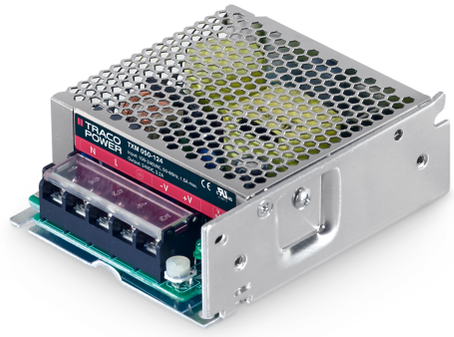
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TRACO POWER

AC/DC Power Supply

TXM 050 Series, 50 Watt

- **Very compact metal cased power supplies**
- **High operating temperature up to 70°C**
- **Low no load power consumption <0.5W**
- **Screw terminal block**
- **No internal fan**
- **Universal AC input, full range**
- **Withstand 300 VAC surge input for 5 s**
- **Adjustable output voltage**
- **3-year product warranty**



UL 62368-1 IEC 62368-1

The TXM 050 series of 50 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 050-105	40 W	5 VDC (4.8 - 5.5 VDC)	8'000 mA	80 %
TXM 050-112	50 W	12 VDC (11.4 - 13.2 VDC)	4'200 mA	85 %
TXM 050-115	51 W	15 VDC (14.3 - 15.0 VDC)	3'400 mA	86 %
TXM 050-124	53 W	24 VDC (22.8 - 26.4 VDC)	2'200 mA	87 %
TXM 050-148	54 W	48 VDC (45.6 - 52.8 VDC)	1'100 mA	89 %

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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
Input Current	- Full Load & Vin = 115 VAC		1'300 mA max.
Power Consumption	- No load & Vin = 230 VAC		500 mW max.
	- No load & Vin = 115 VAC		500 mW max.
Input Inrush Current	- At 230 VAC		45 A max.
Recommended Input Fuse			(The need of an external fuse has to be assessed in the final application.)

Output Specifications

Output Voltage Adjustment			–5% to +10% (By trim potentiometer)
			Output power must not exceed rated power!
Voltage Set Accuracy			±3% max.
Regulation	- Input Variation (Vmin - Vmax)		0.5% max.
	- Load Variation (0 - 100%)		1% max.
Ripple and Noise (20 MHz Bandwidth)		5 VDC model:	80 mVp-p max. (w/ 0.1 µF || 10 µF)
		12 VDC model:	120 mVp-p max. (w/ 0.1 µF || 10 µF)
		15 VDC model:	120 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:	200 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		50 ms min.
Start-up Time	- At 230 VAC		1'500 ms max.
Start-up Overshoot Voltage			5% max.
Short Circuit Protection			Continuous, Automatic recovery
Output Current Limitation			105 - 150% of Iout max.
Overvoltage Protection			115 - 150% of Vout nom.
Transient Response	- Response Deviation		9% 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/txm050
Protection Class		Class I (Prepared): Connection to PE
Pollution Degree		PD 2
Over Voltage Category		OVC II

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 A
	- Voltage Fluctuations & Flicker	EN 61000-3-3

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

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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		–25°C to +70°C
	- Storage Temperature		–40°C to +85°C
Power Derating	- High Temperature		1.5 %/K above 50°C (5 Vout model) 1 %/K above 50°C (other models)
	- Low Input Voltage		0.74 %/V below 115 VAC
		See application note:	www.tracopower.com/overview/txm050
Cooling System			Natural convection (20 LFM)
Altitude During Operation			5'000 m max.
Switching Frequency			65 kHz typ. (PWM)
Insulation System			Reinforced Insulation
Working Voltage (rated)			275 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		6.1 mm min.
Clearance	- Input to Output		6.1 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		200'000 h (MIL-HDBK-217F, ground benign)
Housing Material			Aluminum
Housing Type			Metal Case
Mounting Type			Chassis Mount
Connection Type			Screw Terminal
Weight			270 g
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.)

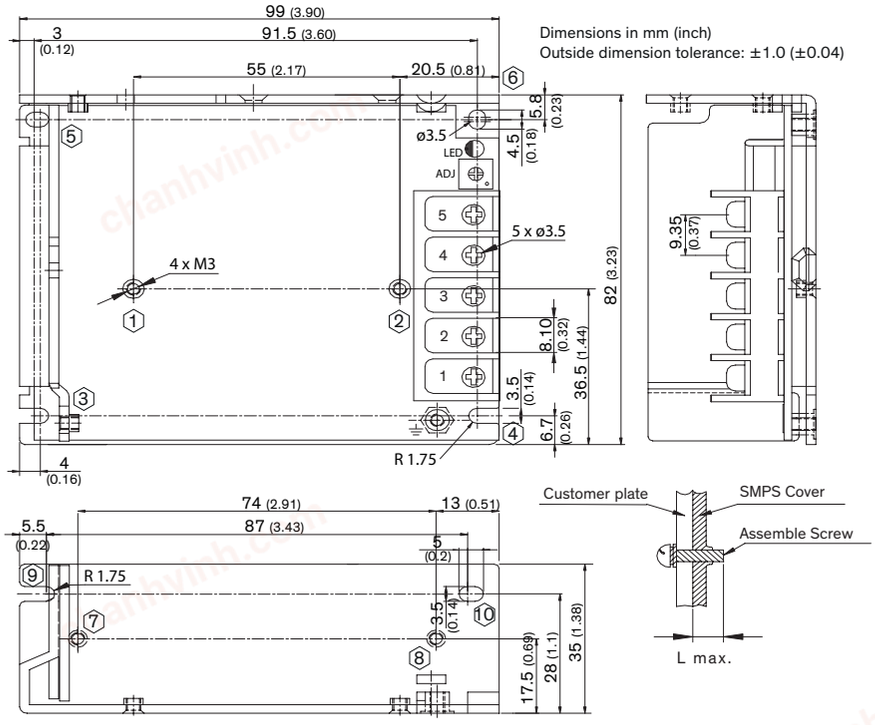
Supporting Documents

Overview Link (for additional Documents)	www.tracopower.com/overview/txm050

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Outline Dimensions



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

Screw Definition				
Installation Method	**Position No.**	**Screw Size**	**L max.**	**Torque max.**
Bottom Installation	1-2	M3	4 (1.6)	6.5 kgfcm
	3-6	M3	4 (1.6)	6.5 kgfcm
Side Installation	7-8	M3	4 (1.6)	6.5 kgfcm
	9-10	M3	4 (1.6)	6.5 kgfcm

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