

CERTIFICATE OF COMPLIANCE

Certificate Number 2015-10-29-E354324
Report Reference E354324-D1000-1-UL
Issue Date 2015-10-29

Issued to: TDK Lambda Ltd
Applicant Company: TDK Lambda Ltd,
56 HAHAROSHET STREET P.O.B. 500 KARMIEL INDUSTRIAL
ZONE
KARMIEL, 2161401 ISRAEL

Listed Company: Same as Applicant

This is to certify that representative samples of Programmable Power Supply
ZUP200 Series, ZUP400 Series and ZUP800 Series

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 61010-1, 3rd Edition, 2012-05, CAN/CSA-C22.2 No. 61010-1, 3rd Edition, 2012-05

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information.

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.


Bruce Mahrenholz, Assistant Chief Engineer, Global Inspection and Field Services, UL LLC
Joseph Hosey, General Manager, Director of Sales – Canada, UNDERWRITERS LABORATORIES OF CANADA INC.

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Underwriters Laboratories (UL LLC) Safety Certification Report

Model: ZUP200 Series, ZUP400 Series and ZUP800 Series
Device Description: Programmable Power Supply
Applicant: TDK Lambda Ltd
TDK Lambda Ltd,
56 HAHAROSHET STREET P.O.B. 500 KARMIEL INDUSTRIAL ZONE
KARMIEL, 2161401 ISRAEL
Manufacturer: Same as Applicant

Manufacturing Facility(ies): Same as Applicant

Report No.: E354324-D1000-1-UL
Report (Re)Issue Date: 2015-10-29

Base Standard(s): UL 61010-1, 3rd Edition, 2012-05, CAN/CSA-C22.2 No. 61010-1, 3rd Edition, 2012-05

Report Types: This report consists of the following report types:
[Yes] US Certification (UL Listing)
[Yes] CAN Certification (cUL Listing)

This report covers the Safety evaluation of the referenced model(s) according to the standard(s) specified above.

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Report Modifications Summary



The following changes were made to this report. If none listed in the below table, this report is the originally issued report.

Date Modified (Year-Month-Day)	Modifications Made (include Report Reference Number)	Modified By

Test Report issued under the responsibility of:



TEST REPORT IEC 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use Part 1: General requirements	
Report Reference No.....:	E354324-D1000-1-UL
Date of issue.....:	2015-10-29
Total number of pages.....:	58
Testing Laboratory.....:	
Address.....:	
Applicant's name	TDK Lambda Ltd
Address.....:	TDK Lambda Ltd, 56 HAHAROSHET STREET P.O.B. 500 KARMIEL INDUSTRIAL ZONE KARMIEL, 2161401 ISRAEL
Test specification:	
Standard	IEC 61010-1:2010 (Third Edition)
Test procedure.....:	UL Certification
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC61010_1J
General disclaimer: The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing UL testing laboratory. The authenticity of this Test Report and its contents can be verified by contacting UL.	

Test item description:	Programmable Power Supply	
Trade Mark:	TDK-Lambda	
Manufacturer:	Same as Applicant	
Model/Type reference:	ZUP200 Series, ZUP400 Series and ZUP800 Series	
Ratings:	Input: 1: ~100-240V, 4A, 50/60Hz; 2: ~100-240V, 7A, 50/60Hz; 3: ~100-240V, 12A, 50/60Hz; Output: 1. ZUP200: from 0-6VDC/0-33A to 0-120VDC/0-1.8A, 220W max. 2. ZUP400: from 0-6VDC/0-66A to 0-120VDC/0-3.6A, 432W max. 3. ZUP800: from 0-6VDC/0-132A to 0-60VDC/0-14A, 864W max.	
Testing procedure and testing location:		
<input type="checkbox"/> UL Testing Laboratory:		
Testing location/ address:		
Tested by (name + signature):	Hima Chetty/Shahab Musavian	
Approved by (name + signature):	Mona Nielsen	
Testing procedure: WMT:		
<input type="checkbox"/> Testing procedure: WMT:		
Testing location/ address:		
Tested by (name + signature):		
Witnessed by (name + signature):		
Approved by (name + signature):		

List of Attachments (including a total number of pages in each attachment):

Refer to Appendix A of this report. All attachments are included within this report.

Summary of testing

Tests performed (name of test and test clause):

Testing location:

Refer to the Test List in Appendix D of this report if testing was performed as part of this evaluation.

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective owners of these marks.

Refer to the enclosure(s) titled Marking Plate in the Enclosures section in Appendix A of this report for a copy.

Test item particulars:	
Type of item:	Laboratory
Description of equipment function:	Programmable power supply
Connection to mains supply:	Detachable cord set
Overvoltage category:	II
Pollution degree:	2
Means of protection:	Class I (PE Connected)
Environmental conditions:	Extended (Specify):max. ambient-50°C, altitude-3000m
For use in wet locations:	No
Equipment mobility:	Portable
Operating conditions:	Continuous
Overall size of equipment (W x D x H)	ZUP200/ZUP400: 70x124x350 (mm) ZUP800: 140x124x350 (mm)
Mass of equipment (kg):	ZUP200: ~2.9kg ZUP400: ~3.2kg ZUP800: ~5.8kg
Marked degree of protection to IEC 60529:	Not IP rated, IPX0
Testing	
Date of receipt of test item(s)	N/A
Dates tests performed	N/A
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement.....	Pass (P)
- test object was not evaluated for the requirement	N/E
- test object does not meet the requirement.....	Fail (F)
Abbreviations used in the report:	
- normal condition: N.C.	- single fault condition: S.F.C.
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory. "(see ENCLOSURE #)" refers to additional information appended to the report. "(see Form A.xx)" refers to a table appended to the report. Bottom lines for measurement tables Form A.xx are optional if used as record.	
Throughout this report a point is used as the decimal separator.	
The application for obtaining a UL Certification includes more than one factory location	Not Applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	Same as Applicant

GENERAL PRODUCT INFORMATION:**Report Summary**

All applicable tests according to the referenced standard(s) have been carried out.
Refer to the Report Modifications page for any modifications made to this report.

Product Description

Description of unit:

ZUP200 series, ZUP400 series and ZUP800 series are family of switching mode programmable power supplies.

All series are Class I product and intended for:

- Indoor use;
- Overvoltage Category II;
- Pollution Degree 2;
- Max. altitude 3000m;
- Max. ambient 50°C.

ZUP200 and ZUP400 series have identical mechanical and electrical construction.

ZUP800 have wide enclosure and constructed of two identical ZUP400 series AC-DC modules.

Description of model differences.

ZUP200 series, ZUP400 series and ZUP800 series Configuration Code: ZUPxxx-yyy

where:

ZUP200/ZUP400:

xxx = max. output voltage, may be any between 6 and 120;

yyy = max. output current, may be any between 66 and 1.8;

ZUP800:

xxx = max. output voltage, may be any between 6 and 60;

yyy = max. output current, may be any between 132 and 14.

Model Differences

N/A

Additional Information

N/A

Technical Considerations

- The product was investigated to the following additional standards:
UL 61010-1, 3rd Edition, 2012-04-17 / CAN/CSA-C22.2 No. 61010-1, 3rd Edition, 2012-04
Additional: None
- The following additional investigations were conducted: None
- The product was not investigated to the following standards or clauses:
- The following accessories were investigated for use with the product:
- No Other Considerations.

Engineering Conditions of Acceptability

When installed in an end-product, consideration must be given to the following:

None