

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.

| Models | | Output Power max. | Output 1 | Output 2 |
|----------------------------|---|-------------------|-----------------|------------------------------------|
| Order Code | | | | |
| 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 _{nom.} 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 |

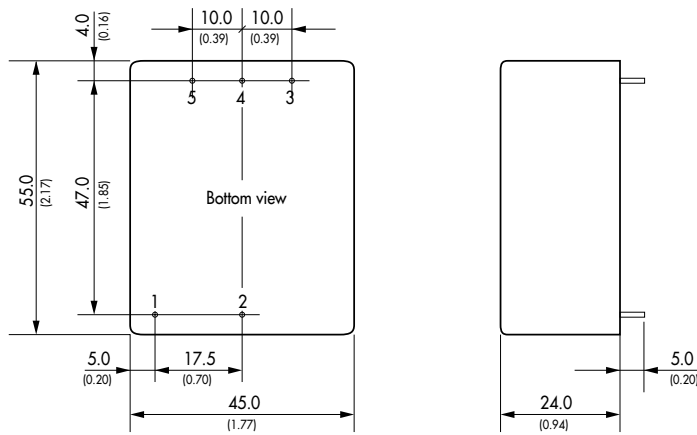
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

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: www.tracopower.com/products/tmf15_CB60950.pdf TMT 30 models: www.tracopower.com/products/tmf30_CB60950.pdf TMT 15 models: www.tracopower.com/products/tmf15_CB60601.pdf TMT 30 models: www.tracopower.com/products/tmf30_CB60601.pdf UL/cUL 60950-1 and UL/cUL 60601 www.ul.com -> 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

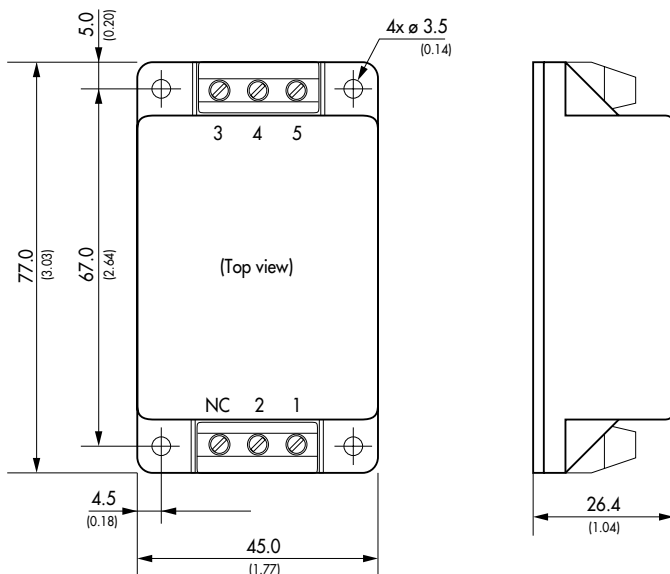
TMT 15 models with solder pins



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 pinn | Common |
| 5 | +V out | +V out |

TMT 15C models with screw terminal block

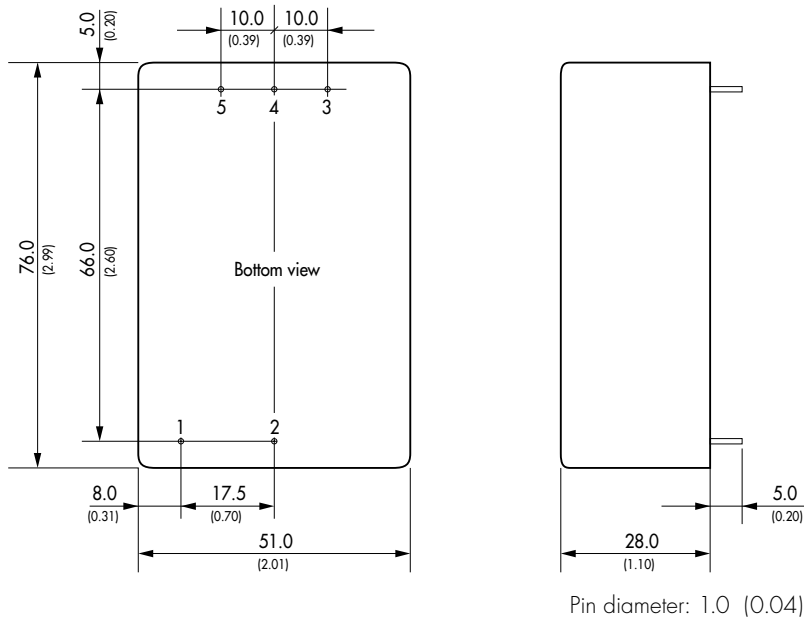


Weight: 90 g (3.2oz)

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

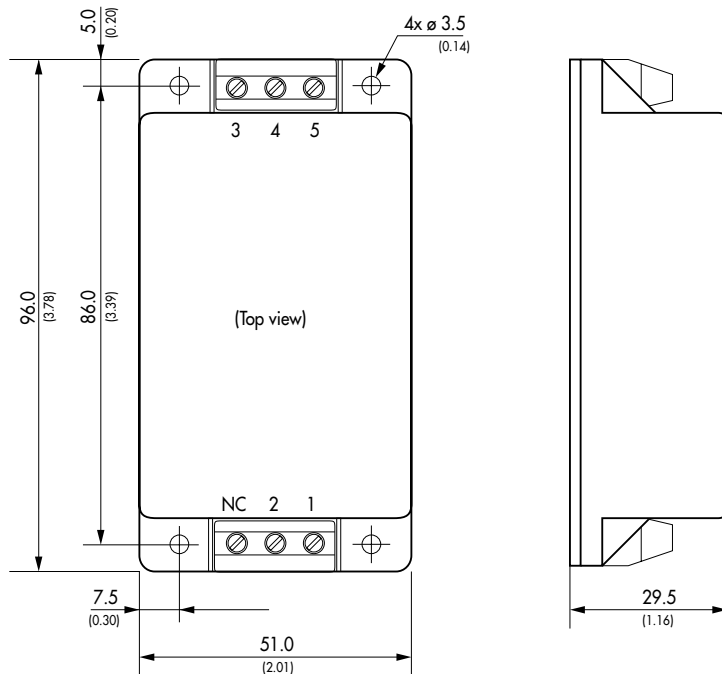
Outline Dimensions

TMT 30 models with solder pins



Weight: 165 g (5.8 oz)

TMT 30C models with screw terminal block



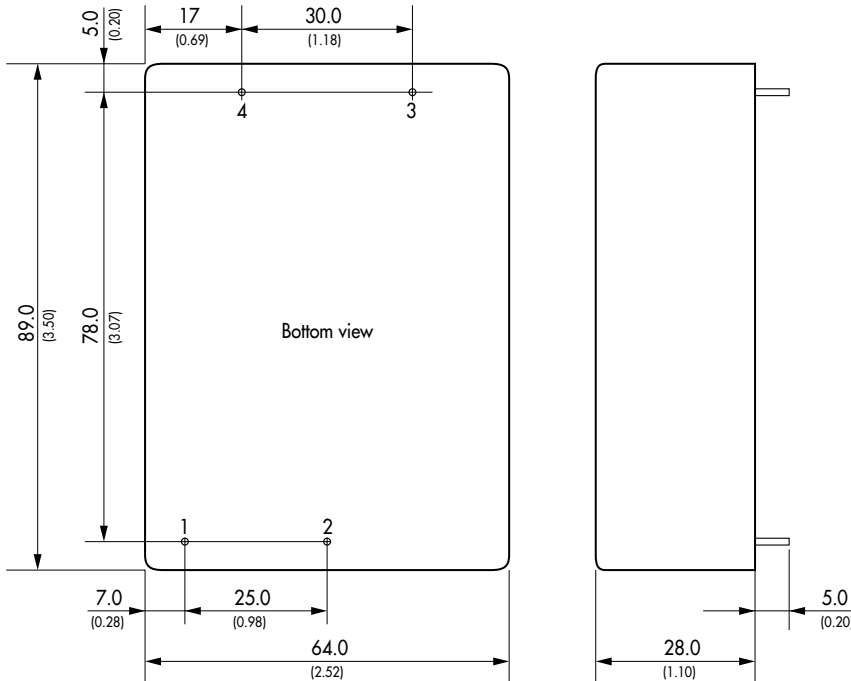
| Connection | | |
|------------|--------|--------|
| Pin | Single | Dual |
| 1 | AC in | AC in |
| 2 | AC in | AC in |
| 3 | -V out | -V out |
| 4 | No pin | Common |
| 5 | +V out | +V out |

Weight: 180 g (6.3 oz)

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

Outline Dimensions

TMT 50 models with solder pins



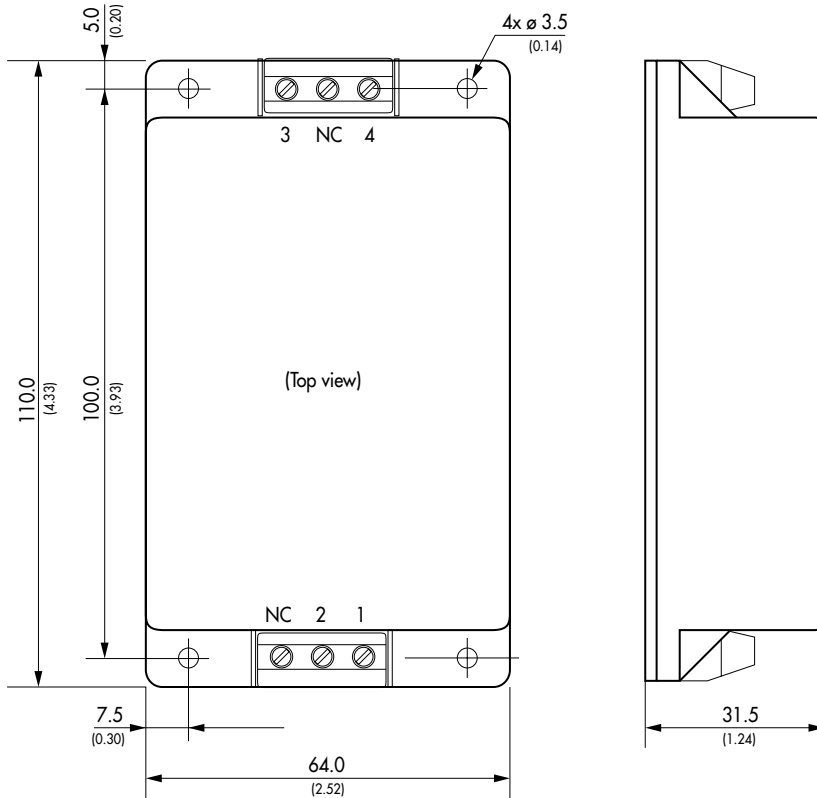
Weight: 245 g (8.6 oz)

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

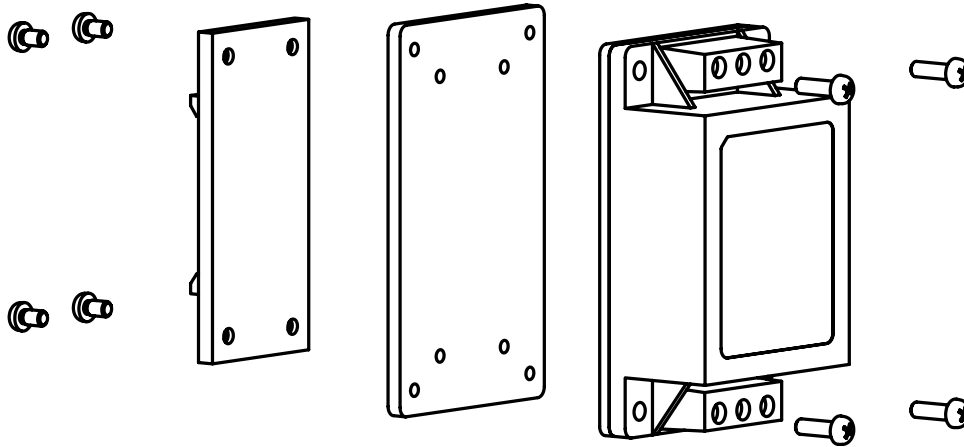
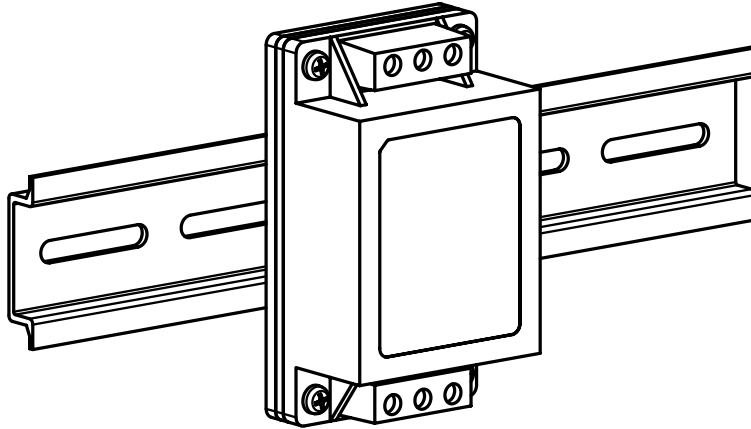


Weight: 295 g (10.4 oz)

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.