

- Compact metal case with screw terminal block
- Universal input 90-264 VAC
- High efficiency up to 89%
- Active PFC >0.95
- 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 960-112	960 W	12 VDC (10.8 - 13.2 VDC)	80'000 mA	87 %
TXLN 960-115		15 VDC (13.5 - 16.5 VDC)	64'000 mA	88 %
TXLN 960-124		24 VDC (21.6 - 26.4 VDC)	40'000 mA	88 %
TXLN 960-148		48 VDC (43.2 - 52.8 VDC)	20'000 mA	89 %

### Input Specifications

Input Voltage	- AC Range	90 - 264 VAC (Full Range)
	- DC Range	127 - 375 VDC (Designed for, no certification)
Input Frequency		47 - 63 Hz
Input Current	- Full Load & Vin = 230 VAC	6'500 mA max.
	- Full Load & Vin = 115 VAC	10'500 mA max.
Input Inrush Current	- At 230 VAC	90 A max.
	- At 115 VAC	50 A max.
Power Factor	- At 230 VAC	0.95 min. (Active Power Factor Correction)
	- At 115 VAC	0.99 min. (Active Power Factor Correction)
Recommended Input Fuse		(The need of an external fuse has to be assessed in the final application.)

### Output Specifications

Output Voltage Adjustment		±10% (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		±1% max.
Regulation	- Input Variation (Vmin - Vmax)	0.5% max.
	- Load Variation (0 - 100%)	1% max.
Ripple and Noise (20 MHz Bandwidth)	12 VDC model:	150 mVp-p max. (w/ 0.1 µF // 47 µF)
	15 VDC model:	150 mVp-p max. (w/ 0.1 µF // 47 µF)
	24 VDC model:	200 mVp-p max. (w/ 0.1 µF // 47 µF)
	48 VDC model:	250 mVp-p max. (w/ 0.1 µF // 47 µF)
Minimum Load		Not required
Temperature Coefficient		±0.03 %/K max.
Hold-up Time	- At 230 VAC	16 ms min.
	- At 115 VAC	16 ms min.
Start-up Time	- At 230 VAC	2'000 ms max.
Short Circuit Protection		Continuous, Automatic recovery
Overload Protection		Constant Current Mode
Output Current Limitation		105 - 135% of Iout max.
Overvoltage Protection		115 - 140% of Vout nom.
Load Share Function	- Refer to application note	<a href="http://www.tracopower.com/overview/txln960">www.tracopower.com/overview/txln960</a>
Load Share Accuracy		10%

### Safety Specifications

Safety Standards	- IT / Multimedia Equipment	EN 62368-1 IEC 62368-1 UL 62368-1
	- Certification Documents	<a href="http://www.tracopower.com/overview/txln960">www.tracopower.com/overview/txln960</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 D
	- Voltage Fluctuations & Flicker	EN 61000-3-3

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

<b>EMS Immunity</b>	<ul style="list-style-type: none"> <li>- Electrostatic Discharge</li> <li>- RF Electromagnetic Field</li> <li>- EFT (Burst) / Surge</li> <li>- Conducted RF Disturbances</li> <li>- PF Magnetic Field</li> <li>- Voltage Dips &amp; Interruptions</li> </ul>	EN 55024 (IT Equipment) Air: EN 61000-4-2, $\pm 8$ kV, perf. criteria A Contact: EN 61000-4-2, $\pm 4$ kV, perf. criteria A EN 61000-4-3, 10 V/m, perf. criteria A EN 61000-4-4, $\pm 2$ kV, perf. criteria A L to L: EN 61000-4-5, $\pm 2$ kV, perf. criteria B L to PE: EN 61000-4-5, $\pm 4$ kV, perf. criteria B EN 61000-4-6, 10 Vrms, perf. criteria A Continuous: EN 61000-4-8, 30 A/m, perf. criteria A 1 s: EN 61000-4-8, 300 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
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<b>General Specifications</b>		
<b>Relative Humidity</b>		90% max. (non condensing)
<b>Temperature Ranges</b>	<ul style="list-style-type: none"> <li>- Operating Temperature</li> <li>- Storage Temperature</li> </ul>	-20°C to +70°C -40°C to +85°C
<b>Power Derating</b>	<ul style="list-style-type: none"> <li>- High Temperature</li> <li>- Low Input Voltage</li> </ul>	2.5 %/K above 50°C See application note: <a href="http://www.tracopower.com/overview/txln960">www.tracopower.com/overview/txln960</a>
<b>Over Temperature Protection Switch Off</b>	- Protection Mode	90°C min. / 95°C typ. / 100°C max. (Automatic recovery)
<b>Cooling System</b>		Forced air cooling (with internal fan)
<b>Fan Power Source</b>	<ul style="list-style-type: none"> <li>- Output Voltage</li> <li>- Output Current</li> </ul>	12 VDC 480 mA max.
<b>Standby Power Source</b>	<ul style="list-style-type: none"> <li>- Output Voltage</li> <li>- Output Current</li> </ul>	12 VDC 300 mA max. (Only for remote control)
<b>Remote Control</b>	- Voltage Controlled Remote	See application note: <a href="http://www.tracopower.com/overview/txln960">www.tracopower.com/overview/txln960</a>
<b>Altitude During Operation</b>		4'000 m max. (The max. ambient temperature decreases by 5 K / 1000 m when operated above 2000 m)
<b>Switching Frequency</b>		55 - 65 kHz (PWM)
<b>Insulation System</b>		Reinforced Insulation
<b>Isolation Test Voltage</b>	<ul style="list-style-type: none"> <li>- Input to Output, 60 s</li> <li>- Input to Case or PE, 60 s</li> <li>- Output to Case or PE, 60 s</li> </ul>	3'000 VAC 1'800 VAC 500 VAC
<b>Isolation Resistance</b>	- Input to Output, 500 VDC	100 M $\Omega$ min.
<b>Leakage Current</b> (at 264 VAC / 60Hz)	- Earth Leakage Current	1500 $\mu$ A max.
<b>Reliability</b>	- Calculated MTBF	84'100 h
<b>Housing Material</b>		Aluminium
<b>Connection Type</b>		Screw Terminal
<b>Weight</b>		2500 g
<b>Power OK Signal</b>	<ul style="list-style-type: none"> <li>- Power OK</li> <li>- Power Off</li> </ul>	Voltage source output High level Low level (Refers to 'PG' and 'GND' Pin)
<b>Status Indicator</b>		Indicated by green LED
<b>Sense Function</b>		(to be done)

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Environmental Compliance - REACH Declaration

[www.tracopower.com/info/reach-declaration.pdf](http://www.tracopower.com/info/reach-declaration.pdf)

REACH SVHC list compliant

REACH Annex XVII compliant

- RoHS Declaration

[www.tracopower.com/info/rohs-declaration.pdf](http://www.tracopower.com/info/rohs-declaration.pdf)

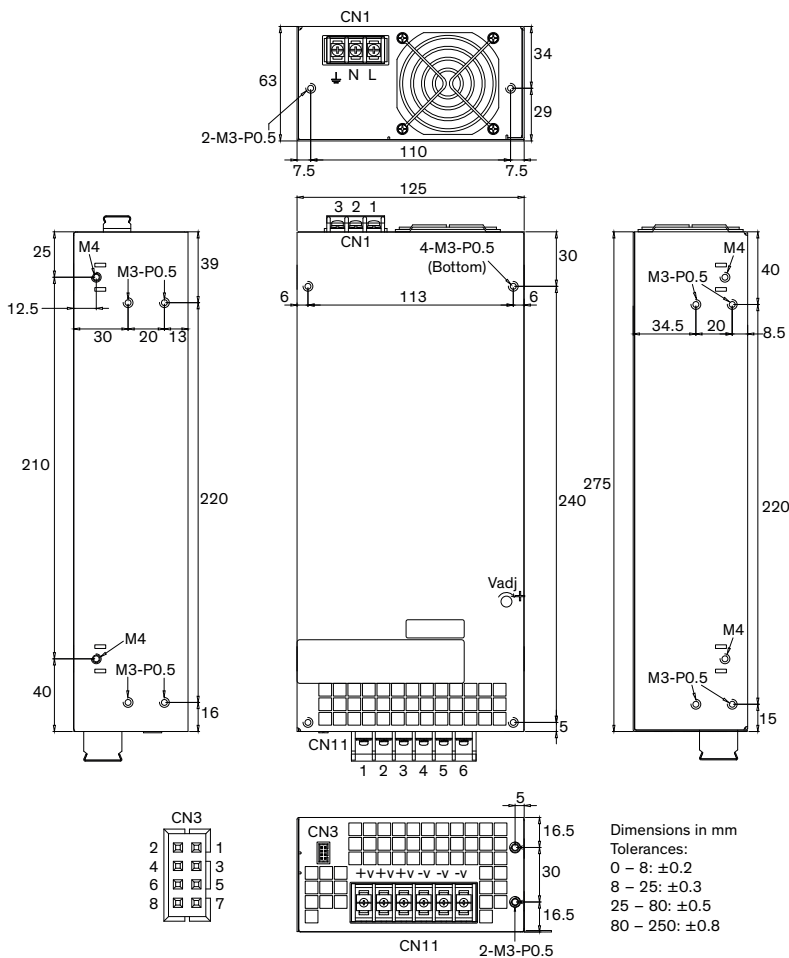
Exemptions: 6a, 6b, 6c, 7a, 7c-I, 7c-II

### Supporting Documents

[Overview Link](#) (for additional Documents)

[www.tracopower.com/overview/txln960](http://www.tracopower.com/overview/txln960)

### Outline Dimensions



Input	
CN1	
Pin	Function
1	AC (L)
2	AC (N)
3	PE

Output	
CN11	
Pin	Function
1-3	+Vout
4-6	-Vout

Auxiliary	
CN3	
Pin	Function
1	LS
2	PG
3	+Sense
4	-Sense
5	-Remote
6	+Remote
7	Standby
8	GND

**CN1:**  
3 pin, 10mm pitch  
with PC cover

**CN11:**  
6 pin, 11 mm pitch

**CN3:**  
HRS DF11-8DP-2DSA