

UL TEST REPORT AND PROCEDURE

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| Standard: | UL 62368-1, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements) |
| Certification Type: | Component Recognition |
| CCN: | QQJQ2, QQJQ8 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment) |
| Complementary CCN: | N/A |
| Product: | Power supply |
| Model: | FZP-040-5-Jy, FZP-040-12-Jy, FZP-040-15-Jy, FZP-040-18-Jy, FZP-040-24-Jy, mFZP-040-5-Jy, mFZP-040-12-Jy, mFZP-040-15-Jy, mFZP-040-18-Jy, mFZP-040-24-Jy, PS6227-01, PS6227-02 (where y maybe maximum 10 characters, any alphanumeric character, hyphen, slash or blank, which denotes control number) |
| Rating: | <p>For FZP-040-5-Jy, mFZP-040-5-Jy and PS6227-01 Input: 100-240 Vac, 0.65 A, 50-60 Hz Output: 5 Vdc, 6 A (8 Apeak)</p> <p>For FZP-040-12-Jy and mFZP-040-12-Jy Input: 100-240 Vac, 0.75 A, 50-60 Hz Output: 12 Vdc, 3.3 A (5 Apeak)</p> <p>For FZP-040-15-Jy and mFZP-040-15-Jy Input: 100-240 Vac, 0.75 A, 50-60 Hz Output: 15 Vdc, 2.6 A (4 Apeak)</p> <p>For FZP-040-18-Jy and mFZP-040-18-Jy Input: 100-240 Vac, 0.75 A, 50-60 Hz Output: 18 Vdc, 2.2 A (3.3 Apeak)</p> <p>For FZP-040-24-Jy and mFZP-040-24-Jy and PS6227-02 Input: 100-240 Vac, 0.75 A, 50-60 Hz Output: 24 Vdc, 1.6 A (2.5 Apeak)</p> |
| Applicant Name and Address: | NIPRON CO LTD 2-57 OHAMA-CHO AMAGASAKI-SHI |

Issue Date: 2021-10-07
Revision Date: 2024-04-09

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Report Reference #

E161936-A6042-UL

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.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: Yoshifusa Koyanagi / Project
Handler

Reviewed By: Tadao Nakayama / Reviewer

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

The product is a building-in type switching power supply.

Model Differences

FZP-040-24-Jy is basal model.

- Model FZP-040-18-Jy is identical to FZP-040-24-Jy except for output rating.
- Model FZP-040-15-Jy is identical to FZP-040-24-Jy except for output rating and transformer (T1) type.
- Model FZP-040-12-Jy is identical to FZP-040-15-Jy except for output rating.
- Model FZP-040-5-Jy is identical to FZP-040-24-Jy except for input/output rating and transformer (T1) type.
- PS6227-01 is identical to FZP-040-5-Jy except for model number.
- PS6227-02 is identical to FZP-040-24-Jy except for model number.

With or Without the prefix "m" does not affect to safety requirements.

The suffix, "y", denotes manufacturer's production control number and does not affect to safety requirements.

Test Item Particulars

| | |
|--|--------------------------------|
| Product group | built-in component |
| Classification of use by | Ordinary person |
| Supply Connection | AC Mains |
| Supply tolerance | +10%/-10% |
| Supply connection – type | Connector |
| Considered current rating of protective device | 20 A; Location: building |
| Equipment mobility | for building-in |
| Over voltage category (OVC) | OVC II |
| Class of equipment | Class I |
| Special installation location | N/A |
| Pollution degree (PD) | PD 2 |
| Manufacturer's specified Tma (°C) | See Enclosure Id 07-01 |
| IP protection class | IPX0 |

| | |
|---|----------------------|
| Power systems | TN IT - 230 V L-L |
| Altitude during operation (m) | 3000 m |
| Altitude of test laboratory (m) | 2000 m or less |
| Mass of equipment (kg) | -- |
| <p>Engineering Conditions of Acceptability</p> <p>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:</p> <ul style="list-style-type: none"> • The following product-line tests are conducted for this product : Electric Strength • The end-product Electric Strength Test is to be based upon a maximum working voltage of : Primary-Secondary: 278 Vrms / 628 Vpk • The following output circuits are at ES1 energy levels : All output • The following output circuits are at PS3 energy levels : All output • Proper bonding to the end-product main protective earthing termination is : Required • An investigation of the protective bonding terminals has : not been conducted • The following input terminals/connectors must be connected to the end-product supply neutral : Input Connector (CN1) 3 pin • The following end-product enclosures are required : Electrical, Fire • The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C) : T1 (Class B) • The power supply terminals and/or connectors are: Suitable for factory wiring only • Peak current of Output is not evaluated in this report. • The Heating Test shall be evaluated in the end-product. • The Varistor (ZNR11) shall be evaluated in the end-product, if fire enclosure provided in the end-product is made from combustible material and located less than 13 mm from the varistor. Applicable requirement is Annex G.8.2. | |
| <p>Additional Information</p> <p>Regarding the Output load conditions, the Derating of temperature of Tma and Input Voltage, the Sample position, see Enclosure Id: 07-01 for details.</p> <p>Unless otherwise stated, all test were conducted with FZP-040-24-Jy as a representative.</p> <p>Model FZP-040-18-Jy is identical to FZP-040-24-Jy except for output rating. Therefore, all test except for Input Test were conducted with FZP-040-24-Jy as a representative. During testing except for Input test, 1.67A was considered as a output current rating of FZP-040-24-Jy by applicant's request.</p> <p>Model FZP-040-12-Jy is identical to FZP-040-15-Jy except for output rating. Therefore, all test except for Input Test were conducted with FZP-040-15-Jy as a representative. During testing except for Input test, 3.30A was considered as a output current rating of FZP-15-Jy by applicant's request.</p> <p>(for CB Application) - UL Standard has requirements that meet or exceed relevant IEC requirements.</p> <p>The marking plate label provided is representative of all series models because the required information except for model name is same as representative.</p> <p>National differences for Singapore provided in Enclosure Id: 07-02.</p> | |
| <p>Additional Standards</p> | |

The product fulfills the requirements of: EN IEC 62368-1:2020+A11:2020, CSA/UL 62368-1:2019

Markings and Instructions

| Clause Title | Marking or Instruction Details |
|--|--|
| Equipment identification marking – Manufacturer identification | Listee's or Recognized Company's name, Trade Name, Trademark or File Number |
| Equipment identification marking – model identification | Model Number |
| Equipment rating marking – ratings | Input Ratings (voltage, frequency/dc, current/power) Output Ratings (voltage, frequency/dc, current/power) |
| Fuses – replaceable by ordinary or instructed person | (component ID: F11, F12), Ratings (3.15A, 250V) and (T) located on or adjacent to fuse or fuseholder |

Special Instructions to UL Representative

For transformer test - When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in Production-Line Testing Requirements be conducted at the component manufacturer.

| BD1.0 | | | | | | |
|--|---|-----------------|----------------------|------------|-----------|--------------|
| TABLE: Production-Line Testing Requirements | | | | | | |
| BD1.1 | | | | | | |
| Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information. | | | | | | |
| Model | Component | Removable parts | Test probe location | Test V rms | Test V dc | Test Time, s |
| All models | Transformer (T1), type MT6148, MT6149, MT6146 | -- | Primary to Secondary | 4000pk | 4000 | 1 |
| BD1.2 | | | | | | |
| Earthing Continuity Test Exemptions – This test is not required for the following models: | | | | | | |
| All models | | | | | | |
| BD1.3 | | | | | | |
| Electric Strength Test Exemptions – This test is not required for the following models: | | | | | | |
| N/A | | | | | | |
| BD1.4 | | | | | | |
| 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 | | | | | | |

| BE1.0 | | | | | |
|--|-----------|----------|------|------------|----------------|
| Sample and Test Specifics for Follow-Up Tests at UL | | | | | |
| Model | Component | Material | Test | Sample (s) | Test Specifics |
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