Features

◆ Ultra compact, low profile plastic casing
◆ Fully encapsulated (pollution/dust)
◆ Single-, dual- and triple output models
◆ 2 standard package versions:
  - Screw terminal block for chassis mount
  - Solder pins for direct PCB mount
  - Optional pin-connector on request
◆ DIN-rail mount adaptor (optional)
◆ Universal input 85-264 VAC, 47-440 Hz
◆ Protection class II
◆ IEC/EN/UL 60950-1 approval, CB-report
◆ Over-temperature protection
◆ Protection against short circuit and overload
◆ 3-year product warranty

The TMP & TMPM series AC/DC Power Modules is a new range of fully encapsulated power supplies in an ultra-compact casing. They feature easy chassis mounting with screw terminal block connection or direct PCB mounting with solder pins. Full compliance with international safety standards for industrial control equipment qualifies the products for worldwide markets. These power supplies offer a cost-effective solution for many space-critical applications in commercial and industrial electronic equipment and for polluted and dusty environments.

### Single Output Models 4 to 10 Watt

<table>
<thead>
<tr>
<th>Order code</th>
<th>Output power max.</th>
<th>Output</th>
<th>Efficiency typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMPM 04103</td>
<td>4 W</td>
<td>3.3 VDC / 1200 mA</td>
<td>70 %</td>
</tr>
<tr>
<td>TMPM 04105</td>
<td></td>
<td>5.0 VDC / 800 mA</td>
<td>72 %</td>
</tr>
<tr>
<td>TMPM 04109</td>
<td></td>
<td>9.0 VDC / 444 mA</td>
<td>75 %</td>
</tr>
<tr>
<td>TMPM 04112</td>
<td></td>
<td>12 VDC / 333 mA</td>
<td>76 %</td>
</tr>
<tr>
<td>TMPM 04115</td>
<td></td>
<td>15 VDC / 267 mA</td>
<td>76 %</td>
</tr>
<tr>
<td>TMPM 04124</td>
<td></td>
<td>24 VDC / 167 mA</td>
<td>77 %</td>
</tr>
<tr>
<td>TMP 07103</td>
<td>4.6 W</td>
<td>3.3 VDC / 1400 mA</td>
<td>70 %</td>
</tr>
<tr>
<td>TMP 07105</td>
<td></td>
<td>5.0 VDC / 1400 mA</td>
<td>73 %</td>
</tr>
<tr>
<td>TMP 07112</td>
<td>7 W</td>
<td>12 VDC / 583 mA</td>
<td>78 %</td>
</tr>
<tr>
<td>TMP 07115</td>
<td></td>
<td>15 VDC / 466 mA</td>
<td>78 %</td>
</tr>
<tr>
<td>TMP 07124</td>
<td></td>
<td>24 VDC / 291 mA</td>
<td>78 %</td>
</tr>
<tr>
<td>TMPM 10103</td>
<td>8.3 W</td>
<td>3.3 VDC / 2500 mA</td>
<td></td>
</tr>
<tr>
<td>TMPM 10105</td>
<td></td>
<td>5.0 VDC / 2000 mA</td>
<td>72 %</td>
</tr>
<tr>
<td>TMPM 10112</td>
<td>10 W</td>
<td>12 VDC / 833 mA</td>
<td>76 %</td>
</tr>
<tr>
<td>TMPM 10115</td>
<td></td>
<td>15 VDC / 667 mA</td>
<td>75 %</td>
</tr>
<tr>
<td>TMPM 10124</td>
<td></td>
<td>24 VDC / 417 mA</td>
<td>72 %</td>
</tr>
<tr>
<td>TMP 10103</td>
<td>6.6 W</td>
<td>3.3 VDC / 2000 mA</td>
<td>70 %</td>
</tr>
<tr>
<td>TMP 10105</td>
<td></td>
<td>5.0 VDC / 2000 mA</td>
<td>73 %</td>
</tr>
<tr>
<td>TMP 10112</td>
<td></td>
<td>12 VDC / 833 mA</td>
<td>76 %</td>
</tr>
<tr>
<td>TMP 10115</td>
<td></td>
<td>15 VDC / 666 mA</td>
<td>76 %</td>
</tr>
<tr>
<td>TMP 10124</td>
<td></td>
<td>24 VDC / 416 mA</td>
<td>76 %</td>
</tr>
</tbody>
</table>
## Single Output Models 15 to 60 Watt

<table>
<thead>
<tr>
<th>Order code</th>
<th>PCB-mount with solder pins</th>
<th>Chassis mount, screw terminal</th>
<th>Output power max.</th>
<th>Output</th>
<th>Efficiency typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMP 15105</td>
<td>TMP 15105C</td>
<td></td>
<td>5 VDC / 3000 mA</td>
<td>5 VDC</td>
<td>75 %</td>
</tr>
<tr>
<td>TMP 15112</td>
<td>TMP 15112C</td>
<td></td>
<td>12 VDC / 1250 mA</td>
<td>12 VDC</td>
<td>79 %</td>
</tr>
<tr>
<td>TMP 15115</td>
<td>TMP 15115C</td>
<td></td>
<td>15 VDC / 1000 mA</td>
<td>15 VDC</td>
<td>79 %</td>
</tr>
<tr>
<td>TMP 15124</td>
<td>TMP 15124C</td>
<td></td>
<td>24 VDC / 625 mA</td>
<td>24 VDC</td>
<td>79 %</td>
</tr>
<tr>
<td>TMP 15148</td>
<td>TMP 15148C</td>
<td></td>
<td>48 VDC / 310 mA</td>
<td>48 VDC</td>
<td>79 %</td>
</tr>
<tr>
<td>TMP 30105</td>
<td>TMP 30105C</td>
<td></td>
<td>5 VDC / 6000 mA</td>
<td>5 VDC</td>
<td>78 %</td>
</tr>
<tr>
<td>TMP 30112</td>
<td>TMP 30112C</td>
<td></td>
<td>12 VDC / 2500 mA</td>
<td>12 VDC</td>
<td>80 %</td>
</tr>
<tr>
<td>TMP 30115</td>
<td>TMP 30115C</td>
<td></td>
<td>15 VDC / 2000 mA</td>
<td>15 VDC</td>
<td>80 %</td>
</tr>
<tr>
<td>TMP 30124</td>
<td>TMP 30124C</td>
<td></td>
<td>24 VDC / 1250 mA</td>
<td>24 VDC</td>
<td>80 %</td>
</tr>
<tr>
<td>TMP 30148</td>
<td>TMP 30148C</td>
<td></td>
<td>48 VDC / 625 mA</td>
<td>48 VDC</td>
<td>80 %</td>
</tr>
<tr>
<td>TMP 60105</td>
<td>TMP 60105C</td>
<td></td>
<td>5.1 VDC / 10’000 mA</td>
<td>5.1 VDC</td>
<td>79 %</td>
</tr>
<tr>
<td>TMP 60112</td>
<td>TMP 60112C</td>
<td></td>
<td>12 VDC / 5000 mA</td>
<td>12 VDC</td>
<td>82 %</td>
</tr>
<tr>
<td>TMP 60115</td>
<td>TMP 60115C</td>
<td></td>
<td>15 VDC / 4000 mA</td>
<td>15 VDC</td>
<td>83 %</td>
</tr>
<tr>
<td>TMP 60124</td>
<td>TMP 60124C</td>
<td></td>
<td>24 VDC / 2500 mA</td>
<td>24 VDC</td>
<td>84 %</td>
</tr>
<tr>
<td>TMP 60136</td>
<td>TMP 60136C</td>
<td></td>
<td>36 VDC / 1665 mA</td>
<td>36 VDC</td>
<td>84 %</td>
</tr>
<tr>
<td>TMP 60148</td>
<td>TMP 60148C</td>
<td></td>
<td>48 VDC / 1250 mA</td>
<td>48 VDC</td>
<td>84 %</td>
</tr>
</tbody>
</table>

## Multi Output Models 4 to 30 Watt

<table>
<thead>
<tr>
<th>Order code</th>
<th>PCB-mount</th>
<th>Chassis mount</th>
<th>Output 1</th>
<th>Output 2</th>
<th>Output 3</th>
<th>Efficiency typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Models with common ground

<table>
<thead>
<tr>
<th>Order code</th>
<th>Output power</th>
<th>Output 1</th>
<th>Output 2</th>
<th>Output 3</th>
<th>Efficiency typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMPM 04212</td>
<td>+12 VDC / 166 mA</td>
<td>-12 VDC / 166 mA</td>
<td>77 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMPM 04215</td>
<td>+15 VDC / 133 mA</td>
<td>-15 VDC / 133 mA</td>
<td>77 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMPM 04253</td>
<td>+5.0 VDC / 600 mA</td>
<td>+3.3 VDC / 150 mA</td>
<td>72 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMPM 04225</td>
<td>+12 VDC / 250 mA</td>
<td>+5.0 VDC / 120 mA</td>
<td>75 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 10212</td>
<td>+12 VDC / 380 mA</td>
<td>-12 VDC / 380 mA</td>
<td>77 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 10215</td>
<td>+15 VDC / 300 mA</td>
<td>-15 VDC / 300 mA</td>
<td>77 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 15212</td>
<td>+12 VDC / 650 mA</td>
<td>-12 VDC / 650 mA</td>
<td>79 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 15215</td>
<td>+15 VDC / 500 mA</td>
<td>-15 VDC / 500 mA</td>
<td>79 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 15212</td>
<td>+12 VDC / 1300 mA</td>
<td>-12 VDC / 1300 mA</td>
<td>80 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 15215</td>
<td>+15 VDC / 1000 mA</td>
<td>-15 VDC / 1000 mA</td>
<td>80 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 15252</td>
<td>5.0 VDC / 1500 mA</td>
<td>12 VDC / 625 mA</td>
<td>72 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 15512</td>
<td>5.0 VDC / 2000 mA</td>
<td>+12 VDC / 200 mA</td>
<td>74 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP 15515</td>
<td>5.0 VDC / 2000 mA</td>
<td>+15 VDC / 150 mA</td>
<td>74 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.0 VDC / 2000 mA</td>
<td>-15 VDC / 150 mA</td>
<td>74 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Models with output 1 isolated from output 2/3 (floating)

<table>
<thead>
<tr>
<th>Order code</th>
<th>Output power</th>
<th>Output 1</th>
<th>Output 2</th>
<th>Output 3</th>
<th>Efficiency typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.0 VDC / 3000 mA</td>
<td>12 VDC / 1250 mA</td>
<td>76 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.0 VDC / 3000 mA</td>
<td>+12 VDC / 600 mA</td>
<td>76 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.0 VDC / 3000 mA</td>
<td>+15 VDC / 500 mA</td>
<td>76 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.0 VDC / 3000 mA</td>
<td>+12 VDC / 1000 mA</td>
<td>76 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.3 VDC / 4000 mA</td>
<td>+5.0 VDC / 1500 mA</td>
<td>71 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.0 VDC / 4500 mA</td>
<td>+3.3 VDC / 1000 mA</td>
<td>71 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Peak current can exceed specified value by

- 133 %
- 150 %
- 200 % but total output power must not exceed 30 W.
# AC/DC Power Modules

## TMP & TMPM Series 4 to 60 Watt

### Input Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>100 – 240 VAC</td>
</tr>
<tr>
<td>AC range (universal input)</td>
<td>85 – 264 VAC</td>
</tr>
<tr>
<td>DC range</td>
<td>120 – 370 VDC</td>
</tr>
<tr>
<td>Input frequency</td>
<td>50 / 60 Hz</td>
</tr>
<tr>
<td>4 – 30 W models:</td>
<td>47 – 440 Hz</td>
</tr>
<tr>
<td>60 W models:</td>
<td>47 – 63 Hz</td>
</tr>
<tr>
<td>Input current at full load</td>
<td>4 W models: 80 mA / 55 mA typ.</td>
</tr>
<tr>
<td>7 W models: 150 mA / 100 mA typ.</td>
<td></td>
</tr>
<tr>
<td>10 W models: 200 mA / 130 mA typ.</td>
<td></td>
</tr>
<tr>
<td>15 W models: 300 mA / 190 mA typ.</td>
<td></td>
</tr>
<tr>
<td>30 W models: 550 mA / 330 mA typ.</td>
<td></td>
</tr>
<tr>
<td>60 W models: 1050 mA / 670 mA typ.</td>
<td></td>
</tr>
<tr>
<td>Recommended external input fuse</td>
<td>4 W models: 1.0 A slow blow</td>
</tr>
<tr>
<td>7 – 15 W models: 2.0 A slow blow</td>
<td></td>
</tr>
<tr>
<td>30 W models: 3.5 A slow blow</td>
<td></td>
</tr>
<tr>
<td>60 W models: 6.3 A slow blow</td>
<td></td>
</tr>
</tbody>
</table>

### Output Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage set accuracy</td>
<td>±2 % max.</td>
</tr>
<tr>
<td>Regulation</td>
<td>1 % max.</td>
</tr>
<tr>
<td>Input variation Output 1</td>
<td>3 % max.</td>
</tr>
<tr>
<td>Input variation Output 2/3</td>
<td>1.5 % max.</td>
</tr>
<tr>
<td>Load variation</td>
<td>1 % max. ([0–100% for TMPM 04 models])</td>
</tr>
<tr>
<td>Voltage set accuracy</td>
<td>±2 % max.</td>
</tr>
<tr>
<td>Regulation</td>
<td>1 % max.</td>
</tr>
<tr>
<td>Input variation Output 1</td>
<td>3 % max.</td>
</tr>
<tr>
<td>Input variation Output 2/3</td>
<td>1.5 % max.</td>
</tr>
<tr>
<td>Load variation</td>
<td>1 % max. ([0–100% for TMPM 04 models])</td>
</tr>
<tr>
<td>Minimum load</td>
<td>TMPM 04 single and sym. dual models: not required</td>
</tr>
<tr>
<td></td>
<td>TMPM 04 asym. dual models:</td>
</tr>
<tr>
<td></td>
<td>single and dual output models:</td>
</tr>
<tr>
<td></td>
<td>triple output models main output:</td>
</tr>
<tr>
<td></td>
<td>triple output models auxiliary outputs:</td>
</tr>
<tr>
<td>Ripple and noise (20MHz bandwidth)</td>
<td>3.3 VDC &amp; 5.0 VDC outputs: 1.8 % of Vout [mVp-p]</td>
</tr>
<tr>
<td></td>
<td>other outputs: 1.0 % of Vout [mVp-p]</td>
</tr>
<tr>
<td>Overload protection by current limit</td>
<td>105% min. of Inom, fold back, automatic recovery (long term overload condition may cause damage to the power supply)</td>
</tr>
<tr>
<td>Overvoltage protection by Zener diode (main output only)</td>
<td>120% of Vout typ.</td>
</tr>
<tr>
<td>Start-up time</td>
<td>400 ms typ.</td>
</tr>
<tr>
<td>Hold-up time</td>
<td>20 ms typ.</td>
</tr>
</tbody>
</table>

### Max. capacitive load [µF]

<table>
<thead>
<tr>
<th>Single output models:</th>
<th>Model series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output:</td>
<td>TMP 04</td>
</tr>
<tr>
<td>3.3 VDC</td>
<td>1200</td>
</tr>
<tr>
<td>5.0 / 5.1 VDC</td>
<td>800</td>
</tr>
<tr>
<td>9.0 VDC</td>
<td>440</td>
</tr>
<tr>
<td>12 / 15 VDC</td>
<td>260</td>
</tr>
<tr>
<td>24 VDC</td>
<td>160</td>
</tr>
<tr>
<td>36 VDC</td>
<td>-</td>
</tr>
<tr>
<td>48 VDC</td>
<td>-</td>
</tr>
<tr>
<td>Dual output models:</td>
<td></td>
</tr>
<tr>
<td>3.3 / 5.0 VDC</td>
<td>4700</td>
</tr>
<tr>
<td>+12 / –12 / +15 / –15 VDC</td>
<td>260</td>
</tr>
<tr>
<td>Triple output models:</td>
<td></td>
</tr>
<tr>
<td>3.3 / 5.0 VDC</td>
<td>-</td>
</tr>
<tr>
<td>+12 / –12 / +15 / –15 VDC</td>
<td>-</td>
</tr>
</tbody>
</table>

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

## Temperature ranges
- **Operating**
  - TMPM 04 models: -25°C to +60°C (no derating)
  - TMP 10 models: -25°C to +50°C (no derating)
  - other models: -25°C to +70°C (with derating)
  - -40°C to +85°C (with derating approved for TMPM04 and TMP10 models)
- **Storage (non-operating)**
  - TMPM 04 models: -25°C to +60°C (no derating)
  - TMP 10 models: -25°C to +50°C (no derating)
  - other models: -25°C to +70°C (with derating)

## Power derating
- 3.3 %/K above +50°C to +65°C
- 5.0 %/K above +65°C to +70°C
  (no derating approved for TMPM04 and TMP10 models)

## Over temperature protection
- at 90°C (automatic recovery at 67°C)

## Temperature coefficient
- 0.02 %/K

## Humidity (non-condensing)
- 95 % rel. H max.

## Switching frequency
- 100 kHz typ. fixed

## Isolation voltage (60 sec.)
- Input/Output: 3'000 VAC

## Isolation resistance
- Input/Output: 100 MOhm (at 500 VDC)

## Altitude during operation
- TMP 10, TMPM 04 & 10: 2'000 m max. (6'560 ft) approved
- other models: 3'000 m max. (9'840 ft) approved

## Electromagnetic compatibility (EMC), Emissions
- EN 61000-6-3: 2007
- EN 61000-6-3: 2000, class A
- EN 61000-6-2: 2005
- EN 61000-6-2: 2000, class A

## Electromagnetic compatibility (EMC), Immunity
- Electrostatic discharge ESD
  - EN 61000-4-2: 8 kV / 4 kV, criteria B
- RF field susceptibility
  - EN 61000-4-3: 10 V/m, criteria A
- Electrical fast transient / burst immunity input
  - EN 61000-4-4: ±2 kV, criteria B
- Electrical fast transient / burst immunity output
  - EN 61000-4-4: ±2 kV, criteria B
- Surge immunity line – neutral
  - EN 61000-4-5: ±1 kV, criteria B
- Surge immunity output
  - EN 61000-4-5: ±0.5 kV, criteria B
- Immunity to conducted RF disturbances
  - EN 61000-4-6: 10 V, criteria B
- Mains voltage dips and interruptions
  - EN 61000-4-1: 30 % 10 ms, criteria B
  - 60 % 100 ms, criteria C
  - 95 % 5000 ms, criteria C

## EMC test certificates
- www.tracopower.com/overview/tmp

## Safety standards
- Information technology equipment
  - IEC/EN 60950-1, UL 60950-1
- Industrial control equipment
  - UL/cUL 508 (chassis mount single and symmetric dual output models only)

## Safety approvals
- CB certificate for IEC 60950-1
- UL approvals for UL 60950-1
- UL approval for UL 508 (chassis mount models only)
  - www.tracopower.com/overview/tmp
  - www.ul.com -> certifications -> File: e188913
  - www.ul.com -> certifications -> File: e322109

## Reliability / calculated MTBF
- TMP 07, TMPM 04 & 10 models: >330'000 h
- TMP 10 models: >300'000 h
- TMP 15 models: >280'000 h
- TMP 30 models: >250'000 h
- TMP 60 models: >125'000 h

## Casing material
- Plastic resin + fiberglass (UL 94V-0 rated)

## Environmental compliance
- Reach
- RoHS
  - RoHS directive 2011/65/EU

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

www.tracopower.com
### AC/DC Power Modules
TMP & TMPM Series 4 to 60 Watt

#### Outline Dimensions

**TMPM 04 models:**

- Pin diameter: 0.5 (0.02)
- Weight: 26 g (0.92 oz)

**TMP 07 models:**

- Pin diameter: 1.0 (0.04)
- Weight: 44 g (1.55 oz)

**TMPM 10 models:**

- Pin diameter: 1.0 (0.04)
- Weight: 54 g (1.90 oz)

**TMP 10 models:**

- Pin diameter: 1.0 (0.04)
- Weight: 92 g (3.25 oz)

---

#### Pinout

**TMPM 04 models:**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
<th>Dual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>NC</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>+Vout</td>
<td>Vout 1</td>
</tr>
<tr>
<td>4</td>
<td>-Vout</td>
<td>com.1/2</td>
</tr>
<tr>
<td>5</td>
<td>No Pin</td>
<td>Vout 2</td>
</tr>
<tr>
<td>6</td>
<td>AC (N)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>AC (L)</td>
<td></td>
</tr>
</tbody>
</table>

(NC = not connected)

**TMP 07 models:**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
</tr>
<tr>
<td>3</td>
<td>+Vout</td>
</tr>
<tr>
<td>4</td>
<td>-Vout</td>
</tr>
</tbody>
</table>

Pin diameter: 1.0 (0.04)
Weight: 44 g (1.55 oz)

**TMPM 10 models:**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
</tr>
<tr>
<td>3</td>
<td>+Vout</td>
</tr>
<tr>
<td>4</td>
<td>-Vout</td>
</tr>
</tbody>
</table>

Pin diameter: 1.0 (0.04)
Weight: 54 g (1.90 oz)

**TMP 10 models:**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
<th>Dual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
<td>AC (N)</td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
<td>AC (L)</td>
</tr>
<tr>
<td>3</td>
<td>-Vout</td>
<td>Vout 2</td>
</tr>
<tr>
<td>4</td>
<td>NC</td>
<td>com.1/2</td>
</tr>
<tr>
<td>5</td>
<td>+Vout</td>
<td>Vout 1</td>
</tr>
</tbody>
</table>

(NC = not connected)

Pin diameter: 1.0 (0.04)
Weight: 92 g (3.25 oz)

Dimensions in [mm], | | = Inches
Case tolerances: ±0.5 (±0.02)
Pin pitch tolerance: ±0.25 (±0.01)
AC/DC Power Modules
TMP & TMPM Series  4 to 60 Watt

Outline Dimensions

TMP 15 models for PCB mount:

Pinout

<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
<th>Dual sym.</th>
<th>Dual asym.</th>
<th>Triple</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>No Pin</td>
<td>–Vout</td>
<td>–Vout 2</td>
<td>Vout 3</td>
</tr>
<tr>
<td>4</td>
<td>no pin</td>
<td>com.1/2</td>
<td>+Vout 2</td>
<td>Vout 2</td>
</tr>
<tr>
<td>5</td>
<td>+Vout</td>
<td>Vout 1</td>
<td>–Vout 1</td>
<td>–Vout 1</td>
</tr>
<tr>
<td>7</td>
<td>No Pin</td>
<td>+Vout 1</td>
<td>+Vout 1</td>
<td></td>
</tr>
</tbody>
</table>

Max Screw penetration: 5.5 (0.21)
Pin diameter: 1.0 (0.04)
Weight: 135 g (4.76 oz)

TMP 15 models for chassis mount:

Connection

<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
<th>Dual sym.</th>
<th>Dual asym.</th>
<th>Triple</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>NC</td>
<td>–Vout</td>
<td>–Vout 2</td>
<td>Vout 3</td>
</tr>
<tr>
<td>4</td>
<td>ntc</td>
<td>com.1/2</td>
<td>+Vout 2</td>
<td>Vout 2</td>
</tr>
<tr>
<td>6</td>
<td>+Vout</td>
<td>Vout 1</td>
<td>–Vout 1</td>
<td>–Vout 1</td>
</tr>
<tr>
<td>7</td>
<td>NC</td>
<td>+Vout 1</td>
<td>+Vout 1</td>
<td></td>
</tr>
</tbody>
</table>

(NC = not connected)

Weight: 132 g (4.66 oz)

Dimensions in [mm], ( ) = Inches
Case tolerances: ±0.5 (±0.02)
Pin pitch tolerance: ±0.25 (±0.01)
Mounting hole tolerance: ±0.5 (±0.02)
AC/DC Power Modules
TMP & TMPM Series  4 to 60 Watt

Outline Dimensions

TMP 30 models for PCB mount:

![Image of TMP 30 models for PCB mount]

<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
<th>Dual sym.</th>
<th>Dual asym.</th>
<th>Triple</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>+Vout</td>
<td>Vout 1</td>
<td>+Vout 2</td>
<td>Vout 2</td>
</tr>
<tr>
<td>4</td>
<td>No Pin</td>
<td>+Vout 1</td>
<td>+Vout 1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>-Vout</td>
<td>Vout 2</td>
<td>com 2/3</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>No Pin</td>
<td>-Vout 1</td>
<td>-Vout 1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>NC</td>
<td>Vout 2</td>
<td>NC</td>
<td>Vout 3</td>
</tr>
</tbody>
</table>

(NC = not connected)

Max Screw penetration: 5.5 (0.21)
Pin diameter: 1.0 (0.04)
Weight: 211 g (7.44 oz)

TMP 30 models for chassis mount:

![Image of TMP 30 models for chassis mount]

Connection

<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
<th>Dual sym.</th>
<th>Dual asym.</th>
<th>Triple</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>+Vout</td>
<td>Vout 1</td>
<td>+Vout 2</td>
<td>Vout 2</td>
</tr>
<tr>
<td>4</td>
<td>No Pin</td>
<td>+Vout 1</td>
<td>+Vout 1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>-Vout</td>
<td>Vout 2</td>
<td>com 2/3</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>No Pin</td>
<td>-Vout 1</td>
<td>-Vout 1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>NC</td>
<td>Vout 2</td>
<td>NC</td>
<td>Vout 3</td>
</tr>
</tbody>
</table>

(NC = not connected)

Weight: 208 g (7.34 oz)

Dimensions in [mm], ( ) = Inches
Case tolerances: ±0.5 (±0.02)
Pin pitch tolerance: ±0.25 (±0.01)
Mounting hole tolerance: ±0.5 (±0.02)
Outline Dimensions

TMP 60 models for PCB mount:

```
<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
</tr>
<tr>
<td>3</td>
<td>No Pin</td>
</tr>
<tr>
<td>4</td>
<td>+Vout</td>
</tr>
<tr>
<td>6</td>
<td>–Vout</td>
</tr>
<tr>
<td>7</td>
<td>No Pin</td>
</tr>
</tbody>
</table>
```

Pin diameter: 1.0 (0.04)
Max Screw penetration: 5.5 (0.21)
Weight: 345 g (12.17 oz)

Connection

```
<table>
<thead>
<tr>
<th>Pin</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AC (N)</td>
</tr>
<tr>
<td>2</td>
<td>AC (L)</td>
</tr>
<tr>
<td>3</td>
<td>NC</td>
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<tr>
<td>4</td>
<td>+Vout</td>
</tr>
<tr>
<td>5</td>
<td>NC</td>
</tr>
<tr>
<td>6</td>
<td>–Vout</td>
</tr>
<tr>
<td>7</td>
<td>NC</td>
</tr>
</tbody>
</table>
```

(nc = not connected)

Weight: 332 g (11.71 oz)

Dimensions in [mm], | = Inches
Case tolerances: ±0.5 (±0.02)
Mounting hole tolerance: ±0.5 (±0.02)
DIN-Rail Mounting Kit

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

<table>
<thead>
<tr>
<th>Order code</th>
<th>For model</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMP-MK1</td>
<td>TMP 15xxxC</td>
<td>186 g (6.56 oz)</td>
</tr>
<tr>
<td></td>
<td>TMP 30xxxC</td>
<td>262 g (9.24 oz)</td>
</tr>
<tr>
<td></td>
<td>TMP 60xxxC</td>
<td>386 g (13.62 oz)</td>
</tr>
<tr>
<td>TMP-MK2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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