

Output Specifications

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|---|---|
| Regulation – Load variation | TML 20 single output models: 1 %, 0–100 % load TML 20 dual output models: 3 % (each output), 10–100 % symmetric load TML 20 triple output models: 2 % for output 1, 20–100 % load 5 % for output 2&3, 20–100 % symmetric load TML 40 single output models: 0.5 % 1–100 % load TML 40 symmetric dual output models: 1 % (each output), 10–100 % symmetric load TML 40 asymmetric dual output models: 2 % for output 1, 25–100 % load 6 % for output 2, 25–100 % load TML 40 triple output models: 3 % for output 1, 25–100 % load 7 % for output 2&3, 25–100 % symmetric load |
| Current limitation | above 105 % of rated output current |
| Overvoltage protection (main output only) | by Zener diode |
| Short circuit protection | hiccup mode, indefinite (automatic recovery) |
| Overtemperature protection (TML 40 models only) | at +100°C |

| Max. capacitive load | | Model series | |
|-------------------------------|----------------------|----------------------|-----------------------|
| | | TML 20 | TML 40 |
| Output: | | | |
| Single output models | 3.3 VDC | 25'000 µF | 60'000 µF |
| | 5.0 VDC | 13'000 µF | 40'000 µF |
| | 12 VDC | 920 µF | 8'600 µF |
| | 15 VDC | 820 µF | 6'600 µF |
| | 24 VDC | 600 µF | 1'400 µF |
| Dual output models symmetric | +5.0 / -5.0 VDC | 4'300 / 4'300 µF | 12'000 / 12'000 µF |
| | +12 / -12 VDC | 560 / 560 µF | 4'400 / 4'400 µF |
| | +15 / -15 VDC | 220 / 220 µF | 1'000 / 1'000 µF |
| Dual output models asymmetric | +5.0 / +12 VDC | – | 10'000 / 470 µF |
| | +5.0 / +24 VDC | – | 10'000 / 400 µF |
| Triple output models | +5.0 / +12 / -12 VDC | 3'500 / 220 / 220 µF | 10'000 / 780 / 780 µF |
| | +5.0 / +15 / -15VDC | 3'500 / 150 / 150 µF | 10'000 / 900 / 900 µF |

General Specifications

| | | |
|---|---|--|
| Temperature ranges | – Operating – Power derating above +50°C – Case max. – Storage (non operating) | TML 20 models: -25°C to +70°C TML 40 models: -40°C to +60°C TML 20 models: 3.75 %/K TML 40 models: 3.0 %/K +95°C -40°C to +85°C |
| Temperature coefficient | | TML 20 models: 0.02 %/K TML 40 models: 0.01 %/K |
| Efficiency | | 74 – 84 % (depending on model) |
| Humidity (non condensing) | | 95 % rel max. |
| Switching frequency (pulse width modulation PWM) | | TML 20 models: 100 kHz typ. TML 40 models: 132 kHz typ. |
| Hold-up time | | 10 ms min. |
| Isolation voltage | – Input/Output | 3'000 VAC |
| Reliability /calculated MTBF (MIL-HDBK-217F, at +25°C, ground benign) | | >200'000 h |
| EMI / RFI conducted | | EN 55022, class B, FCC part 15, level B |
| EMC compliance | | EN 55024 |

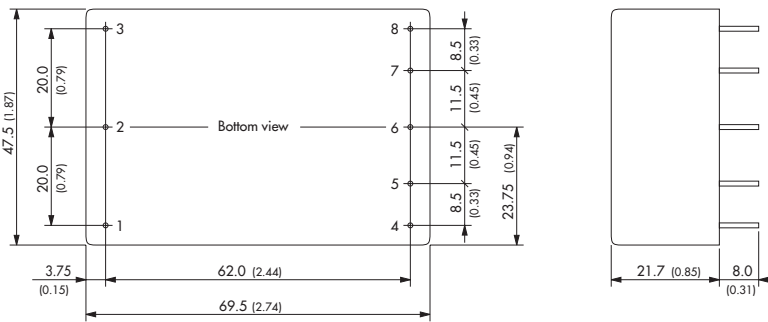
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

General Specifications

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|--------------------------|--|
| Protection class | class II to IEC/EN 60536 |
| Safety standards | UL/cUL 60950-1, IEC/EN 60950-1 www.tracopower.com/overview/tml |
| Casing material | plastic resin + fiberglass (UL 94V-0 rated) |
| Environmental compliance | - Reach - RoHS www.tracopower.com/products/reach-declaration.pdf RoHS directive 2011/65/EU |

Outline Dimensions

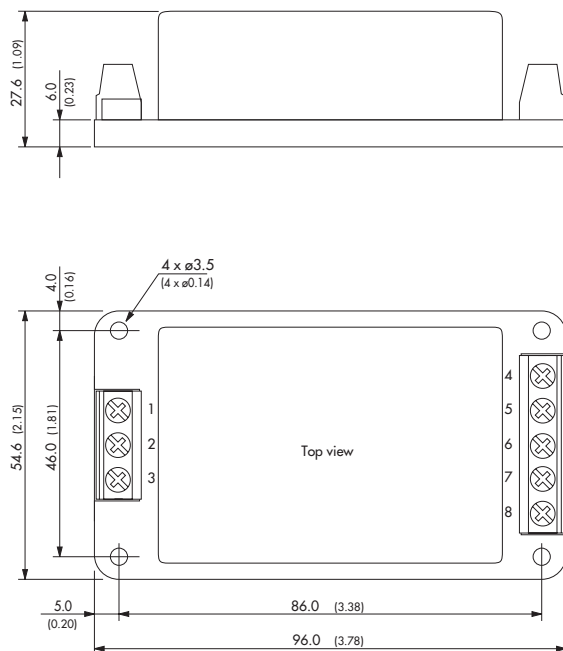
TML 20 models
for PCB mount:



Pin diameter \varnothing 1.0 mm (0.039)

Weight: 110 g (3.9 oz)

TML 20C models
for chassis mount:



Weight: 155 g (5.5 oz)

Pinout / Connection

| Pin/ con. | Single output | Dual output | Triple output |
|--------------|------------------|----------------|------------------|
| 1 | FG | | |
| 2 | AC in (N) | | |
| 3 | AC in (L) | | |
| 4 | no pin / nc | no pin / nc | Vout 3 |
| 5 | -Vout 1 | Vout 2 | com. 2/3 |
| 6 | no pin | com. 1/2 | Vout 2 |
| 7 | +Vout 1 | +Vout 1 | -Vout 1 |
| 8 | no pin | no pin | +Vout 1 |

nc = not to connect

Dimensions in [mm], () = Inches
Tolerances = 0.5mm (0.02)