

#### Features

- ◆ Ultra compact, fully encapsulated plastic case
- ◆ 2 package styles:
  - with screw terminal block for chassis mount
  - with solder pins for PCB mount
- ◆ 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 compliant
- ◆ 3-year product warranty



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 instrumentation, the modules are also approved to the 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 offer an interesting power supply solution for many space critical applications in commercial and industrial electronic equipment.

Order Code		Output Power max.	Output 1	Output 2
PCB-Mount with Solder Pins	Chassis Mount with Screw Terminal Block			
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	
TMT 50105	TMT 50105C	50 Watt	5 VDC/9000 mA	
TMT 50112	TMT 50112C		12 VDC/4200 mA	
TMT 50115	TMT 50115C		15 VDC/3400 mA	
TMT 50124	TMT 50124C		24 VDC/2100 mA	
TMT 50148	TMT 50148C		48 VDC/1050 mA	

### Input Specifications

Input voltage range		85 – 264 VAC 120 – 370 VDC
Input frequency		47 – 63 Hz
Input current full load		115 VAC/ 230 VAC 15 watt models: 280 mA/ 180 mA typ. 30 watt models: 570 mA/ 360 mA typ. 50 watt models: 870 mA/ 540 mA typ.
Inrush current		115 VAC/ 230 VAC 24 A/ 36 A
External input fuse (recommended)		15 watt models: 1.0 A slow blow 30 watt models: 2.0 A slow blow 50 watt models: 3.15 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 <sub>nom.</sub> automatic recovery (long term short circuit operation may cause damage to the unit)
Capacitive load		10'000 µF max.
Rise time		200 ms typ.
Hold-up time		115 VAC/ 230 VAC 15 watt models: 25 ms/ 130 ms min. other models: 17 ms/ 93 ms min.

### General Specifications

Temperature ranges	– Operating – Storage (non operating)	–25 °C to +70 °C max. –25 °C to +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	– 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 mains line – Surge – Voltage sags	IEC/EN 60601-1-2 IEC/EN 61000-4-2, 8 kV/8 kV IEC/EN 61000-4-3, 3 V/m IEC/EN 61000-4-4, 2 kV IEC/EN 61000-4-5, 1 kV/2 kV IEC/EN 61000-4-11
Safety Class II		to IEC/EN 60536

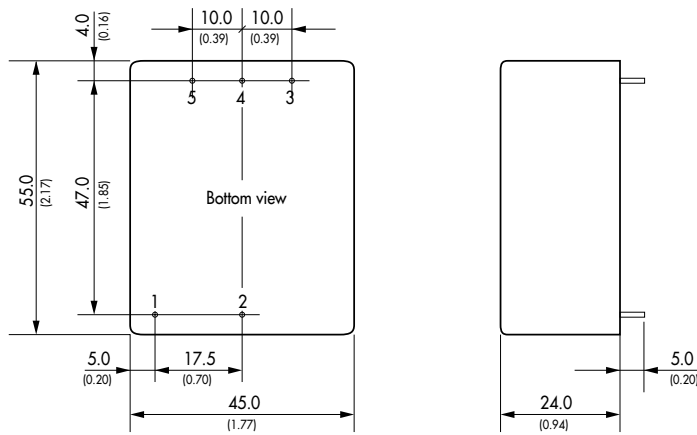
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

**General Specifications**

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 ed.2, UL 60601-1
Safety approvals (TMT 50 models pending)	- CB certificate for IEC 60950-1 - CB certificate for IEC 60601-1 - UL approvals	TMT 15 models: <a href="http://www.tracopower.com/products/tmf15_CB60950.pdf">www.tracopower.com/products/tmf15_CB60950.pdf</a> TMT 30 models: <a href="http://www.tracopower.com/products/tmf30_CB60950.pdf">www.tracopower.com/products/tmf30_CB60950.pdf</a> TMT 15 models: <a href="http://www.tracopower.com/products/tmf15_CB60601.pdf">www.tracopower.com/products/tmf15_CB60601.pdf</a> TMT 30 models: <a href="http://www.tracopower.com/products/tmf30_CB60601.pdf">www.tracopower.com/products/tmf30_CB60601.pdf</a> UL/cUL 60950-1 and UL/cUL 60601 <a href="http://www.ul.com">www.ul.com</a> -> certifications -> File: E141988
Environment	- Vibration - Shock	3 axes, sine sweep, 0.5 mm, 10-55Hz, 1 oct./min, 30 min. 20 g (3 directions each 3 times)
Soldering temperature		265 °C max/10 sec

**Outline Dimensions**

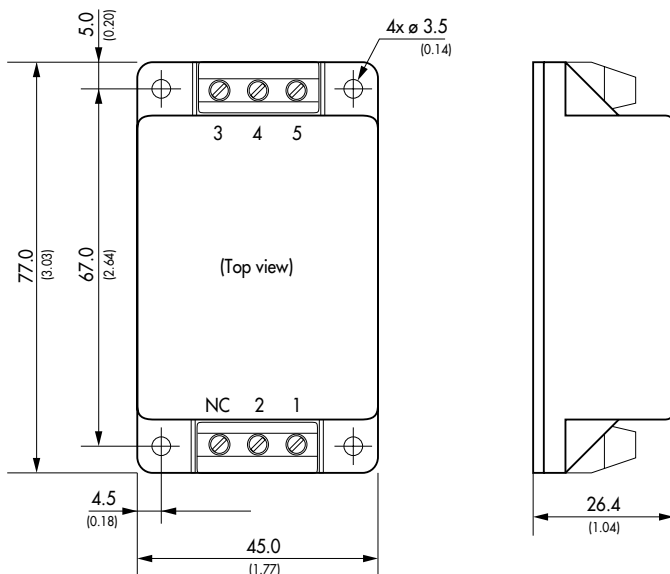
**TMT 15 models with solder pins**



Pin diameter: 1.0 (0.04)

**Weight: 75 g (2.6 oz)**

**TMT 15C models with screw terminal block**



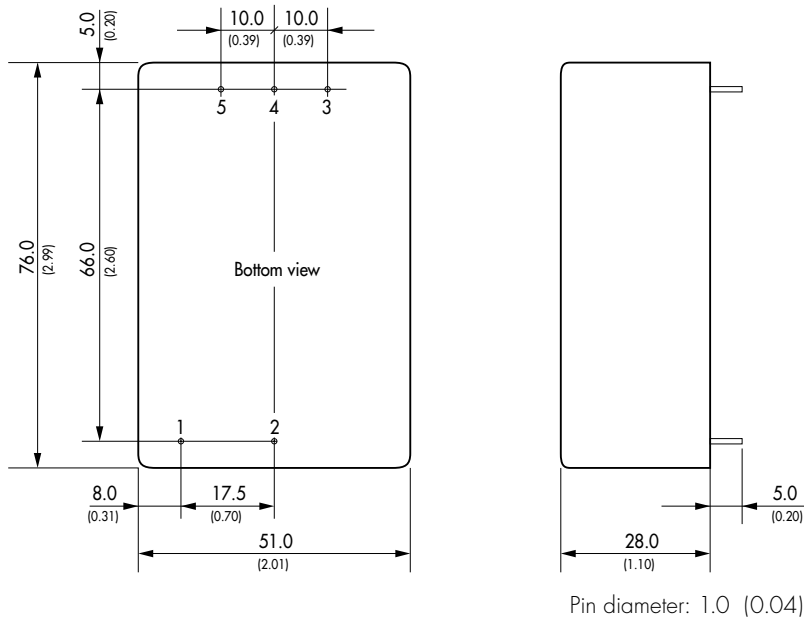
**Weight: 90 g (3.2oz)**

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

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

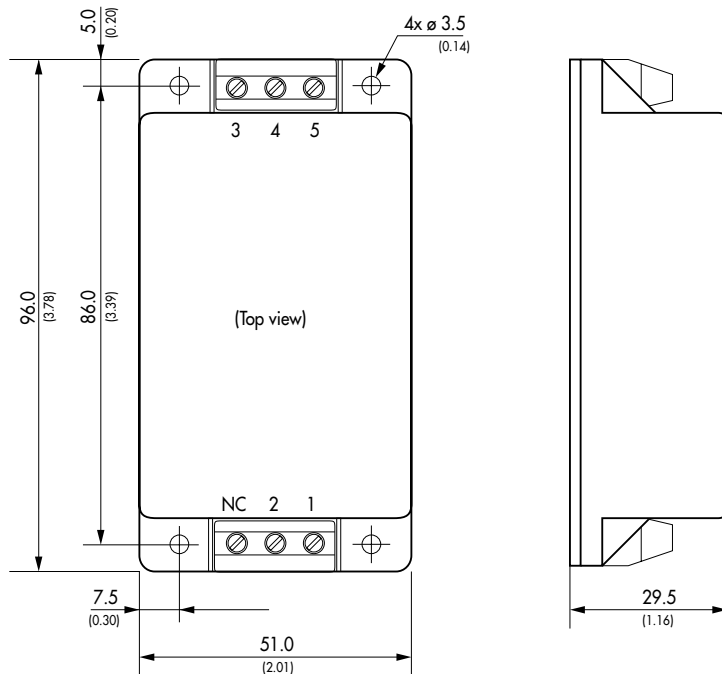
**Outline Dimensions**

**TMT 30 models with solder pins**



**Weight:** 165 g (5.8 oz)

**TMT 30C models with screw terminal block**



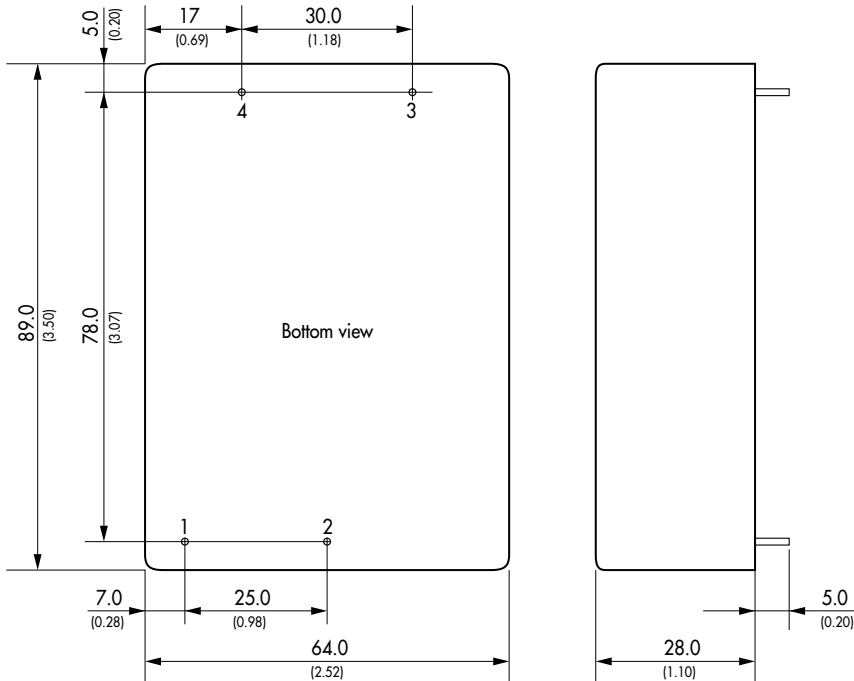
Connection		
Pin	Single	Dual
1	AC in	AC in
2	AC in	AC in
3	-V out	-V out
4	No pin	Common
5	+V out	+V out

**Weight:** 180 g (6.3 oz)

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

**Outline Dimensions**

**TMT 50 models with solder pins**

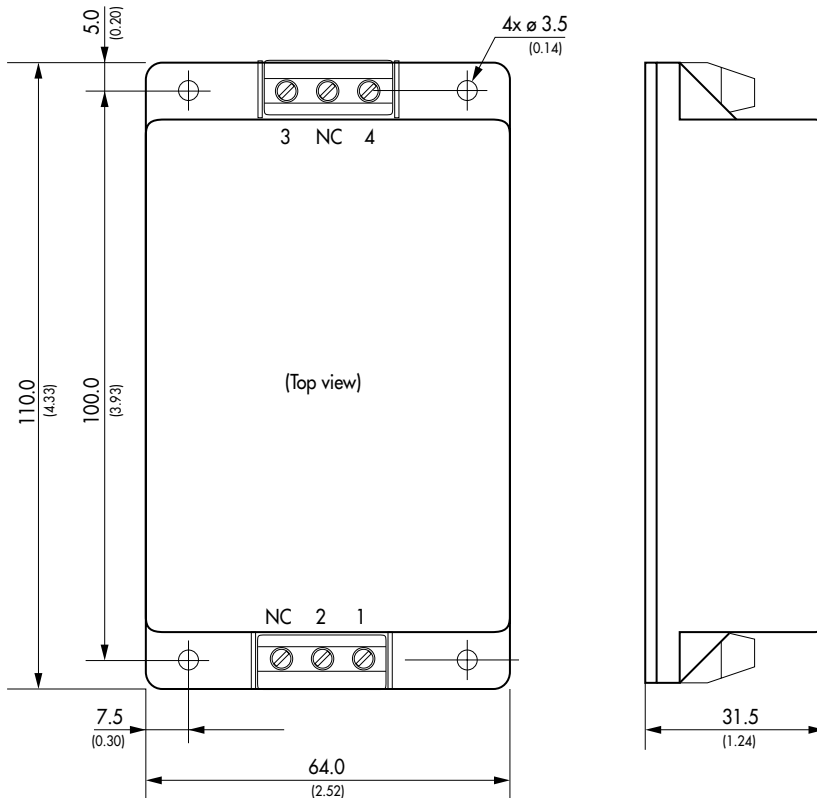


**Weight:** 245 g (8.6 oz)

Pin diameter: 1.2 (0.05)

Connection	
Pin	Single
1	AC in
2	AC in
3	-V out
4	+V out

**TMT 50C models with screw terminal block**

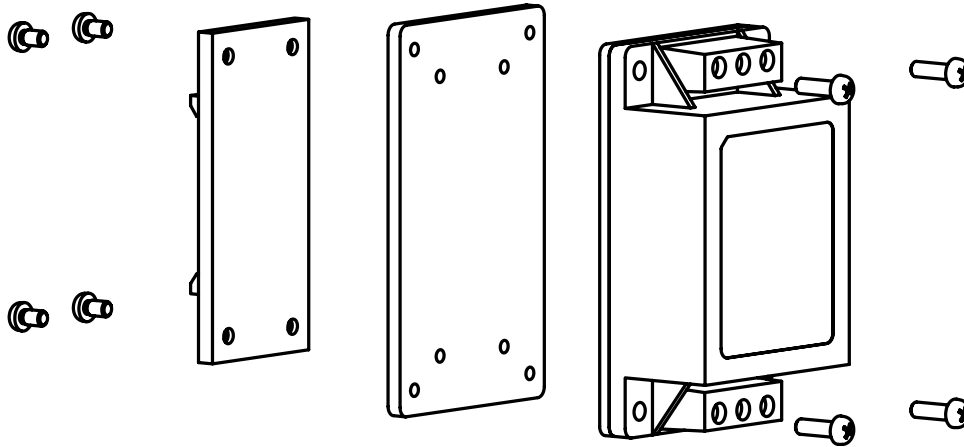
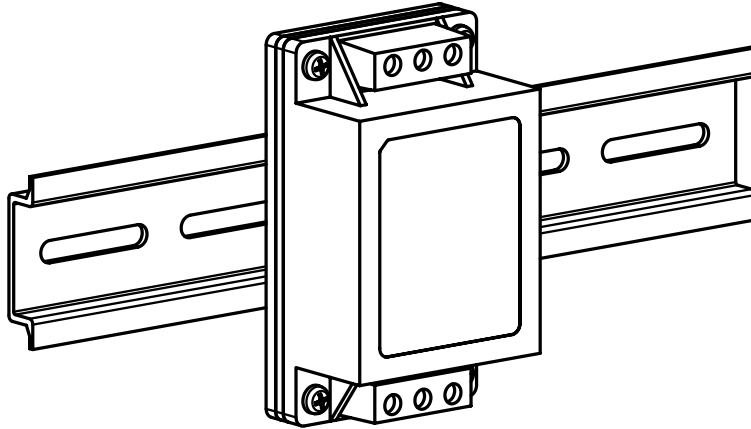


**Weight:** 295 g (10.4 oz)

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
TMT-MK3	TMT 50xxxC

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

Specifications can be changed any time without notice.