



Certificate Number: 031220X5-A6004

Date: 2022-09-27

## UL CONDITIONS OF ACCEPTABILITY

**Company Name:** TRACO ELECTRONIC AG

**File-CCN:** E188913-QQJQ2, QQJQ8

**Product Description:** DC-DC Converter

**Models:**

TMV 0505EN, TMV 0512EN, TMV 0515EN, TMV 0505DEN, TMV 0512DEN, TMV 0515DEN, TMV 1205EN, TMV 1212EN, TMV 1215EN, TMV 1205DEN, TMV 1212DEN, TMV 1215DEN

**Conditions Of Acceptability:**

- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Input-ES1: 300 Vrms / 640 Vpk per Manufacturer declaration.
- The following output circuits are at ES1 energy levels: Outputs
- The following output circuits are at PS3 energy levels: Outputs
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C): Choke (T1) (Class B)
- The DC/DC Converter was evaluated for Double/Reinforced Insulation and is intended to an isolated or non-isolated d.c. power source, the transient voltage through the d.c. power source is assuming same as 2,500 Vpk transient voltage from the a.c. mains supply circuits.
- Models input voltage range 5 Vdc or 12 Vdc, tests were done with the assumption the insulation is reinforced for working voltage 250 Vrms – hazardous voltage. Reinforced Insulation between input and output is assured by potting of the device. Thermal Cycling Procedure Test conducted. Only distance through insulation exists. DC/DC Converter is considered providing Reinforced Insulation between input to output up to a maximum potential of 250 Vrms / 420 Vpeak.
- Class of equipment shall be evaluated in end product.
- The DC/DC Converter was evaluated for transient voltage 2500 Vpk.
- The power supply terminals and/or connectors are: Suitable for factory wiring only.
- The need for suitable electrical enclosure (for ES safeguard), fire enclosure (for PS safeguard), mechanical enclosure (for MS safeguard), and safeguard for thermal burn injury (for TS safeguard) is to be evaluated and provided (if necessary) in the end-product.
- The current rating of protective device is to be evaluated in the end-product. Simulated Abnormal Operating Conditions (B.3) Test and Simulated Single Fault Conditions (B.4) Test were carried out with an External Fuse rated 500 mA with input voltage 5 Vdc and 200 mA with input voltage 12 Vdc.

**Ratings:**

<b>Models</b>	<b>Input Voltage (Vdc)</b>	<b>Input Current (mA)</b>	<b>Output Voltage (Vdc)</b>	<b>Output Current (mA)</b>
TMV 0505EN	5 (4.5-5.5)	291-356	5	200
TMV 0512EN			12	80
TMV 0515EN			15	65
TMV 0505DEN			+5	+100
TMV 0512DEN			+12	+40
TMV 0515DEN			+15	+35
TMV 1205EN	12 (10.8-13.2)	121-148	5	200
TMV 1212EN			12	80
TMV 1215EN			15	65
TMV 1205DEN			+5	+100
TMV 1212DEN			+12	+40
TMV 1215DEN			+15	+35

**Nomenclature:** N/A