

UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 1st Edition, 2007-10-31 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Component Recognition
CCN:	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Product:	Power Supply for Building In
Model:	PCFL-180P-F2S., PCFL-180P-F1S., and PCFL-180P-X2S. (The dot "." can be Space, 0 to 9 or A to Z or the dot "." can be Space, 2 to 9 or A to Z when provided with Battery Pack)
Rating:	Input: 100-240 Vac, 50/60 Hz, 2.10-0.82 A. Output Ratings: Model PCFL-180P-F2S Outputs: 4 A, 3.3 Vdc; 4 A, 5 Vdc; 2 A, 12 Vdc; 1 A, 24 Vdc; 0.3 A, -12 Vdc; 1 A, +5 Vsb Model PCFL-180P-F1S Outputs: 4 A, +5 Vdc; 3 A, +12 Vdc; 1 A, +24 Vdc; 0.3 A, -12 Vdc; 1 A, +5 Vsb See Enclosure Id. 4-01 (Derating Tables) for details. Model PCFL-180P-X2S Outputs: 4 A, +3.3 Vdc; 4 A, +5 Vdc; 4 A, +12 Vdc; 0.3 A, -12 Vdc; 1 A, +5Vsb
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.

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.

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Reviewed by: Tetsuo Iwasaki

Issue Date: 2006-02-09
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Page 2 of 11

Report Reference #

E161936-A11-UL

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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

These products are Power Supplies for Building-In.

Model Differences

PCFL-180P-F2S., PCFL-180P-F1S., and PCFL-180P-X2S. are identical except for Model Name and DC Output Ratings.

"." is a space (blank), or alphanumeric character (0 to 9, A to Z), and denotes the shipment difference.

Model PCFL-180P-X2S. (". Space, 2 to 9 or A to Z) CH4 (24V) output for these models are not used.

Model PCFL-180P-X2S. (". Space, 2 to 9 or A to Z) can be provided with Battery Packs (Optional), Type BS17.-H24/2.0L... (". Space, 0 to 9, A to Z or hyphen) or Type PS2935... used with AC Inlet, X-capacitor and Switch. (". Space, 0 to 9, A to Z or hyphen).

Technical Considerations

- Equipment mobility : for building-in
- Operating condition : continuous
- Mains supply tolerance (%) : -15%, +10 %
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class I (earthed)
- Mass of equipment (kg) : < 18
- Protection against ingress of water : IP X0
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 25°C and 60°C (Product is derated for 60°C)
- The product is intended for use on the following power systems: TN
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual

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 following Production-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-SELV: 240 Vrms, 612 Vpk , ,
- The following secondary output circuits are SELV: All
- The following secondary output circuits are at non-hazardous energy levels: All
- The following output terminals were referenced to earth during performance testing: All Outputs.
- The power supply terminals and/or connectors are: Not investigated for field wiring
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- 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 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 following end-product enclosures are required: Electrical , Fire
- The equipment is suitable for direct connection to: AC mains supply
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Components in protective earthing conductor and protective bonding conductor must be investigated in the end product.

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Screws for Protective Bonding must be investigated in the end product.

Additional Information

This Test Report was transferred from Volume X1 to Volume X2.

Markings and instructions

Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.

Special Instructions to UL Representative

N/A

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
N/A						

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

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

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
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Sample and Test Specifics for Follow-Up Tests at UL

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