



Certificate Number: 080615X2-A55

Date: 2022-08-25

UL CONDITIONS OF ACCEPTABILITY

Company Name: TRACO ELECTRONIC AG

File-CCN: E188913-QQGQ2, QQGQ28

Product Description: DC-DC Power Supply

Models:

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,
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THM 15-1214zzzzzzzz, THM 15-24S10zzzzzzzz, THM 15-2414zzzzzzzz, THM 15-48S10zzzzzzzz,
THM 15-4814zzzzzzzz, THM 15-24S10Wlzzzzzzzz, THM 15-2414Wlzzzzzzzz, THM 15-48S10Wlzzzzzzzz,
THM 15-4814Wlzzzzzzzz, THM 20-12S10zzzzzzzz, THM 20-1214zzzzzzzz, THM 20-24S10zzzzzzzz,
THM 20-2414zzzzzzzz, THM 20-48S10zzzzzzzz, THM 20-4814zzzzzzzz, THM 20-24S10Wlzzzzzzzz

(Continued)

Models:

THM 20-2414Wlzzzzzzzz, THM 20-48S10Wlzzzzzzzz, THM 20-4814Wlzzzzzzzz, THM 30-12S10zzzzzzzz, THM 30-1214zzzzzzzz, THM 30-24S10zzzzzzzz, THM 30-2414zzzzzzzz, THM 30-48S10zzzzzzzz, THM 30-4814zzzzzzzz, THM 30-24S10Wlzzzzzzzz, THM 30-2414Wlzzzzzzzz, THM 30-48S10Wlzzzzzzzz, THM 30-4814Wlzzzzzzzz, THM 30-4822Wlzzzzzzzz(!), THM 20-4821zzzzzzzz(!)

Where “z” may be any alphanumeric character, "-" or blank for market purpose.

(!) - Where z can be any alphanumeric or dash or blank for marketing purpose only.

Conditions Of Acceptability:

- The end-product Electric Strength Test is to be based upon a maximum working voltage of: 250 Vrms, 420 Vpk were declared by manufacturer. (60 Vrms, 280 Vpk were the real measured data)
- The following secondary output circuits are SELV: Output of all models
- The following secondary output circuits are at non-hazardous energy levels: Output of all models
- The following output terminals were referenced to earth during performance testing: -Vo (single output), - COM (dual output)
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The investigated Pollution Degree is: 2
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJ2 insulation system with the indicated rating greater than Class A (105°C): Transformer TX1 (Class F)
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- The output pins of the DC to DC power supply have been evaluated for SELV, ES1, PS2 circuit; the output of circuits and parts that are accessible to ordinary persons should be reconsidered when it's employed in the end-use equipment.
- 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.
- Upon request, the product was investigated to the electric strength 5000 Vac between input and output circuits and Transformer input and output; declared by manufacturer.
- The current rating of protective device is to be evaluated in the end-product. Simulated Abnormal Operating Condition Tests and Single Fault Condition Tests were conducted with the external time delay fuses.

The list of rated current of external fuse that is used under tests:

Models	External fuse rating
THM 30-2411Wlzzzzzzzz THM 30-2412Wlzzzzzzzz THM 30-2413Wlzzzzzzzz THM 30-2415Wlzzzzzzzz THM 30-1211zzzzzzzz	6.3A

THM 30-1212zzzzzzzzz THM 30-1213zzzzzzzzz THM 30-1215zzzzzzzzz THM 30-2411zzzzzzzzz THM 30-2412zzzzzzzzz THM 30-2413zzzzzzzzz THM 30-2415zzzzzzzzz THM 30-12S10zzzzzzzzz THM 30-1214zzzzzzzzz THM 30-24S10zzzzzzzzz THM 30-2414zzzzzzzzz THM 30-24S10Wlzzzzzzzzz THM 30-2414Wlzzzzzzzzz	
THM 30-2421Wlzzzzzzzzz THM 30-2422Wlzzzzzzzzz THM 30-2423Wlzzzzzzzzz THM 30-1221zzzzzzzzz THM 30-1222zzzzzzzzz THM 30-1223zzzzzzzzz THM 30-2421zzzzzzzzz THM 30-2422zzzzzzzzz THM 30-2423zzzzzzzzz	6.3A
THM 30-4811Wlzzzzzzzzz THM 30-4812Wlzzzzzzzzz THM 30-4813Wlzzzzzzzzz THM 30-4815Wlzzzzzzzzz THM 30-4811zzzzzzzzz THM 30-4812zzzzzzzzz THM 30-4813zzzzzzzzz THM 30-4815zzzzzzzzz THM 30-48S10zzzzzzzzz THM 30-4814zzzzzzzzz THM 30-48S10Wlzzzzzzzzz THM 30-4814Wlzzzzzzzzz	3.15A
THM 30-4821Wlzzzzzzzzz THM 30-4823Wlzzzzzzzzz THM 30-4821zzzzzzzzz THM 30-4822zzzzzzzzz THM 30-4823zzzzzzzzz	3.15A
THM 15-2411Wlzzzzzzzzz THM 15-2412Wlzzzzzzzzz THM 15-2413Wlzzzzzzzzz THM 15-2415Wlzzzzzzzzz THM 20-2411Wlzzzzzzzzz THM 20-2412Wlzzzzzzzzz THM 20-2413Wlzzzzzzzzz THM 20-2415Wlzzzzzzzzz THM 15-1211zzzzzzzzz THM 15-1212zzzzzzzzz	4A

THM 15-1213zzzzzzzz THM 15-1215zzzzzzzz THM 15-2411zzzzzzzz THM 15-2412zzzzzzzz THM 15-2413zzzzzzzz THM 15-2415zzzzzzzz THM 20-1211zzzzzzzz THM 20-1212zzzzzzzz THM 20-1213zzzzzzzz THM 20-1215zzzzzzzz THM 20-2411zzzzzzzz THM 20-2412zzzzzzzz THM 20-2413zzzzzzzz THM 20-2415zzzzzzzz THM 15-12S10zzzzzzzz THM 15-1214zzzzzzzz THM 15-24S10zzzzzzzz THM 15-2414zzzzzzzz THM 15-24S10Wlzzzzzzzz THM 15-2414Wlzzzzzzzz THM 20-12S10zzzzzzzz THM 20-1214zzzzzzzz THM 20-24S10zzzzzzzz THM 20-2414zzzzzzzz THM 20-2414Wlzzzzzzzz	
THM 15-2421Wlzzzzzzzz THM 15-2422Wlzzzzzzzz THM 15-2423Wlzzzzzzzz THM 20-2421Wlzzzzzzzz THM 20-2422Wlzzzzzzzz THM 20-2423Wlzzzzzzzz THM 15-1221zzzzzzzz THM 15-1222zzzzzzzz THM 15-1223zzzzzzzz THM 15-2421zzzzzzzz THM 15-2422zzzzzzzz THM 15-2423zzzzzzzz THM 20-1221zzzzzzzz THM 20-1222zzzzzzzz THM 20-1223zzzzzzzz THM 20-2421zzzzzzzz THM 20-2422zzzzzzzz THM 20-2423zzzzzzzz	4A
THM 15-4811Wlzzzzzzzz THM 15-4812Wlzzzzzzzz THM 15-4813Wlzzzzzzzz THM 15-4815Wlzzzzzzzz THM 20-4811Wlzzzzzzzz THM 20-4812Wlzzzzzzzz	2A

THM 20-4813Wlzzzzzzzz	
THM 20-4815Wlzzzzzzzz	
THM 15-4811zzzzzzzz	
THM 15-4812zzzzzzzz	
THM 15-4813zzzzzzzz	
THM 15-4815zzzzzzzz	
THM 20-4811zzzzzzzz	
THM 20-4812zzzzzzzz	
THM 20-4813zzzzzzzz	
THM 20-4815zzzzzzzz	
THM 15-48S10zzzzzzzz	
THM 15-4814zzzzzzzz	
THM 15-48S10Wlzzzzzzzz	
THM 15-4814Wlzzzzzzzz	
THM 20-48S10zzzzzzzz	
THM 20-4814zzzzzzzz	
THM 20-24S10Wlzzzzzzzz	
THM 20-48S10Wlzzzzzzzz	
THM 20-4814Wlzzzzzzzz	
THM 15-4821Wlzzzzzzzz	2A
THM 15-4822Wlzzzzzzzz	
THM 15-4823Wlzzzzzzzz	
THM 20-4821Wlzzzzzzzz	
THM 20-4822Wlzzzzzzzz	
THM 20-4823Wlzzzzzzzz	
THM 15-4821zzzzzzzz	
THM 15-4822zzzzzzzz	
THM 15-4823zzzzzzzz	
THM 20-4822zzzzzzzz	
THM 20-4823zzzzzzzz	
THM 20-4821zzzzzzzz	
THM 30-4822Wlzzzzzzzz	

- 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
- 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 DC-DC power supply is provided Double/ Reinforce isolation from input to output circuit.

Ratings:

Input voltage: 9-18 Vdc or 9-36 Vdc or 18-36 Vdc or 18-75 Vdc or 36-75 Vdc

Nomenclature: N/A