

INSTALLATION INSTRUCTIONS

TMM 24 Series AC/DC Switching Power Supply

Order Code *	Input Voltage Range	Rated Output Power	Output1	Output2	Recommended circuit Breaker / Fuse
TMM 24105 (C)	Nominal: 100 – 240Vac 47 – 440Hz Operational: 85-264Vac 47 – 440Hz	15W	5Vdc / 3000mA	-	?
TMM 24109 (C)		24W	9Vdc / 2666mA	-	
TMM 24112 (C)			12Vdc / 2000mA	-	
TMM 24115 (C)			15Vdc / 1600mA	-	
TMM 24124 (C)			24Vdc / 1000mA	-	
TMM 24212 (C)			+12Vdc / +1000mA	-12Vdc / -1000mA	
TMM 24215 (C)			+15Vdc / +800mA	-15Vdc / -800mA	

* Option C indicates the unit with chassis mount

Input Current:	@ $V_{in} = 115Vac$	@ $V_{in} = 230Vac$
TMM 24105 (C)	285mA	170mA
TMM 24xxx (C)	425mA	255mA

Operating temperature range: Natural Air Convection Cooling (20LFM)		-40°C – +80°C	
Over temperature protection:		Shutdown: at 90°C Automatic recovery: at 67°C approx	
Output power derating in respect to ambient temperature:	Model Type	Start of derating	Power derating
	TMM 24105 (C)	+60°C	2.5%/K
	TMM 24xxx (C)	+60°C	3.75%/K
Storage temperature range / Humidity:		-40°C – +95°C / 95% rH max.	
Over voltage protection (main output only):		120% of V_{out} typ.	
Connections:	Input / Output terminal:	Screw type terminal: Wires 1.5mm ² max. Recommended tightening torque (Used Copper Conductors only, 60/75°C): 0.5 to 0.6Nm (4.4 to 5.3lb.in.)	
	Pin (TMM 24xxxC):	PCB mounting with solder pins	
Internal Fuse:		T2A 250VAC Min.	
Case Material:		Plastic Resin + Fiberglass UL 94V-0 flammability rating	
Installation:		1. The following end product enclosures are required; Mechanical, Fire & Electrical in accordance to applicable safety standards.	

Safety Instructions:

- Before installation read these instructions carefully and completely. This installation instruction cannot account for every possible condition of installation, operation or maintenance. Further information can be obtained from your local distributor's office or from the product datasheet, which can be downloaded from our website: <http://www.tracopower.com>.
- The power supplies are constructed in accordance with the safety requirements of IEC/EN60950-1 and UL60950-1, UL 508 and CSA C22.2 No 107.1-01. They fulfil the requirements of the Low Voltage Directive (LVD) and carries the CE-mark. They are UL and cUL approved in accordance to ANSI/AAMI ES60601-1, UL60950-1, UL 508 and CSA C22.2 No107 1-01 (recognised). The equipment has not been evaluated according to IEC60601-1-2. The EMC assessment shall be conducted for the end system configuration.
- Before any installation, maintenance or modification work ensure that the main switch is switched off and prevented from being switched on again. Non-observance, touching of any live components or improper handling of this power supply can result in death, severe personal injury or substantial property damage. Proper and safe operation is dependent on proper storage, handling, installation and operation.
- While applying connections, no mechanical stress should be applied to the printed circuit board and its surface mounted components.
- Compliance with the relevant national regulations must be ensured. Before operation is started the following conditions must be ensured:
 - ❖ Connection to mains supply in compliance with national regulations.
 - ❖ Power supply and mains cables must be sufficiently fused.
 - ❖ All output wires must be rated for the power supply output current and must be connected with the correct polarity.
 - ❖ Do not disconnect while circuit is alive.
 - ❖ Sufficient cooling must be ensured
 - ❖ The equipment for installation in a Pollution Degree 2 environment.
 - ❖ The classification of the equipment is: (For ANSI/AAMI ES60601-1)
 - ◆ Class II
 - ◆ No applied parts
 - ◆ Not AP or APG type
 - ◆ Protection class IPX0
 - ◆ Not intended for use in the presence of flammability anaesthetic mixture with air or with oxygen or nitrous oxide
 - ◆ Intended for continuous operation
- **Never work on the power supply if power is supplied:** Risk of electric arcs and electrical shock, which can cause death, severe personal injury or substantial property damage.

- **Warning:** Hazardous voltages and components storing a very substantial amount of energy are present in this power supply during normal operating conditions. Improper handling may result in an electric shock or serious burns!
- **Do not open the power supply**
 - ❖ Do not introduce any objects into the power supply. An output voltage adjustment potentiometer (if existing) may only be actuated using an insulated screwdriver.
 - ❖ Keep away from fire, water and chemicals.
- The switching power supply is intended used for medical electrical equipment. There are not parts in this equipment, not suitable for direct patient contact! (ANSI/AAMI ES60601-1)
- Do not modify this equipment without authorization of the manufacturer. (ANSI/AAMI ES60601-1)
- Caution: Double Pole/Neutral Fusing
- Do not open the power supply until at least 5 minutes after it has been disconnected from the mains on all poles.

Installation Instructions

- This power supply is designed for professional indoor systems. In operation the power supply must not be accessible. It may be installed and put into service by qualified personnel only.
- All required connections have to be carried out as described in the table on the front side.
- By use of stranded wires, all strands must be fastened in the terminal blocks (potential danger of short circuits).
- Do not cover any ventilation holes. Optimal cooling performance must be ensured. Observe power derating (see datasheet).
- The internal fuse(s) may not be replaced by the user. If an internal fuse has blown, the power supply has most properly an internal defect and, for safety reasons, must be shipped to the local distributor.
- The correct mounting position for optimal cooling performance must be observed. Observe power derating. (see datasheet)
- **Recycling:** *The unit contains elements that are suitable for recycling, and components that need special disposal. You are therefore requested to make sure that the power supply will be recycled environment friendly at the end of its service life.*