| File E131905 | Vol. 1 | Sec. 76 | Page 1 | Issued: | 2000-01-19 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | nd Report |  | Revised: | 2007-02-27 |

## DESCRIPTION

## PRODUCT COVERED:

USR/CNR - Linear - Power Supply, Models HA5-1.5/OVP, HA15-0.9, HA240.5, HAD12-0.4, HAD15-0.4, HB5-3/0VP, HB12-1.7, HB15-1.5, HB24-1.2, HB28-1, followed by suffix -A. Suffixes after the first hyphen may be replaced by -5XX where $X$ is $0-9$. Model name may be followed by "G" or SXXX or SXXXG indicating non-safety critical options.

ELECTRICAL RATING:

| Model | Input |  |  | Output, (ac |  | (dc) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | V | A | Hz | V | A | W @ |
| HA5-1.5/0VP-A | 100/120/230/240 | 0.25/0.125 | 50/60 | 5 | 1.5 | 7.5 |
| HA15-0.9-A | 100/120/230/240 | 0.5/0.25 | 50/60 | 12-15 | 0.9 | 10.8 |
| HA24-0.5-A | 100/120/230/240 | 0.5/0.25 | 50/60 | 24-28 | 0.5 | 14.0 |
| HAD12-0.4-A | 100/120/230/240 | 0.5/0.25 | 50/60 | 12 | 0.4 | 9.6 |
| HAD15-0.4-A | 100/120/230/240 | 0.5/0.25 | 50/60 | 15 | 0.4 | 12.0 |
| HB5-3/0VP-A | 100/120/230/240 | 0.5/0.25 | 50/60 | 5 | 3.0 | 15.0 |
| HB12-1.7-A | 100/120/230/240 | 0.5/0.25 | 50/60 | 12 | 1.7 | 20.4 |
| HB15-1.5-A | 100/120/230/240 | 0.5/0.25 | 50/60 | 15 | 1.5 | 22.5 |
| HB24-1.2-A | 100/120/230/240 | 0.75/0.375 | 50/60 | 24 | 1.2 | 28.8 |
| HB28-1-A | 100/120/230/240 | 0.75/0.375 | 50/60 | 28 | 1.0 | 28.0 |

@ - Maximum continuous output power without forced air cooling when the units operate at $25^{\circ} \mathrm{C}$ ambient. Some units may require forced air cooling when operated at $50^{\circ} \mathrm{C}$. See Conditions of Acceptability for more information.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):
Use - For use only in (or with) complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Special Considerations - The following items are considerations that were used when evaluating this product.

USR/CNR indicates investigation to the U.S. and Canadian (Bi-National) Standard for Safety of Information Technology Equipment, CSA C22.2 No. 609501 * UL60950-1, First Edition, dated April 1, 2003.

| File E131905 | Vol. 1 | Sec. 76 | Page 2 | Issued: | 2000-01-19 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Re |  | Revised | 20 |

Conditions of Acceptability - When installed in the end product, consideration shall be given to the following:

1. This component has been judged on the basis of the required spacings in the Standard for Safety of Information Technology Equipment, CSA/UL60950-1, First Edition, dated April 1, 2003, Sub-clause 2.10 which would cover the component itself if submitted for Listing.
2. The products were tested on a 20 A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.
3. All secondary output circuits for all models are SELV and are not hazardous energy levels.
4. The terminals and connectors have not been evaluated for field wiring.
5. The power supply shall be properly bonded to the main protective earthing termination in the end product.
6. Magnetic device(s) (e.g. transformer, inductor) T1 employ(s) an (OBJY3) electrical insulation system designated Class B.
7. The equipment has been evaluated for use in a Pollution Degree 2 environment.
8. A suitable Electrical and Fire enclosure shall be provided.
9. Abnormal Tests were conducted with a Listed non-time-delay fuse rated 0.75 A connected in the ungrounded conductor circuit.
10. Bonding terminals provided on this equipment have not been evaluated as protective earthing terminals.
11. These power supplies have been evaluated for use in a 25 , 50 and $70^{\circ} \mathrm{C}$ ambient in accordance with the manufacturer's specifications. The units were loaded to $100 \%$ normal rated load for 25 and $50^{\circ} \mathrm{C}$ ambient and $40 \%$ of normal load for $70^{\circ} \mathrm{C}$ ambient. At $50^{\circ} \mathrm{C}$, the following units required forced air cooling in order to comply with standard requirements.

Model
Required
Model
HB24-1.2-A

LFM

HB24-1.2-A
100
HB28-1-A50

