



### Features

- ◆ Ultra compact, fully encapsulated plastic case
- ◆ Single-, dual- and triple output models
- ◆ 2 package styles:
  - with screw terminal block for chassis mount
  - with solder pins for PCB mount
- ◆ DIN-rail mount adaptor (option)
- ◆ Universal Input 85-264VAC, 50/60Hz
- ◆ Protection class II
- ◆ Approved to IEC/UL 60950-1 safety standard
- ◆ UL 508 listed (chassis mount version)
- ◆ 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 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 standards including UL 508 listing qualify these products for worldwide markets.

These AC/DC modules offer an interesting power supply solution for many space critical applications in commercial and industrial electronic equipment.

The series is approved to medical standard IEC60601-1 ed.3.0. A re-approval to IEC60601-1 ed.3.1 is not scheduled.

### Single Output Models

Order Code		Output Power max.	Output 1
PCB-Mount with Solder Pins	Chassis Mount with Screw Terminal Block		
TMT 10105 TMT 10112 TMT 10115 TMT 10124		10 Watt	5 VDC/2000 mA 12 VDC/840 mA 15 VDC/670 mA 24 VDC/420 mA
TMT 15105 TMT 15112 TMT 15115 TMT 15124	TMT 15105C TMT 15112C TMT 15115C TMT 15124C	15 Watt	5 VDC/3000 mA 12 VDC/1250 mA 15 VDC/1000 mA 24 VDC/625 mA
TMT 30105 TMT 30112 TMT 30115 TMT 30124	TMT 30105C TMT 30112C TMT 30115C TMT 30124C	30 Watt	5 VDC/6000 mA 12 VDC/2500 mA 15 VDC/2000 mA 24 VDC/1250 mA
TMT 50105 TMT 50112 TMT 50115 TMT 50124 TMT 50148	TMT 50105C TMT 50112C TMT 50115C TMT 50124C TMT 50148C	50 Watt	5 VDC/9000 mA 12 VDC/4200 mA 15 VDC/3400 mA 24 VDC/2300 mA 48 VDC/1150 mA

**Dual- and Triple Output Models**

Order Code		Output Power max.	Output 1	Output 2	Output 3
PCB-Mount with Solder Pins	Chassis Mount with Screw Terminal Block				
TMT 15212 TMT 15215	TMT 15212C TMT 15215C	15 Watt	+12 VDC/625 mA +15 VDC/500 mA	-12 VDC/625 mA -15 VDC/500 mA	
TMT 30212 TMT 30215 TMT 30252 TMT 30522 TMT 30515 TMT 30503 TMT 30505	TMT 30212C TMT 30215C TMT 30252C* TMT 30522C* TMT 30515C*		30 Watt	+12 VDC/1250 mA +15 VDC/1000 mA +5 VDC/3000 mA <sup>1)</sup> +5 VDC/3000 mA <sup>1)</sup> +5 VDC/3000 mA <sup>1)</sup> +3.3 VDC/6000 mA <sup>2)</sup> +5 VDC/5000 mA <sup>3)</sup>	-12 VDC/1250 mA -15 VDC/1000 mA +12 VDC/1200 mA <sup>4)</sup> +12 VDC/1000 mA <sup>5)</sup> +15 VDC/500 mA +5 VDC/1500 mA <sup>5)</sup> +3.3 VDC/1000 mA <sup>6)</sup>

\* EOL announcement May 2016  
[www.tracopower.com/overview/tmt-c](http://www.tracopower.com/overview/tmt-c)

<sup>1)</sup> 4500 mA

<sup>2)</sup> 7500 mA

<sup>3)</sup> 6000 mA

<sup>4)</sup> 1800 mA

<sup>5)</sup> 2000 mA

<sup>6)</sup> 1500 mA

<sup>7)</sup> 500 mA

Peak current <30 sec., 10 % duty cycle max, total load not to exceed 30 Watt.

**Input Specifications**

Input voltage	- nominal - range	115 / 230 VAC 85 – 264 VAC 85 – 370 VDC below 110 VDC: 1.2%/V output power derating
Input frequency		47 – 63 Hz
Input current full load		115 VAC / 230 VAC 10 watt models: 210 mA / 140 mA typ. 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 required (recommended values)		10–15 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 and triple output models (min. load 10%): 500 mV max.
Ripple and noise (20MHz bandwidth)		150 mVpk-pk max.
Overload protection by current limit		>105 % Inom (long term overload condition may cause damage)
Capacitive load		10'000 µF max.
Rise time		200 ms typ.
Hold-up time		115 VAC / 230 VAC 15/50 watt models: 25 ms / 130 ms min. other models: 17 ms / 93 ms min.

## General Specifications

Temperature ranges	<ul style="list-style-type: none"> <li>- Operating</li> <li>- Storage (non operating)</li> </ul>	-25°C to +50°C max. -25°C to +85°C
Derating		5 %/K above +40°C
Temperature coefficient		0.02 %/K
Humidity (non condensing)		85 % rel. H max.
Efficiency		83 % typ.
Switching frequency		100 kHz typ. (fixed)
Isolation voltage	- Input/Output	4'000 VAC
Isolation resistance	- Input/Output	100 MOhm (500 VDC)
Isolation capacitance	- Input/Output	4'700 pF
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	<ul style="list-style-type: none"> <li>- Electrostatic discharge ESD</li> <li>- RF field susceptibility</li> <li>- Electrical fast transients / bursts on mains line</li> <li>- Surge</li> <li>- Immunity to conducted RF disturbances</li> <li>- Power frequency field immunity</li> <li>- Voltage sags</li> </ul>	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 IEC/EN 61000-4-6, 10 V/m IEC/EN 61000-4-8, 3 A/m IEC/EN 61000-4-11
Protection class		class II (in closed cabinets)
Safety standards	<ul style="list-style-type: none"> <li>- Information technology equipment</li> <li>- Industrial control equipment</li> <li>- Medical equipment*</li> </ul>	IEC/EN 60950-1, UL 60950-1, CSA-C22.2 No. 60950-1-03 UL/cUL 508 (chassis mount version only) IEC/EN 60601-1, ed.3.0 (for 2 x MOOP), UL 60601-1 no re-approval according latest medical standards scheduled!
Safety approvals	<ul style="list-style-type: none"> <li>- CB certificates</li> <li>- UL approvals for UL 60950-1 and UL 60601</li> <li>- UL approval for UL 508</li> </ul>	<a href="http://www.tracopower.com/overview/tmt">www.tracopower.com/overview/tmt</a> <a href="http://www.ul.com">www.ul.com</a> -> certifications -> File: e188913 <a href="http://www.ul.com">www.ul.com</a> -> certifications -> File: e322109
Reliability, calculated MTBF, at +25°C acc. to IEC 61709		>1.8 Mio h.
Environment	<ul style="list-style-type: none"> <li>- Vibration</li> <li>- Shock</li> </ul>	3 axes, sine sweep, 0.5 mm, 10 – 55Hz, 1 oct. / min, 30 min. 20 g (3 directions each 3 times)
casing		plastic with silicone rubber compound (UL 94V-0 rated)
Environmental compliance	<ul style="list-style-type: none"> <li>- Reach</li> <li>- RoHS</li> </ul>	<a href="http://www.tracopower.com/overview/tmt">www.tracopower.com/overview/tmt</a> RoHS directive 2011/65/EU
Soldering temperature		265°C max. / 10 sec.

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

**Outline Dimensions**

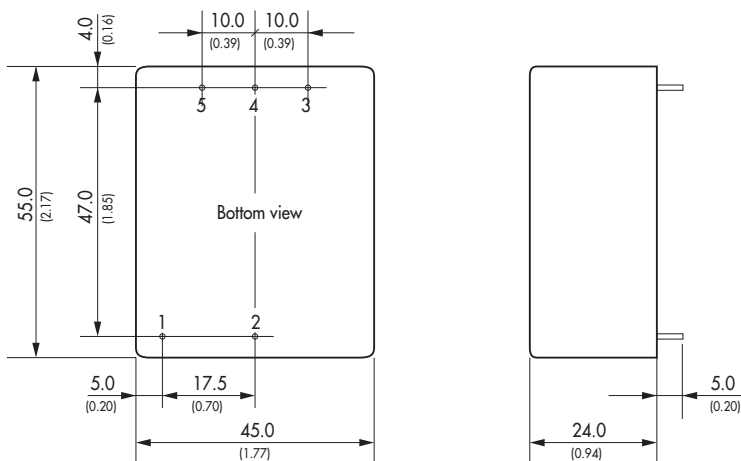
**TMT 10 models**



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

**Weight: 52 g (1.8 oz)**

**TMT 15 models with solder pins**

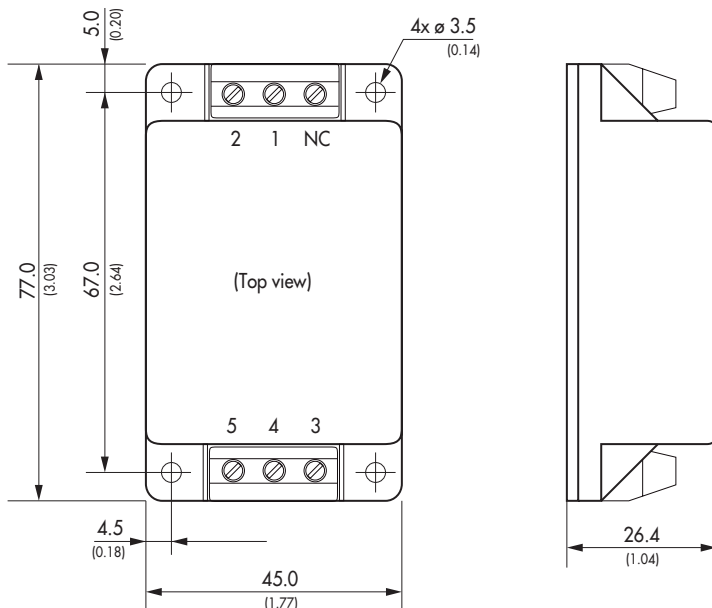


Pin diameter: 1.0 (0.04)

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

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

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



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

Dimensions in [mm], ( ) = Inches  
Case tolerances:  $\pm 1.0$  ( $\pm 0.04$ )  
Pin pitch tolerance:  $\pm 0.5$  ( $\pm 0.02$ )  
Mounting hole tolerance:  $\pm 0.5$  ( $\pm 0.02$ )

**Outline Dimensions**

TMT 30 single output models and TMT 30212 & TMT 30215 (solder pins)



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

TMT 30C single output models and TMT 30212C & TMT 30215C (screw terminal block)



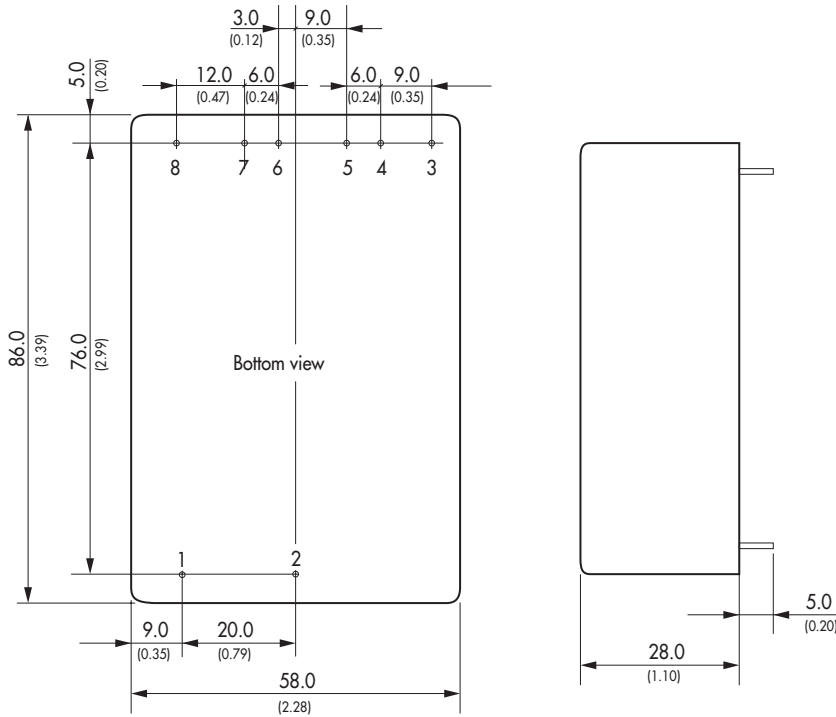
Connection		
Pin	Single	Dual
1	AC in	AC in
2	AC in	AC in
3	-V out	-V out
4	No pin/con	Common
5	+V out	+V out

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

Dimensions in [mm], ( ) = Inches  
Case tolerances: ±1.0 (±0.04)  
Pin pitch tolerance: ±0.5 (±0.02)  
Mounting hole tolerance: ±0.5 (±0.02)

**Outline Dimensions**

TMT 30 triple output models and TMT 30252 (solder pins)

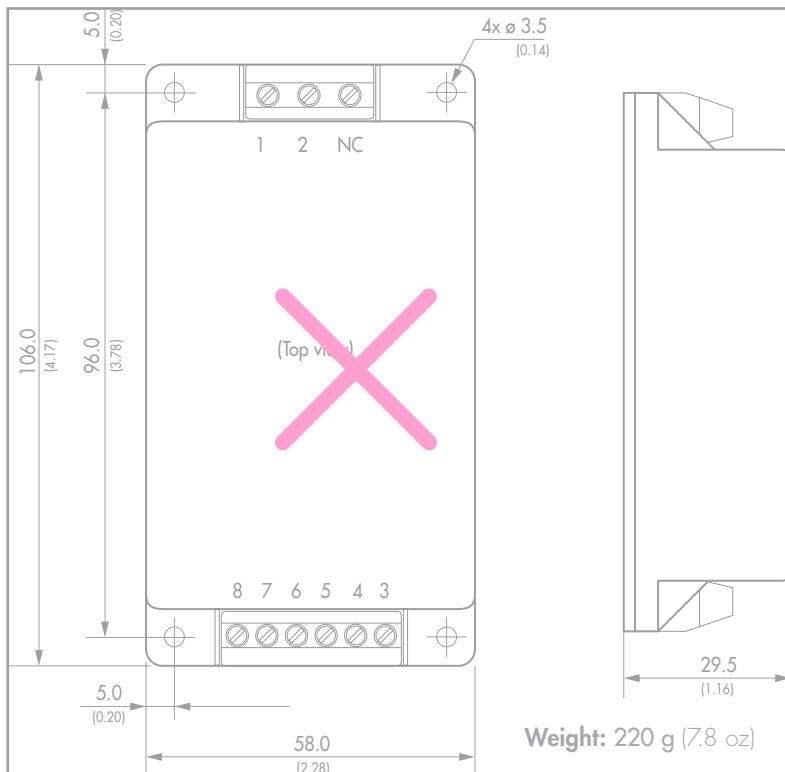


**Weight:** 200 g (7.1 oz)  
Pin diameter: 1.0 (0.04)

Connection		
Pin	Dual	Triple
1	AC in	AC in
2	AC in	AC in
3	No pin/con.	-V out 3
4	No pin/con.	+V out 3
5	-V out 2	-V out 2
6	+V out 2	+V out 2
7	-V out 1	-V out 1
8	+V out 1	+V out 1

TMT 30C triple output models and TMT 30252C (screw terminal block)

EOL announcement May 2016 [www.tracopower.com/overview/tmt-c](http://www.tracopower.com/overview/tmt-c)



**Weight:** 220 g (7.8 oz)

Dimensions in [mm], ( ) = Inches  
Casing tolerances:  $\pm 1.0$  ( $\pm 0.04$ )  
Pin pitch tolerance:  $\pm 0.5$  ( $\pm 0.02$ )  
Mounting hole tolerance:  $\pm 0.5$  ( $\pm 0.02$ )

**Outline Dimensions**

**TMT 50 models with solder pins**

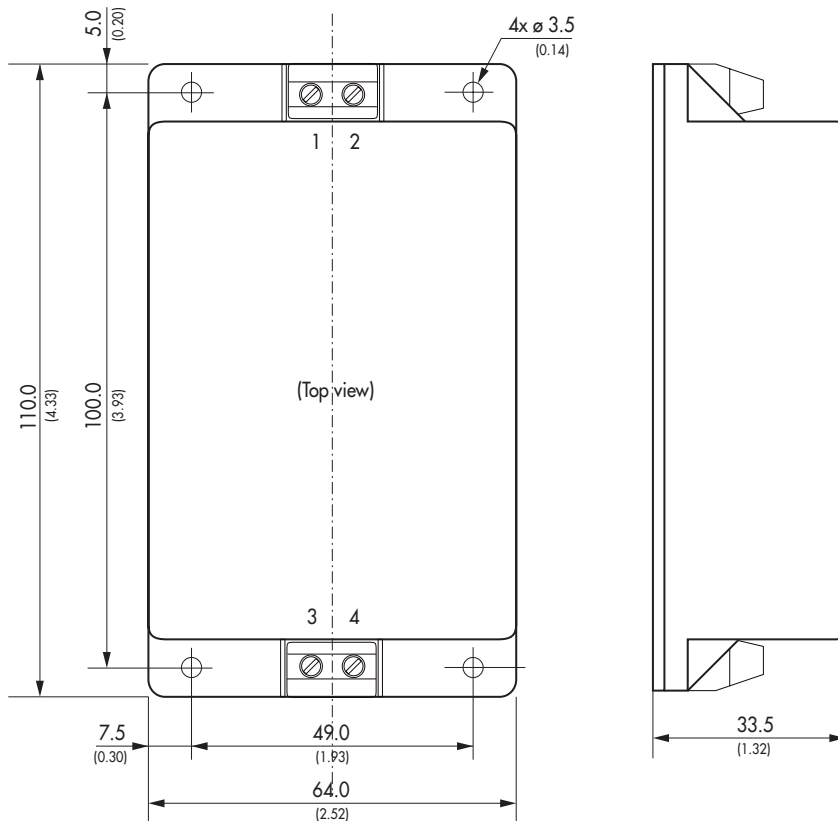


**Weight: 245 g (8.6 oz)**

Pin diameter: 1.0 (0.04)

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  
Case tolerances:  $\pm 1.0$  ( $\pm 0.04$ )  
Pin pitch tolerance:  $\pm 0.5$  ( $\pm 0.02$ )  
Mounting hole tolerance:  $\pm 0.5$  ( $\pm 0.02$ )

**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 single & $\pm 12/\pm 15$ VDC
TMT-MK3	For triple and dual asymmetric output -EOL
TMT-MK5	TMT 50xxxC

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

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at [www.tracopower.com](http://www.tracopower.com)