



Certificate of Compliance

Certificate: 1780336

Master Contract: 226037

Project: 1780336

Date Issued: 2006/07/26

Issued to: TRACO Electronic AG
Jenatschstrasse 1
Zurich, Zurich 8027
Switzerland

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US'



Issued by: Eric Fortier, Eng.

Authorized by: Helene Vaillancourt,
Operations Manager

PRODUCTS

CLASS 5311 07 - POWER SUPPLIES - Component Type - (CSA 60950-1-03)

CLASS 5311 87 - POWER SUPPLIES - Component Type - Certified to US Stds. - (CSA 60950-1-03/UL 60950-1, First Edition, NRTL Program)

- DC to DC Converters*, PCB Mount, Models:
- TES 2N-05xx: Input: 4,5 – 9,0Vdc / 600mA, Output: See 'xx' values below.
- TES 2N-12xx: Input: 9 – 18Vdc / 220mA, Output: See 'xx' values below.
- TES 2N-24xx: Input: 18 – 36Vdc / 110mA, Output: See 'xx' values below.

The 'C' and 'US' indicators adjacent to the CSA Mark signify that the product has been evaluated to the applicable CSA and ANSI/UL Standards, for use in Canada and the U.S., respectively. This 'US' indicator includes products eligible to bear the 'NRTL' indicator. NRTL, i.e. National Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards.



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- TES 2N-48xx: Input: 36 – 75Vdc / 55mA, Output: See 'xx' values below.
- TES 3-12xx: Input: 9 – 18Vdc / 300mA, Output: See 'xx' values below.
- TES 3-24xx: Input: 18 – 36Vdc / 150mA, Output: See 'xx' values below.
- TES 3-48xx: Input: 36 – 75Vdc / 75mA, Output: See 'xx' values below.
- THD 15-2410: Input: 18 – 36Vdc / 570mA, Output: See 'xx' values below.
- THD 15-24xx: Input: 18 - 36Vdc / 730mA, Output: See 'xx' values below.
- THD 15-4810: Input: 36 - 75Vdc / 280mA, Output: See 'xx' values below.
- THD 15-48xx: Input: 36 – 75Vdc / 360mA, Output: See 'xx' values below.

Series	xx value	Output Rating
TES 2N		
	10	3,3Vdc / 500mA
	11	5Vdc / 400mA
	12	12Vdc / 165mA
	13	15Vdc / 135mA
	21	+5Vdc / +200mA
	22	+12Vdc / +85mA
	23	+15Vdc / +65mA

Series	xx value	Output Rating
TES 3		
	10	3,3Vdc / 700mA
	11	5Vdc / 600mA
	12	12Vdc / 250mA
	22	+12Vdc / +125mA
	23	+15Vdc / +100mA



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Series	xx value	Output Rating
THD 15		
	10	3,3Vdc / 3500mA
	11	5,1Vdc / 3000mA
	12	12Vdc / 1250mA
	13	15Vdc / 1000mA
	22	+12Vdc / +600mA
	23	+15Vdc / +500mA

***Notes:**

- Units were evaluated as components where the suitability of the combination with the host equipment shall be re-evaluated.
- The equipment has been evaluated for use in a Pollution Degree I or 2 and overvoltage category II environment.
- A suitable Electrical and Fire enclosure shall be provided.
- The product is specified for maximum ambient of 71°C
- Dielectric insulation (Basic between Input-Output) : 1500Vac.

BI-NAT CSA 60950-1-03/UL 60950-1, 1st Edition DESIGN MANUAL, Version 1.0

IS AN INTEGRAL PART OF THIS REPORT.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 60950-1-03 - Information Technology Equipment – Safety – Part 1: General requirements.

UL 60950-1 (1st Edition) - Information Technology Equipment – Safety – Part 1: General requirements.



Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
1780336	2006/07/26	Certification project c/CSA/us of DC-DC converters, Series TES and THD.