



Certificate Number: 0402192-10

Date: 2019-05-24

## UL CONDITIONS OF ACCEPTABILITY

**Company Name:** TRACO ELECTRONIC AG

**File-CCN:** E188913 – QQJQ2 & QQJQ8

**Product Description:** DC/DC Converter

**Models:** TMDC 10-7211H-B1, TMDC 10-7211H, TMDC 10-7212H, TMDC 10-7213H, TMDC 10-7215H, TMDC 10-7218H, TMDC 10-7222H, TMDC 10-7223H, TMDC 10-7225H

### 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:

- The equipment is suitable for direct connection after isolated secondary circuitry.
- The outputs of this component DC/DC converter have been evaluated for PS1 and ES1; the PS and 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 metal base plate was investigated as part of the protective earthing/bonding and shall be evaluated in end use product.
- 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.
- The equipment was investigated to the electric strength 3000 Vrms between input and output circuit, declared by the manufacturer. Reinforced insulation between input and output is assured by potting of the device, thermal cycling procedure performed, only distance through solid insulation exists.
- 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, working voltage 1410Vpk/1000Vrms is declared by the manufacturer
- 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)
- All tests were tested in series with an external time delay fuse, rated 2.5 A.

**Ratings:**

All models are similar except for ratings, PCB layout, schematic, windings of transformer and model designation, see below.

Model No.	Input Voltage Range	Rated Input Current (max mA)	Output Voltage (Vdc)	Output Current (mA)
TMDC 10-7211H-B1	Nominal: 110Vdc Range: 80-160Vdc	160	5.0	2000
TMDC 10-7211H			5.1	2000
TMDC 10-7212H			12.0	833
TMDC 10-7213H			15.0	666
TMDC 10-7215H			24.0	416
TMDC 10-7218H			48.0	208
TMDC 10-7222H			±12.0	±416
TMDC 10-7223H			±15.0	±333
TMDC 10-7225H			±24.0	±208

**Nomenclature:** N/A