

File E161936  
Project 02NK13184

April 18, 2002

REPORT

on

COMPONENT - POWER SUPPLIES, INFORMATION TECHNOLOGY  
EQUIPMENT, INCLUDING ELECTRICAL BUSINESS EQUIPMENT

Nipron Co., Ltd.  
Hyogo-ken, Japan

Copyright © 2002 Underwriters Laboratories Inc.

Underwriters Laboratories Inc. authorizes the above named company to reproduce this Report provided it is reproduced in its entirety.

Underwriters Laboratories Inc. authorizes the above named company to reproduce the latest pages of that portion of this Report consisting of this Cover Page through Page 2.

## DESCRIPTION

## PRODUCT COVERED:

**USR, CNR Switching Power Supply, Model eNSP-300P-XXYXXXX (X = - or space or 0 to 9 or A to Z. Y = 0 to 9 except 5 and 6 or A to Z.) and Models eNSP-300P-XX5XXXX, eNSP-300P-XX6XXXX, and eNSP-300P-S2A-XX (X = - or space or 0 to 9 or A to Z.)**

\*

## RATING:

Model	Input			Output				
	AC Input			(Max. Total Output 203.6 W)				
	V ac	Hz	A	V dc	Max.		Peak (+)	
					A	W	A	W
eNSP-300P-XXYXXXX	100-240	50/60	3.1-1.3	+5	21	105	30	150
	DC Input (Optional Lead- Acid Battery Packs with Optional Nonstop Unit, Type BU-300P-24PX) (X = - or space or 0 to 9 or A to Z)			+3.3	14	46.2	28	92.4
				+12	10	120	15	180
				-5	0.3	1.5	0.3	1.5
				-12	0.8	9.6	0.8	9.6
				+5 (VS)	1.5	7.5	2.5	12.5
	V dc	Hz	A					
	24	-	16					
	Alternate DC Input (Optional Ni-MH Battery Packs with Optional Nonstop Unit, Type BU-300P-24PX) (X = - or space or 0 to 9 or A to Z)							
				V dc	Hz	A		
				23	-	15		

(+) - Peak output max 5 s, 3 min interval. Total output power not to exceed 203.6 W.

Model	Input			Output		
	AC Input			(Max. Total Output 102.2 W)		
	V ac	Hz	A	V dc	Max.	
					A	W
eNSP-300P-XX5XXXX	100-240	50/60	1.6-0.7	+5	1	5
	DC Input (Optional Lead-Acid Battery Packs with Optional Nonstop Unit, Type BU-300P-24PX) (X = - or space or 0 to 9 or A to Z).			+12	8	96
				-12	0.1	1.2
	V dc	Hz	A			
	24	-	16			
	Alternate DC Input (Optional Ni-MH Battery Packs with Optional Nonstop Unit, Type BU-300P-24PX) (X = - or space or 0 to 9 or A to Z)					
				V dc	Hz	A
	23	-	15			

Model	Input			Output						
	AC Input			(Max. Total Output 240.6 W)				(+)		
	V ac	Hz	A	V dc	Max.			Peak		
eNSP-300P-XX6XXXX	100-240	50/60	3.7-1.5	+5	21	105	(++)	30	150	(++)
	DC Input (Optional Lead-Acid Battery Packs with Optional Nonstop Unit, Type BU-300P-24PX) (X = - or space or 0 to 9 or A to Z)			+3.3	14	46.2	222	28	92.4	280
				+12	10	120		15	180	
				-5	0.3	1.5		0.3	1.5	
				-12	0.8	9.6		0.8	9.6	
				+5(VS)	1.5	7.5		2.5	12.5	
	V dc	Hz	A							
	24	-	16							
	Alternate DC Input (Optional Ni-MH Battery Packs with Optional Nonstop Unit, Type BU-300P-24PX) (X = - or space or 0 to 9 or A to Z)									
	V dc	Hz	A							
23	-	15								

(+) - Peak output max 5 s, 3 min interval. Total output power not to exceed 303.6 W.

(++) - total maximum output.

Model	Input			(Max. Total Output 240.6 W)		
	AC Input			Max.		
	V ac	Hz	A	V dc	A	W
eNSP-300P-S2A-XX	100-240	50/60	2.2-0.9	+5	10	50
				+12	8	96

## 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.

For Models eNSP-300P-XXYXXXXX, eNSP-300P-XX5XXXXX and eNSP-300P-XX6XXXXX: USR and CNR indicate investigation to the U.S. and Canadian Standard for Safety of Information Technology Equipment, UL 60950 and CSA C22.2 No. 60950-00, Third Edition.

For Model eNSP-300P-S2A-XX: USR and CNR indicate investigation to the U.S. and Canadian Standards for Safety of Information Technology Equipment - Safety - Part 1: General Requirements, CSA C22.2 No. 60950-1 UL60950-1, First Edition.

The component is Class I (earthed), for building in, intended for use on a TN power system.

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

1. Models eNSP-300P-XXYXXXXX, eNSP-300P-XX5XXXXX, and eNSP-300P-XX6XXXXX have been judged on the basis of the required spacings in the Standard for Information Technology Equipment, UL 60950, Subclause 2.10, Third Edition. Model eNSP-300P-S2A-XX has been judged on the basis of the required spacings in the Standard for Safety of Information Technology Equipment - Safety - Part 1: General Requirements, CSA C22.2 No. 60950-1 UL60950-1, First Edition, Subclause 2.10.
2. All secondary output circuits are SELV and are not hazardous energy levels.
3. The power supply shall be properly bonded to the main protective earthing termination in the **end-use** product.
4. The equipment has been evaluated for use in a Pollution Degree 2 environment.
- \*5. The power supply shall be installed in compliance with the enclosure, mounting, spacing, casualty and segregation requirements of the **end-use** product.
6. Output connectors are not intended for field wiring.

- \*7. The maximum working voltage primary to ground present is 624 V peak. The **Electric Strength Test** in the end product shall be based on this value.
8. The power supply is considered for use in a maximum ambient following below:
- Model eNSP-300P-XXYXXXX - 40°C at 100% load and 50°C at 60% load.  
Model eNSP-300P-XX5XXXX - 65°C at 100% load.  
Model eNSP-300P-XX6XXXX - 45°C at 100% load and 60°C at 50% load.  
Model eNSP-300P-S2A-XX - 50°C at 100% load.
9. The **end-use** product should be marked with "CAUTION: Double Pole/ Neutral Fusing" or the equivalent or a similar marking in the service manual.
- \*10. The power supply must be installed to the **end-use** product with the distance of more than 3 cm from the **air-opening** inlet to the barrier and of more than 10 cm from the **air-opening** outlet to the barrier.
11. Power supply and batteries should be integral in end-use **product**.
12. The **end-use** product should be marked with 1.7.15 "CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions."
- \*13. **Backfeed Protection Test** not considered due to SELV output of batteries.
- \*14. Battery **Compartment Ventilation Test**, Par. 57 of UL 1778, will be required in the end-use product.
- \*15. Models eNSP-300P-XXYXXXX, eNSP-300P-XX5XXXX, and eNSP-300P-XX6XXXX: The enclosure has not been evaluated as Mechanical, Fire or Electrical enclosure. Additional consideration shall be given in the **end-use** product.
16. Model eNSP-300P-S2A-XX: Only the area around the Fan Guard and Appliance Inlet on Front Panel Assembly has been evaluated as an Electrical and Fire enclosure. Additional consideration shall be given to the **end-use** product installation.
- \*17. The areas of Fan Guard and **Appliance** Inlet on the Front Panel **have** not been evaluated as a top or bottom enclosure of the **end-use** product.
- \*18. The **power supply was** tested on a 30 A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.

## CONSTRUCTION DETAILS:

See **Section General** for additional details.

\*Model eNSP-300P-XXYXXXX represents other models **in** the **Report**, unless otherwise indicate in the **Report**.

Model **Differences** -

Model eNSP-300P-XX5XXXX is identical to Model eNSP-300P-XXYXXXX except number of output **circuits**.

Model eNSP-300P-XX6XXXX is identical to Model eNSP-300P-XXYXXXX except maximum rated output power.

\*Model eNSP-300P-S2A-XX is identical to Model eNSP-300P-XXYXXXX, except for the number of output circuits and items described in this **Report**. Fan speed control circuit and optional **Battery Pack** are not provided.

Printed Wiring Boards - (ZPMV2), flammability rating minimum V-1, operating temperature rating minimum 130°C.