

Features

- ◆ AC/DC Power Modules for PCB Mounting
- ◆ Highest Power Density
- ◆ Fully encapsulated Plastic Case
- ◆ Universal Input 85-264 VAC, 47 - 440 Hz
- ◆ High Efficiency
- ◆ EMI meets EN 55022, Class B and FCC, Level B
- ◆ Low Ripple and Noise
- ◆ Short Circuit and Overload Protection
- ◆ 3 Year Product Warranty



The TMLM Series switching power supplies, offer highest power density in a fully encapsulated module which can be soldered directly on PCB's. This feature makes these modules an ideal solution for all space critical applications in commercial and industrial electronic equipment. International safety approvals qualify the product for worldwide markets. SMD-technology and high efficiency guarantees a high reliability of these Power Supplies.

Models

Order code	Output power max.	Output voltage	Output current max.
TMLM 05103	4.1 Watt	3.3 VDC	1250 mA
TMLM 05105	5 Watt	5 VDC	1000 mA
TMLM 05112	5 Watt	12 VDC	420 mA
TMLM 05115	5 Watt	15 VDC	333 mA
TMLM 05124	5.5 Watt	24 VDC	230 mA
TMLM 10103	8.2 Watt	3.3 VDC	2500 mA
TMLM 10105	10 Watt	5 VDC	2000 mA
TMLM 10112	10 Watt	12 VDC	830 mA
TMLM 10115	10 Watt	15 VDC	666 mA
TMLM 10124	10 Watt	24 VDC	420 mA

NEW
Models

Input Specifications

Input voltage range	90 – 264 VAC or 120 – 370 VDC
Input frequency	47 – 440 Hz
Input current at full load	115 VAC / 230 VAC TMLM 05 models: 110 mA / 70 mA typ TMLM 10 models: 220 mA / 150 mA typ
Inrush current (<2 ms)	115 VAC / 230 VAC 10 A max/ 20 A max.
External fuse (recommended)	1.5 A slow blow type

Output Specifications

Voltage set accuracy	±2 %
Regulation	– Input variation 0.3 % max. – Load variation (5–100%) 0.5 % max.
Minimum load	5 % of rated max. output current. (Operation at lower load is safe but major deviations to specified data may occur)
Ripple and noise (20 MHz Bandwidth)	– 3.3 & 5 VDC output models: < 1.5 % of Vout – other models: < 1.0 % of Vout
Current limitation	120 – 180 % fold back
Short circuit protection	indefinite (automatic recovery)
Maximum capacitive load	470 – 23'000 µF depending on model

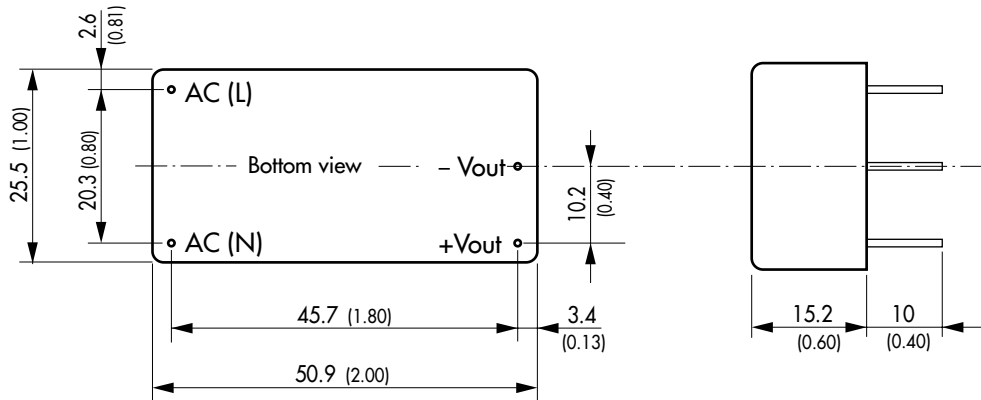
General Specifications

Temperature ranges	– Operating –25°C...+71 °C – Storage (non operating) –40°C...+85 °C
Derating	3.75 %/K above +50°C
Temperature coefficient	0.02 %/K
Humidity (non condensing)	95 % rel max.
Efficiency	72 % typ. (depending on model)
Switching frequency	125 kHz typ. (Puls width modulation PWM)
Hold-up time	15 ms min.
Isolation voltage (60 sec)	– Input/ Output 3'000 VAC
Leakage current	TMLM 05 models: 0.75 mA max. TMLM 10 models: 0.25 mA max.
Reliability /calculated MTBF (MIL-HDBK-217F ground benign)	> 330'000 h @ 25°C
EMI / RFI conducted	EN 55022, class B, FCC part 15, level B
Safety Class II	to IEC / EN 60536
Safety standards	UL 60950-1, IEC/EN 60950-1
Safety approval	cUL /UL File E188913 www.ul.com -> certifications
Case material	plastic resin + fiberglass (flammability UL 94V-0 rated)

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

Outline Dimensions

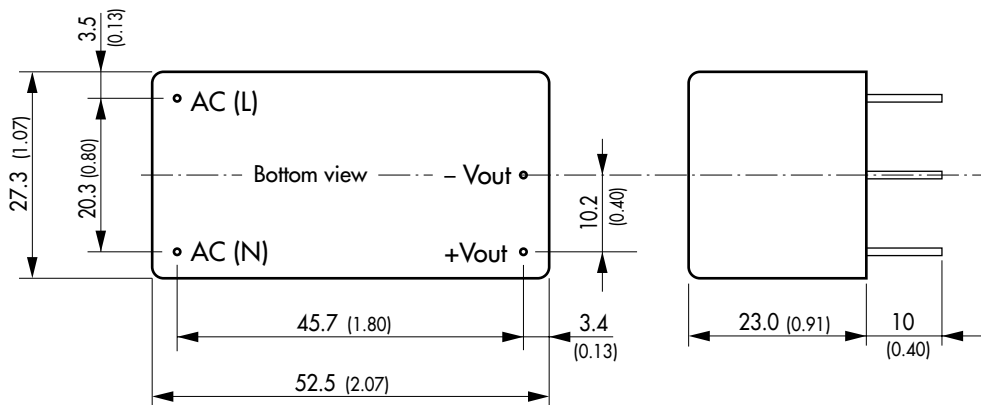
TLM 05 Models



Weight : 30 g (1.06 oz)

Pin diameter: 1.0 (0.04)

TLM 10 Models



Weight : 55 g (1.94 oz)

Pin diameter: 1.0 (0.04)

Specifications can be changed any time without notice

Dimensions in [mm], () = Inch
Tolerances: ± 0.5 (0.02)
Pin pitch tolerance: ± 0.3 (0.012)