Output Specifications

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	
Output:		TML 20	TML 40
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 symetric	+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 asymetric	+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	TML 20 models:	–25°C to +70°C
		TML 40 models:	–40°C to +60°C
	– Power derating above +50°C	TML 20 models:	3.75 %/K
		TML 40 models:	3.0 %/K
	– Case max.		+95°C
	– Storage (non operating)		–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.

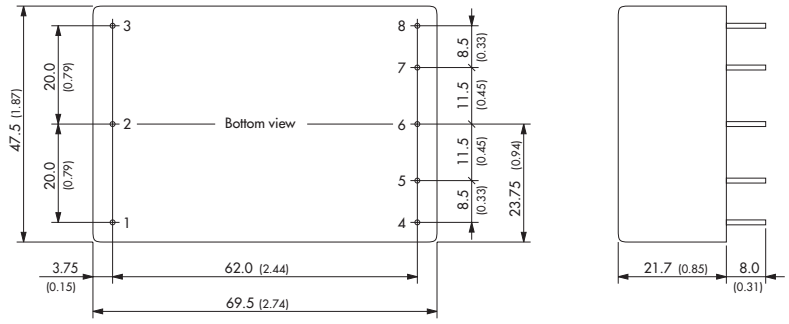
General Specifications

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

Outline Dimensions

TML 20 models

for PCB mount:

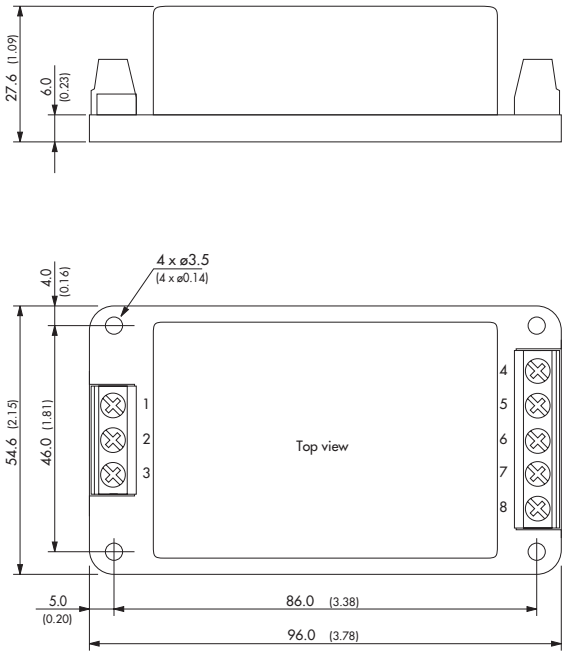


Pin diameter ø 1.0 mm (0.039)

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)