

## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	UL 60950-1, 2nd Edition, 2019-05-09 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
<b>Certification Type:</b>	Component Recognition
<b>CCN:</b>	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
<b>Product:</b>	Switching Power Supply
<b>Model:</b>	<p>OZP-200-3R3, OZP-200-5, OZP-200-12, OZP-200-15, OZP-200-24, OZP-200-36 and OZP-200-48 (maybe followed by suffix "-xynnz"; (x is "J" or "T", y is "0" or "S", n is any number "0" to "9" or any letter "A" to "Z" except for "E" or blank and z is "-K" or "-C" or blank)</p> <p>OZP-200-3R3-xyEnz, OZP-200-5-xyEnz, OZP-200-12-xyEnz, OZP-200-15-xyEnz, OZP-200-24-xyEnz, OZP-200-36-xyEnz and OZP-200-48-xyEnz (x is "J" or "T", y is "0" or "S", n is any number "0" to "9" or any letter "A" to "Z" except for "E" or blank and z is "-K" or "-C" or blank)</p> <p>mOZP-200-3R3-xyEnz, mOZP-200-5-xyEnz, mOZP-200-12-xyEnz, mOZP-200-15-xyEnz, mOZP-200-24-xyEnz, mOZP-200-36-xyEnz and mOZP-200-48-xyEnz (x is "J" or "T", y is "0" or "S", n is any number "0" to "9" or any letter "A" to "Z" except for "E" or blank and z is "-K" or "-C" or blank)</p> <p>PS-10WP-5VSB* (*: 'A' to 'Z' or '0' to '9' or blank)</p> <p>OZP-240/600P-x24y, OZP-240/600P-x48y (where x maybe alphanumeric character or blank, which denotes control number. where y maybe maximum 20 characters, any alphanumeric character, slash, hyphen or blank, which denotes control number), OZP-240/600P-24-J00D</p>
<b>Rating:</b>	<p>- OZP-200-3R3-xynnz / OZP-200-3R3-xyEnz / mOZP-200-3R3-xyEnz Input: 100-240 Vac, 1.9 A, 50-60 Hz Output: 3.3 Vdc, 40 A (60 A peak)</p> <p>- OZP-200-5-xynnz / OZP-200-5-xyEnz / mOZP-200-5-xyEnz Input: 100-240 Vac, 2.8 A, 50-60 Hz Output: 5 Vdc, 40 A (60 A peak)</p> <p>- OZP-200-12-xynnz / OZP-200-12-xyEnz / mOZP-200-12-xyEnz Input: 100-240 Vac, 2.8 A, 50-60 Hz Output: 12 Vdc, 16.7 A (33.4 A peak)</p> <p>- OZP-200-15-xynnz / OZP-200-15-xyEnz / mOZP-200-15-xyEnz Input: 100-240 Vac, 2.8 A, 50-60 Hz Output: 15 Vdc, 13.4 A (26.7 A peak)</p> <p>- OZP-200-24-xynnz / OZP-200-24-xyEnz / mOZP-200-24-xyEnz</p>

Input: 100-240 Vac, 2.8 A, 50-60 Hz  
Output: 24 Vdc, 8.4 A (16.7 A peak)

- OZP-200-36-xynnz / OZP-200-36-xyEnz / mOZP-200-36-xyEnz  
Input: 100-240 Vac, 2.8 A, 50-60 Hz  
Output: 36 Vdc, 5.6 A (11.2 A peak)

- OZP-200-48-xynnz / OZP-200-48-xyEnz / mOZP-200-48-xyEnz  
Input: 100-240 Vac, 2.8 A, 50-60 Hz  
Output: 48 Vdc, 4.2 A (8.4 A peak)

PS-10WP-5VSB\*  
Input: DC134-386V, 0.08 A  
Output: 5 Vdc, 1.5 A (2.0 A peak)

- OZP-240/600P-x24y / OZP-240/600P-24x-J00D  
Input: 100-240 Vac, 2.3 A, 50-60Hz  
Output: 24 Vdc, 8.4 A (16.7 A peak) (When input 100Vac), 24Vdc, 10 A (25 A peak) (When input 200Vac)

- OZP-240/600P-x48y  
Input: 100-240 Vac, 2.3 A, 50-60Hz  
Output: 48 Vdc, 4.2 A (8.4 A peak) (When input 100Vac), 48Vdc, 5 A (12.5 A peak) (When input 200Vac)

**Applicant Name and Address:**

NIPRON CO LTD  
2-57 OHAMA-CHO  
AMAGASAKI-SHI  
HYOGO-KEN 660-0095 JAPAN

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

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### Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
  - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
  - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
  - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

### Product Description

Building-in type switching power supplies.

### Model Differences

Model OZP-200-3R3-xynnz is described as basic model in this report.

Model OZP-200-5-xynnz is identical to Model OZP-200-3R3-xynnz except for model designation, output rating and secondary components.

Model OZP-200-12-xynnz is identical to Model OZP-200-3R3-xynnz except for model designation, output rating, Transformer (T1) and secondary components.

Model OZP-200-15-xynnz is identical to Model OZP-200-12-xynnz except for model designation, output rating and secondary components.

Model OZP-200-24-xynnz is identical to Model OZP-200-3R3-xynnz except for model designation, output rating, Inductor (L3), Transformer (T1), PWB, and secondary components.

Model OZP-200-36-xynnz is identical to Model OZP-200-24-xynnz except for model designation, output rating, Transformer (T1) and secondary components.

Model OZP-200-48-xynnz is identical to Model OZP-200-24xynnz except for model designation, output rating, Transformer (T1) and secondary components.

Models Nomenclature: Representative case.

Model OZP-200-3R3-xynnz: (All models were "3029P1x" or "3144P1x" Board name provided, print screen to PWB.)

-200-: 200 W

-3R3-: Output Voltage 3.3Vdc

-x: Input/output Connection; "J": Nylon Connector, "T": Terminal Block

-y: Output Current Balance Function; "0": Not Provided. "S": Provided.

-n: Any number "0" to "9", any letter "A" to "Z" or blank, which does not affected safety.

-z: Chassis and Cover. "Blank": Not Provided. "-C": Chassis Provided. "-K": Chassis and Cover Provided.

Model OZP-200-3R3-xyEnz: (All models were "3165P1x" or "3166P1x" Board name provided, print screen to PWB.)

Except for "E": Same as Model OZP-200-3R3-xynnz.

"E" is intended to alternate switching control integrated circuit (IC1, IC2) and peripheral circuitry are used as "3165P1B" Board.

And secondary signal transform circuits, Type PS-3208 (Optional) provided.

Model mOZP-200-3R3-xyEnz: (All models were "3165P1x" or "3166P1x" Board name provided, print screen to PWB.). This model is Identical to Model OZP-200-3R3-xyEnz except for model designation.

PS-10WP-5VSB\* (\*: 'A' to 'Z' or '0' to '9' or blank):

\*: Does not affected safety.

Model OZP-240/600P-x24y is identical to Model OZP-200-24-xynnz except for model designation, output rating, Y-Capacitor (C126), Arrester (AR1), Varistor (ZNR2), Fuses (F1,F3), Fuse (F2), Transformer (T2), Thermistor (TH5), PWB pattern, and secondary components.

Model OZP-240/600P-24-J00D is identical to Model OZP-240/600P-x24y except for model designation, Transformer (T3), Output Current Balance Function, PWB pattern. (Output Current Balance Function, Transformer (T3) not provided)

Model OZP-240/600P-x48y is identical to Model OZP-240/600P-x24y except for model designation, output rating and Transformer (T1).

#### Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : N/A
- Operating condition : continuous
- Access location : N/A
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +10%, -5% (-15% to -5% with output derating) for OZP-200 series, mOZP-200 series, and OZP-240/600P series. N/A for PS-10WP-5VSB\*
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class I (earthed)
- Considered current rating of protective device as part of the building installation (A) : 20 A
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : Less than 2000 m
- Altitude of test laboratory (m) : approximately 10 m
- Mass of equipment (kg) : Model OZP-200 series, mOZP-200 series: approximately 0.85 kg (with Chassis and Cover), Model PS-10WP-5VSB\*: approximately 28 g, Models OZP-240/600P-x24y, OZP-240/600P-24-J00D and OZP-240/600P-x48y: approximately 0.82 kg (with Chassis and Cover)
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: Models OZP-200 series, mOZP-200 series; Maximum 70°C. See Enclosure Id. 7-01 or 7-04 for details. Model PS-10WP-5VSB\*; 60°C (Without forced air), 70°C (With forced air). Models OZP-200 series, mOZP-200 series with PS-10WP-5VSB\*; 60°C (With/without forced air). See Enclosure Id. 3-28 and Id. 3-29 for details. Models OZP-240/600P series; 60°C (without chassis and Cover), 55°C (With chassis and Cover) See Enclosure Id. 7-07 for details.
- The product is intended for use on the following power systems: TN (Except for Model PS-10WP-5VSB\*)

### Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The end-product Electric Strength Test is to be based upon a maximum working voltage of: For Model OZP-200-3R3-xynnz, OZP-200-3R3-xyEnz, mOZP-200-3R3-xyEnz, OZP-200-5-xynnz, OZP-200-5-xyEnz, mOZP-200-5-xyEnz, Primary-SELV: 240 Vrms, 444 Vpk, Primary-Earthed Dead Metal: 235 Vrms, 428 Vpk. For Model OZP-200-12-xynnz, OZP-200-12-xyEnz, mOZP-200-12-xyEnz, OZP-200-15-xynnz, OZP-200-15-xyEnz, mOZP-200-15-xyEnz, OZP-200-24-xynnz, OZP-200-24-xyEnz, mOZP-200-24-xyEnz, OZP-200-36-xynnz, OZP-200-36-xyEnz, mOZP-200-36-xyEnz, OZP-200-48-xynnz, OZP-200-48-xyEnz and mOZP-200-48-xyEnz, Primary-SELV: 321 Vrms, 616 Vpk, Primary-Earthed Dead Metal: 222 Vrms, 452 Vpk. For Models PS-10WP-5VSB\*, Primary-SELV: 316 Vrms, 560 Vpk, Primary-Earthed Dead Metal: 318 Vrms, 562 Vpk. For Models OZP-240/600P-x24y and OZP-240/600P-24-J00D, Primary-SELV: 284 Vrms, 474 Vpk, Primary-Earthed Dead Metal: 233 Vrms, 418 Vpk. For Model OZP-240/600P-x48y, Primary-SELV: 329 Vrms, 540 Vpk, Primary-Earthed Dead Metal: 238 Vrms, 414 Vpk.
- The following secondary output circuits are ELV: Output of CN13 and CN14 for Model OZP-200-12-xynnz, OZP-200-15-xynnz, OZP-200-24-xynnz, OZP-200-36-xynnz, OZP-200-48-xynnz, OZP-200-12-xyEnz, OZP-200-15-xyEnz, OZP-200-24-xyEnz, OZP-200-36-xyEnz, OZP-200-48-xyEnz, mOZP-200-12-xyEnz, mOZP-200-15-xyEnz, mOZP-200-24-xyEnz, mOZP-200-36-xyEnz, mOZP-200-48-xyEnz, OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D
- The following secondary output circuits are SELV: 3.3 Vdc Output, 5 Vdc Output, 12 Vdc Output, 15 Vdc Output, 24 Vdc Output, 36 Vdc Output and 48 Vdc Output (For Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series, OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D), 5Vdc Output (For Model PS-10WP-5VSB\*)
- The following secondary output circuits are at hazardous energy levels: 3.3 Vdc Output, 5 Vdc Output, 12 Vdc Output, 15 Vdc Output, 24 Vdc Output, 36 Vdc Output and 48 Vdc Output (For Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series, OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D)
- The following secondary output circuits are at non-hazardous energy levels: 5Vdc Output (For Model PS-10WP-5VSB\*)
- The following output terminals were referenced to earth during performance testing: Input Connector (CN1) (N), Input Connector (CN1) (FG) and Output Connector (CN8) Output (-) (For Models OZP-200 series, OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D). Output Connectors (CN501, CN504) (For Model PS-10WP-5VSB\*)
- The power supply terminals and/or connectors are: Suitable for factory wiring only (All models)
- The maximum investigated branch circuit rating is: 20 A (All models)
- The investigated Pollution Degree is: 2 (All models)
- Proper bonding to the end-product main protective earthing termination is: Required (All models)
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJ2 insulation system with the indicated rating greater than Class A (105°C): Transformer (T1) (Class B), Inductors (L1, L2) (120°C), Inductor (L3) (150°C) (For Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series, OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D), Transformer (T500) (150°C) (For Model PS-10WP-5VSB\*)
- The following end-product enclosures are required: Electrical and Fire (All models)
- RTI of Bobbin Material of Inductors (L1, L2) are minimum 120°C. RTI of Bobbin Material and Insulation Tape of Inductor (L3) is minimum 130°C. (For Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series, Model OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D)

- Fuse (F2) is intended to provide in non operator access area. (For Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series, Model OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D)
- Performance of Thermistors (TH2, TH3) have not been evaluated. Thermistors (TH2, TH3) were not provided for all tests. (For Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series, Models OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D)
- For some of the Heating Test and Power Supply Output Overload Test, the power supply was tested in a cooling carton box, which was provided with nine DC Fans (UL Recognized Component (GPWV2), DC Fans, Melco Technorex Co., Ltd., Type MMF-08C12DS, rated 1.5 m/second) and Filter. See appended table 4.5, appended table 5.3, and Enclosure Id. 7-02 for details. (For Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series)
- LEDs in Capacitor Pack shall not be accessible to the USER. (For Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series)
- Connected for Model PS-10WP-5VSB\*: Input connectors (CN500, CN502) shall be connected to connector (CN3) of Models OZP-200 series, OZP-200-series with suffix xyEnz, Model mOZP-200 series.
- Installation of Model PS-10WP-5VSB\* except for shipping configuration from "Nipron Co., Ltd. (See Enclosure Id. 3-28 and Id. 3-29): The clearances, creepage distances, heating test shall be evaluated in the end product.
- Model PS-10WP-5VSB\* was evaluated with Models OZP-200 series, OZP-200-series with suffix xyEnz, mOZP-200 series. Additional tests may be required if used with other models.

#### Additional Information

<For Models OZP-200-X-yynnz series>

Tests conducted with following output conditions. See Enclosure Id. 7-01 for details.

Models OZP-200-3R3 and OZP-200-5

3.3 Vdc (2.97-3.96 Vdc: Maximum 151.8 W) or 5 Vdc (4.00-6.00 Vdc: Maximum 230 W)

Output current 46 A with Forced Air (1.5 m/second)

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 70°C / 70°C

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 60°C / 45°C

Output current 38 A with Forced Air (1.5 m/second)

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 70°C / 60°C

Output current 32 A with Forced Air (1.5 m/second)

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is (70°C) / 70°C

Models OZP-200-3R3 and OZP-200-5

3.3 Vdc (3.14-3.47 Vdc: Maximum 132 W) or 5 Vdc (4.75-5.25 Vdc: Maximum 200 W)

Output current 40 A without Forced Air.

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 40°C / 35°C

B position: Tma is 45°C / 40°C

C position: Tma is 50°C / 45°C

D position: Tma is 45°C / 35°C

E position: Tma is 40°C / 30°C  
F position: Tma is 40°C / 30°C  
Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover  
A position: Tma is 40°C / 30°C  
B position: Tma is 30°C / 20°C  
C position: Tma is 40°C / 30°C  
D position: Tma is 30°C / 5°C  
E position: Tma is 20°C / 5°C  
F position: Tma is 20°C / 5°C

Output current 32 A without Forced Air.  
Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover  
C position: Tma is 60°C / -°C

Output current 28 A without Forced Air.  
Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover  
C position: Tma is -°C / 55°C

Output current 26 A without Forced Air.  
Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover  
B position: Tma is 60°C / 55°C  
D position: Tma is 60°C / -°C

Output current 22 A without Forced Air.  
Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover  
A position: Tma is 60°C / 55°C  
D position: Tma is -°C / 55°C  
E position: Tma is 60°C / -°C  
F position: Tma is 60°C / -°C

Output current 18 A without Forced Air.  
Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover  
E position: Tma is -°C / 55°C  
F position: Tma is -°C / 55°C

Output current 24 A without Forced Air.  
Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover  
A position: Tma is 60°C / 55°C  
C position: Tma is 60°C / 55°C

Output current 20 A without Forced Air.  
Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover  
B position: Tma is 60°C / 55°C  
D position: Tma is 60°C / -°C

Output current 16 A without Forced Air.  
Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover  
D position: Tma is -°C / 55°C  
E position: Tma is 60°C / 55°C  
F position: Tma is 60°C / 55°C

Tests conducted with following output conditions. See Enclosure Id. 7-04 for details.

Models OZP-200-12, OZP-200-15, OZP-200-24, OZP-200-36 and OZP-200-48

12 Vdc (9.0-13.2 Vdc: Maximum 240 W) or 15 Vdc (12.0-17.3 Vdc: Maximum 240 W) or 24 Vdc (19.2-28.8 Vdc: Maximum 240 W) or 36 Vdc (28.8-41.4 Vdc: Maximum 241.2 W) or 48 Vdc (40.8-55.2 Vdc: Maximum 240 W)

Output Power 240 W with Forced Air (1.5 m/second)

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 70°C / 70°C

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 60°C / 45°C

Output Power 190 W with Forced Air (1.5 m/second)

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 70°C / 60°C

Output Power 160 W with Forced Air (1.5 m/second)

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is (70°C) / 70°C

Output Power 200 W without Forced Air.

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 40°C / 35°C

B position: Tma is 45°C / 40°C

C position: Tma is 50°C / 45°C

D position: Tma is 45°C / 35°C

E position: Tma is 40°C / 30°C

F position: Tma is 40°C / 30°C

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 40°C / 30°C

B position: Tma is 30°C / 20°C

C position: Tma is 40°C / 30°C

D position: Tma is 30°C / 5°C

E position: Tma is 20°C / 5°C

F position: Tma is 20°C / 5°C

Output Power 160 W without Forced Air.

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

C position: Tma is 60°C / -°C

Output Power 140 W without Forced Air.

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

C position: Tma is -°C / 55°C

Output Power 130 W without Forced Air.

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

B position: Tma is 60°C / 55°C

D position: Tma is 60°C / -°C

Output Power 110 W without Forced Air.

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 60°C / 55°C

D position: Tma is -°C / 55°C

E position: Tma is 60°C / -°C

F position: Tma is 60°C / -°C



Output Power 90 W without Forced Air.

Input Voltage 200 Vac without Chassis and Cover / with Chassis and Cover

E position: Tma is -°C / 55°C

F position: Tma is -°C / 55°C

Output Power 120 W without Forced Air.

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

A position: Tma is 60°C / 55°C

C position: Tma is 60°C / 55°C

Output Power 100 W without Forced Air.

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

B position: Tma is 60°C / 55°C

D position: Tma is 60°C / -°C

Output Power 80 W without Forced Air.

Input Voltage 100 Vac without Chassis and Cover / with Chassis and Cover

D position: Tma is -°C / 55°C

E position: Tma is 60°C / 55°C

F position: Tma is 60°C / 55°C

Power Supply has output power derating curve by Input Voltage 85 Vac, 90% to 95 Vac, 100%.

<For Models OZP-200-X-xyEnz series, mOZP-200-X-xyEnz series>

Only limited tests were performed. Because other required tests were conducted to basic model except for switching control integrated circuit (IC1, IC2) and peripheral circuitry.

<For Model PS-10WP-5VSB\*>

Tested with input connector (CN500) power supplied from connector (CN3) of Models OZP-200-3R3-xynnz, OZP-200-5-xynnz, OZP-200-48-xynnz, OZP-200-3R3-xyEnz, OZP-200-5-xyEnz and OZP-200-48-xyEnz.

And during tests fixed to Model OZP-200 series. During the tests this unit was fixed to Model OZP-200 series.

Models OZP-200 series, mOZP-200 series are with/without Model PS-10WP-5VSB\*.

Models OZP-200 series, mOZP-200 series with Model PS-10WP-5VSB\* (Shipping configuration from "Nipron Co., Ltd.): No Chassis and Cover are provided. See Enclosure Id. 3-28 and Id. 3-29.

<For Models OZP-240/600P-x24y, OZP-240/600P-24-J00D and OZP-240/600P-x48y>

Tests that conducted with output conditions see Enclosure Ids 7-07 and 7-08 for details.

#### Additional Standards

The product fulfills the requirements of: N/A

#### Markings and instructions

Clause Title	Marking or Instruction Details
2.7.6 Warning to service personnel	"CAUTION: Double pole/neutral fusing"  For Models: OZP-200-3R3-xyEnz, OZP-200-5-xyEnz, OZP-200-12-xyEnz, OZP-200-15-xyEnz, OZP-200-24-xyEnz, OZP-200-36-xyEnz and OZP-200-48-xyEnz (x is "J" or "T", y is "0" or "S", n is any number "0" to "9" or any letter "A" to "Z" except for "E" or blank and z is "-K" or "-C" or blank)

	<p>mOZP-200-3R3-xyEnz, mOZP-200-5-xyEnz, mOZP-200-12-xyEnz, mOZP-200-15-xyEnz, mOZP-200-24-xyEnz, mOZP-200-36-xyEnz and mOZP-200-48-xyEnz (x is "J" or "T", y is "0" or "S", n is any number "0" to "9" or any letter "A" to "Z" except for "E" or blank and z is "-K" or "-C" or blank)</p> <p>OZP-240/600P-x24y, OZP-240/600P-x48y (where x maybe alphanumeric character or blank, which denotes control number. where y maybe maximum 20 characters, any alphanumeric character, slash, hyphen or blank, which denotes control number) and OZP-240/600P-24-J00D</p>
1.7.1 Power rating - Ratings	Ratings (voltage, frequency/dc, current)
1.7.1 Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
1.7.1 Power rating - Model	Model Number
1.7.6 Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.
1.7.7.2 Terminals for external primary power supply conductors	Capital letter "N" located adjacent to a terminal intended exclusively for connection of the primary power neutral conductor
<p><b>Special Instructions to UL Representative</b></p> <p>Inspect the Transformer(s) listed in BD1.1 per AA1.1 - C. When the tests are conducted at other location, inspect Test Record and Specification Sheet provided by the Component Manufacturer.</p> <p>Verify the Specification Sheet indicates 100% Routine Test specified in BD1.1 be conducted at the Component Manufacturer.</p>	

**Production-Line Testing Requirements**

**Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.**

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
OZP-200 series and mOZP-200 series, Models OZP-240/600P-x24y, OZP-240/600P-x48y and OZP-240/600P-24-J00D	Transformer (T1), Type MT1563, MT1596, MT1597, MT1598 and MT1599	N/A	Primary to Secondary	3000	4242	1
PS-10WP-5VSB*	Transformer (T500), Type MT1624 (Marked MT1624X)	N/A	Primary to Secondary	3000	4242	1

**Earthing Continuity Test Exemptions - This test is not required for the following models:**

All models.

**Electric Strength Test Exemptions - This test is not required for the following models:**

N/A

**Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:**

N/A

**Sample and Test Specifics for Follow-Up Tests at UL**

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A	--	--	--	--	--