

Certificate Number: 121319X3-A6020

Date: 2023-06-21

## UL CONDITIONS OF ACCEPTABILITY

**Company Name:** TRACO ELECTRONIC AG

**File-CCN:** QQJQ2, QQJQ8

**Product Description:** POWER SUPPLIES FOR USE WITH AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT – COMPONENT

**Models:** TMR 6-0510zzzzzz, TMR 6-0511zzzzzz, TMR 6-0519zzzzzz, TMR 6-0512zzzzzz, TMR 6-0513zzzzzz, TMR 6-0515zzzzzz, TMR 6-0521zzzzzz, TMR 6-0522zzzzzz, TMR 6-0523zzzzzz, TMR 6-1210zzzzzz, TMR 6-1211zzzzzz, TMR 6-1219zzzzzz, TMR 6-1212zzzzzz, TMR 6-1213zzzzzz, TMR 6-1215zzzzzz, TMR 6-1221zzzzzz, TMR 6-1222zzzzzz, TMR 6-1223zzzzzz, TMR 6-2410zzzzzz, TMR 6-2411zzzzzz, TMR 6-2419zzzzzz, TMR 6-2412zzzzzz, TMR 6-2413zzzzzz, TMR 6-2415zzzzzz, TMR 6-2421zzzzzz, TMR 6-2422zzzzzz, TMR 6-2423zzzzzz, TMR 6-4810zzzzzz, TMR 6-4811zzzzzz, TMR 6-4819zzzzzz, TMR 6-4812zzzzzz, TMR 6-4813zzzzzz, TMR 6-4815zzzzzz, TMR 6-4821zzzzzz, TMR 6-4822zzzzzz, TMR 6-4823zzzzzz, TMR 6-0510HI zzzzzz, TMR 6-0511HI zzzzzz, TMR 6-0519HI zzzzzz, TMR 6-0512HI zzzzzz, TMR 6-0513HI zzzzzz, TMR 6-0515HI zzzzzz, TMR 6-0521HI zzzzzz, TMR 6-0522HI zzzzzz, TMR 6-0523HI zzzzzz, TMR 6-1210HI zzzzzz, TMR 6-1211HI zzzzzz, TMR 6-1219HI zzzzzz, TMR 6-1212HI zzzzzz, TMR 6-1213HI zzzzzz, TMR 6-1215HI zzzzzz, TMR 6-1221HI zzzzzz, TMR 6-1222HI zzzzzz, TMR 6-1223HI zzzzzz, TMR 6-2410HI zzzzzz, TMR 6-2411HI zzzzzz, TMR 6-2419HI zzzzzz, TMR 6-2412HI zzzzzz, TMR 6-2413HI zzzzzz, TMR 6-2415HI zzzzzz, TMR 6-2421HI zzzzzz, TMR 6-2422HI zzzzzz, TMR 6-2423HI zzzzzz, TMR 6-4810HI zzzzzz, TMR 6-4811HI zzzzzz, TMR 6-4819HI zzzzzz, TMR 6-4812HI zzzzzz, TMR 6-4813HI zzzzzz, TMR 6-4815HI zzzzzz, TMR 6-4821HI zzzzzz, TMR 6-4822HI zzzzzz, TMR 6-4823HI zzzzzz

**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 following output circuits are at ES1 energy levels : Output
- The following output circuits are at PS1 energy levels : Output
- The terminals of the DC-DC Converter are only suitable for factory wiring only.
- The need for suitable electrical enclosure (for ES safeguard), fire enclosure (for PS safeguard), and safeguard for thermal burn injury (for TS safeguard) is to be evaluated and provided (if necessary) in the end-product.

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- The current rating of protective device is to be evaluated in the end-product. Simulated Abnormal Operating Conditions Test and Simulated Single Fault Conditions Test were carried out with an external slow blow fuse 3 A for TMR 6-05XXzzzzzz; 1.6 A for TMR 6-06XXzzzzzz; 1 A for TMR 6-24XXzzzzzz; and 0.5A for TMR 6-48XXzzzzzz. Repeating Simulated Abnormal Operating Conditions Test and Simulated Single Fault Conditions Test in the end-product shall be considered if using different rated protective device. UL Recognized Component Fuse used and rated to at least the maximum allowable DC input voltage.
- The DC-DC Converter was evaluated for Functional Insulation and is intended to be installed in an isolated (non-mains) ES1 or ES2 circuit which is separated from a.c. mains circuit by Double or Reinforced Insulation.
- Electric Strength Test voltage of 3000 V d.c. was conducted between Input and Output for models with Plastic Enclosure as declared by manufacturer.
- Electric Strength Test voltage of 1600 V d.c. was conducted between Input and Output for models with Metal Enclosure as declared by manufacturer.

**Ratings:** • All models are similar except for model designation, input/output ratings, single/dual output voltage, PWB layout, transformer, and some components. See Enclosure Id. 07-01 for models and ratings details. PWB Layout A is for single output voltage except 24Vdc and PWB Layout B is for dual output voltage and single output voltage 24Vdc.

Model Name	Input Range (Vdc)	Input Current (mA) Max	Output Voltage (Vdc)	Output Current (mA)	Tranformer	Temperature
TMR 6-0510zzzzzz	4.5-9	1300	3.3	1300	1	65
TMR 6-0511zzzzzz	4.5-9	1740	5	1200	2	65
TMR 6-0519zzzzzz	4.5-9	1690	9	666	3	65
TMR 6-0512zzzzzz	4.5-9	1666	12	500	4	65
TMR 6-0513zzzzzz	4.5-9	1666	15	400	5	65
TMR 6-0515zzzzzz	4.5-9	1666	24	250	TMR 6-0522zzzzzz	65
TMR 6-0521zzzzzz	4.5-9	1740	±5	±600	6	65
TMR 6-0522zzzzzz	4.5-9	1666	±12	±250	7	65
TMR 6-0523zzzzzz	4.5-9	1666	±15	±200	8	65
TMR 6-1210zzzzzz	9-18	644	3.3	1300	9	65
TMR 6-1211zzzzzz	9-18	844	5	1200	10	65
TMR 6-1219zzzzzz	9-18	833	9	666	11	65

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Model Name	Input Range (Vdc)	Input Current (mA) Max	Output Voltage (Vdc)	Output Current (mA)	Transformer	Temperature
TMR 6-1212zzzzzz	9-18	823	12	500	12	65
TMR 6-1213zzzzzz	9-18	823	15	400	13	65
TMR 6-1215zzzzzz	9-18	844	24	250	TMR 6-1222zzzzzz	65
TMR 6-1221zzzzzz	9-18	855	±5	±600	14	65
TMR 6-1222zzzzzz	9-18	844	±12	±250	15	65
TMR 6-1223zzzzzz	9-18	833	±15	±200	16	65
TMR 6-2410zzzzzz	18-36	322	3.3	1300	17	65
TMR 6-2411zzzzzz	18-36	422	5	1200	18	65
TMR 6-2419zzzzzz	18-36	417	9	666	19	65
TMR 6-2412zzzzzz	18-36	411	12	500	20	65
TMR 6-2413zzzzzz	18-36	406	15	400	21	65
TMR 6-2415zzzzzz	18-36	417	24	250	TMR 6-2422zzzzzz	65
TMR 6-2421zzzzzz	18-36	427	±5	±600	22	65
TMR 6-2422zzzzzz	18-36	417	±12	±250	23	65
TMR 6-2423zzzzzz	18-36	417	±15	±200	24	65
TMR 6-4810zzzzzz	36-75	161	3.3	1300	25	65
TMR 6-4811zzzzzz	36-75	214	5	1200	26	65
TMR 6-4819zzzzzz	36-75	208	9	666	27	65
TMR 6-4812zzzzzz	36-75	206	12	500	28	65
TMR 6-4813zzzzzz	36-75	203	15	400	29	65
TMR 6-4815zzzzzz	36-75	208	24	250	TMR 6-4822zzzzzz	65
TMR 6-4821zzzzzz	36-75	214	±5	±600	30	65
TMR 6-4822zzzzzz	36-75	208	±12	±250	31	65
TMR 6-4823zzzzzz	36-75	208	±15	±200	32	65
TMR 6-0510HI zzzzzz	4.5-9	1300	3.3	1300	1	65
TMR 6-0511HI zzzzzz	4.5-9	1740	5	1200	2	65
TMR 6-0519HI zzzzzz	4.5-9	1690	9	666	3	65
TMR 6-0512HI zzzzzz	4.5-9	1666	12	500	4	65
TMR 6-0513HI zzzzzz	4.5-9	1666	15	400	5	65

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TMR 6-0515HI zzzzzz	4.5-9	1666	24	250	TMR 6-0522HI zzzzzz	65
TMR 6-0521HI zzzzzz	4.5-9	1740	±5	±600	6	65
TMR 6-0522HI zzzzzz	4.5-9	1666	±12	±250	7	65
TMR 6-0523HI zzzzzz	4.5-9	1666	±15	±200	8	65
TMR 6-1210HI zzzzzz	9-18	644	3.3	1300	9	65
TMR 6-1211HI zzzzzz	9-18	844	5	1200	10	65
TMR 6-1219HI zzzzzz	9-18	833	9	666	11	65
TMR 6-1212HI zzzzzz	9-18	823	12	500	12	65
TMR 6-1213HI zzzzzz	9-18	823	15	400	13	65
TMR 6-1215HI zzzzzz	9-18	844	24	250	TMR 6-1222HI zzzzzz	65
TMR 6-1221HI zzzzzz	9-18	855	±5	±600	14	65
TMR 6-1222HI zzzzzz	9-18	844	±12	±250	15	65
TMR 6-1223HI zzzzzz	9-18	833	±15	±200	16	65
TMR 6-2410HI zzzzzz	18-36	322	3.3	1300	17	65
TMR 6-2411HI zzzzzz	18-36	422	5	1200	18	65
TMR 6-2419HI zzzzzz	18-36	417	9	666	19	65
TMR 6-2412HI zzzzzz	18-36	411	12	500	20	65
TMR 6-2413HI zzzzzz	18-36	406	15	400	21	65
TMR 6-2415HI zzzzzz	18-36	417	24	250	TMR 6-2422HI zzzzzz	65
TMR 6-2421HI zzzzzz	18-36	427	±5	±600	22	65
TMR 6-2422HI zzzzzz	18-36	417	±12	±250	23	65
TMR 6-2423HI zzzzzz	18-36	417	±15	±200	24	65
TMR 6-4810HI zzzzzz	36-75	161	3.3	1300	25	65
TMR 6-4811HI zzzzzz	36-75	214	5	1200	26	65
TMR 6-4819HI zzzzzz	36-75	208	9	666	27	65
TMR 6-4812HI zzzzzz	36-75	206	12	500	28	65
TMR 6-4813HI zzzzzz	36-75	203	15	400	29	65
TMR 6-4815HI zzzzzz	36-75	208	24	250	TMR 6-4822HI zzzzzz	65

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Model Name	Input Range (Vdc)	Input Current (mA) Max	Output Voltage (Vdc)	Output Current (mA)	Transformer	Temperature
TMR 6-4821HI zzzzzz	36-75	214	±5	±600	30	65
TMR 6-4822HI zzzzzz	36-75	208	±12	±250	31	65
TMR 6-4823HI zzzzzz	36-75	208	±15	±200	32	65

**Nomenclature:** N/A