



Test Report issued under the responsibility of:

**IEC 60601-1**  
**Medical electrical equipment**  
**Part 1: General requirements for basic safety and essential performance**

**Report Reference No.**.....: 141102705

**Date of issue** .....: 2016-04-27

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**CB Testing Laboratory**.....: Victronic Technology Corporation.

**Address** .....: 4<sup>th</sup> Fl. 130, Ln. 235, Baoqiao Rd., Xindian Dist, New Taipei 231, Taiwan.

**Applicant's name**.....: TRACO ELECTRONIC AG

**Address** .....: SIHLBRUGGSTRASSE 111 CH-6340 BAAR, SWITZERLAND

**Test specification:**

**Standard** .....: IEC 60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007) + AM1 (2012) or IEC 60601-1: 2012

**Test procedure**.....: CB Scheme

**Non-standard test method**.....: N/A

**Test Report Form No.**.....: IEC60601\_1H

**Test Report Form Originator** .....: UL(US)

**Master TRF** .....: Dated 2012-12

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**Test item description** .....: Switching power supply

**Trade Mark** .....: **TRACO<sup>®</sup>**  
**POWER**

**Manufacturer**.....: Same as applicant

<b>Model/Type reference.....:</b>	<p>TPP40-1L(V)Xzzzzzzzz, TPP40-1(V)Xzzzzzzzz,  TPP65-1L(V)Xzzzzzzzz, TPP65-1(V)Xzzzzzzzz  (where X can be A or U or D or blank;  L for low efficiency or blank for standard;  (V) can be 05, 07, 09, 12, 15, 24, 28, 36, 48 or 53;  z can be any alphanumeric or dash or blank for marketing purpose.)</p> <p>TPP40-2(V1)(V2)(XX)Xzzzzzzzz,  TPP65-2(V1)(V2)(XX)Xzzzzzzzz  (where X can be A or U or D or blank;  (V1) can be any number between 1 to 5 or V7.5 or V9 or V28;  (V2) can be any number between 0 to 3 or X;  (XX) can be any number between dash 1.0 and 15 designating the  output voltage or blank;  z can be any alphanumeric or dash or blank for marketing purpose.)</p> <p>TPP40-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz,  TPP40-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz,  TPP65-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz,  TPP65-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz  (where X can be A or U or D or blank;  (V1) can be any number between 1 to 5 or V7.5 or V9 or V28;  (V2) can be any number between 0 to 3 or X;  (V3) can be any number between 0 to 5 or Y;  (XX) can be any number between dash V1.0 and V15 designating  the output voltage or blank;  M for negative output Voltage V3, blank for positive output voltage  V3;  (YY) can be any number between V1.0 and V24 designating the  output voltage or blank;  z can be any alphanumeric or dash or blank for marketing purpose.)</p>
<b>Ratings .....</b>	<p>Input: 100-240 Vac, 50/60 Hz,  1.0-0.5A for TPP40-1L(V)Xzzzzzzzz, TPP40-1(V)Xzzzzzzzz;  1.6-0.9A for TPP65-1L(V)Xzzzzzzzz, TPP65-1(V)Xzzzzzzzz;  1.05-0.55A for TPP40-2(V1)(V2)(XX)Xzzzzzzzz, TPP40-  3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP40-  3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz  1.65-0.95A for TPP65-2(V1)(V2)(XX)Xzzzzzzzz, TPP65-  3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and  TPP65-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz</p> <p>Output Rating:  See "General product information" for details.</p>

<b>Testing procedure and testing location:</b>	
<input checked="" type="checkbox"/> <b>CB Testing Laboratory:</b> <b>Testing location/ address .....</b> :  <input type="checkbox"/> <b>Associated CB Test Laboratory:</b> <b>Testing location/ address .....</b> :  <b>Tested by (name + signature).. :</b>  <b>Approved by (+ signature) .....</b> :	Victronic Technology Corporation. 4 <sup>th</sup> Fl. 130, Ln. 235, Baoqiao Rd., Xindian Dist, New Taipei 231, Taiwan.    Ella Chang Daniel Chen
<input type="checkbox"/> <b>Testing procedure: TMP</b> <b>Tested by (name + signature).. :</b> <b>Approved by (+ signature) .....</b> : <b>Testing location/ address .....</b> :	
<input type="checkbox"/> <b>Testing procedure: WMT</b> <b>Tested by (name + signature).. :</b> <b>Witnessed by (+ signature) .....</b> : <b>Approved by (+ signature) .....</b> : <b>Testing location/ address .....</b> :	
<input type="checkbox"/> <b>Testing procedure: SMT</b> <b>Tested by (name + signature).. :</b> <b>Approved by (+ signature) .....</b> : <b>Supervised by (+ signature) .... :</b> <b>Testing location/ address .....</b> :	

<b>List of Attachments (including a total number of pages in each attachment):</b>	
- N/A	
<b>Summary of testing</b>	
<b>Tests performed (name of test and test clause):</b>	<b>Testing location:</b>
No tests were considered necessary.	--
<b>Summary of compliance with National Differences</b>	
List of countries addressed: N/A	
<input checked="" type="checkbox"/> The product fulfils the requirements of EN 60601-1:2006/A1:2013/A12:2014, ANSI/AAMI ES60601-1:2005/(R) 2012 and A1:2012, C1:2009/(R)2012 and A2:2010/(R)2012	

**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.



All marking about safety on marking plate are the same for all models, except for model name, input rating and output rating.

<b>GENERAL INFORMATION</b>	
Test item particulars (see also Clause 6):	
Classification of installation and use..... :	Switching Power Supply for Built-in
Device type (component/sub-assembly/ equipment/ system)..... :	Sub-assembly
Intended use (Including type of patient, application location)..... :	None
Mode of operation .....	Continuous
Supply connection .....	Connector
Accessories and detachable parts included .....	None
Other options include .....	None
<b>Testing</b>	
Date of receipt of test item(s)..... :	N/A
Dates tests performed .....	N/A
<b>Possible test case verdicts:</b>	
- 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 (collateral standards only)
- test object does not meet the requirement .....	Fail (F)
<b>Abbreviations used in the report:</b>	
- normal condition .....	N.C.
- means of Operator protection .....	MOOP
- single fault condition .....	S.F.C.
- means of Patient protection ... :	MOPP
<b>General remarks:</b>	
<p>"(See Attachment #)" refers to additional information appended to the report.</p> <p>"(See appended table)" refers to a table appended to the report.</p> <p>The tests results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>List of test equipment must be kept on file and available for review.</p> <p>Additional test data and/or information provided in the attachments to this report.</p>	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC60060-1:</b>	
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..... :	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable	
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... :	TRACO ELECTRONIC AG SIHLBRUGGSTRASSE 111 CH-6340 BAAR, SWITZERLAND

**General product information:**

- The equipment, models shown as on cover page are Open Frame Switching Power Supply intended for supplying medical electrical apparatus, consists of electronic components mounted on PWB, and/or housed in metal chassis.

- All models are similar in design and differ from each other in the model name, input rating, output ratings, mains transformer TX1 specification and the rating of the secondary components.

- Unless otherwise specified, all tests were performed on model TPP65-105X, TPP65-107X, TPP65-153X, TPP65-21V4X, TPP65-2V7.5V6X, TPP65-2V7.51X, TPP65-2V281X, TPP65-2V283X, TPP65-221X, TPP65-31V42X, TPP65-31V45X, TPP65-3V7.512X, TPP65-3V7.515X, TPP65-3V7.5V65X, TPP65-3V7.5V62X, TPP65-3V2835X, TPP65-3V2832X, TPP65-3V2815X, TPP65-3V2812X.

- The insulation system of the equipment was evaluated for compliance with the two Means of Patient Protection (2MOPP).

- The switching power supply shall be installed in compliance with the enclosure, mounting, marking, spacing, and separation requirements of the end use application.

- Model with blank or D are with whole enclosure, A is open frame type, and U is U type chassis.

- Temperature, Leakage Current, Dielectric Voltage Withstand, and Interruption of the Power Supply tests should be considered as part of the end product evaluation and be tested accordingly to achieve certification of the end application or ME equipment defined Type B and BF Applied Part.

- The ambient temperature of all models for standard voltage see below:

For TPP65-1L(V)Xzzzzzzzz, TPP65-1(V)Xzzzzzzzz, TPP65-2(V1)(V2)(XX)Xzzzzzzzz, TPP65-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP65-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz series:

Rated Voltage	Ambient Temperature (°C)_Open frame type			Ambient Temperature (°C)_Enclosed type		
	Single model series	Dual model series	Triple model series	Single model series	Dual model series	Triple model series
90-264Vac	55	45	50	50	45	45

For TPP40-1L(V)Xzzzzzzzz, TPP40-1(V)Xzzzzzzzz, TPP40-2(V1)(V2)(XX)Xzzzzzzzz, TPP40-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP40-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz series:

Rated Voltage	Ambient Temperature (°C)_Open frame type			Ambient Temperature (°C)_Enclosed type		
	Single model series	Dual model series	Triple model series	Single model series	Dual model series	Triple model series
90-264Vac	75	65	65	65	65	70

- The ambient temperature of all models per customer's request see below:

For TPP65-1L(V)Xzzzzzzzz, TPP65-1(V)Xzzzzzzzz, TPP65-2(V1)(V2)(XX)Xzzzzzzzz, TPP65-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP65-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz series:

Test Voltage	Ambient Temperature (°C)_Open frame type	Ambient Temperature (°C)_Enclosed type
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	Single model series	Dual model series	Triple model series	Single model series	Dual model series	Triple model series
100VAC	55	45	50	55	45	50
115VAC	65	50	55	65	50	55
230VAC	65	60	60	65	60	60
264VAC	65	60	60	65	60	60

For TPP40-1L(V)Xzzzzzzzz, TPP40-1(V)Xzzzzzzzz, TPP40-2(V1)(V2)(XX)Xzzzzzzzz, TPP40-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP40-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz series:

Test Voltage	Ambient Temperature (°C)_Open frame type			Ambient Temperature (°C)_Enclosed type		
	Single model series	Dual model series	Triple model series	Single model series	Dual model series	Triple model series
100VAC	75	65	70	75	65	70
115VAC	75	65	70	75	65	70
230VAC	75	65	70	75	65	70
264VAC	75	70	70	75	70	70

- The clearance distance is compiled the requirements for use in altitude 5000m above the sea level, the altitude correction factor is 1.29.

- \*SAFETY EXTRA-LOW VOLTAGE (SELV): Voltage which does not exceed a NOMINAL value of 25 V a.c. or 60V d.c. at RATED supply voltage on the transformer or converter, between conductors in an earth-free circuit which is isolated from the SUPPLY MAINS by a SAFETY EXTRA-LOW VOLTAGE TRANSFORMER or by a device with an equivalent separation was refer from IEC 60601-1: 1988+A1+A2.

**- Output rating see below:**

For models TPP40-1L(V)Xzzzzzzzz, TPP40-1(V)Xzzzzzzzz, TPP65-1L(V)Xzzzzzzzz, TPP65-1(V)Xzzzzzzzz (where X can be A or U or D or blank;

L for low efficiency or blank for standard;

(V) can be 05, 07, 09, 12, 15, 24, 28, 36, 48 or 53;

z can be any alphanumeric or dash or blank for marketing purpose.)

Single model series	PCB	TX1	Output rating		Single model series	PCB	TX1	Output rating	
			Voltage	Current				Voltage	Current
			Vdc	A				Vdc	A
TPP40-105X	P1	X1	5	8	TPP65-105X	P1	X1	5	10
TPP40-107X	P1	X2	7.5	5.34	TPP65-107X	P1	X2	7.5	8.67
TPP40-109X	P1	X2	9	4.45	TPP65-109X	P1	X2	9	7.23
TPP40-112X	P2	X3	12	3.34	TPP65-112X	P2	X3	12	5.42
TPP40-115X	P2	X3	15	2.67	TPP65-115X	P2	X3	15	4.34
TPP40-124X	P2	X4	24	1.67	TPP65-124X	P2	X4	24	2.71
TPP40-128X	P2	X4	28	1.43	TPP65-128X	P2	X4	28	2.33



TPP40-136X	P2	X5	36	1.12	TPP65-136X	P2	X5	36	1.81
TPP40-148X	P2	X6	48	0.84	TPP65-148X	P2	X6	48	1.36
TPP40-153X	P2	X6	53	0.77	TPP65-153X	P2	X6	53	1.24
TPP40-105X	P1	X1	5	8	TPP65-105X	P1	X1	5	10

For models TPP40-2(V1)(V2)(XX)Xzzzzzzzz, TPP65-2(V1)(V2)(XX)Xzzzzzzzz

(where X can be A or U or D or blank;

(V1) can be any number between 1 to 5 or V7.5 or V9 or V28;

(V2) can be any number between 0 to 3 or X;

(XX) can be any number between dash 1.0 and 15 designating the output voltage or blank;

z can be any alphanumeric or dash or blank for marketing purpose.)

Dual model series	PCB	TX1	Output 1		Output 2		Max. Total Output Power
			Voltage	Normal Current		Normal Current	
			Vdc	A	W	A	
TPP40-210X	P3	X1	5	5	3.3	0-4	38.20
TPP40-21(XX)X	P3	X1	5	5	1.0-4	0-4	41.00
TPP40-2V7.5(XX)X	P3	X2	7.5	3.4	1.0-6	0-4	45.50
TPP40-2V9(XX)X	P3	X2	9	2.8	1.0-7.2	0-4	45.20
TPP40-220X	P3	X3	12	2.1	3.3	0-4	38.40
TPP40-221X	P3	X3	12	2.1	5	0-4	45.20
TPP40-22(XX)X	P3	X3	12	2.1	1.0-10	0-4	45.20
TPP40-231X	P5	X3	15	1.7	5	0-4	45.50
TPP40-23(XX)X	P5	X3	15	1.7	1.0-5.3	0-4	45.50
TPP40-23(XX)X	P3	X3	15	1.7	5.4-12	0-4	45.50
TPP40-251X	P3	X4	24	1.05	5	0-4	45.20
TPP40-25(XX)X	P3	X4	24	1.05	8.5-15	0-4	45.20
TPP40-25(XX)X	P5	X4	24	1.05	1.0-8.4	0-4	45.20
TPP40-2V28(XX)X	P3	X4	28	0.9	9.9-15	0-4	45.20
TPP40-2V28(XX)X	P5	X4	28	0.9	1.0-9.8	0-4	45.20
TPP65-210X	P3	X1	5	6	3.3	0-6	49.80
TPP65-21(XX)X	P3	X1	5	6	1.0-4	0-6	54.00
TPP65-2V7.5(XX)X	P3	X2	7.5	4.8	1.0-6	0-6	66.00
TPP65-2V9(XX)X	P3	X2	9	4	1.0-7.2	0-6	66.00
TPP65-220X	P3	X3	12	3	3.3	0-6	55.80
TPP65-221X	P3	X3	12	3	5	0-6	66.00
TPP65-22(XX)X	P3	X3	12	3	1.0-10	0-6	66.00
TPP65-231X	P5	X3	15	2.4	5	0-6	66.00
TPP65-23(XX)X	P5	X3	15	2.4	1.0-5.3	0-6	66.00
TPP65-23(XX)X	P3	X3	15	2.4	5.4-12	0-6	66.00
TPP65-251X	P3	X4	24	1.5	5	0-6	66.00
TPP65-25(XX)X	P3	X4	24	1.5	8.5-15	0-6	66.00
TPP65-25(XX)X	P5	X4	24	1.5	1.0-8.4	0-6	66.00
TPP65-2V28(XX)X	P3	X4	28	1.3	9.9-15	0-6	66.40

TPP65-2V28(XX)X	P5	X4	28	1.3	1.0-9.8	0-6	66.40
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For models TPP40-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz, TPP40-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz, TPP65-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz, TPP65-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz

(where X can be A or U or D or blank;

(V1) can be any number between 1 to 5 or V7.5 or V9 or V28;

(V2) can be any number between 0 to 3 or X;

(V3) can be any number between 0 to 5 or Y;

(XX) can be any number between dash V1.0 and V15 designating the output voltage or blank;

M for negative output Voltage V3, blank for positive output voltage V3;

(YY) can be any number between V1.0 and V24 designating the output voltage or blank;

z can be any alphanumeric or dash or blank for marketing purpose.)

Triple model series	PCB	TX1	Output 1		Output 2		Output 3		Max. Total Output Power
			Voltage	Normal Current	Voltage	Normal Current	Voltage	Normal Current	
			Vdc	A	Vdc	A	Vdc	A	W
TPP40-310M1X	P3	X9	5	5	3.3	4	-5	0.5	38.2
TPP40-3102X	P3	X9	5	5	3.3	4	12	0.5	38.2
TPP40-310M2X	P3	X9	5	5	3.3	4	-12	0.5	38.2
TPP40-31(XX)(YY)X	P3	X9	5	5	1.0-4	4	1.0-24	0.5	41.0
TPP40-31(XX)M(YY)X	P3	X9	5	5	1.0-4	4	-1.0 ~ 24	0.5	41.0
TPP40-3V7.5(XX)(YY)X	P3	X10	7.5	3.4	1.0-6	4	1.0-24	0.5	45.5
TPP40-3V7.5(XX)M(YY)X	P3	X10	7.5	3.4	1.0-6	4	-1.0 ~ 24	0.5	45.5
TPP40-3V9(XX)(YY)X	P3	X10	9	2.8	1.0-7.2	4	1.0-24	0.5	45.2
TPP40-3V9(XX)M(YY)X	P3	X10	9	2.8	1.0-7.2	4	-1.0 ~ 24	0.5	45.2
TPP40-321M1X	P3	X7	12	2.1	5	4	-5	0.5	45.2
TPP40-321M2X	P3	X7	12	2.1	5	4	-12	0.5	45.2
TPP40-3201X	P3	X7	12	2.1	3.3	4	5	0.5	38.4
TPP40-320M2X	P3	X7	12	2.1	3.3	4	-12	0.5	38.4
TPP40-32(XX)(YY)X	P3	X7	12	2.1	1.0-10	4	1.0-24	0.5	45.2
TPP40-32(XX)M(YY)X	P3	X7	12	2.1	1.0-10	4	-1.0 ~ 24	0.5	45.2
TPP40-331M3X	P5	X7	15	1.7	5	4	-15	0.5	45.5
TPP40-33(XX)(YY)X	P3	X7	15	1.7	5.3-12	4	1.0-24	0.5	45.5
TPP40-33(XX)(YY)X	P5	X7	15	1.7	1.0-5.3	4	1.0-24	0.5	45.5
TPP40-33(XX)M(YY)X	P3	X7	15	1.7	5.3-12	4	-1.0 ~ 24	0.5	45.5
TPP40-33(XX)M(YY)X	P5	X7	15	1.7	1.0-5.3	4	-1.0 ~ 24	0.5	45.5

TPP40-3512X	P5	X8	24	1.05	5	4	12	0.5	45.2
TPP40-351M2X	P5	X8	24	1.05	5	4	-12	0.5	45.2
TPP40-35(XX)(YY)X	P3	X8	24	1.05	8.5-15	4	1.0-24	0.5	45.2
TPP40-35(XX)(YY)X	P5	X8	24	1.05	1.0-8.4	4	1.0-24	0.5	45.2
TPP40-35(XX)M(YY)X	P3	X8	24	1.05	8.5-15	4	-1.0 ~ 24	0.5	45.2
TPP40-35(XX)M(YY)X	P5	X8	24	1.05	1.0-8.4	4	-1.0 ~ 24	0.5	45.2
TPP40-3V28(XX)(YY)X	P3	X8	28	0.9	9.8-15	4	1.0-24	0.5	45.2
TPP40-3V28(XX)(YY)X	P5	X8	28	0.9	1.0-9.8	4	1.0-24	0.5	45.2
TPP40-3V28(XX)M(YY)X	P3	X8	28	0.9	9.8-15	4	-1.0 ~ 24	0.5	45.2
TPP40-3V28(XX)M(YY)X	P5	X8	28	0.9	1.0-9.8	4	-1.0 ~ 24	0.5	45.2
TPP65-310M1X	P3	X9	5	6	3.3	6	-5	0.6	49.8
TPP65-3102X	P3	X9	5	6	3.3	6	12	0.6	49.8
TPP65-310M2X	P3	X9	5	6	3.3	6	-12	0.6	49.8
TPP65-31(XX)(YY)X	P3	X9	5	6	1.0-4	6	1.0-24	0.6	54.0
TPP65-31(XX)M(YY)X	P3	X9	5	6	1.0-4	6	-1.0 ~ 24	0.6	54.0
TPP65-3V7.5(XX)(YY)X	P3	X10	7.5	4.8	1.0-6	6	1.0-24	0.6	66.0
TPP65-3V7.5(XX)M(YY)X	P3	X10	7.5	4.8	1.0-6	6	-1.0 ~ 24	0.6	66.0
TPP65-3V9(XX)(YY)X	P3	X10	9	4	1.0-7.2	6	1.0-24	0.6	66.0
TPP65-3V9(XX)M(YY)X	P3	X10	9	4	1.0-7.2	6	-1.0 ~ 24	0.6	66.0
TPP65-321M1X	P3	X7	12	3	5	6	-5	0.6	66.0
TPP65-321M2X	P3	X7	12	3	5	6	-12	0.6	66.0
TPP65-3201X	P3	X7	12	3	3.3	6	5	0.6	55.8
TPP65-320M2X	P3	X7	12	3	3.3	6	-12	0.6	55.8
TPP65-32(XX)(YY)X	P3	X7	12	3	1.0-10	6	1.0-24	0.6	66.0
TPP65-32(XX)M(YY)X	P3	X7	12	3	1.0-10	6	-1.0 ~ 24	0.6	66.0
TPP65-331M3X	P5	X7	15	2.4	5	6	-15	0.6	66.0
TPP65-33(XX)(YY)X	P3	X7	15	2.4	5.3-12	6	1.0-24	0.6	66.0
TPP65-33(XX)(YY)X	P5	X7	15	2.4	1.0-5.3	6	1.0-24	0.6	66.0
TPP65-33(XX)M(YY)X	P3	X7	15	2.4	5.3-12	6	-1.0 ~ 24	0.6	66.0
TPP65-33(XX)M(YY)X	P5	X7	15	2.4	1.0-5.3	6	-1.0 ~ 24	0.6	66.0
TPP65-3512X	P5	X8	24	1.5	5	6	12	0.6	66.0
TPP65-351M2X	P5	X8	24	1.5	5	6	-12	0.6	66.0

TPP65-35(XX)(YY)X	P3	X8	24	1.5	1.0-8.4	6	1.0-24	0.6	66.0
TPP65-35(XX)(YY)X	P5	X8	24	1.5	8.5-15	6	1.0-24	0.6	66.0
TPP65-35(XX)M(YY)X	P3	X8	24	1.5	1.0-8.4	6	-1.0 ~ 24	0.6	66.0
TPP65-35(XX)M(YY)X	P5	X8	24	1.5	8.5-15	6	-1.0 ~ 24	0.6	66.0
TPP65-3V28(XX)(YY)X	P3	X8	28	1.3	9.8-15	6	1.0-24	0.6	66.4
TPP65-3V28(XX)(YY)X	P5	X8	28	1.3	1.0-9.8	6	1.0-24	0.6	66.4
TPP65-3V28(XX)M(YY)X	P3	X8	28	1.3	9.8-15	6	-1.0 ~ 24	0.6	66.4
TPP65-3V28(XX)M(YY)X	P5	X8	28	1.3	1.0-9.8	6	-1.0 ~ 24	0.6	66.4

**Report summary:**

All applicable tests according to the referenced standard(s) have been carried out.

This test report shall be read in conjunction with the original report number:

- UL (Demko) CBTR Ref. No.: 141102704 issued on 2016-04-20, with CB Test Certificate no. DK-53757-UL issued on 2016-04-26.

**This report has been amended, due to:**

- Correct the model name in the “**Ratings**” from “1.0-0.5A for TPP40-1L(V)BXzzzzzzzz, TPP40-1(V)BXzzzzzzzz; 1.6-0.9A for TPP65-1L(V)BXzzzzzzzz, TPP65-1(V)BXzzzzzzzz; 1.05-0.55A for TPP40-2(V1)(V2)(XX)BXzzzzzzzz, TPP40-3(V1)(V2)(XX)(V3)(YY)BXzzzzzzzz and TPP40-3(V1)(V2)(XX)M(V3)(YY)BXzzzzzzzz 1.65-0.95A for TPP65-2(V1)(V2)(XX)BXzzzzzzzz, TPP65-3(V1)(V2)(XX)(V3)(YY)BXzzzzzzzz and TPP65-3(V1)(V2)(XX)M(V3)(YY)BXzzzzzzzz” to “1.0-0.5A for TPP40-1L(V)Xzzzzzzzz, TPP40-1(V)Xzzzzzzzz; 1.6-0.9A for TPP65-1L(V)Xzzzzzzzz, TPP65-1(V)Xzzzzzzzz; 1.05-0.55A for TPP40-2(V1)(V2)(XX)Xzzzzzzzz, TPP40-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP40-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz; 1.65-0.95A for TPP65-2(V1)(V2)(XX)Xzzzzzzzz, TPP65-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP65-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz” for typo.
- Correct the model name in the “**General product information**” from “TPP65-1L(V)BXzzzzzzzz, TPP65-1(V)BXzzzzzzzz, TPP65-2(V1)(V2)(XX)BXzzzzzzzz, TPP65-3(V1)(V2)(XX)(V3)(YY)BXzzzzzzzz and TPP65-3(V1)(V2)(XX)M(V3)(YY)BXzzzzzzzz series”, “TPP40-1L(V)BXzzzzzzzz, TPP40-1(V)BXzzzzzzzz, TPP40-2(V1)(V2)(XX)BXzzzzzzzz, TPP40-3(V1)(V2)(XX)(V3)(YY)BXzzzzzzzz and TPP40-3(V1)(V2)(XX)M(V3)(YY)BXzzzzzzzz series”, to “TPP65-1L(V)Xzzzzzzzz, TPP65-1(V)Xzzzzzzzz, TPP65-2(V1)(V2)(XX)Xzzzzzzzz, TPP65-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP65-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz series”, “TPP40-1L(V)Xzzzzzzzz, TPP40-1(V)Xzzzzzzzz, TPP40-2(V1)(V2)(XX)Xzzzzzzzz, TPP40-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz and TPP40-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz series” for typo.
- Correct the model name in the “**TABLE: List of critical components**” from “Heat-sink (Secondary) (For TPP40-2(V1)(V2)(XX)BXzzzzzzzz and TPP65-2(V1)(V2)(XX)BXzzzzzzzz series)” to “Heat-sink (Secondary) (For TPP40-2(V1)(V2)(XX)Xzzzzzzzz and TPP65-2(V1)(V2)(XX)Xzzzzzzzz series)” for typo.
- No tests were considered necessary for this amendment.

**Model Differences definition of variable(s):**

For models TPP40-1L(V)Xzzzzzzzz, TPP40-1(V)Xzzzzzzzz, TPP65-1L(V)Xzzzzzzzz, TPP65-1(V)Xzzzzzzzz  
(where X can be A or U or D or blank;

L for low efficiency or blank for standard;

(V) can be 05, 07, 09, 12, 15, 24, 28, 36, 48 or 53;

z can be any alphanumeric or dash or blank for marketing purpose.)

Variable:	Range of variable:	Content:
X	A or U or D or blank	denote different type
L	L or blank	L for low efficiency or blank for standard
(V)	05, 7P5, 09, 12, 15, 24, 28, 36, 48 or 53	denote different output voltage
z	any alphanumeric or dash or blank	for marketing purpose

TPP40-2(V1)(V2)(XX)Xzzzzzzzz, TPP65-2(V1)(V2)(XX)Xzzzzzzzz

(where X can be A or U or D or blank;

(V1) can be any number between 1 to 5 or V7.5 or V9 or V28;

(V2) can be any number between 0 to 3 or X;

(XX) can be any number between dash 1.0 and 15 designating the output voltage or blank;

z can be any alphanumeric or dash or blank for marketing purpose.)

Variable:	Range of variable:	Content:	
X	A or U or D or blank	denote different type	
(V1)	any number between 1 to 5 or V7.5 or V9 or V28	denote different output voltage for output 1	
		Number	Voltage
		1	5Vdc
		2	12Vdc
		3	15Vdc
		5	24Vdc
		V7.5	7.5Vdc
		V9	9Vdc
		V28	28Vdc
(V2)	any number between 0 to 3 or X	denote different output voltage for output 2	
		Number	Voltage
		0	3.3Vdc
		1	5Vdc
		2	12Vdc
		3	15Vdc
		X	refer to (XX)
(XX)	any number between dash V1.0 and V15 or	denote different output voltage for	

	blank	output 2 except during rang of (V2)
z	any alphanumeric or dash or blank	for marketing purpose

TPP40-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz, TPP40-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz, TPP65-3(V1)(V2)(XX)(V3)(YY)Xzzzzzzzz, TPP65-3(V1)(V2)(XX)M(V3)(YY)Xzzzzzzzz  
(where X can be A or U or D or blank;  
(V1) can be any number between 1 to 5 or V7.5 or V9 or V28;  
(V2) can be any number between 0 to 3 or X;  
(V3) can be any number between 0 to 5 or Y;  
(XX) can be any number between dash V1.0 and V15 designating the output voltage or blank;  
M for negative output Voltage V3, blank for positive output voltage V3;  
(YY) can be any number between V1.0 and V24 designating the output voltage or blank;  
z can be any alphanumeric or dash or blank for marketing purpose.)

Variable:	Range of variable:	Content:																
X	A or U or D or blank	denote different type																
(V1)	any number between 1 to 5 or V7.5 or V28	denote different output voltage for output 1 <table><tr><td>Number</td><td>Voltage</td></tr><tr><td>1</td><td>5Vdc</td></tr><tr><td>2</td><td>12Vdc</td></tr><tr><td>3</td><td>15Vdc</td></tr><tr><td>5</td><td>24Vdc</td></tr><tr><td>V7.5</td><td>7.5Vdc</td></tr><tr><td>V9</td><td>9Vdc</td></tr><tr><td>V28</td><td>28VdZc</td></tr></table>	Number	Voltage	1	5Vdc	2	12Vdc	3	15Vdc	5	24Vdc	V7.5	7.5Vdc	V9	9Vdc	V28	28VdZc
Number	Voltage																	
1	5Vdc																	
2	12Vdc																	
3	15Vdc																	
5	24Vdc																	
V7.5	7.5Vdc																	
V9	9Vdc																	
V28	28VdZc																	
(V2)	any number between 0 to 3 or X	denote different output voltage for output 2 <table><tr><td>Number</td><td>Voltage</td></tr><tr><td>0</td><td>3.3Vdc</td></tr><tr><td>1</td><td>5Vdc</td></tr><tr><td>2</td><td>12Vdc</td></tr><tr><td>3</td><td>15Vdc</td></tr><tr><td>5</td><td>24Vdc</td></tr><tr><td>X</td><td>refer to (XX)</td></tr></table>	Number	Voltage	0	3.3Vdc	1	5Vdc	2	12Vdc	3	15Vdc	5	24Vdc	X	refer to (XX)		
Number	Voltage																	
0	3.3Vdc																	
1	5Vdc																	
2	12Vdc																	
3	15Vdc																	
5	24Vdc																	
X	refer to (XX)																	
(V3)	any number between 0 to 5 or Y	denote different output voltage for output 3 <table><tr><td>Number</td><td>Voltage</td></tr><tr><td>0</td><td>3.3Vdc</td></tr><tr><td>1</td><td>5Vdc</td></tr></table>	Number	Voltage	0	3.3Vdc	1	5Vdc										
Number	Voltage																	
0	3.3Vdc																	
1	5Vdc																	

		2	12Vdc	
		3	15Vdc	
		5	24Vdc	
		Y	refer to (YY)	
(XX)	any number between dash V1.0 and V15	denote different output voltage for output 2 except during rang of (V2)		
M	M or blank	M for negative output Voltage V3, blank for positive output voltage V3		
(YY)	any number between V1.0 and V24	denote different output voltage for output 3 except during rang of (V3)		
z	any alphanumeric or dash or blank	for marketing purpose		

IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict

8.10	TABLE: List of critical components					Pass
Component/ Part No.	Manufacturer/ Trademark	Type No./model No./	Technical data	Standard No./, Edition	Mark(s) & Certificates of conformity <sup>1</sup>	
Heat-sink (Secondary) (For TPP40- 2(V1)(V2)(XX) Xzzzzzzzz and TPP65- 2(V1)(V2)(XX) Xzzzzzzzz series)	Interchangeable	Interchangeable	Metal, 1.0 mm thick. Between TX1 and CON2 to PWB by solder. See Enclosure ID 4-12 for details.	--	--	