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TRACO POWER

AC/DC Power Supply

TXM 200 Series, 200 Watt

- **Compact 200 Watt metal cased power supplies**
- **Fully convection cooled power supplies**
- **Cost efficient design**
- **High operating temperature up to 65°C**
- **Universal AC input 90 - 264 VAC**
- **Active power factor correction >0.95**
- **Withstand 300 VAC surge input for 5 s**
- **Adjustable output voltage**
- **Over current limitation and short circuit protection**
- **3-year product warranty**



UL 62368-1 IEC 62368-1

The TXM 200 series is a family of 200 Watt encased AC/DC power supplies designed for cost critical applications. It extends the existing TXM series which ranged from 15 to 150 Watt with an additional 200 Watt series. With a compact metal case and screw terminal block connections, they are easy to install in any equipment. There are three models of single output voltages from 12 VDC to 48 VDC. They also feature an universal input and comply with EN 55032 class B and the latest IEC/UL 60950-1 edition to cover a wide range of applications.

Models

Order Code	Output Power **max.**	Output Voltage **nom.** (adjustable)	Output Current **max.**	Efficiency **typ.**
TXM 200-112	200 W	12 VDC (10.0 - 15.5 VDC)	16'700 mA	87 %
TXM 200-124	202 W	24 VDC (20.0 - 27.2 VDC)	8'400 mA	88 %
TXM 200-148		48 VDC (42.0 - 53.0 VDC)	4'200 mA	89 %

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Input Specifications

Input Voltage	- AC Range	Operational Range:	90 - 264 VAC (Full Range)
		Rated Range:	100 - 240 VAC (Full Range)
	- DC Range	Operational Range:	120 - 375 VDC (Designed for, no certification)
		Polarity:	irrelevant
			(Surge voltage (5 s max.): 300 VAC max.)
Input Frequency		Operational Range:	47 - 63 Hz
		Certified:	50/60 Hz
Input Current	- Full Load & Vin = 115 VAC		3'000 mA max.
Power Consumption	- No load & Vin = 230 VAC		3'000 mW max.
	- No load & Vin = 115 VAC		2'500 mW max.
Input Inrush Current	- At 230 VAC		50 A max.
	- At 115 VAC		30 A max.
Power Factor	- At 230 VAC		0.95 min. (Active Power Factor Correction)
	- At 115 VAC		0.98 min. (Active Power Factor Correction)
Recommended Input Fuse			(The need of an external fuse has to be assessed in the final application.)

Output Specifications

Output Voltage Adjustment		12 VDC model:	10.0 - 15.5 VDC
		24 VDC model:	20.0 - 27.2 VDC
		48 VDC model:	42.0 - 53.0 VDC
			(By trim potentiometer)
			Output power must not exceed rated power!
Voltage Set Accuracy			±1% max. (24 & 48 VDC models)
			±2 % max. (12 VDC models)
Regulation	- Input Variation (Vmin - Vmax)		0.5% max.
	- Load Variation (0 - 100%)		1% max. (24 & 48 VDC models)
			2% max. (12 VDC model)
Ripple and Noise (20 MHz Bandwidth)		12 VDC model:	150 mVp-p max. (w/ 0.1 µF || 10 µF)
		24 VDC model:	200 mVp-p max. (w/ 0.1 µF || 10 µF)
		48 VDC model:	150 mVp-p max. (w/ 0.1 µF || 10 µF)
Minimum Load			Not required
Temperature Coefficient			±0.03 %/K max.
Hold-up Time	- At 230 VAC		16 ms min.
	- At 115 VAC		16 ms min.
Start-up Time	- At 230 VAC		2'000 ms max.
	- At 115 VAC		4'000 ms max.
Start-up Overshoot Voltage			5% max.
Short Circuit Protection			Continuous, Automatic recovery
Output Current Limitation			105 - 150% of Iout max.
Transient Response	- Response Deviation		5% max. (75% to 100% Load Step)
	- Response Time		400 µs typ. (75% to 100% Load Step)

Safety Specifications

Safety Standards	- IT / Multimedia Equipment	EN 60950-1 EN 62368-1 IEC 60950-1 IEC 62368-1 UL 60950-1 UL 62368-1
	- Certification Documents	www.tracopower.com/overview/txm200
Protection Class		Class I (Prepared): Connection to PE
Pollution Degree		PD 2
Over Voltage Category		OVC II

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

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EMC Specifications

EMI Emissions	- Conducted Emissions		EN 55032 class B (internal filter)
	- Radiated Emissions		EN 55032 class B (internal filter)
	- Harmonic Current Emissions		EN 61000-3-2, class D
	- Voltage Fluctuations & Flicker		EN 61000-3-3
EMS Immunity			EN 55024 (IT Equipment)
			EN 55035 (Multimedia)
	- Electrostatic Discharge	Air:	EN 61000-4-2, ±8 kV, perf. criteria B
		Contact:	EN 61000-4-2, ±4 kV, perf. criteria B
	- RF Electromagnetic Field		EN 61000-4-3, 3 V/m, perf. criteria A
	- EFT (Burst) / Surge		EN 61000-4-4, ±1 kV, perf. criteria B
		L to L:	EN 61000-4-5, ±1 kV, perf. criteria B
		L to PE:	EN 61000-4-5, ±2 kV, perf. criteria B
	- Conducted RF Disturbances		EN 61000-4-6, 3 Vrms, perf. criteria A
	- PF Magnetic Field	Continuous:	EN 61000-4-8, 1 A/m, perf. criteria A
	- Voltage Dips & Interruptions	230 VAC / 50 Hz:	EN 61000-4-11
			30%, 25 periods, perf. criteria C
			>95%, 0.5 periods, perf. criteria B
			>95%, 250 periods, perf. criteria C

General Specifications

Relative Humidity			90% max. (non condensing)
Temperature Ranges	- Operating Temperature		–20°C to +65°C
	- Storage Temperature		–40°C to +65°C
			(with derating)
Power Derating	- High Temperature		3.3 %/K above 50°C
	- Low Input Voltage		0.8 %/V below 115 VAC
		See application note:	www.tracopower.com/overview/txm200
Cooling System			Natural convection (20 LFM)
Altitude During Operation			5'000 m max.
Switching Frequency			80 - 85 kHz (PWM)
Insulation System			Reinforced Insulation
Working Voltage (rated)			494 VAC
Isolation Test Voltage	- Input to Output, 60 s		3'000 VDC
	- Input to Case or PE, 60 s		1'500 VAC
	- Output to Case or PE, 60 s		500 VAC
Creepage	- Input to Output		8 mm min.
Clearance	- Input to Output		8 mm min.
Isolation Resistance	- Input to Output, 500 VDC		100 MΩ min.
Leakage Current	- Earth Leakage Current		3500 µA max.
	- Touch Current		250 µA max.
Reliability	- Calculated MTBF		100'000 h (MIL-HDBK-217F, ground benign)
Housing Material			Aluminum
Housing Type			Metal Case
Mounting Type			Chassis Mount
Connection Type			Screw Terminal
Weight			700 g

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

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Environmental Compliance	- REACH Declaration	www.tracopower.com/info/reach-declaration.pdf REACH SVHC list compliant REACH Annex XVII compliant
	- RoHS Declaration	www.tracopower.com/info/rohs-declaration.pdf Exemptions: 7a, 7c-I (RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule). The SCIP number is provided on request.)

Supporting Documents

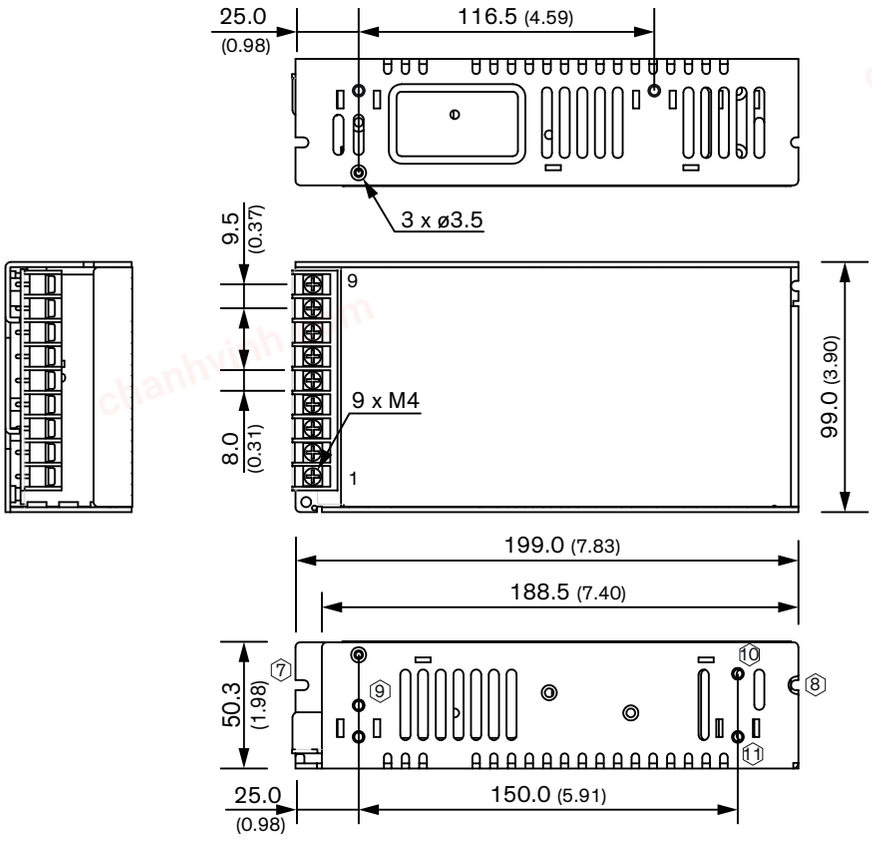
Overview Link (for additional Documents)	www.tracopower.com/overview/txm200

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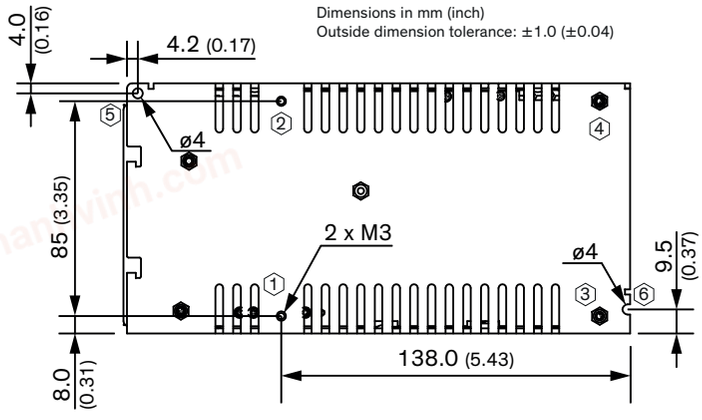
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Outline Dimensions



Dimensions in mm (inch)
Outside dimension tolerance: ±1.0 (±0.04)



Pin-Out	
Pin	**Function**
1	AC (N)
2	AC (L)
3	GND
4	– Vout
5	– Vout
6	– Vout
7	+ Vout
8	+ Vout
9	+ Vout

Screw Definition				
Installation Method	**Position No.**	**Screw Size**	**L max.**	**Torque max.**
Bottom Installation	1-4	M3	3.5 (0.17)	6.5 kgfcm
	5-6	M3	4.0 (0.16)	6.5 kgfcm
Side Installation	7-8	M3	4.0 (0.16)	6.5 kgfcm
	9-11	M4	4.0 (0.16)	12.0 kgfcm

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