

- 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



UL 62368-1 IEC 62368-1

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

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

## Input Specifications

Input Voltage	- AC Range	Operational Range: <b>88 - 264 VAC</b> (Full Range) Rated Range: <b>100 - 240 VAC</b> (Full Range)
	- DC Range	Operational Range: <b>125 - 375 VDC</b> (Designed for, no certification) Polarity: <b>irrelevant</b>
Input Frequency		Operational Range: <b>47 - 63 Hz</b> Certified: <b>50/60 Hz</b>
Input Current	- Full Load & $V_{in} = 115$ VAC	<b>1'600 mA max.</b>
Power Consumption	- No load & $V_{in} = 230$ VAC	<b>500 mW 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) (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) 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 ( $V_{min} - V_{max}$ )	<b>1.5% max.</b> (3.3 Vout model) <b>1% max.</b> (5 Vout model) <b>0.5% max.</b> (other models)
	- Load Variation (0 - 100%)	<b>3% max.</b> (3.3 Vout model)
		<b>2% max.</b> (5 Vout model)
		<b>1% max.</b> (other models)
Ripple and Noise (20 MHz Bandwidth)	3.3 VDC model:	<b>70 mVp-p max.</b> (w/ 0.1 $\mu$ F    47 $\mu$ F)
	5 VDC model:	<b>70 mVp-p max.</b> (w/ 0.1 $\mu$ F    47 $\mu$ F)
	7.5 VDC model:	<b>80 mVp-p max.</b> (w/ 0.1 $\mu$ F    47 $\mu$ F)
	12 VDC model:	<b>120 mVp-p max.</b> (w/ 0.1 $\mu$ F    47 $\mu$ F)
	15 VDC model:	<b>150 mVp-p max.</b> (w/ 0.1 $\mu$ F    47 $\mu$ F)
	24 VDC model:	<b>150 mVp-p max.</b> (w/ 0.1 $\mu$ F    47 $\mu$ F)
	30 VDC model:	<b>200 mVp-p max.</b> (w/ 0.1 $\mu$ F    47 $\mu$ F)
48 VDC model:	<b>200 mVp-p max.</b> (w/ 0.1 $\mu$ F    47 $\mu$ F)	
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>

## Safety Specifications

Safety Standards	- IT / Multimedia Equipment	<b>EN 62368-1</b> <b>IEC 62368-1</b> <b>UL 62368-1</b>
	- Certification Documents	<a href="http://www.tracopower.com/overview/txln060">www.tracopower.com/overview/txln060</a>
Protection Class		<b>Class I</b> (Prepared): <b>Connection to PE</b>
Pollution Degree		<b>PD 2</b>
Over Voltage Category		<b>OVC II</b>

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

## 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) EN 55035 (Multimedia)
	- Electrostatic Discharge	Air: EN 61000-4-2, ±8 kV, perf. criteria A Contact: EN 61000-4-2, ±4 kV, perf. criteria A EN 61000-4-3, 3 V/m, perf. criteria A EN 61000-4-4, ±1 kV, perf. criteria A
	- RF Electromagnetic Field	L to L: EN 61000-4-5, ±1 kV, perf. criteria A L to PE: EN 61000-4-5, ±2 kV, perf. criteria A
	- EFT (Burst) / Surge	EN 61000-4-6, 3 Vrms, perf. criteria A
	- Conducted RF Disturbances	Continuous: EN 61000-4-8, 3 A/m, perf. criteria A
	- PF Magnetic Field	230 VAC / 50 Hz: EN 61000-4-11
	- Voltage Dips & Interruptions	30%, 25 periods, perf. criteria A >95%, 0.5 periods, perf. criteria A >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.
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 MΩ min.
Isolation Capacitance	- Input to Output, 100 kHz, 1 V	20'000 pF max.
Leakage Current (at 264 VAC)	- Earth Leakage Current	750 μA 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
Weight		340 g
Status Indicator		Indicated by green LED
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	743ccba0-610e-418f-951e-bafa6e2a32cc

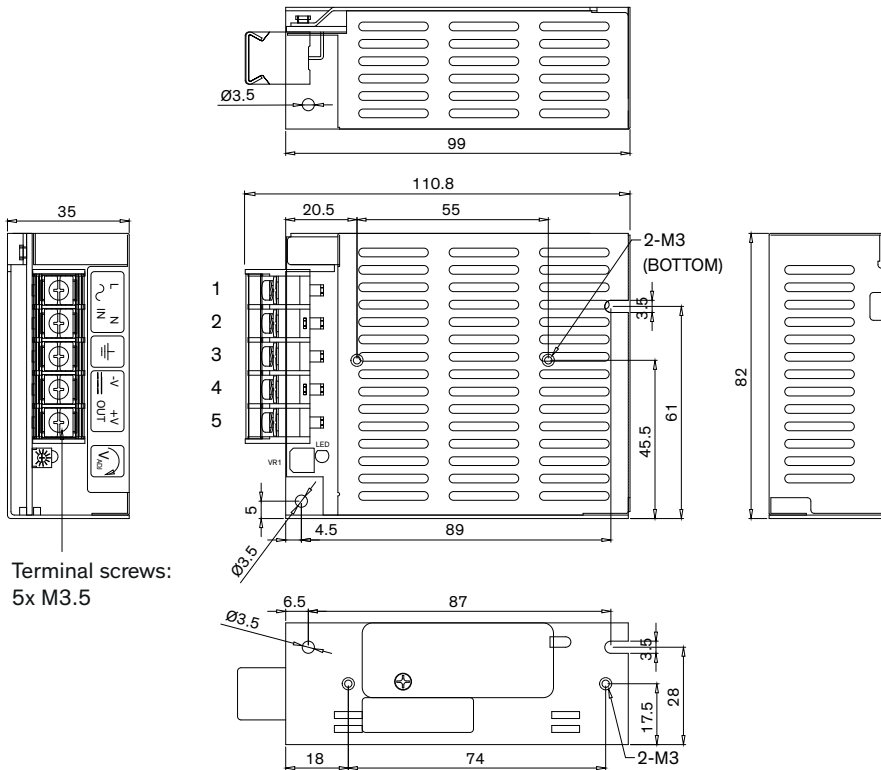
All specifications valid at nominal voltage, resistive full load and +25°C after warm-up time, unless otherwise stated.

## 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

Terminal screws:  
5x M3.5

Dimensions in mm  
Tolerances:  
0-8:  $\pm 0.2$   
8-25:  $\pm 0.3$   
25-80:  $\pm 0.5$   
80-250:  $\pm 0.8$

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