TRACO POWER

AC/DC Power Supply

TXLN 960 Series, 960 Watt

- **Compact metal case with screw terminal block**
- **Universal input 90-264 VAC**
- **High efficiency up to 89%**
- **Active PFC >0.95**
- **EMI/EMC compliance with EN 61000-6-3 and EN 61000-6-1**
- **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
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		www.tracopower.com/overview/txln960
Load Share Accuracy			10%

Safety Specifications

Safety Standards	- Certification Documents	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		EN 61000-6-3 (Generic Residential)
	- 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.

EMS Immunity			EN 55024 (IT Equipment)
	- 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	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)
Standby Power Source	- Output Voltage		12 VDC
	- Output Current		300 mA max. (Only for remote control)
Remote Control	- Voltage Controlled Remote	See application note:	www.tracopower.com/overview/txln960
Altitude During Operation			4'000 m max. (The ambient temperature has to be derated by 5 K / 1000 m when operated above 2000 m)
Switching Frequency			105 kHz typ. (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.
Leakage Current (at 264 VAC / 60Hz)	- Touch Current		1500 µA max.
Reliability	- Calculated MTBF		84'170 h
Housing Material			Aluminium
Connection Type			Screw Terminal
Weight			2500 g
Power OK Signal			Voltage source output
	- Power OK		High level
	- Power Off		Low level (Refers to 'PG' and 'GND' Pin)
Status Indicator			Indicated by green LED
Sense Function			
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: 6a, 6b, 6c, 7a, 7c-I, 7c-II

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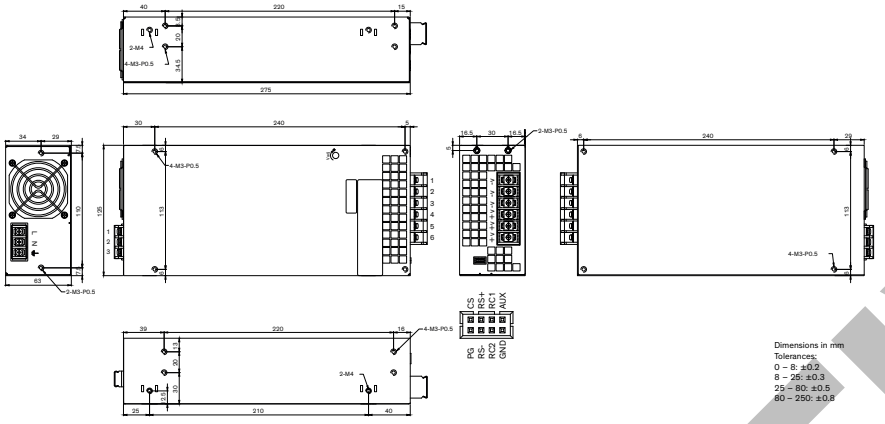
Supporting Documents

Overview Link (for additional Documents) www.tracopower.com/overview/txln960

Outline Dimensions



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

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

Auxiliary	
CN3	
Pin	Function
1	CS
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