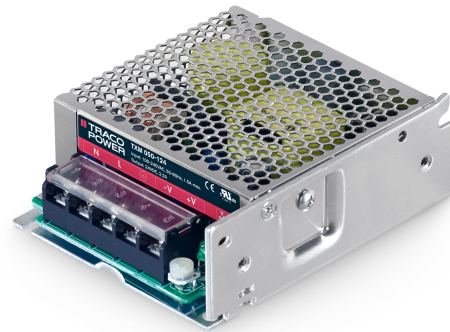


- Very compact metal cased power supplies
- High operating temperature up to 70°C
- Low no load power consumption <0.5W
- Screw terminal block
- No internal fan
- Universal AC input, full range
- Withstand 300 VAC surge input for 5 s
- Adjustable output voltage
- 3-year product warranty



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: 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 & $V_{in} = 115 \text{ VAC}$ | 1'300 mA max. |
| Power Consumption | - No load & $V_{in} = 230 \text{ VAC}$ | 500 mW max. |
| | - No load & $V_{in} = 115 \text{ VAC}$ | 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 ($V_{min} - V_{max}$) | 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 I_{out} max. |
| Overshoot Protection | | 115 - 150% of V_{out} nom. |
| Transient Response | - Response Deviation | 9% 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/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.

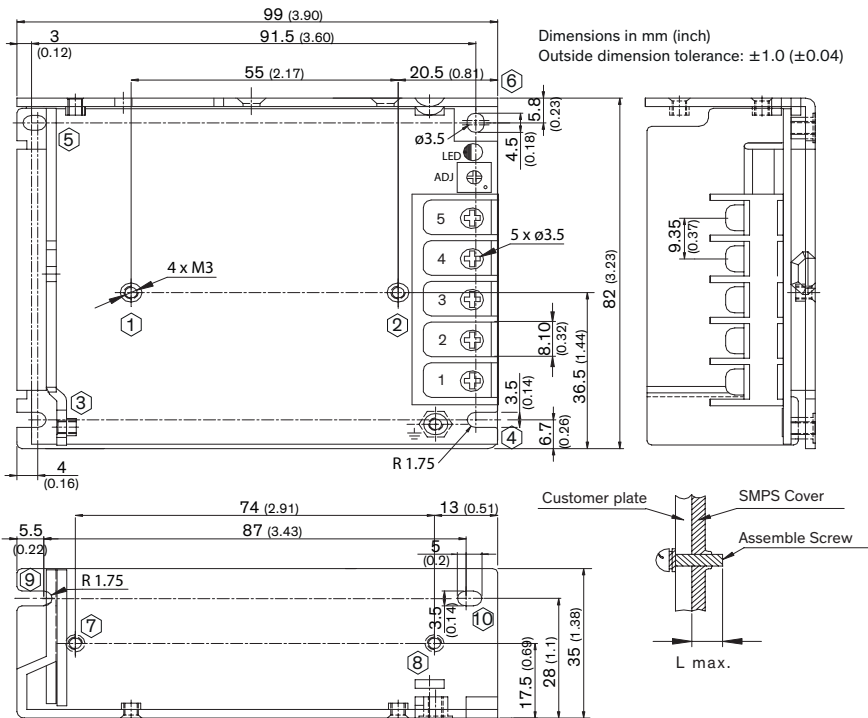
| | | |
|--------------|--|--|
| EMS Immunity | <ul style="list-style-type: none"> - Electrostatic Discharge - RF Electromagnetic Field - EFT (Burst) / Surge - Conducted RF Disturbances - PF Magnetic Field - Voltage Dips & Interruptions | EN 55024 (IT Equipment) EN 55035 (Multimedia) Air: EN 61000-4-2, ± 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 L to L: EN 61000-4-5, ± 1 kV, perf. criteria B L to PE: EN 61000-4-5, ± 2 kV, perf. criteria B EN 61000-4-6, 3 Vrms, perf. criteria A Continuous: EN 61000-4-8, 1 A/m, perf. criteria A 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 | <ul style="list-style-type: none"> - Operating Temperature - Storage Temperature | -25°C to +70°C -40°C to +85°C |
| Power Derating | <ul style="list-style-type: none"> - High Temperature - Low Input Voltage | 1.5 %/K above 50°C (5 Vout model) 1 %/K above 50°C (other models) 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 | <ul style="list-style-type: none"> - Input to Output, 60 s - Input to Case or PE, 60 s - Output to Case or PE, 60 s | 3'000 VDC 1'500 VAC 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 M Ω min. |
| Leakage Current | <ul style="list-style-type: none"> - Earth Leakage Current - Touch Current | 3500 μ A max. 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 | | 270 g |
| Environmental Compliance | <ul style="list-style-type: none"> - REACH Declaration - RoHS Declaration - SCIP Reference Number | www.tracopower.com/info/reach-declaration.pdf REACH SVHC list compliant REACH Annex XVII compliant 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).) 9ca2f776-0a1e-4139-86c0-d553473746ef |

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

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 | 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 |