

- 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



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 %

### Input Specifications

Input Voltage	- AC Range	Operational Range: <b>90 - 264 VAC</b> (Full Range) Rated Range: <b>100 - 240 VAC</b> (Full Range)
	- DC Range	Operational Range: <b>120 - 375 VDC</b> (Designed for, no certification) Polarity: <b>irrelevant</b> (Surge voltage (5 s max.): 300 VAC max.)
Input Frequency		Operational Range: <b>47 - 63 Hz</b> Certified: <b>50/60 Hz</b>
Input Current	- Full Load & Vin = 115 VAC	<b>3'000 mA max.</b>
Power Consumption	- No load & Vin = 230 VAC	<b>3'000 mW max.</b>
	- No load & Vin = 115 VAC	<b>2'500 mW max.</b>
Input Inrush Current	- At 230 VAC	<b>50 A max.</b>
	- At 115 VAC	<b>30 A max.</b>
Power Factor	- At 230 VAC	<b>0.95 min.</b> (Active Power Factor Correction)
	- At 115 VAC	<b>0.98 min.</b> (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: <b>10.0 - 15.5 VDC</b> 24 VDC model: <b>20.0 - 27.2 VDC</b> 48 VDC model: <b>42.0 - 53.0 VDC</b> (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		<b>±1% max.</b> (24 & 48 VDC models) <b>±2 % max.</b> (12 VDC models)
Regulation	- Input Variation (Vmin - Vmax) - Load Variation (0 - 100%)	<b>0.5% max.</b> <b>1% max.</b> (24 & 48 VDC models) <b>2% max.</b> (12 VDC model)
Ripple and Noise (20 MHz Bandwidth)		12 VDC model: <b>150 mVp-p max.</b> (w/ 0.1 µF    10 µF) 24 VDC model: <b>200 mVp-p max.</b> (w/ 0.1 µF    10 µF) 48 VDC model: <b>150 mVp-p max.</b> (w/ 0.1 µF    10 µF)
Minimum Load		<b>Not required</b>
Temperature Coefficient		<b>±0.03 %/K max.</b>
Hold-up Time	- At 230 VAC	<b>16 ms min.</b>
	- At 115 VAC	<b>16 ms min.</b>
Start-up Time	- At 230 VAC	<b>2'000 ms max.</b>
	- At 115 VAC	<b>4'000 ms max.</b>
Start-up Overshoot Voltage		<b>5% max.</b>
Short Circuit Protection		<b>Continuous, Automatic recovery</b>
Output Current Limitation		<b>105 - 150% of Iout max.</b>
Transient Response	- Response Deviation	<b>5% max.</b> (75% to 100% Load Step)
	- Response Time	<b>400 µs typ.</b> (75% to 100% Load Step)

### Safety Specifications

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

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

## 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, $\pm 8$ kV, perf. criteria B
		Contact: EN 61000-4-2, $\pm 4$ kV, perf. criteria B
	- RF Electromagnetic Field	EN 61000-4-3, 3 V/m, perf. criteria A
	- EFT (Burst) / Surge	EN 61000-4-4, $\pm 1$ kV, perf. criteria B
		L to L: EN 61000-4-5, $\pm 1$ kV, perf. criteria B
		L to PE: EN 61000-4-5, $\pm 2$ 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
Cooling System		Natural convection (20 LFM)
Altitude During Operation		5'000 m max.
Regulator Topology		Forward Converter
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 M $\Omega$ min.
Leakage Current	- Earth Leakage Current	3500 $\mu$ A max.
	- Touch Current	250 $\mu$ A max.
Reliability	- Calculated MTBF	100'000 h (MIL-HDBK-21 7F, 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.

---

Environmental Compliance - REACH Declaration

[www.tracopower.com/info/reach-declaration.pdf](http://www.tracopower.com/info/reach-declaration.pdf)

- RoHS Declaration

REACH SVHC list compliant

REACH Annex XVII compliant

[www.tracopower.com/info/rohs-declaration.pdf](http://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))

- SCIP Reference Number

4915a9f2-2871-4bcc-8787-54903610e627

---

## Supporting Documents

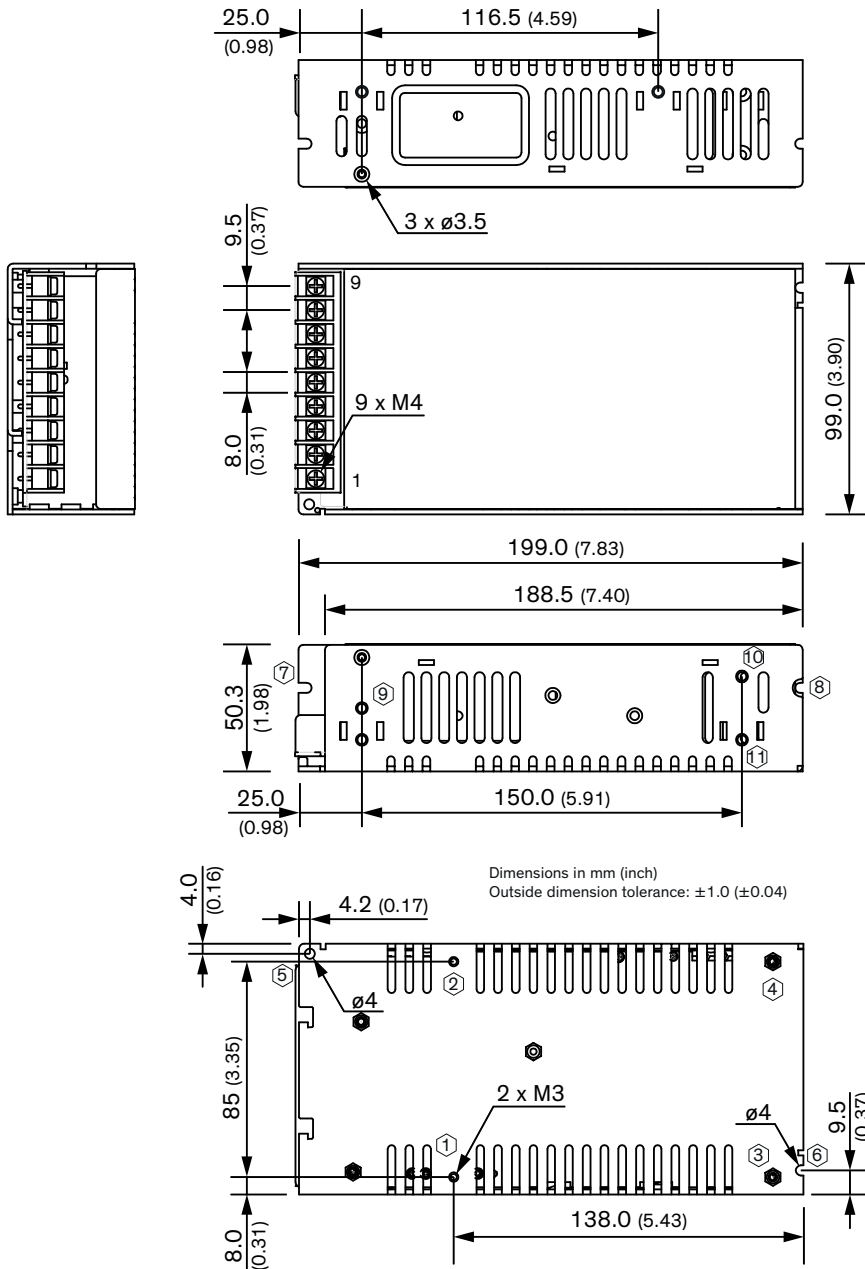
Overview Link (for additional Documents)

[www.tracopower.com/overview/txm200](http://www.tracopower.com/overview/txm200)

---

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

### Outline Dimensions



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 locked torque:  
12.0 kgfcm (1.18 Nm) max.

Dimensions in mm (inch)  
Outside dimension tolerance:  $\pm 1.0$  ( $\pm 0.04$ )

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