



Certificate Number: 0520192-12

Date: 2019-06-25

UL CONDITIONS OF ACCEPTABILITY

Company Name: TRACO ELECTRONIC AG

File-CCN: E188913-QQJQ2,QQJQ8

Product Description: DC to DC Converter

Models:

TRI 10-1210, TRI 10-1211-B1, TRI 10-1211, TRI 10-1212, TRI 10-1213, TRI 10-1215, TRI 10-1222, TRI 10-1223, TRI 10-2410, TRI 10-2411-B1, TRI 10-2411, TRI 10-2412, TRI 10-2413, TRI 10-2415, TRI 10-2422, TRI 10-2423, TRI 10-4810, TRI 10-4811-B1, TRI 10-4811, TRI 10-4812, TRI 10-4813, TRI 10-4815, TRI 10-4822, TRI 10-4823.

Conditions Of Acceptability:

- The equipment is suitable for direct connection after isolated secondary circuitry.
- The outputs of this component DC/DC converter have been evaluated for PS2 and ES1; the ES classification of circuits and parts that are accessible to ordinary persons should be reconsidered when it's employed in the end-use equipment.
- The terminals of this component DC/DC converter are only suitable for factory wiring only.
- Electrical Energy Source of unit output (V+ to earth, GND to earth) under normal, abnormal operation and single fault condition should be considered in the end product investigation.
- Models have four different input voltage ranges, 4.5-9 Vdc, 9-18 Vdc, 18-36 Vdc and 36-75 Vdc. Tests were done, assuming the insulation is reinforced for working voltage 1000 Vrms.
- Reinforced insulation between input and output is assured by potting of the device and Thermal cycling procedure performed..
- Only distance through solid insulation exists. The product is considered providing reinforced insulation between input and output, a maximum potential of 1000 Vrms / 1410 Vpeak.
- The equipment has been evaluated for reinforced Insulation and intended to be supplied by an isolated or non-isolated DC source; the transient voltage through the DC source is assuming up to 2500Vpk maximum.
- 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) when it's employed in the end-use equipment.
- 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): T1 (Class B)
- The product was investigated to the electric strength 5000Vac between input and output circuits, declared by the manufacturer.
- The Class of equipment and AC Power Distribution Systems to which the end-use equipment is connected are to be evaluated when it's employed in the end-use equipment.
- Tests for Abnormal operating and Single Fault conditions were carried out with an external, Time-delay fuse having a current rating of 0.25 A thru. 3.0 A (See Table below). Tests should be repeated when it's employed in the end-use equipment with a differently rated overcurrent protective devices.

Ratings:

Models	Fuse Ratings.
TRI 10-1210, TRI 10-1211-B1, TRI 10-1211, TRI 10-1212, TRI 10-1213, TRI 10-1215, TRI 10-1222, TRI 10-1223	3 A
TRI 10-2410, TRI 10-2411-B1, TRI 10-2411, TRI 10-2412, TRI 10-2413, TRI 10-2415, TRI 10-2422, TRI 10-2423	2 A
TRI 10-4810, TRI 10-4811-B1, TRI 10-4811, TRI 10-4812, TRI 10-4813, TRI 10-4815, TRI 10-4822, TRI 10-4823,	1 A

Nomenclature: N/A