

### Features

- ◆ Ultra compact, fully encapsulated Plastic Case
- ◆ 2 Package Styles:
  - with Screw Terminal Block for Chassis Mounting
  - with Solder Pins for PCB Mounting
- ◆ DIN-Rail Mounting Adaptor (Option)
- ◆ Universal Input 85-264VAC, 50/60Hz
- ◆ Safety Class II Product
- ◆ Approved to EN/UL 60950-1 and EN/UL 60601-1 Medical Safety Standard
- ◆ EMI according to EN 55022, Class B and FCC, Level B
- ◆ Short Circuit and Overload Protection
- ◆ Lead free Design – RoHS compliance
- ◆ 3 Year Product Warranty



UL 60950-1  
UL 60601-1



The TMT series Power Modules are AC/DC Power Supplies in an ultra compact fully encapsulated module. They feature easy installation with screw terminals and optional DIN-rail mounting adaptor or direct PCB mounting with Solder Pins. Compliance with International safety and EMC standards qualify these products for worldwide markets. For application in medical instrumentations the modules are also approved to EN/UL 60601-1 safety standard.

High reliability is provided by use of industrial quality grade components and conservative temperature specifications. These AC/DC modules offers an interesting power supply solution for many space critical applications in commercial and industrial electronic equipment.

### Models

Ordercode		Output Power max.	Output 1 max.	Output 2 max.
PCB-mounting with solder pins	Chassis mounting with screw terminals			
TMT 15105	TMT 15105C	15 Watt	5 VDC / 3000 mA	-12 VDC / 625 mA -15 VDC / 500 mA
TMT 15112	TMT 15112C		12 VDC / 1250 mA	
TMT 15115	TMT 15115C		15 VDC / 1000 mA	
TMT 15124	TMT 15124C		24 VDC / 625 mA	
TMT 15212	TMT 15212C		+12 VDC / 625 mA	
TMT 15215	TMT 15215C		+15 VDC / 500 mA	
TMT 30105	TMT 30105C	30 Watt	5 VDC / 6000 mA	-12 VDC / 1250 mA -15 VDC / 1000 mA
TMT 30112	TMT 30112C		12 VDC / 2500 mA	
TMT 30115	TMT 30115C		15 VDC / 2000 mA	
TMT 30124	TMT 30124C		24 VDC / 1250 mA	
TMT 30212	TMT 30212C		+12 VDC / 1250 mA	
TMT 30215	TMT 30215C		+15 VDC / 1000 mA	

### Input Specifications

Input voltage range		85 – 264 VAC 120 – 370 VDC
Input frequency		47 – 63 Hz
Input current full load	15 watt models: 30 watt models:	115 VAC/ 230 VAC 280 mA/ 180 mA typ. 570 mA/ 360 mA typ.
Inrush current		115 VAC/ 230 VAC 24 A/ 36 A
External input fuse (recommended)	15 watt models: 30 watt models:	1.0 A slow blow 2.0 A slow blow

### Output Specifications

Voltage set accuracy		± 2 %
Regulation	– Input variation – Load variation	20 mV max.  single output models (0–100%): 50 mV max. dual output models (min. load 10%): 500 mV max.
Ripple and noise (20Mhz Bandwidth)		150 mVpk-pk max.
Overload protection by current limit		>105 % $I_{nom}$ . automatic recovery (long term short circuit operation may cause damage to the unit)
Capacitive load		10'000 µF max.
Rise-up time		200 ms typ.
Hold-up time	15 watt models: 30 watt models:	115 VAC/ 230 VAC 25 ms/ 130 ms min. 17 ms/ 93 ms min.

### General Specifications

Temperature ranges	– Operating – Storage (non operating)	– 25 °C...+60 °C ambient temp. max. – 20 °C...+85 °C
Derating		2.5 %/K above +50°C
Temperature coefficient		0.02 %/K
Humidity (non condensing)		85 % rel. H max.
Efficiency		83 % typ.
Isolation voltage (60sec.)	– Input / Output	4'000 VAC
Isolation resistance	– Input / Output	100 MOhm (500 VDC)
Electromagnetic compatibility (EMC), Emissions		EN 55022, level B, FCC Part 15 level B UL/EN 60601-1-2 (for medical equipment)
Electromagnetic compatibility (EMC), Immunity	– Electrostatic discharge ESD – RF field susceptibility – Electrical fast transients / bursts on mainsline – Surge – Voltage sags	IEC/EN 60601-1-2 IEC / EN 61000-4-2 level 4 8 kV / 15 kV IEC / EN 61000-4-3 level 3 10 V / m IEC / EN 61000-4-4 level 3 2 kV IEC / EN 61000-4-5 level 3 1 kV / 2 kV IEC / EN 61000-4-11

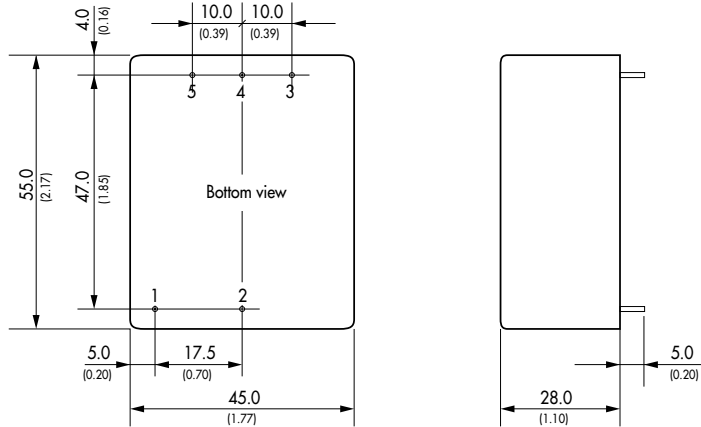
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

**General Specifications**

Safety Class II		to IEC / EN 60536
Safety standards	- Information technology equipment - Medical equipment	IEC/EN 60950-1, UL 60950-1, CSA-C22.2 No. 60950-1-03 IEC/EN 60601-1, UL 60601-1
Safety approvals		UL/cUL File no.: E141988 <a href="http://www.ul.com">www.ul.com</a> -> certifications CB-Report
Environment	- Vibration - Shock	3 axis, sine sweep, 0.5mm, 10-55Hz, 1oct/min, 30min. 20 G (3 directions each 3 times)
Soldering temperature		265°C max / 10 sec

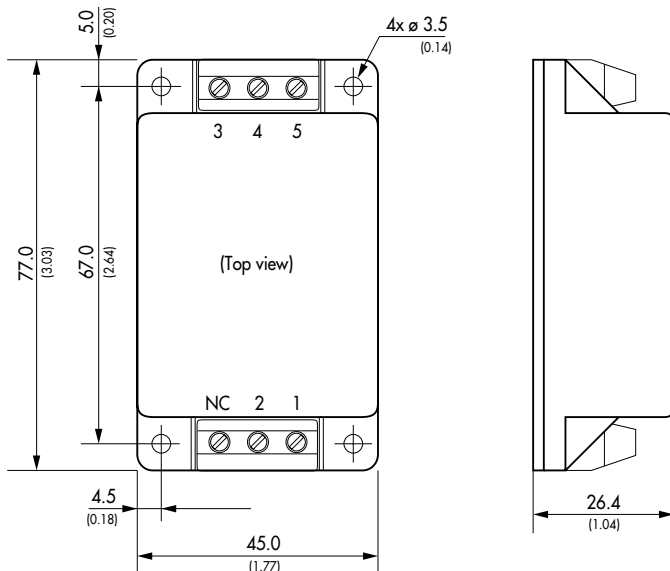
**Outline Dimensions**

TMT 15 Watt (with solder pins)



Pin diameter: 1.0 (0.04)

TMT 15 Watt (with screw terminal)



**Connection**

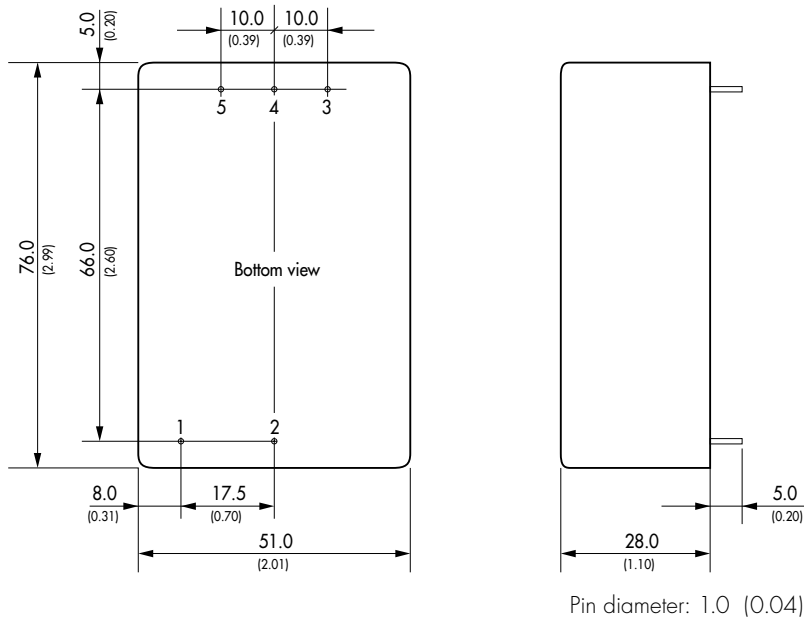
Pin	Single	Dual
1	AC in	AC in
2	AC in	AC in
3	-V out	-V out
4	No pin No function	Common
5	+V out	+V out

**Weight:** 80 g (2.8 oz)

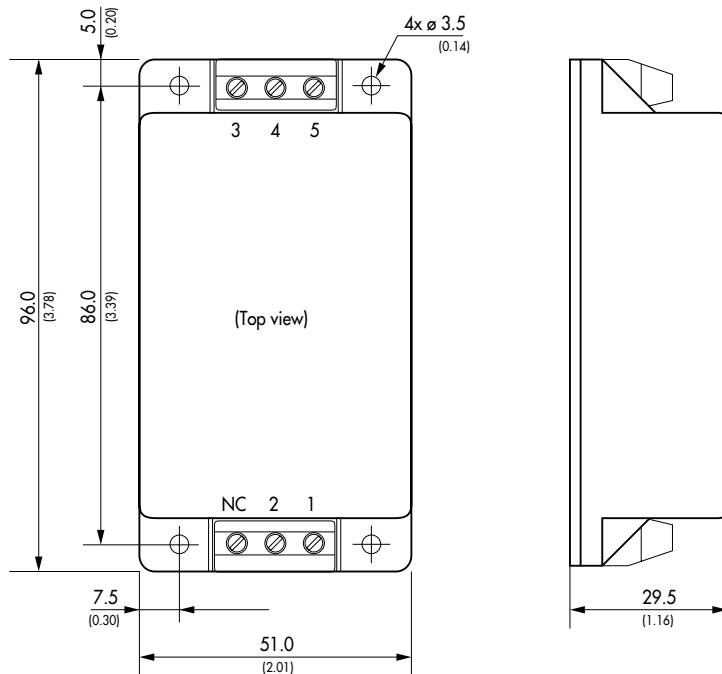
Dimensions in [mm], ( ) = Inches  
Tolerances = 0.5 (0.02)

**Outline Dimensions mm (inches)**

**TMT 30 Watt** (with solder pins)



**TMT 30 Watt** (with screw terminals)



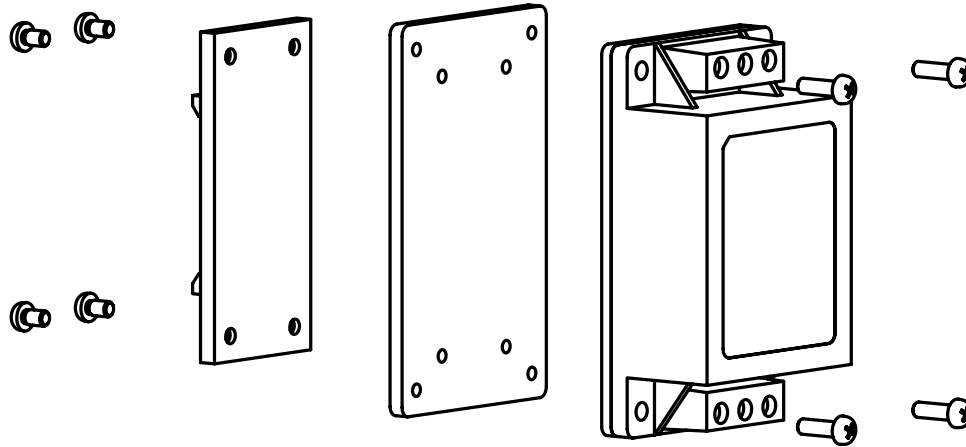
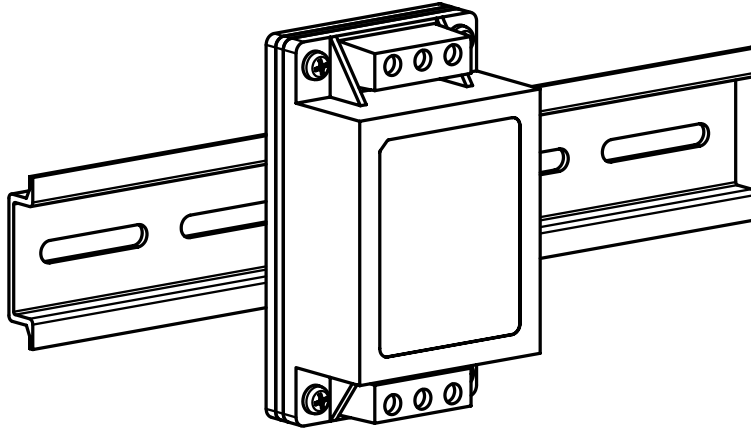
Connection		
Pin	Single	Dual
1	AC in	AC in
2	AC in	AC in
3	-V out	-V out
4	No pin No function	Common
5	+V out	+V out

**Weight:** 170 g (6.0 oz)

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

**DIN-Rail Mounting Kit**

Adapter for mounting on DIN-rails as per EN 50022-35 (snap-on mounting)



**DIN-Rail Mounting Kit**

Order Code	For Models
TMT-MK1	TMT 15xxxC
TMT-MK2	TMT 30xxxC

Kit contains interface plate, DIN-rail clip and necessary screws.

Specifications can be changed any time without notice