Certificate Number: 061413X1-A4   Date: 2014-02-24

UL CONDITIONS OF ACCEPTABILITY

Company Name: TRACO ELECTRONIC AG

File-CCN: E188913 – QQHM2 & QQHM8

Product Description: DC-DC Power Supply

Models: (1) THM 3-0510WIAz1z1z1z1z1z1z1z1, THM 3-0511WIAz1z1z1z1z1z1z1z1,
THM 3-0512WIAz1z1z1z1z1z1z1z1, THM 3-0513WIAz1z1z1z1z1z1z1z1,
THM 3-0515WIAz1z1z1z1z1z1z1z1, THM 3-0521WAz1z1z1z1z1z1z1z1,
THM 3-0522WIAz1z1z1z1z1z1z1z1, THM 3-0523WIAz1z1z1z1z1z1z1z1, THM 3-1210Az1z1z1z1z1z1z1z1,
THM 3-1211Az1z1z1z1z1z1z1z1, THM 3-1212Az1z1z1z1z1z1z1z1, THM 3-1213Az1z1z1z1z1z1z1z1,
THM 3-1215Az1z1z1z1z1z1z1z1, THM 3-1221Az1z1z1z1z1z1z1z1, THM 3-1222Az1z1z1z1z1z1z1z1,
THM 3-1223Az1z1z1z1z1z1z1z1, THM 3-2410Az1z1z1z1z1z1z1z1, THM 3-2411Az1z1z1z1z1z1z1z1,
THM 3-2412Az1z1z1z1z1z1z1z1, THM 3-2413Az1z1z1z1z1z1z1z1, THM 3-2415Az1z1z1z1z1z1z1z1,
THM 3-2421Az1z1z1z1z1z1z1z1, THM 3-2422Az1z1z1z1z1z1z1z1, THM 3-2423Az1z1z1z1z1z1z1z1,
THM 3-4810Az1z1z1z1z1z1z1z1, THM 3-4811Az1z1z1z1z1z1z1z1, THM 3-4812Az1z1z1z1z1z1z1z1,
THM 3-4813Az1z1z1z1z1z1z1z1, THM 3-4815Az1z1z1z1z1z1z1z1, THM 3-4821Az1z1z1z1z1z1z1z1,
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THM 6-0511WIAz1z1z1z1z1z1z1z1, THM 6-0512WIAz1z1z1z1z1z1z1z1,
THM 6-0513WIAz1z1z1z1z1z1z1z1, THM 6-0515WIAz1z1z1z1z1z1z1z1,
THM 6-0521WAz1z1z1z1z1z1z1z1, THM 6-0522WIAz1z1z1z1z1z1z1z1,
THM 6-0523WIAz1z1z1z1z1z1z1z1, THM 6-1210Az1z1z1z1z1z1z1z1, THM 6-1211Az1z1z1z1z1z1z1z1,
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THM 10-0513WIAz1z1z1z1z1z1z1z1, THM 10-0515WIAz1z1z1z1z1z1z1z1,
THM 10-0521WAz1z1z1z1z1z1z1z1, THM 10-0522WIAz1z1z1z1z1z1z1z1,
THM 10-0523WIAz1z1z1z1z1z1z1z1, THM 10-1210Az1z1z1z1z1z1z1z1,
THM 10-1211Az1z1z1z1z1z1z1z1z1, THM 10-1212Az1z1z1z1z1z1z1z1, THM 10-1213Az1z1z1z1z1z1z1z1,

THM 10-1215Az1z1z1z1z1z1z1z1z1, THM 10-1221Az1z1z1z1z1z1z1z1z1, THM 10-1222Az1z1z1z1z1z1z1z1z1,
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THM 10-2412Az1z1z1z1z1z1z1z1z1, THM 10-2413Az1z1z1z1z1z1z1z1z1, THM 10-2415Az1z1z1z1z1z1z1z1z1,
THM 10-2421Az1z1z1z1z1z1z1z1z1, THM 10-2422Az1z1z1z1z1z1z1z1z1, THM 10-2423Az1z1z1z1z1z1z1z1z1,
THM 10-4810Az1z1z1z1z1z1z1z1z1, THM 10-4811Az1z1z1z1z1z1z1z1z1, THM 10-4812Az1z1z1z1z1z1z1z1z1,
THM 10-4813Az1z1z1z1z1z1z1z1z1, THM 10-4815Az1z1z1z1z1z1z1z1z1, THM 10-4821Az1z1z1z1z1z1z1z1z1,
THM 10-4822Az1z1z1z1z1z1z1z1z1, THM 10-4823Az1z1z1z1z1z1z1z1z1.

(2) THM 3-0510WIz1z1z1z1z1z1z1z1z1, THM 3-0511WIz1z1z1z1z1z1z1z1z1,
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THM 6-0515WIz1z1z1z1z1z1z1z1z1, THM 6-0523WIz1z1z1z1z1z1z1z1z1, THM 3-0513WIz1z1z1z1z1z1z1z1z1,
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THM 3-4822z1z1z1z1z1z1z1z1, THM 3-4823z1z1z1z1z1z1z1z1, THM 6-0513WIz1z1z1z1z1z1z1z1,
THM 6-0521WIz1z1z1z1z1z1z1z1z1, THM 6-0522WIz1z1z1z1z1z1z1z1z1, THM 6-1210z1z1z1z1z1z1z1z1z1,
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THM 6-4813z1z1z1z1z1z1z1z1z1, THM 6-4815z1z1z1z1z1z1z1z1z1, THM 6-4821z1z1z1z1z1z1z1z1z1,
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THM 10-0511WIz1z1z1z1z1z1z1z1, THM 10-0512WIz1z1z1z1z1z1z1z1,
THM 10-0513WIz1z1z1z1z1z1z1z1, THM 10-0515WIz1z1z1z1z1z1z1z1,
THM 10-0521WIz1z1z1z1z1z1z1z1, THM 10-0522WIz1z1z1z1z1z1z1z1,
THM 10-0523WIz1z1z1z1z1z1z1z1, THM 10-1210z1z1z1z1z1z1z1z1z1, THM 10-1211z1z1z1z1z1z1z1z1z1,
THM 10-1212z1z1z1z1z1z1z1z1z1, THM 10-1213z1z1z1z1z1z1z1z1z1, THM 10-1215z1z1z1z1z1z1z1z1z1,
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THM 10-2410z1z1z1z1z1z1z1z1z1, THM 10-2411z1z1z1z1z1z1z1z1z1, THM 10-2412z1z1z1z1z1z1z1z1z1,
THM 10-2413z1z1z1z1z1z1z1z1z1, THM 10-2415z1z1z1z1z1z1z1z1z1, THM 10-2421z1z1z1z1z1z1z1z1z1,
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THM 10-4823z1z1z1z1z1z1z1z1z1.

(3) THM 3-2410WIAz1z1z1z1z1z1z1z1, THM 3-2411WIAz1z1z1z1z1z1z1z1,
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THM 3-2415WIAz1z1z1z1z1z1z1z1, THM 3-2421WIAz1z1z1z1z1z1z1z1,
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THM 6-4812WIAz1z1z1z1z1z1z1z1, THM 6-4813WIAz1z1z1z1z1z1z1z1,
THM 6-4815WIAz1z1z1z1z1z1z1z1, THM 6-4821WIAz1z1z1z1z1z1z1z1,
THM 6-4822WIAz1z1z1z1z1z1z1z1, THM 6-4823WIAz1z1z1z1z1z1z1z1,
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(4) THM 3-2410WIz1z1z1z1z1z1z1z1, THM 3-2411WIz1z1z1z1z1z1z1z1,
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THM 6-2423WIz1z1z1z1z1z1z1z1, THM 6-4810WIz1z1z1z1z1z1z1z1, THM 6-4813WIz1z1z1z1z1z1z1z1,
THM 6-4815WIz1z1z1z1z1z1z1z1, THM 6-4822WIz1z1z1z1z1z1z1z1, THM 6-4823WIz1z1z1z1z1z1z1z1,
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THM 10-2412WIz1z1z1z1z1z1z1z1, THM 10-2413WIz1z1z1z1z1z1z1z1,
THM 10-2415WIz1z1z1z1z1z1z1z1, THM 10-2421WIz1z1z1z1z1z1z1z1,
THM 10-2422WIz1z1z1z1z1z1z1z1, THM 10-2423WIz1z1z1z1z1z1z1z1,
THM 10-4810WIz1z1z1z1z1z1z1z1, THM 10-4811WIz1z1z1z1z1z1z1z1,
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THM 10-4815WIz1z1z1z1z1z1z1z1, THM 10-4821WIz1z1z1z1z1z1z1z1,

THM 10-4822WIz1z1z1z1z1z1z1z1z1, THM 10-4823WIz1z1z1z1z1z1z1z1z1.

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:

- This power supply has been judged on the basis of the required creepage and clearances in the First Edition of the Standard for Medical Electrical Equipment, ANSI/AAMI ES 60601-1, Sub clause 8.9.
- The power supply was evaluated to provide MOPP based upon mains voltage of 250Vrms and 354Vpk as followings: 2MOPP between Primary to Secondary of transformer and 2 MOPP between Secondary to Core. See insulation diagram for details.
- Consideration shall be given to measuring the temperatures on power electronic components and transformer windings when the power supply is installed within the end-use equipment.
- The secondary output circuit of the product is SELV.
- The secondary output circuits are at non-hazardous energy levels.
- The output circuits have not been evaluated for direct patient connections (either Type B, BF or CF).
- This device is operated up to 5000m above sea level / Pollution Degree 2 / Overvoltage Category II as declared by manufacturer.
- The input and output connectors are not acceptable for field connections, they are only intended for connection to mating connectors inside the end-use product.
- The component shall be installed in compliance with the enclosure, mounting, marking, spacing, and separation requirements of the end-use application.
- The housing of the device was not evaluated to comply with Mechanical, Fire, Electrical requirements. A suitable Mechanical, Fire and Electrical enclosure shall be provided in the end product.
- The end-product evaluation shall ensure that the requirements related to Accompanying Documents, Clause 7.9 are met.
- These units have been evaluated with the following external fuse type under single fault conditions: Walter / TSD.
- The potting compound is not used for isolation, therefore no cycling test is required.

Ratings: Input voltage / current for (1) and (2) model series:
4.5-9Vdc; 9-18Vdc; 18-36Vdc; 36-75Vdc /
0.04-1.2A for output 3VA models;
0.08-2.0A for output 6VA models;
0.1-3.2A for output 10VA models

Input voltage / current for (3) and (4) model series:
9-36Vdc; 18-75Vdc /
0.04-1.2A for output 3VA models;
0.08-2.0A for output 6VA models;

0.1-3.2A for output 10VA models

Output voltage / current for all series:
For output 3VA model:
3.3Vdc / 1000mA
5Vdc / 600mA
12Vdc / 250mA
15Vdc / 200mA
24Vdc / 125mA
+/-5Vdc / +/-300mA
+/-12Vdc / +/-125mA
+/-15Vdc / +/-100mA

For output 6VA model:
3.3Vdc / 1800mA
5Vdc / 1200mA
12Vdc / 500mA
15Vdc / 400mA
24Vdc / 250mA
+/-5Vdc / +/-600mA
+/-12Vdc / +/-250mA
+/-15Vdc / +/-200mA

For output 10VA model:
3.3Vdc / 2500mA
5Vdc / 2000mA
12Vdc / 830mA
15Vdc / 670mA
24Vdc / 416mA
+/-5Vdc / +/-1000mA
+/-12Vdc / +/-416mA
+/-15Vdc / +/-333mA

Nomenclature: z1 can be any alphanumeric or blank for marketing purpose and no impact to safety.