



### Features

- ◆ Fully encapsulated low profile plastic casing in PCB- or chassis mount version
- ◆ 2 x MOPP Medical safety according to AAMI/ANSI ES 60601-1:2005(R) and IEC/EN 60601-1 3rd edition
- ◆ IT and industrial safety according to IEC/UL 60950-1 and UL 508
- ◆ Ready to meet ErP directive <0.5 W no load power consumption
- ◆ -40°C start-up temperature
- ◆ Safety class II prepared
- ◆ Protection against over-temperature overload and short circuit
- ◆ 3-year product warranty



Also see:

**TMM 24 Series, 24 Watt**

[www.tracopower.com/products/tmm24.pdf](http://www.tracopower.com/products/tmm24.pdf)

**TMM 40 Series, 40 Watt**

[www.tracopower.com/products/tmm40.pdf](http://www.tracopower.com/products/tmm40.pdf)

The TMM 60 Series of fully encapsulated 60 Watt AC/DC power supply modules feature a reinforced/double I/O isolation system according to latest medical safety standards 60601-3 3rd edition for 2 x MOPP (Means Of Patient Protection). The high efficiency and the use of highest grade components make the units suitable for an operating temperature range of -40°C to +60°C while it goes up to 75°C with 50% load derating. EMI/EMC characteristics and the safety approval package qualify these modules not only for medical devices but also for demanding applications in transportation systems and for equipment in industrial an commercial environment.

Order code		Output power max.	Output	Efficiency
PCB mount	Chassis mount			
TMM 60105	TMM 60105C	60 W	5.1 VDC / 10000 mA	84 %
TMM 60112	TMM 60112C		12 VDC / 5000 mA	87 %
TMM 60115	TMM 60115C		15 VDC / 4000 mA	87 %
TMM 60124	TMM 60124C		24 VDC / 2500 mA	87 %
TMM 60148	TMM 60148C		48 VDC / 1250 mA	88 %

### Input Specifications

Input voltage ranges	– nominal – AC input – DC Input	100 – 240 VAC 85 – 264 VAC 120 – 370 VDC
Input frequency		47 – 440 Hz
Input current at full load (115 VAC / 230 VAC nominal input)	5.1 VDC model: 48 VDC model: other models:	880 mA / 528 mA typ. 988 mA / 593 mA typ. 1000 mA / 600 mA typ
Leakage current		80 µA typ.
No-Load power consumption		<0.5 W
External input fuse required (recommended value)		3 A slow blow type or characteristic C

### Output Specifications

Voltage set accuracy		±1% typ. / 2.0 % max.
Minimum load		no minimum load required
Regulation	– Input variation – Load variation (0-100%)	0.2% typ. / 1.0 % max. : 0.5% typ. / 1.0 % max.
Temperature coefficient		0.02 %/K
Ripple and noise (20 MHz bandwidth) (measured with capacitor 0.1µF/50V MLCC and 1µ/50V e-cap)	5.1 VDC model: other models:	3% of Vout [Vp-p] max. 1.5% of Vout [Vp-p] max.
Current limitation		above 105 % of rated output current. hiccup, auto recovery
Overvoltage protection by Zener diode (main output only)		120 % of Vout typ.
Short circuit protection		continuous, automatic recovery
Max. capacitive load	5.1 VDC model: 12 VDC model: 15 VDC model: 24 VDC model: 48 VDC model:	8000 µF 3900 µF 3300 µF 1500 µF 680 µF

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