



Certificate Number: 091317D1-D1007

Date: 2017-11-14

UL CONDITIONS OF ACCEPTABILITY

Company Name: TRACO ELECTRONIC AG

File-CCN: E188913, QQHM2 & QQHM8

Product Description:

Model: THM 15-2411Wlzzzzzzzz, THM 15-2412Wlzzzzzzzz, THM 15-2413Wlzzzzzzzz, THM 15-2415Wlzzzzzzzz, THM 15-2421Wlzzzzzzzz, THM 15-2422Wlzzzzzzzz, THM 15-2423Wlzzzzzzzz, THM 15-4811Wlzzzzzzzz, THM 15-4812Wlzzzzzzzz, THM 15-4813Wlzzzzzzzz, THM 15-4815Wlzzzzzzzz, THM 15-4821Wlzzzzzzzz, THM 15-4822Wlzzzzzzzz, THM 15-4823Wlzzzzzzzz, THM 20-2411Wlzzzzzzzz, THM 20-2412Wlzzzzzzzz, THM 20-2413Wlzzzzzzzz, THM 20-2415Wlzzzzzzzz, THM 20-2421Wlzzzzzzzz, THM 20-2422Wlzzzzzzzz, THM 20-2423Wlzzzzzzzz, THM 20-4811Wlzzzzzzzz, THM 20-4812Wlzzzzzzzz, THM 20-4813Wlzzzzzzzz, THM 20-4815Wlzzzzzzzz, THM 20-4821Wlzzzzzzzz, THM 20-4822Wlzzzzzzzz, THM 20-4823Wlzzzzzzzz, THM 30-2411Wlzzzzzzzz, THM 30-2412Wlzzzzzzzz, THM 30-2413Wlzzzzzzzz, THM 30-2415Wlzzzzzzzz, THM 30-2421Wlzzzzzzzz, THM 30-2422Wlzzzzzzzz, THM 30-2423Wlzzzzzzzz, THM 30-4811Wlzzzzzzzz, THM 30-4812Wlzzzzzzzz, THM 30-4813Wlzzzzzzzz, THM 30-4815Wlzzzzzzzz, THM 30-4821Wlzzzzzzzz, THM 30-4822Wlzzzzzzzz, THM 30-4823Wlzzzzzzzz, THM 15-1211zzzzzzzz, THM 15-1212zzzzzzzz, THM 15-1213zzzzzzzz, THM 15-1215zzzzzzzz, THM 15-1221zzzzzzzz, THM 15-1222zzzzzzzz, THM 15-1223zzzzzzzz, THM 15-2411zzzzzzzz, THM 15-2412zzzzzzzz, THM 15-2413zzzzzzzz, THM 15-2415zzzzzzzz, THM 15-2421zzzzzzzz, THM 15-2422zzzzzzzz, THM 15-2423zzzzzzzz, THM 15-4811zzzzzzzz, THM 15-4812zzzzzzzz, THM 15-4813zzzzzzzz, THM 15-4815zzzzzzzz, THM 15-4821zzzzzzzz, THM 15-4822zzzzzzzz, THM 15-4823zzzzzzzz, THM 20-1211zzzzzzzz, THM 20-1212zzzzzzzz, THM 20-1213zzzzzzzz, THM 20-1215zzzzzzzz, THM 20-1221zzzzzzzz, THM 20-1222zzzzzzzz, THM 20-1223zzzzzzzz, THM 20-2411zzzzzzzz, THM 20-2412zzzzzzzz, THM 20-2413zzzzzzzz, THM 20-2415zzzzzzzz, THM 20-2421zzzzzzzz, THM 20-2422zzzzzzzz, THM 20-2423zzzzzzzz, THM 20-4811zzzzzzzz, THM 20-4812zzzzzzzz, THM 20-4813zzzzzzzz, THM 20-4815zzzzzzzz, THM 20-4822zzzzzzzz, THM 20-4823zzzzzzzz, THM 30-1211zzzzzzzz, THM 30-1212zzzzzzzz, THM 30-1213zzzzzzzz, THM 30-1215zzzzzzzz, THM 30-1221zzzzzzzz, THM 30-1222zzzzzzzz, THM 30-1223zzzzzzzz, THM 30-2411zzzzzzzz, THM 30-2412zzzzzzzz, THM 30-2413zzzzzzzz, THM 30-2415zzzzzzzz, THM 30-2421zzzzzzzz, THM 30-2422zzzzzzzz, THM 30-2423zzzzzzzz, THM 30-4811zzzzzzzz, THM 30-4812zzzzzzzz, THM 30-4813zzzzzzzz, THM 30-4815zzzzzzzz, THM 30-4821zzzzzzzz, THM 30-4822zzzzzzzz, THM 30-4823zzzzzzzz.

Conditions of Acceptability – 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 Amd1, Sub clause 8.9, CAN/CSA-C22.2 No. 60601-1: 2014 (includes National Differences for Canada).
- The power supply was evaluated to provide MOPP based upon mains voltage of 250Vrms and 354Vpk as followings: 2MOPP between DC IN to DC OUT of transformer, and 2 MOPP between DC OUT to Core of transformer. 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 circuits are at non-hazardous energy levels.
- The output circuits have not been evaluated for direct patient connection (either is 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 connection; 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: CONQUER ELECTRONICS CO LTD / UDE, UDE-4, see Enclosure "Miscellaneous - (02)" for current rating description.
- The potting compound is not used for isolation, therefore no cycling test is required.
- This power supply output has not been evaluated for patient connected applications.
- Consideration should be given to measuring the temperatures on power electronic components and transformer windings when the power supply is installed in the end-use equipment. The transformer (TX1) incorporates a Class F, 155 degree C insulation system.
- Mains voltage shall be purposely reduced to DC input voltage as noted in the Device Ratings, while used to connect AC Mains circuits.
- Per customer's request, some models were conducted with de-rating operation mode with higher ambient limitations in Temperature tests (11.1.1) for reference only, which shall be considered in end application. See Enclosure "Miscellaneous - (03) Model difference" for details.

Ratings:

Input voltage for models:

9-18 Vdc; 9-36 Vdc; 18-36 Vdc; 18-75 Vdc; 36-75 Vdc

Output voltage / current for all series:

For output 15 VA (THM 15 Series) model:

5 Vdc / 3000 mA
 12 Vdc / 1250 mA
 15 Vdc / 1000 mA
 24 Vdc / 625 mA
 ±5 Vdc / ± 1500 mA
 ± 12 Vdc / ± 625 mA
 ± 15 Vdc / ± 500 mA

For output 20 VA (THM 20 Series) model:

5 Vdc / 4000 mA
 12 Vdc / 1670 mA
 15 Vdc / 1330 mA
 24 Vdc / 833 mA
 ±5 Vdc / ± 2000 mA
 ± 12 Vdc / ± 833 mA
 ± 15 Vdc / ± 667 mA

This document is for reference only. It is current as of the date referenced above, and is subject to change at any time without notice.

For output 30 VA (THM 30 Series) model:

5 Vdc / 6000 mA
12 Vdc / 2500 mA
15 Vdc / 2000 mA
24 Vdc / 1250 mA
 ± 5 Vdc / ± 3000 mA
 ± 12 Vdc / ± 1250 mA
 ± 15 Vdc / ± 1000 mA

Nomenclature: N/A