DC-3, DS550DC-3-002, DS550DC-3-003, DS450DC-3, DS450DC-3-002 for use in Information Technology Equipment.

ELECTRICAL RATINGS:

MODEL	INPUT	OUTPUT
DS550DC-3 / DS550DC-3-003	DC -40 V to -60 V	DC + 12 V 45.0 A
	18.0 A	DC + 3.3 Vsb 3.0 A
DS450DC-3 / DS450DC-3-002	DC -40 V to -60 V	DC + 12 V 36.67 A
	16.0 A	DC + 3.3 Vsb 3.0 A
DS550DC-3-002	DC -40 V to -75 V	DC + 12 V 45.0 A
	18.0 A	DC + 3.3 Vsb 3.0 A

Maximum Continuous Output Power is 550 W for DS550DC-3, DS550DC-3-002 and DS550DC-3-003; and 450 W for DS450DC-3 and DS450DC-3-002.

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. This component has 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, **October 14, 2014** and CAN/CSA C22.2 No. 60950-1-07, **Second Edition, dated October 14, 2014**.

2. These power supplies have only been evaluated for use in pollution degree environment.

3. These power supplies have been evaluated with the assumption that the power source is a TNV-2 power system as defined by UL 60950-1, Second Edition, **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, **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 secondary output of the power supply is considered SELV and the output (+12.0V) would represent energy hazardous, the unit shall be handled with care during end product installation. Sub-clause 2.2.3.1 per UL 60950-1, Second Edition, **October 14, 2014** and CAN/CSA-C22.2 No 60950-1-07, **Second Edition, dated October 14, 2014** were used to maintain the reinforced insulation of SELV from primary circuits.
7. These power supplies have been evaluated for use in 25°C and 45°C ambient.
- *8. Transformer T2 employs Class 155(F) electrical insulation system.
9. These power supplies were not evaluated for end system mounting.
10. The secondary DC output connector has not been evaluated for field connections.
11. These power supplies are classified as Level 5 as defined by UL 60950-1, Second Edition, **October 14, 2014** and CAN/CSA-C22.2 No. 60950-1-07, **Second Edition, dated October 14, 2014**.
12. Compliance to the temperature limits of user touchable parts and surfaces of the power supply shall be considered at the end system.
13. The clearance and creepage distances have additionally been assessed for suitability up to 3000m elevation.
14. The power supply maintains Basic insulation between TNV-2 input and SELV output. The transformer that separates the TNV-2 input to SELV output was tested for electric strength test suitable for Basic insulation in accordance with clause 2.2.4.
15. Basic insulation is maintained between TNV-2 input and protective earth.
16. The equipment disconnect device is considered to be input connector.
17. The class of laser product is Class 1(1).
18. These power supplies were evaluated for use with reverse fan option.

19. The following Production-Line tests are 100% conducted for these products: Earthing Continuity test and Electric Strength test.