DESCRIPTION

PRODUCT COVERED:

USR/CNR Component - Power Supplies, Model PAF600F24-12, PAF600F24-28, PAF600F48-12, PAF600F48-28, with or without suffixes.

For use in Information Technology Equipment Including Electrical Business Equipment

GENERAL CHARACTER AND USE:

The units covered by this Report are DC to DC converters. They are provided with input and output terminals for connection to the end use equipment.

RATINGS:

| | Input, dc | | Output, dc | |
|---|---|---|---|---|
| Model | V | A | V | A |
| PAF600F24-12 | 20-36 | 43 | 12 | 50 |
| PAF600F24-28 | 19-36 | 43 | 28 | 21.5 |
| PAF600F48-12 | 36-76 | 21 | 12 | 50 |
| PAF600F48-28 | 36-76 | 21 | 28 | 21.5 |

Maximum Output Power: 602W

The above may also include a Suffix /T which indicates the 4 corner studs have their threads removed.

Suffix /TK denotes high efficiency model with input 36-60 V dc, PAF600F48-12 only.

Suffix /TC – Indicates additional adhesive between daughter editorial PWB and plastic case.

Suffix /V – Indicates auto restart.

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

For use only in complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

USR/CNR indicates investigation to the US and Canadian (Bi-National) Standard for Safety of Information Technology Equipment, UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) and CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements).

USR, CNR indicates investigation to UL 62368-1, 2nd Edition, 2014-12-01 (Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements) and CSA C22.2 No. 62368-1-14, 2nd Edition, 2014-12-01 (Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements).

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

1. This component has been judged on the basis of the required spacings in the Standard for Safety of Information Technology Equipment, UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) and CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements), Sub. Clause 2.10, and UL 62368-1, 2nd Edition, 2014-12-01 (Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements), and CSA C22.2 No. 62368-1-14, 2nd Edition, 2014-12-01 (Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements)which would cover the component itself, if submitted for Listing. Note basic insulation at working voltages was assessed between the input and output.

Note: For 48 V units: During installation, it must be ensured that the positive input terminal and the positive output terminal are not connected to ground at the same time, because under a fault condition where the basic insulation of the transformer is shorted out, a hazard may occur. Other grounding conditions and fault conditions are acceptable. The handbook must include a statement to this effect. The above limitation for installation does not apply to the 24 V input Models.

2. The product shall be installed in compliance with the enclosure, mounting, creepage, casualty, markings and segregation requirements of the end use application. The DC to DC converters were tested with the heatsink mounted below the baseplate of the converters (worst case).

3. The equipment has been evaluated for use in a pollution Degree 2 environment, over voltage category II.

4. Consideration shall be given to measuring the temperature on power electronic components, inductors and transformer windings when the power supply is installed in the end use equipment. Transformers T101 and T102 employ a Class 180(H) insulation system and T1 employs a Class 155 (F) insulation system. It must be ensured that the baseplate temperature does not exceed: 48 V input models 100°C, 100% load; 24 V input models 100°C, 83% load, 85°C, 100% load. This temperature limit governs the working ambient temperature.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):CONTINUED

5. The input to the units must be isolated from the mains by reinforced insulation in accordance with UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) and CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements). UL 62368-1, 2nd Edition, 2014-12-01, and CSA C22.2 No. 62368-1-14, 2nd Edition, 2014-12-01. Due to the potential non-SELV voltages at the input, the input to these units must be considered a hazardous secondary voltage. Outputs are considered SELV. The SELV output is classed as an energy hazard and must not be accessible to the operator in the end product.

6. The input and output connectors are not acceptable for field connections and are only intended for connection to mating connectors of internal wiring inside the end use equipment. The acceptability of these and the mating connectors relative to secureness, insulating materials, and temperature shall be considered.

7. This power supply shall be properly bonded to earth in the end use product as this unit was investigated for Class I construction.

8. For 48 V Input Models: The recommended input fuse rating within the instructions and the fuse used for testing is as follows:-F30AH, 250Vac. Tests were conducted with a dc supply capable of a fault current of 1500A.

9. For 24 V Input Models: The recommended input fuse rating within the instructions and the fuse used for testing is as follows: Normal 50 A, 250 V ac, 125 V dc. The input used during tests was capable of supplying a fault current of 300 A.

For Items 8 and 9, the braking capacity and voltage rating are subject to the end use application.

10. The unit has been evaluated for tropical climate and altitude up to 3,000 m.

11. Output circuit was considered ES1/PS3.

12. Classification of PIS has not been conducted. Therefore, all electrical components and conductors including printed wirings were assumed to be arcing PIS and resistive PIS.

13. This component has been evaluated in "control of fire spread" method assuming appropriate fire enclosure is provided in end product. Unless the fire enclosure is made of non-combustible or V-0 material, the separation from the PIS shall be considered.