

- Compact metal case with screw terminal block
- Universal input 88-264 VAC
- Convection cooled (no-fan)
- High efficiency up to 86%
- Compliance to EN 61000-3-2
- Short circuit, overvoltage and overload protection
- IEC/EN/UL 62368-1 safety approvals
- 3-year product warranty



The TXLN series is a family of encased power supplies designed for a wide range of cost critical applications. With a low profile metal case and screw terminal block connection, they are easy to install in any equipment. 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. |
|--------------|-------------------|----------------------------------|---------------------|-----------------|
| TXLN 060-103 | 40 W              | 3.3 VDC (3.0 - 3.6 VDC)          | 12'000 mA           | 72 %            |
| TXLN 060-105 | 50 W              | 5 VDC (4.5 - 5.5 VDC)            | 10'000 mA           | 78 %            |
| TXLN 060-112 | 60 W              | 12 VDC (10.8 - 13.2 VDC)         | 5'000 mA            | 81 %            |
| TXLN 060-115 |                   | 15 VDC (13.5 - 16.5 VDC)         | 4'000 mA            | 83 %            |
| TXLN 060-124 |                   | 24 VDC (21.6 - 26.4 VDC)         | 2'500 mA            | 84 %            |
| TXLN 060-148 |                   | 48 VDC (43.2 - 52.8 VDC)         | 1'300 mA            | 86 %            |

### Options

|  |  |
|--|--|
| on demand<br>(backorder with MOQ<br>non stocking item) | - Optional model with 7.5 VDC and 7'000 mA |
|  | - Optional model with 30 VDC and 2'000 mA  |

### Input Specifications

|                        |                             |  |
|------------------------|-----------------------------|--|
| Input Voltage          | - AC Range                  | Operational Range: <b>88 - 264 VAC</b> (Full Range)<br>Rated Range: <b>100 - 240 VAC</b> (Full Range)      |
|                        | - DC Range                  | Operational Range: <b>125 - 375 VDC</b> (Designed for, no certification)<br>Polarity: <b>irrelevant</b>    |
| Input Frequency        |                             | Operational Range: <b>47 - 63 Hz</b><br>Certified: <b>50/60 Hz</b>   |
| Power Consumption      | - No load & Vin = 230 VAC   | <b>500 mW max.</b>   |
| Input Current          | - Full load & Vin = 115 VAC | <b>1'600 mA max.</b>   |
| Input Inrush Current   | - At 230 VAC                | <b>50 A max.</b>   |
|                        | - At 115 VAC                | <b>30 A max.</b>   |
| Input Protection       |                             | <b>T 2 A / 250 VAC</b> (Internal Fuse)   |
| Recommended Input Fuse |                             | <b>2'000 mA</b> (slow blow)<br>(The need of an external fuse has to be assessed in the final application.) |

### Output Specifications

|  |                                 |   |
|--|---------------------------------|---|
| Output Voltage Adjustment              |                                 | <b>±10%</b> (By trim potentiometer)<br>Output power must not exceed rated power!                      |
| Voltage Set Accuracy                   |                                 | <b>±3% max.</b> (3.3 Vout model)  |
|  |                                 | <b>±2% max.</b> (5 Vout model)  |
|  |                                 | <b>±1% max.</b> (other models)  |
| Regulation                             | - Input Variation (Vmin - Vmax) | <b>1.5% max.</b> (3.3 Vout model)<br><b>1% max.</b> (5 Vout model)<br><b>0.5% max.</b> (other models) |
|  | - Load Variation (0 - 100%)     | <b>3% max.</b> (3.3 Vout model)<br><b>2% max.</b> (5 Vout model)<br><b>1% max.</b> (other models)     |
|  |                                 |   |
|  |                                 |   |
| Ripple and Noise<br>(20 MHz Bandwidth) | 3.3 VDC model:                  | <b>70 mVp-p max.</b> (w/ 0.1 µF    47 µF)   |
|  | 5 VDC model:                    | <b>70 mVp-p max.</b> (w/ 0.1 µF    47 µF)   |
|  | 7.5 VDC model:                  | <b>80 mVp-p max.</b> (w/ 0.1 µF    47 µF)   |
|  | 12 VDC model:                   | <b>120 mVp-p max.</b> (w/ 0.1 µF    47 µF)  |
|  | 15 VDC model:                   | <b>150 mVp-p max.</b> (w/ 0.1 µF    47 µF)  |
|  | 24 VDC model:                   | <b>150 mVp-p max.</b> (w/ 0.1 µF    47 µF)  |
|  | 30 VDC model:                   | <b>200 mVp-p max.</b> (w/ 0.1 µF    47 µF)  |
|  | 48 VDC model:                   | <b>200 mVp-p max.</b> (w/ 0.1 µF    47 µF)  |
| Capacitive Load                        | 3.3 VDC model:                  | <b>108'000 µF max.</b>  |
|  | 5 VDC model:                    | <b>108'000 µF max.</b>  |
|  | 7.5 VDC model:                  | <b>108'000 µF max.</b>  |
|  | 12 VDC model:                   | <b>72'000 µF max.</b>   |
|  | 15 VDC model:                   | <b>54'000 µF max.</b>   |
|  | 24 VDC model:                   | <b>18'000 µF max.</b>   |
|  | 30 VDC model:                   | <b>9'000 µF max.</b>  |
| 48 VDC model:                          | <b>5'400 µF max.</b>            |   |
| Minimum Load                           |                                 | <b>Not required</b>   |
| Temperature Coefficient                |                                 | <b>±0.03 %/K max.</b>   |
| Hold-up Time                           | - At 230 VAC                    | <b>60 ms min.</b>   |
|  | - At 115 VAC                    | <b>16 ms min.</b>   |
| Start-up Time                          | - At 230 VAC                    | <b>1'000 ms max.</b>  |
|  | - At 115 VAC                    | <b>1'000 ms max.</b>  |
| Short Circuit Protection               |                                 | <b>Continuous, Automatic recovery</b>   |
| Output Current Limitation              |                                 | <b>105 - 150% of Iout max.</b>  |
| Overvoltage Protection                 |                                 | <b>115 - 140% of Vout nom.</b>  |

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

### Safety Specifications

|                       |                             |  |
|-----------------------|-----------------------------|--|
| Standards             | - IT / Multimedia Equipment | EN 62368-1<br>IEC 62368-1<br>UL 62368-1  |
|                       | - Certification Documents   | <a href="http://www.tracopower.com/overview/txln060">www.tracopower.com/overview/txln060</a> |
| 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  |
| EMS (Immunity)  |                                  | EN 55024 (IT Equipment)<br>EN 55035 (Multimedia)  |
|                 | - Electrostatic Discharge        | Air: EN 61000-4-2, $\pm 8$ kV, perf. criteria A<br>Contact: EN 61000-4-2, $\pm 4$ kV, perf. criteria A  |
|                 | - 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 A<br>L to L: EN 61000-4-5, $\pm 1$ kV, perf. criteria A<br>L to PE: EN 61000-4-5, $\pm 2$ kV, perf. criteria A |
|                 | - Conducted RF Disturbances      | EN 61000-4-6, 3 Vrms, perf. criteria A  |
|                 | - PF Magnetic Field              | Continuous: EN 61000-4-8, 3 A/m, perf. criteria A   |
|                 | - Voltage Dips & Interruptions   | 230 VAC / 50 Hz: EN 61000-4-11<br>30%, 25 periods, perf. criteria A<br>>95%, 0.5 periods, perf. criteria A<br>>95%, 250 periods, perf. criteria C       |

### General Specifications

|                                 |                                 |  |
|---------------------------------|---------------------------------|--|
| Relative Humidity               |                                 | 90% max. (non condensing)  |
| Temperature Ranges              | - Operating Temperature         | -20°C to +70°C   |
|                                 | - Storage Temperature           | -40°C to +85°C   |
| Power Derating                  | - High Temperature              | 2.5 %/K above 50°C   |
|                                 | - Low Input Voltage             | 0.83 %/V below 100 VAC   |
|                                 |                                 | See application note: <a href="http://www.tracopower.com/overview/txln060">www.tracopower.com/overview/txln060</a> |
| Cooling System                  |                                 | Natural convection (20 LFM)  |
| Altitude During Operation       |                                 | 2'000 m max.   |
| Regulator Topology              |                                 | Flyback Converter  |
| Switching Frequency             |                                 | 58 - 72 kHz (PWM)  |
| Insulation System               |                                 | Reinforced Insulation  |
| Working Voltage (rated)         |                                 | 357 VAC  |
| Isolation Test Voltage          | - Input to Output, 60 s         | 3'000 VAC  |
|                                 | - Input to Case or PE, 60 s     | 1'800 VAC  |
|                                 | - Output to Case or PE, 60 s    | 500 VAC  |
| Isolation Resistance            | - Input to Output, 500 VDC      | 100 M $\Omega$ min.  |
| Isolation Capacitance           | - Input to Output, 100 kHz, 1 V | 20'000 pF max.   |
| Leakage Current<br>(at 264 VAC) | - Earth Leakage Current         | 750 $\mu$ A max.   |
| Distance Through Isolation      |                                 | 6 mm   |
| Reliability                     | - Calculated MTBF               | 335'000 h (MIL-HDBK-217F, ground benign)   |
| Housing Material                |                                 | Aluminum   |
| Housing Type                    |                                 | Metal Case   |
| Mounting Type                   |                                 | Chassis Mount  |
| Connection Type                 |                                 | Screw Terminal   |

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

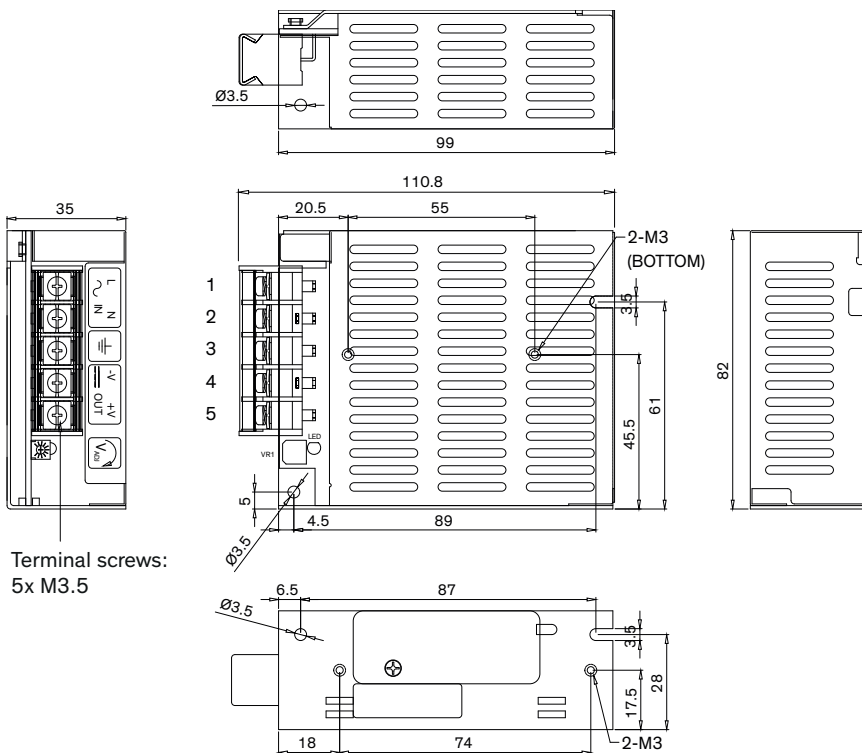
|                          |  |
|--------------------------|--|
| Weight                   | 340 g  |
| Status Indicator         | Indicated by green LED   |
| Environmental Compliance | <a href="http://www.tracopower.com/info/reach-declaration.pdf">www.tracopower.com/info/reach-declaration.pdf</a><br>REACH SVHC list compliant<br>REACH Annex XVII compliant<br><a href="http://www.tracopower.com/info/rohs-declaration.pdf">www.tracopower.com/info/rohs-declaration.pdf</a><br>Exemptions: 7a, 7c-1<br>(RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule))<br>743ccba0-610e-418f-951e-bafa6e2a32cc |
| - REACH Declaration      |  |
| - RoHS Declaration       |  |
| - SCIP Reference Number  |  |

### Supporting Documents

Overview Link (for additional Documents)

[www.tracopower.com/overview/txln060](http://www.tracopower.com/overview/txln060)

### Outline Dimensions



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

Max. terminal screw locked torque: 0.7 Nm

Terminal screws:  
5x M3.5

Dimensions in mm  
Tolerances:  
0-8: ±0.2  
8-25: ±0.3  
25-80: ±0.5  
80-250: ±0.8

Mounting screws  
Max. screw penetration depth: 4.5  
Max. screw locked torque: 0.8 Nm