

- 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



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 %

### Input Specifications

Input Voltage	- AC Range	Operational Range: <b>85 - 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>
Power Consumption	- No load & Vin = 230 VAC	<b>500 mW max.</b>
	- No load & Vin = 115 VAC	<b>500 mW max.</b>
Input Current	- Full load & Vin = 115 VAC	<b>1'300 mA max.</b>
Input Inrush Current	- At 230 VAC	<b>45 A max.</b>
Recommended Input Fuse		(The need of an external fuse has to be assessed in the final application.)

### Output Specifications

Output Voltage Adjustment		<b>-5% to +10%</b> (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		<b>±3% max.</b>
Regulation	- Input Variation (Vmin - Vmax)	<b>0.5% max.</b>
	- Load Variation (0 - 100%)	<b>1% max.</b>
Ripple and Noise (20 MHz Bandwidth)	5 VDC model:	<b>80 mVp-p max.</b> (w/ 0.1 µF    10 µF)
	12 VDC model:	<b>120 mVp-p max.</b> (w/ 0.1 µF    10 µF)
	15 VDC model:	<b>120 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>200 mVp-p max.</b> (w/ 0.1 µF    10 µF)
Minimum Load		Not required
Temperature Coefficient		<b>±0.03 %/K max.</b>
Hold-up Time	- At 230 VAC	<b>50 ms min.</b>
Start-up Time	- At 230 VAC	<b>1'500 ms max.</b>
Start-up Overshoot Voltage		<b>5% max.</b>
Short Circuit Protection		Continuous, Automatic recovery
Output Current Limitation		<b>105 - 150% of Iout max.</b>
Oversvoltage Protection		<b>115 - 150% of Vout nom.</b>
Transient Response	- Response Deviation	<b>9% 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/txm050">www.tracopower.com/overview/txm050</a>
Protection Class		<b>Class I (Prepared): Connection to PE</b>
Pollution Degree		<b>PD 2</b>
Over Voltage Category		<b>OVC II</b>

### EMC Specifications

EMI (Emissions)	- Conducted Emissions	<b>EN 55032 class B</b> (internal filter)
	- Radiated Emissions	<b>EN 55032 class B</b> (internal filter)
	- Harmonic Current Emissions	<b>EN 61000-3-2, class A</b>
	- Voltage Fluctuations & Flicker	<b>EN 61000-3-3</b>

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

<b>EMS (Immunity)</b>		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 EN 61000-4-3, 3 V/m, perf. criteria A EN 61000-4-4, ±1 kV, perf. criteria B
- RF Electromagnetic Field	L to L:	EN 61000-4-5, ±1 kV, perf. criteria B
- EFT (Burst) / Surge	L to PE:	EN 61000-4-5, ±2 kV, perf. criteria B EN 61000-4-6, 3 Vrms, perf. criteria A
- Conducted RF Disturbances	Continuous:	EN 61000-4-8, 1 A/m, perf. criteria A
- PF Magnetic Field	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
- Voltage Dips & Interruptions		

### General Specifications

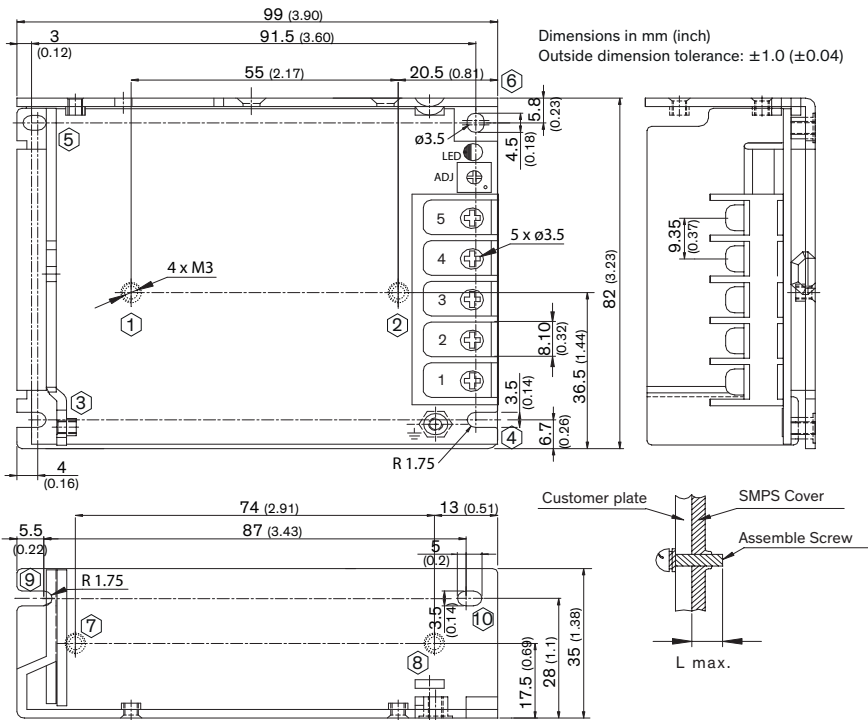
Relative Humidity		90% max. (non condensing)
Temperature Ranges	- Operating Temperature	-25°C to +70°C
	- Storage Temperature	-40°C to +85°C
Power Derating	- High Temperature	1.5 %/K above 50°C (5 Vout model) 1 %/K above 50°C (other models)
	- Low Input Voltage	0.74 %/V below 115 VAC
Cooling System		Natural convection (20 LFM)
Altitude During Operation		5'000 m max.
Regulator Topology		Flyback Converter
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	<a href="http://www.tracopower.com/info/reach-declaration.pdf">www.tracopower.com/info/reach-declaration.pdf</a> REACH SVHC list compliant REACH Annex XVII compliant
	- RoHS Declaration	<a href="http://www.tracopower.com/info/rohs-declaration.pdf">www.tracopower.com/info/rohs-declaration.pdf</a> 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	9ca2f776-0a1e-4139-86c0-d553473746ef

### Supporting Documents

Overview Link (for additional Documents)	<a href="http://www.tracopower.com/overview/txm050">www.tracopower.com/overview/txm050</a>
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### Outline Dimensions



Pin-Out	
Pin	Function
1	AC (N)
2	AC (L)
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	1-2	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