

- 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
- Remote On/Off and Remote Sense
- Standard features: Power Good Signal, Load Sharing, 12 V Standby Output
- 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	Operational Range: 90 - 264 VAC (Full Range) Rated Range: 100 - 240 VAC (Full Range)
	- DC Range	Operational Range: 127 - 375 VDC (Designed for, no certification) Polarity: irrelevant
Input Frequency		Operational Range: 47 - 63 Hz Certified: 50/60 Hz
Input Current	- Full load & Vin = 230 VAC - Full load & Vin = 115 VAC	6'500 mA max. 10'500 mA max.
Input Inrush Current	- At 230 VAC - At 115 VAC	90 A max. 50 A max.
Power Factor	- At 230 VAC - At 115 VAC	0.95 min. (Active Power Factor Correction) 0.95 min. (Active Power Factor Correction)
Input Protection		T 12 A / 250 VAC (Internal Fuse)
Recommended Input Fuse		12'000 mA (slow blow) (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) - Load Variation (0 - 100%)	0.5% max. 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)
Capacitive Load		108'000 µF max.
Minimum Load		Not required
Temperature Coefficient		±0.03 %/K max.
Hold-up Time	- At 230 VAC - At 115 VAC	14 ms min. 14 ms min.
Start-up Time	- At 230 VAC	2'000 ms max.
Short Circuit Protection		Continuous, Automatic recovery
Output Current Limitation		105 - 135% of Iout max.
Overvoltage Protection		115 - 140% of Vout nom.
Load Share Function	- Refer to application note	www.tracopower.com/overview/txln960
Load Share Accuracy		10%

Safety Specifications

Standards	- IT / Multimedia Equipment - Certification Documents	EN 62368-1 IEC 62368-1 UL 62368-1 www.tracopower.com/overview/txln960
Protection Class		Class I (Prepared): Connection to PE
Pollution Degree		PD 2
Over Voltage Category		OVC II

EMC Specifications

EMI Emissions	- Conducted Emissions - Radiated Emissions - Harmonic Current Emissions - Voltage Fluctuations & Flicker	EN 55032 class B (internal filter) EN 55032 class B (internal filter) EN 61000-3-2, class D EN 61000-3-3
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All specifications valid at nominal voltage, resistive full load and +25°C after warm-up time, unless otherwise stated.

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
- RF Electromagnetic Field		EN 61000-4-3, 10 V/m, perf. criteria A
- EFT (Burst) / Surge		EN 61000-4-4, ±2 kV, perf. criteria A
	L to L:	EN 61000-4-5, ±2 kV, perf. criteria B
	L to PE:	EN 61000-4-5, ±4 kV, perf. criteria B
- Conducted RF Disturbances		EN 61000-4-6, 10 Vrms, perf. criteria A
- PF Magnetic Field	Continuous:	EN 61000-4-8, 30 A/m, perf. criteria A
	1 s:	EN 61000-4-8, 300 A/m, perf. criteria A
- Voltage Dips & Interruptions	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	- 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	Depending on model
		See application note: www.tracopower.com/overview/txln960
Over Temperature Protection Switch Off	- Protection Mode	90°C min. / 95°C typ. / 100°C max. (Automatic recovery)
Cooling System		Forced air cooling (with internal fan)
Fan Power Source	- Characteristic	Constant fan speed (continuous)
	- Output Voltage	12 VDC
	- Output Current	480 mA max. (6'800 RPM / 38 CFM)
Standby Power Source	- Output Voltage	12 VDC
	- Output Current	300 mA max.
Remote Control	- Voltage Controlled Remote	See application note: www.tracopower.com/overview/txln960
Altitude During Operation		4'000 m max.
Regulator Topology		Flyback Converter
Switching Frequency		55 - 65 kHz (PWM)
Insulation System		Reinforced Insulation
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 / 60Hz)	- Earth Leakage Current	1500 μA max.
Distance Through Isolation		6 mm
Reliability	- Calculated MTBF	84'100 h (MIL-HDBK-217F, ground benign)
Housing Material		Aluminum
Housing Type		Metal Case
Mounting Type		Chassis Mount
Connection Type		Screw Terminal
Weight		2'500 g
Power OK Signal	- Power OK	Voltage source output
	- Power Off	High level
		Low level
		(Refers to 'PG' and 'GND' Pin)
Status Indicator		Indicated by green LED

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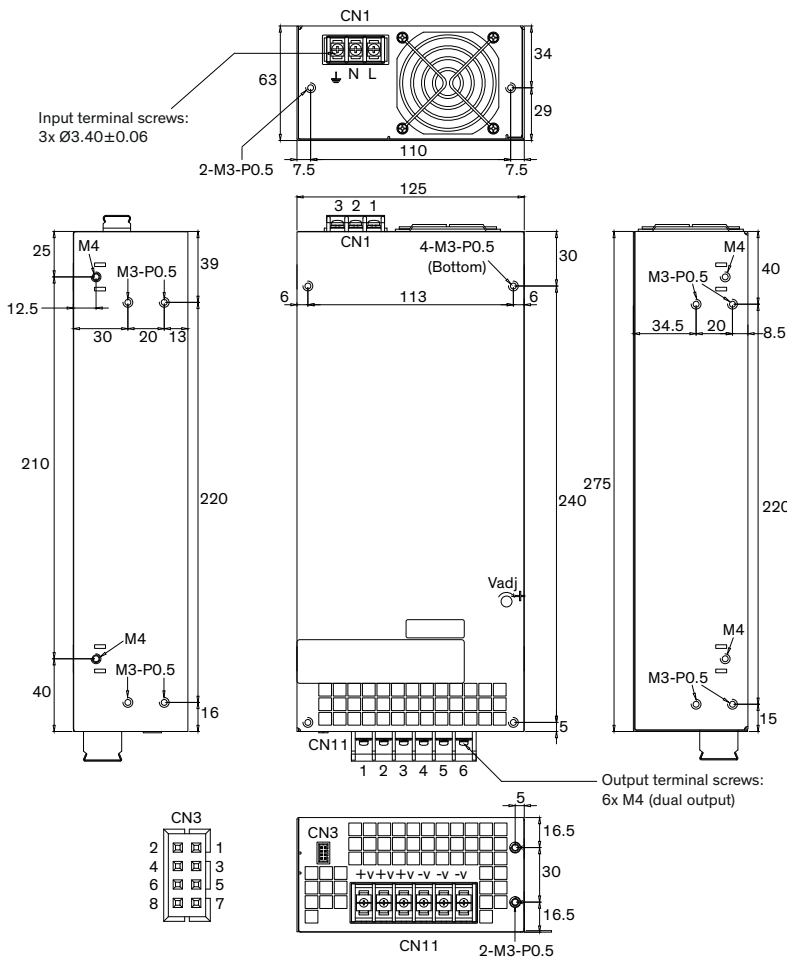
Sense Function	(to be done)
Environmental Compliance - REACH Declaration	www.tracopower.com/info/reach-declaration.pdf
	REACH SVHC list compliant
	REACH Annex XVII compliant
- RoHS Declaration	www.tracopower.com/info/rohs-declaration.pdf
	Exemptions: 7a, 7c-l
	(RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule))
- SCIP Reference Number	da352870-36d9-4f59-bf3b-c8691a73b195

Supporting Documents

Overview Link (for additional Documents)

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
Max. Terminal screw locked torque: 0.7 Nm

CN11:
6 pin, 11 mm pitch
Max. Terminal screw locked torque: 0.7 Nm

CN3 Housing Type:
HRS DF11-8DP-2DSA

CN3 Mating Housing:
HRS DF11-8DS-2C

CN3 Crimp Contact:
HRS DF11-EP22SCB

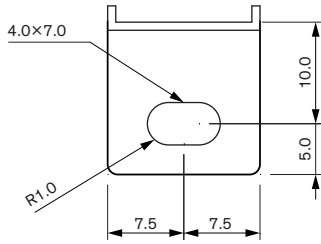
Dimensions in mm
 Tolerances:
 0-8: ±0.2
 8-25: ±0.3
 25-80: ±0.5
 80-250: ±0.8

Mounting screws
 Max. screw penetration depth: 3.0
 Max. screw locked torque M3: 0.8 Nm
 Max. screw locked torque M4: 1.6 Nm

Included in shipment:
 - 6x M3 mounting screw

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Mounting Bracket (included)



Dimensions in mm

- Included in shipment:
- 4x Mounting Bracket
 - 4x M4 mounting screw

