

AC/DC Power Supply

TXM 100 Series, 100 Watt

Not recommended for new designs

- Very compact metal cased power supplies
- High operating temperature up to 60°C
- Screw terminal block
- No internal fan
- Universal AC input, full range
- Active power factor correction >0.93
- Withstand 300 VAC surge input for 5 s
- Adjustable output voltage
- 3-year product warranty



The TXM 100 series of 100 Watt is a family of enclosed AC/DC power supplies designed for cost critical applications. With a low profile metal case and screw terminal block connections, they are easy to install in any equipment. There are five models of single output voltages from 5 VDC to 48 VDC. These power supplies have universal input and comply with European EMC standards and the Low Voltage Directive (LVD).

Models				
Order Code	Output Power max.	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TXM 100-105 *	100 W	5 VDC (3.3 - 5.5 VDC)	20'000 mA	84 %
TXM 100-112 *	102 W	12 VDC (10.0 - 15.0 VDC)	8'500 mA	87 %
TXM 100-115 *	105 W	15 VDC (13.5 - 17.0 VDC)	7'000 mA	87 %
TXM 100-124 *	101 W	24 VDC (21.0 - 27.0 VDC)	4'200 mA	88 %
TXM 100-148 *	106 W	48 VDC (43.2 - 52.8 VDC)	2'200 mA	88 %

Note * Not recommended for new designs

Input Specifications

Input Voltage	- AC Range	Operational Range: 85 - 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
Power Consumption	- No load & Vin = 230 VAC	5'100 mW max.
	- No load & Vin = 115 VAC	5'000 mW max.
Input Current	- Full load & Vin = 115 VAC	1'500 mA max.
Input Inrush Current	- At 230 VAC	50 A max.
	- At 115 VAC	30 A max.
Power Factor	- At 230 VAC	0.98 min. (Active Power Factor Correction)
	- At 115 VAC	0.93 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		5 VDC model: 3.3 - 5.5 VDC 12 VDC model: 10.0 - 15.0 VDC 15 VDC model: 13.5 - 17.0 VDC 24 VDC model: 21.0 - 27.0 VDC 48 VDC model: 43.2 - 52.8 VDC (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		±1% max. (24 & 48 VDC models) ±2 % max. (5, 12 & 15 VDC models)
Regulation	- Input Variation (Vmin - Vmax)	0.5% max.
	- Load Variation (0 - 100%)	1% max. (24 & 48 VDC models) 2% max. (5, 12 & 15 VDC models)
Ripple and Noise (20 MHz Bandwidth)		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 12 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		110 - 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

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/txm100-safety-cert/
Protection Class		Class I (Prepared): Connection to PE See application note: www.tracopower.com/info/protection-class.pdf
Energy Source		- Output, acc. to 62368-1 ES1

All specifications valid at 230 VAC, resistive full load and +25°C after warm-up time, unless otherwise stated.

Power Source	- Output, acc. to 62368-1	PS3
Pollution Degree		PD 2
Over Voltage Category		OVC II

EMC Specifications

EMI (Emissions)	- Conducted Emissions	EN 55032 class A (internal filter) EN 55032 class B (internal filter)
	- Radiated Emissions	EN 55032 class A (internal filter) EN 55032 class B (internal filter)
	- Harmonic Current Emissions	EN 61000-3-2, class A
	- 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 +60°C
	- Storage Temperature	-30°C to +85°C
Power Derating	- High Temperature	2.5 %/K above 40°C
	- Low Input Voltage	1.0 %/V below 100 VAC
Cooling System		Natural convection (20 LFM)
Altitude During Operation		5'000 m max.
Regulator Topology		Forward Converter
Switching Frequency		100 kHz typ. (PWM)
Insulation System		Reinforced Insulation
Working Voltage (rated)		360 VAC
Isolation Test Voltage	- Input to Output, 60 s	4'000 VDC
	- Input to Case or PE, 60 s	2'500 VDC
Creepage	- Input to Output	6.2 mm min.
Clearance	- Input to Output	6.2 mm min.
Isolation Resistance	- Input to Output, 500 VDC	100 M Ω min.
Leakage Current	- Earth Leakage Current	3500 μ A max.
	- Touch Current	250 μ A max.
Reliability	- Calculated MTBF	200'000 h (MIL-HDBK-217F, ground benign)
Housing Material		Aluminum
Housing Type		Metal Case
Mounting Type		Chassis Mount
Connection Type		Screw Terminal
Weight		455 g

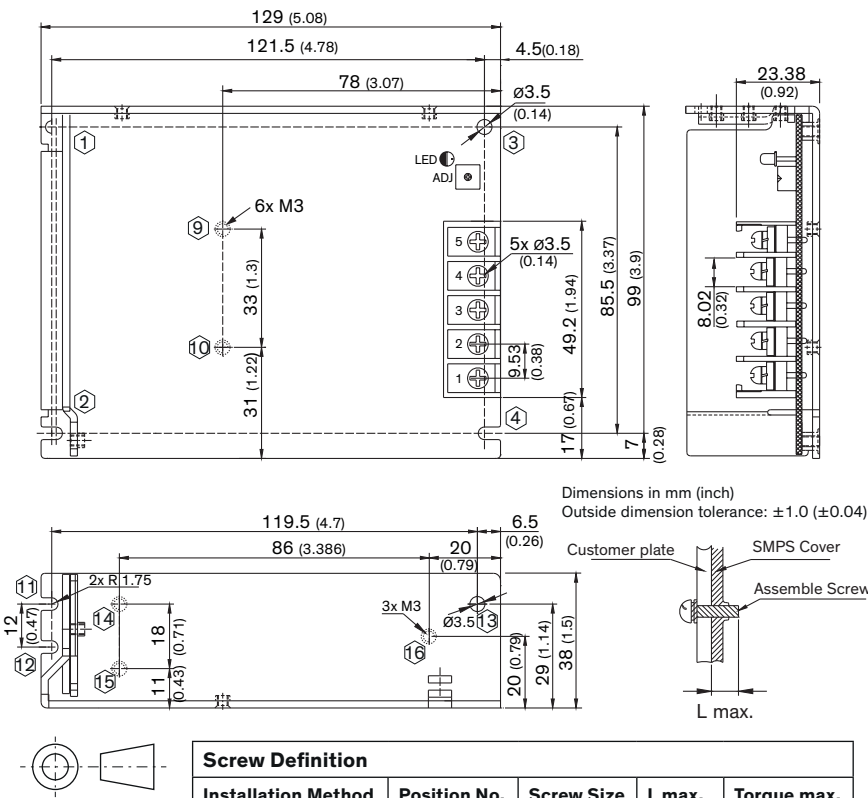
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Environmental Compliance	- REACH Declaration	www.tracopower.com/info/reach-declaration.pdf
	- RoHS Declaration	REACH SVHC list compliant REACH Annex XVII compliant www.tracopower.com/info/rohs-declaration.pdf
	- SCIP Reference Number	Exemptions: 7(a), 7(c)-I (RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule)) a85f760c-f4c2-42fe-92c4-6e293a206f51

Additional Information

Supporting Documents	www.tracopower.com/overview/txm100
Frequently Asked Questions	www.tracopower.com/glossary-faq
Glossary	www.tracopower.com/info/glossary.pdf
Service Portal	www.tracoserviceportal.com

Outline Dimensions



Pin-Out	
Pin	Function
1	AC (L)
2	AC (N)
3	PE
4	- Vout
5	+ Vout

Screw locked torque:
8.0 kgfcm (0.78 Nm) max.

Screw Definition				
Installation Method	Position No.	Screw Size	L max.	Torque max.
Bottom Installation	1-4	M3	5 (0.20)	7.0 kgfcm
	9-10	M3	3 (0.12)	6.5 kgfcm
Side Installation	11-13	M3	5 (0.20)	7.0 kgfcm
	14-16	M3	3 (0.12)	6.5 kgfcm