

Test Report issued under the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment – Safety –
Part 1: General requirements

Report Number..... : 30581696.032
Date of issue : 14 July 2015
Total number of pages..... : 107 + Attachments

Applicant’s name : TDK-Lambda Americas, Inc.
Address..... : 401 Mile of Cars Way, Suite 325, National City, CA, 91950 USA

Test specification:
Standard : IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
and EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 +
A2:2013
Test procedure : CB Scheme
Non-standard test method : N/A

Test Report Form No...... : IEC60950_1F
Test Report Form(s) Originator : SGS Fimko Ltd
Master TRF..... : Dated 2014-02

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If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.
This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description	Switching Power Supply	
Trade Mark.....	TDK·Lambda	
Manufacturer.....	Same as applicant	
Model/Type reference.....	1) LZS-A500-3; 2) LZS-A1000-3; 3) LZS-A1500-3; 4) LZS-A1000-2; 5) LZS-A1500-3-001, 6) LZS-A1500-4, 7) LZS-A1000-2-009	
Ratings.....	<p>1) Input: 100-240 VAC, 7.3 A, 47-63 Hz (Operating Range 85-265 V) Output: 18.0-29.4 VDC, 21A, 504W max @ 60°C; 12.6A, 302W @ 70°C</p> <p>2) Input: 100-240 VAC, 15 A, 47-63 Hz (Operating Range 85-265 V) Output: 18.0-29.4 VDC, 42A, 1008W @ 60°C; 25.5A, 605W @ 70°C</p> <p>3) Input: 100-240 VAC, 15 A, 47-63 Hz (Operating Range 85-265 V) Output: see rating table I on page 5 for details</p> <p>4) Input: 100-240 VAC, 15 A, 47-63 Hz (Operating Range 85-265 V) Output: 10.0-15.75 VDC, 84 A, 1008W @ 60°C; 50.4 A, 605W @ 70°C</p> <p>5) Input: 100-240 VAC, 18 A, 47-63 Hz (Operating Range 85-265 V) Output: see rating table II on page 6 for details</p> <p>6) Input: 100-240 VAC, 18 A, 47-63 Hz (Operating Range 85-265 V) Output: see rating table III on page 7 for details</p> <p>7) Input: 100-240 VAC, 15 A, 47-63 Hz (Operating Range 85-265 V) Output: 9.2-15.75 VDC, 84 A, 1008W @ 60°C; 50.4 A, 605W @ 70°C</p>	
Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	
Testing location/ address.....	TÜV Rheinland of North America, Inc. 1279 Quarry Lane, Suite A, Pleasanton, CA 94566	
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address.....		
Tested by (name + signature).....	Duy Nguyen	
Approved by (name + signature).....	Hai Nguyen	
<input type="checkbox"/>	Testing procedure: TMP/CTF Stage 1:	N/A
Testing location/ address.....		
Tested by (name + signature).....		
Approved by (name + signature).....		
<input type="checkbox"/>	Testing procedure: WMT/CTF Stage 2:	N/A
Testing location/ address.....		
Tested by (name + signature).....		

Witnessed by (name + signature).....:			
Approved by (name + signature).....:			
<input type="checkbox"/>	Testing procedure: SMT/CTF Stage 3 or 4:	N/A	
Testing location/ address.....:			
Tested by (name + signature).....:			
Witnessed by (name + signature).....:			
Approved by (name + signature).....:			
Supervised by (name + signature).....:			

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

1. National Differences (31 pages)
2. Photos (7 pages)
3. Transformer drawings (22 pages)
4. PCB layout (60 pages)
5. Schematics (23 pages)
6. Enclosure drawings (16 pages)

Summary of testing:**Tests performed (name of test and test clause):**

30581696.032-No testing

No testing performed
(30581696.030)

No testing performed for this report amendment
(30581696.028)

No testing performed for this report amendment
(30581696.026)

Testing performed on August 10, 2012 (30581696.024)

Clause 1.6.2 Power Input Measurements

Clause 1.6.2 Power Input Measurements

Clause 1.7.11 Durability of Marking Test

Clause 2.1.1.7 Capacitance Discharge Test

Clause 2.2 SELV circuits-voltage
measurements (normal and
fault conditions)

Clause 2.6.3 Earthing Test

Clause 2.9.2 Humidity conditioning treatment

Clause 2.10 Measurement of creepage- and
clearance distances, solid
insulation

Clause 3.1.9 Termination of conductors –
10N pull test

Clause 4.5 Temperature rise measurements

Clause 5.1 Touch current and protective
conductor current

Clause 5.2 Electric strength measurements

Clause 5.3 Abnormal operating and fault
conditions

Annex C Testing on Transformers

Annex Q VDR,s

Testing location:

No further testing performed for this
Amendment. Please refer to the original test
report, number 30581696.024

Summary of compliance with National Differences:

List of countries addressed

EU Group Differences, EU Special National Conditions, United States, Canada

The product fulfils the requirements of IEC 60950-1:2005 + Am 1:2009 + Am 2:2013; EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

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 NCBs that own these marks.

TDK-Lambda  

LZS-A500-3
REGULATED POWER SUPPLY  

<p>INPUT</p> <p>100-240 VAC (⎓) 47-63 Hz 7.3A RMS MAX.</p>	<p>OUTPUT</p> <p>18.0-29.4 VDC (≡) MAX. RATINGS 21A (504W) 60°C 12.6A (302W) 70°C</p>
---	--

IND. CONT. EQ. 64WA

TEMP CODE: T3G @ 70°C & 60°C
CLASS I, DIV 2, GROUPS A,B,C & D

REV. K


YYWWFFXXXXXX

ASSEMBLED IN XXXXXX ZZZZ

SEE MANUAL FOR CONNECTIONS AND OTHER INPUT INFORMATION



TDK-Lambda  

LZS-A1000-3
REGULATED POWER SUPPLY  

<p>INPUT</p> <p>100-240 VAC (⎓) 47-63 Hz 15A RMS MAX.</p>	<p>OUTPUT</p> <p>18.0-29.4 VDC (≡) MAX. RATINGS 42A (1008W) 60°C 25.2A (605W) 70°C</p>
--	---

IND. CONT. EQ. 64WA

TEMP CODE: T3 @ 70°C
TEMP CODE: T3A @ 60°C
CLASS I, DIV 2, GROUPS A,B,C & D

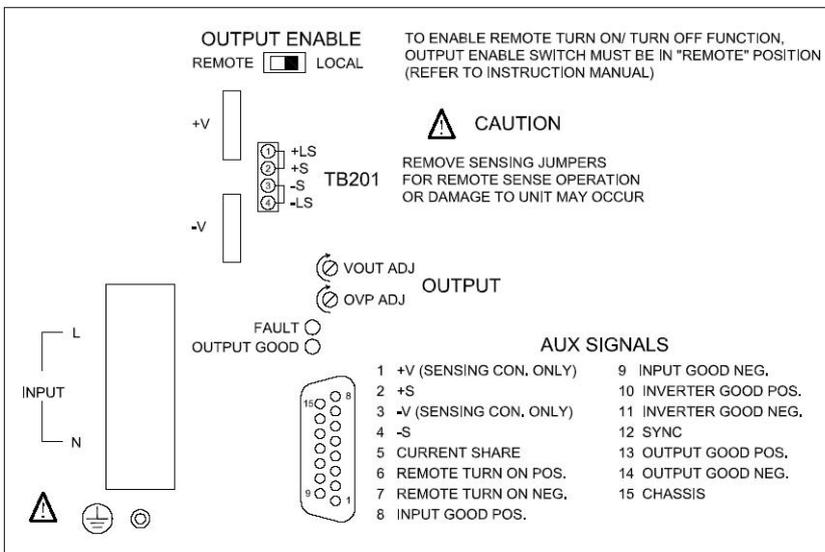
REV. M


YYWWFFXXXXXX

ASSEMBLED IN XXXXXX ZZZZ

SEE MANUAL FOR CONNECTIONS AND OTHER INPUT INFORMATION





TDK-Lambda  

LZS-A1500-3
REGULATED POWER SUPPLY

IND. CONT. EQ.
64WA

<p>INPUT</p> <p>100-240 VAC (~) 47-63 Hz 15A RMS MAX.</p> <p></p> <p>SEE MANUAL FOR CONNECTIONS AND OTHER INPUT / OUTPUT INFORMATION</p>	<p>OUTPUT</p> <p>OUTPUT VOLTAGE: 18,0-29,4 VDC (---) OUTPUT CURRENT: 63A MAX. MAX. OUTPUT POWER 1008W @85VAC MIN. 1104W @100VAC MIN. 1200W @120VAC MIN. 1512W @180-265VAC</p> <p>Max. operating temp. is 60C. Derated linearly to 60% of max. rated output power at 70C.</p>
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TEMP CODE: T2B @ 70°C
 TEMP CODE: T2C @ 60°C
 CLASS I, DIV 2, GROUPS A,B,C & D

 YYWWFFXXXXXX

REV. H

ASSEMBLED IN XXXXXX ZZZZ

TDK-Lambda  

LZS-A1000-2
REGULATED POWER SUPPLY

IND. CONT. EQ.
64WA

<p>INPUT</p> <p>100-240 VAC (~) 47-63 Hz 15A RMS MAX.</p> <p></p> <p>SEE MANUAL FOR CONNECTIONS AND OTHER INPUT INFORMATION</p>	<p>OUTPUT</p> <p>10,0-15,75 VDC (---) MAX. RATINGS 84A (1008W) 60°C 50.4A (605W) 70°C</p>
---	--

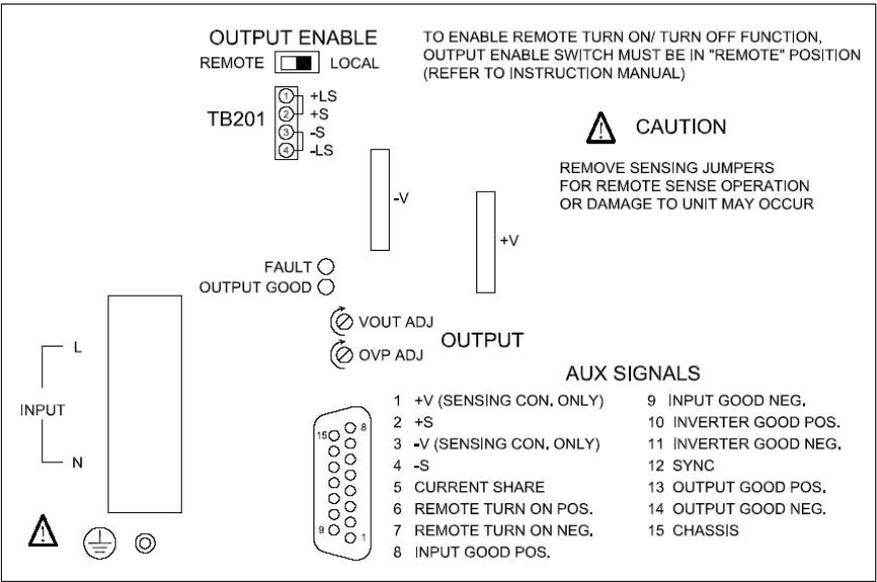
 

TEMP CODE: T3 @ 70°C
 TEMP CODE: T3A @ 50°C
 CLASS I, DIV 2, GROUPS A,B,C & D

 YYWWFFXXXXXX

REV. E

ASSEMBLED IN XXXXXX ZZZZ



TDK-Lambda  

LZS-A1500-4
REGULATED POWER SUPPLY  

IND. CONT. EQ. 64WA

INPUT

100-240 VAC (~)
47-63 Hz
18A RMS MAX.


SEE MANUAL FOR CONNECTIONS AND OTHER INPUT INFORMATION

OUTPUT

OUTPUT VOLTAGE: 36.0 - 56.0 VDC (---)
OUTPUT CURRENT: 31.5A MAX.

MAX. OUTPUT POWER

VIn	Po @ 50°C	Po @ 60°C	Po @ 70°C
85VAC	1200W	1125W	675W
90VAC	1300W	1200W	720W
95VAC	1400W	1275W	765W
100VAC	1512W	1350W	810W
105VAC	1512W	1425W	855W
110-265VAC	1512W	1512W	907W

APPROVED

TEMP CODE: T4A @ 50°C
TEMP CODE: T4 @ 60°C
TEMP CODE: T4A @ 70°C

REV. X4



YYWWFFXXXXXX

ASSEMBLED IN XXXXXX ZZZZ

TDK-Lambda  

LZS-A1500-3-001
REGULATED POWER SUPPLY  

IND. CONT. EQ. 64WA

INPUT

100-240 VAC (~)
47-63 Hz
18A RMS MAX.


SEE MANUAL FOR CONNECTIONS AND OTHER INPUT / OUTPUT INFORMATION

OUTPUT

OUTPUT VOLTAGE: 18.0-29.4 VDC (---)
OUTPUT CURRENT: 63A MAX.

MAX. OUTPUT POWER

VIn	Po @ 50°C	Po @ 60°C	Po @ 70°C
85VAC	1200W	1125W	675W
90VAC	1300W	1200W	720W
95VAC	1400W	1275W	765W
100VAC	1512W	1350W	810W
105VAC	1512W	1425W	855W
110-265VAC	1512W	1512W	907W

APPROVED

TEMP CODE: T4A @ 50°C
TEMP CODE: T4 @ 60°C
TEMP CODE: T4 @ 70°C
CLASS I, DIV 2, GROUPS A,B,C & D

REV. A



YYWWFFXXXXXX

ASSEMBLED IN XXXXXX ZZZZ

TDK-Lambda  

LZS-A1000-2-009
REGULATED POWER SUPPLY  

IND. CONT. EQ. 64WA

INPUT

100-240 VAC (~)
47-63 Hz
15A RMS MAX.


SEE MANUAL FOR CONNECTIONS AND OTHER INPUT INFORMATION

OUTPUT

9.20 -15.75 VDC (---)
MAX. RATINGS
84A (1008W) 60°C
50.4A (605W) 70°C

REV. B



YYWWFFXXXXXX

APPROVED

TEMP CODE: T3 @ 70°C
TEMP CODE: T3A @ 50°C
CLASS I, DIV 2, GROUPS A,B,C & D

ASSEMBLED IN XXXXXX ZZZZ

LZS-A1500-3 Output Rating Table I

Input Voltage (V ac)	Output Voltage (V dc)	Max Output Current (A)	Max Output Power (W)	Max Ambient (°C)
85	18	56	1008	60
	24	42	1008	
	29.4	34.3	1008	
85	18	33.6	605	70
	24	25.2	605	
	29.4	20.6	605	
100	18	61.4	1104	60
	24	46	1104	
	29.4	37.6	1104	
100	18	36.8	662	70
	24	27.6	662	
	29.4	22.5	662	
120	18	63	1134	60
	24	50	1200	
	29.4	40.9	1200	
120	18	40	720	70
	24	30	720	
	29.4	24.5	720	
180 to 265	18	63	1134	60
	24	63	1512	
	29.4	51.5	1512	
180 to 265	18	50.4	907	70
	24	37.8	907	
	29.4	30.9	907	

LZS-A1500-3-001 Output Rating Table II

Input Voltage (V ac)	Output Voltage (V dc)	Max Output Current (A) @ 50°C max ambient	Max Output Power (W) @ 50°C max ambient	Max Output Current (A) @ 60°C max ambient	Max Output Power (W) @ 60°C max ambient	Max Output Current (A) @ 70°C max ambient	Max Output Power (A) @ 70°C max ambient
85	18	63	1134	62.5	1125	37.5	675
	24	50	1200	46.9	1125	28.2	675
	29.4	40.8	1200	38.3	1125	23.0	675
90	18	63	1134	63	1134	40	720
	24	54.2	1300	50	1200	30	720
	29.4	44.2	1300	40.8	1200	24.5	720
95	18	63	1134	63	1134	42.5	765
	24	58.4	1400	53.1	1275	31.9	765
	29.4	47.6	1400	43.4	1275	26.1	765
100	18	63	1134	63	1134	45	810
	24	63	1512	56.3	1350	33.8	810
	29.4	51.4	1512	46.0	1350	27.6	810
105	18	63	1134	63	1134	47.5	855
	24	63	1512	59.4	1425	35.7	855
	29.4	51.4	1512	48.5	1425	29.1	855
110 – 265	18	63	1134	63	1134	50.4	907
	24	63	1512	63	1512	37.8	907
	29.4	51.42	1512	51.42	1512	30.9	907

LZS-A1500-4 Output Rating Table III

Input Voltage (V ac)	Output Voltage (V dc)	Max Output Current (A) @ 50°C max ambient	Max Output Power (W) @ 50°C max ambient	Max Output Current (A) @ 60°C max ambient	Max Output Power (W) @ 60°C max ambient	Max Output Current (A) @ 70°C max ambient	Max Output Power (A) @ 70°C max ambient
85	36	31.5	1134	31.25	1125	18.75	675
	48	25	1200	23.45	1125	14.1	675
	54	22.25	1200	20.85	1125	12.5	675
90	36	31.5	1134	31.5	1134	20	720
	48	27.1	1300	25	1200	15	720
	54	24.1	1300	22.25	1200	13.35	720
95	36	31.5	1134	31.5	1134	21.25	765
	48	29.2	1400	26.6	1275	15.95	765
	54	25.95	1400	23.6	1275	14.2	765
100	36	31.5	1134	31.5	1134	22.5	810
	48	31.5	1512	28.15	1350	16.9	810
	54	28	1512	25	1350	15	810
105	36	31.5	1134	31.5	1134	23.75	855
	48	31.5	1512	29.7	1425	17.85	855
	54	28	1512	26.4	1425	15.85	855
110 – 265	36	31.5	1134	31.5	1134	25.2	907
	48	31.5	1512	31.5	1512	18.9	907
	54	27	1512	28	1512	16.8	907

Test item particulars..... :	
Equipment mobility.....:	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains.....:	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> type A <input type="checkbox"/> type B <input checked="" type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
Operating condition.....:	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	+10%/-15%
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	230
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as part of the building installation (A)	16 (Europe), 20 (US/CAN)
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IPX0
Altitude during operation (m)	3000
Altitude of test laboratory (m)	Sea level
Mass of equipment (kg)	Less than 18Kg

Possible test case verdicts:

- test case does not apply to the test object.....: N/A
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

Testing:

Date of receipt of test item.....: October 5, 2005 (30581696.001)
 June 5, 2006 (30581696.003)
 June 8, 2006 (30581696.005)
 October 10, 2006 (30581696.007)
 March 21, 2007 (30581696.010)
 June 15, 2007 (30581696.013)
 N/A (30581696.016)
 December 15, 2008 (30581696.018)
 N/A (30581696.020)
 September 14, 2009 (30581696.022)
 August 10, 2012 (30581696.024)
 N/A (30581696.026)
 N/A (30581696.028)
 N/A (30581696.030)
 N/A (30581696.032)

Date (s) of performance of tests.....: October 5, 2005 (30581696.001)
 June 5, 2006 (30581696.003)
 June 8, 2006 (30581696.005)
 October 10, 2006 (30581696.007)
 March 21, 2007 (30581696.010)
 June 25, 2007 (30581696.013)
 N/A (30581696.016)
 December 15, 2008 (30581696.018)
 N/A (30581696.020)
 September 14, 2009 (30581696.022)
 August 10, 2012 (30581696.024)
 N/A (30581696.026)
 (test data is based on previously-issued CB test report 30581696.024; this report is based on equipment with the same construction to that covered by these earlier-issued reports)
 N/A (30581696.028)
 N/A (30581696.030)
 N/A (30581696.032)

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 appended table)" refers to a table appended to the report.

Throughout this report a comma / point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60950-1:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

Yes
 Not applicable

The units manufactured in each factory are fully identical. All tested samples are representing products from each factory.

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ie s): Panyu Trio Microtronics Co., Ltd.
Shiji Industrial Estate,
Guangzhou, Guandong, 190
China

General product information:

The equipment is a switch-mode power supply. All models are constructionally equivalent from a safety-critical standpoint and differ only in output voltage and current due to variations in output resistance values.

The subject power supplies being evaluated in this report are fully enclosed, custom made, single output with forced air-cooling switch mode power supplies.

Report History:

Note: Gaps in the report numbering were reserved for TÜV internal use, not related to the technical contents of the CB report.

30581696.001 – First issue / initial product evaluation.

30581696.003 – The subject power supply being evaluated in this report is a fully enclosed, custom made, single output switch mode power supply, which is as additional model with the similarity to previous approval model LZS-A500-3 under report number 30581696.001. The unit is electrically, schematically and constructionally identical to the previously approval model. The main differences are the bigger sized

chassis and cooling fan are implemented, the PC Boards are enlarged correspondingly as well. Complete testing were performed to this new model unit and passed with positive results.

30581696.005 – This test report is as an amendment CB report based on the previously approval under CB report number 30581696.001 and 30581696.003. The alternate changes were made only on the model of LZS-A500-3. They are as follows:

1. Add alternate fan Sanyo Denki.
2. Add alternate part for T401 primary winding material.
3. Add revision change for PCB (X revisions were changed to A when released to

production).

30581696.007 - This is a fully addressed amendment CB report to add an additional model LZS-A1500-3 based on the previously approval under CB report number 30581696.003 and 30581696.005. The product being evaluated in this report is identical to the previous approved model LZS-A1000-3. The product enclosure and input board kept the exactly same as before. The main difference is that a new output board is implemented and some higher grade component (such as: output transformer, output choke and power transistors...) are introduced in order to give higher power output.

Due to the changes mentioned above, the effect caused by the changes were brought into consideration and evaluation. No complete testing was considered necessary, however, selected tests were conducted and passed with positive results. This test report is limited to the clauses affected.

30581696.010 - This is a fully addressed CB report to consolidate all the previous models that are under original CB report number 30581696.001 and 3 amendment CB report number 30581696.003, 30581696.005 and 30581696.007. This report is also covering an additional model LZS-A1000-2 based on above previously approvals. The new model being evaluated in this report is identical to the previous approved model LZS-A1500-3. The enclosure of the unit and input/output boards are kept the exactly same as model LZS-A1500-3. The mainly difference made on the new model LZS-A1000-2 are changing the winding turns of the main transformer T401 and some secondary side component ratings so as to get the required rated power output.

30581696.013 - This amendment 1 CB report is based upon the previously approved CB report number 30581696.010 to include the alternate constructions made on model LZS-A500-3, LZS-A1000-2, LZS-A1000-3 and LZS-A1500-3. The products being evaluated in this report are identical to the previous approvals. The alternations made on individual models are as follows:

For LZS-A500-3:

- 1) Update PCB revisions
- 2) Add alternate parts for Y caps C102 and C107
- 3) Add alternate part for bridge rectifier CR101

For LZS-A1000-3:

- 1) Update PCB revisions
- 2) Correct Littelfuse P/N for F101 from 314020 to 324020
- 3) Add alternate part for X Cap C103 (previously submitted but not added on the Critical List of the CB Report)
- 4) Add alternate part for Y caps C101, C102, C107 and C108
- 5) Add alternate part for common mode chokes L101 and L102
- 6) Add alternate part for Main Transformer (T401) (Alternate part is used in Model LZS-A1500-3)
- 7) Add alternate parts for T401 primary winding material
- 8) Add primary fuse F102 and F400. These fuses were already listed in Model LZS-A1500-3.

For LZS-A1500-3:

- 1) Update PCB revisions
- 2) Correct Littelfuse P/N for F101 from 314020 to 324020

- 3) Add alternate part for Y caps C101 and C108
- 4) Add alternate part for common mode chokes L101 and L102
- 5) Add alternate parts for T401 primary winding material

In addition to above alternations, the UL approved conformal coating materials will be used on all existing PWBs of above models without any change on PWB layouts, clearance and creepage distances in accordance with end user's specific requirement.

30581696.016 - This test report is covering a company name- and trademark change from Lambda to TDK-Lambda. This report is a consolidation of the reports with number 30581696.010 (main CB-report) and it's first Amendment, report number 30581696.013. No further testing was done in the scope of this project. Minor editorial changes have been implemented throughout the report.

30581696.018 - This report is Amendment 1 to the original test report number 30581696.016 and covers the evaluation of the LZS-1500-3-001 and LZS-1500-4 model variations. The LZS-1500-3-001 is a de-rated version of the LZS-1500-3 and has the same construction. All other model variations vary by internal construction only and have the same enclosure.

30581696.020 - This report is Amendment 2 to the original test report number 30581696.016 and covers the evaluation of the LZS-A1000-2-009 model variation. The LZS-A1000-2-009 is a de-rated version of the LZS-A1000-2 and has the same construction except for a resistor (R506) at the output that alters the output voltage range from 10.0-15.75Vdc to 9.2-15.75Vdc. There are no other physical differences between the models and no changes to any of the safety-critical components (refer to Table 1.5.1 within report nos. 30581696.016 and 30581696.018 for list of safety-critical components). There are no changes to the output power due to the voltage de-rating and therefore no input or temperature tests were required to be re-performed per this update.

30581696.022 – New CB report

30581696.024 – New report: This report serves to document the following changes:

1. Upgrade to IEC 60950-1:2005 + A1
2. Minor changes to the Critical Component List
3. Re-testing input power to 47 and 63 Hz
4. Correction of factory address from
Nava Nakon Industrial Estate Phase 2
60/79 MOO 19 Klong Nueng
Klong Luang
Phatlim Thani
12120 Thailand
to
Nava Nakon Industrial Estate Phase 2
60/79 MOO 19 Klong Nueng
Klong Luang
Pathum Thani
12120 Thailand

30581696.026 – This report is the first amendment to original report no. 30581696.024 and covers the addition of primary fuse F404 (Optional) and the addition of factory

Trio Engineering Co. LTD.
Shiji Industrial Estate
Dongyong, Nansha,
Guangzhou Guangdong, China

30581696.028 – This report is the second amendment to remove Fuji Electric Power Supply (Thailand) Co. Ltd. Factory; also to revise Trio Engineering Co. LTD to Panyu Trio Micronics Co., Ltd.; and adding alternate PCB Connector Molex Inc. 41815 Series, 94V-2, 250V, 5A.

30581696.030- Amendment 3 to CB report no. 30581696.024 which covers the applicant address change

from "3055 Del Sol Boulevard, San Diego, CA 92154 USA" to "401 Mile of Cars Way, Suite 325, National City, CA, 91950 USA"

30581696.032- New CB report covers the upgrade of standard to IEC 60950-1:2005 + Am 1:2009 + Am 2:2013 and typo correction for Altitude during operation from 2000m to 3000m. No additional testing is deemed necessary.

Conditions of Acceptability:

1. This units are considered to operate under the conditions of:
 - Pollution Degree 2 environment
 - Equipment mobility: Component for building-in
 - Class of Equipment: Class I (grounded)
2. Rated ambient 60°C at full load, 70°C at 60% load.
3. Fire enclosure requirements must be addressed in the end product.
4. Output is considered to be at hazardous energy levels.
5. All heating tests must be re-evaluated in the end use application.
6. All fuses used are non-user accessible and replaceable UL/CSA-fuses (no further testing necessary).

Abbreviations used in the report:

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	OP	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite polarity	BOP	- reinforced insulation	RI

Indicate used abbreviations (if any)