

- Compact metal case with screw terminal block
- Universal input 90-264 VAC
- I/O reinforced isolation 3000 VAC
- Active power factor correction >0.9
- Internal EN 55032 class B filter
- High efficiency up to 93%
- Operating temperature range -30°C to 70+°C
- Short circuit, overvoltage and overload protection
Remote ON/OFF, Remote Sense function
- IEC/EN/UL 62368-1 safety approvals
- 3-year product warranty



UL 62368-1

The TXN 500 is a cost efficient, metal enclosed AC/DC power supplies series and is designed for industrial applications. With a low-profile metal case and screw terminal block connection, they are easy to install in any equipment. Active PFC (>0.9), internal EMC filter, high IO-isolation and wide temperature range qualify them for numerous industrial applications. All models within the TXN 500 series have universal input (90-264 VAC) and comply with the latest industrial standard IEC/EN/UL 62368-1, European EMC standards and the Low Voltage Directive (LVD).

Models

Order Code	Output Power max.	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TXN 500-112	500 W	12 VDC (10.8 - 13.2 VDC)	41'700 mA	90 %
TXN 500-115		15 VDC (13.5 - 16.5 VDC)	33'400 mA	90 %
TXN 500-124		24 VDC (21.6 - 26.4 VDC)	21'000 mA	92 %
TXN 500-148		48 VDC (43.2 - 50.4 VDC)	10'500 mA	93 %

Options

TXN-AUX2	- Optional Cable: www.tracopower.com/overview/txn-aux2
on demand (backorder with MOQ non stocking item)	- Optional model with 36 VDC and 13'800 mA

Input Specifications

Input Voltage	- AC Range	Operational Range: 90 - 264 VAC (Full Range) Rated Range: 100 - 240 VAC (Full Range)
	- DC Range	Operational Range: 140 - 340 VDC (Designed for, no certification) Polarity: +DC: L / -DC: N
Input Frequency		Operational Range: 47 - 63 Hz
		Certified: 50/60 Hz
Power Consumption	- No load & Vin = 230 VAC	621 mW max. (Ready to meet ErP directive)
	- No load & Vin = 115 VAC	655 mW max.
Input Current	- Full load & Vin = 230 VAC	2'700 mA max.
	- Full load & Vin = 115 VAC	5'700 mA max.
Input Inrush Current	- At 230 VAC	50 A max.
	- At 115 VAC	20 A max.
Power Factor	- At 230 VAC	0.9 min. (Active Power Factor Correction)
	- At 115 VAC	0.9 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% to +5% (48 Vout model) ±10% (other models) (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:	200 mVp-p typ. (w/ 0.1 µF 47 µF)
	15 VDC model:	250 mVp-p typ. (w/ 0.1 µF 47 µF)
	24 VDC model:	200 mVp-p typ. (w/ 0.1 µF 47 µF)
	36 VDC model:	320 mVp-p typ. (w/ 0.1 µF 47 µF)
	48 VDC model:	320 mVp-p typ. (w/ 0.1 µF 47 µF)
Minimum Load		Not required
Hold-up Time		6 ms min.
Start-up Time		1'000 ms max.
Short Circuit Protection		Continuous, Automatic recovery 110 - 150% of Iout nom.
Overvoltage Protection		115% typ. of Vout nom.

Safety Specifications

Standards	- IT / Multimedia Equipment	UL 62368-1
	- Certification Documents	www.tracopower.com/overview/txn500
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 A (internal filter)
		EN 55032 class B (internal filter)
	- Radiated Emissions	EN 55032 class A (internal filter)
		EN 55032 class B (internal filter)

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

EMS (Immunity)	- Electrostatic Discharge	Air: EN 61000-4-2, ± 4 kV, perf. criteria B
	- RF Electromagnetic Field	Contact: EN 61000-4-2, ± 8 kV, perf. criteria B
	- EFT (Burst) / Surge	EN 61000-4-3, 10 V/m, perf. criteria B
		EN 61000-4-4, ± 2 kV, perf. criteria B
	- Conducted RF Disturbances	L to L: EN 61000-4-5, ± 1 kV, perf. criteria B
	- Voltage Dips & Interruptions	L to PE: EN 61000-4-5, ± 2 kV, perf. criteria B
		230 VAC / 50 Hz: EN 61000-4-6, 10 Vrms, perf. criteria B
		EN 61000-4-11
		30%, 25 periods, perf. criteria C
		>95%, 0.5 periods, perf. criteria B
		>95%, 250 periods, perf. criteria C
EMC / Environmental	- Certification Documents	www.tracopower.com/overview/txn500

General Specifications		
Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature	-30°C to +70°C
	- Storage Temperature	-40°C to +80°C
Power Derating	- High Temperature	2.5 %/K above 50°C
	See application note:	www.tracopower.com/overview/txn500
Over Temperature Protection Switch Off	- Protection Mode	Automatic recovery
Cooling System		Forced air cooling (with internal fan)
Remote Control	- Voltage Controlled Remote (passive = on)	On: < 0.6 VDC or open circuit
		Off: 4 to 10 VDC
		Refers to '+Remote' and '-Remote' Pin
Altitude During Operation		2'000 m max.
Regulator Topology		LLC Converter
Switching Frequency		55 - 250 kHz (PFM)
Insulation System		Reinforced Insulation
Isolation Test Voltage	- Input to Output, 60 s	3'000 VAC
	- Input to Case or PE, 60 s	1'500 VAC
	- Output to Case or PE, 60 s	500 VAC
Isolation Resistance	- Input to Output, 500 VDC	100 M Ω min.
Leakage Current (at 240 VAC)	- Earth Leakage Current	3.5 mA max.
	- Touch Current	250 μ A max.
Reliability	- Calculated MTBF	142'600 h (MIL-HDBK-217F, ground benign)
Environment	- Vibration	2 g, 3 axis, 60 min, 10-500 Hz, 10 min/cycle
	- Mechanical Shock	20 g, 3 axis, 3 shocks
Housing Type		Metal Case
Mounting Type		Chassis Mount
Connection Type		Screw Terminal
Weight		970 g
Status Indicator		Indicated by green LED
Sense Function		(0.2 V max.)
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-I
		(RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule).)
	- SCIP Reference Number	0a2c409a-1ecc-4b12-91e4-43f960573514

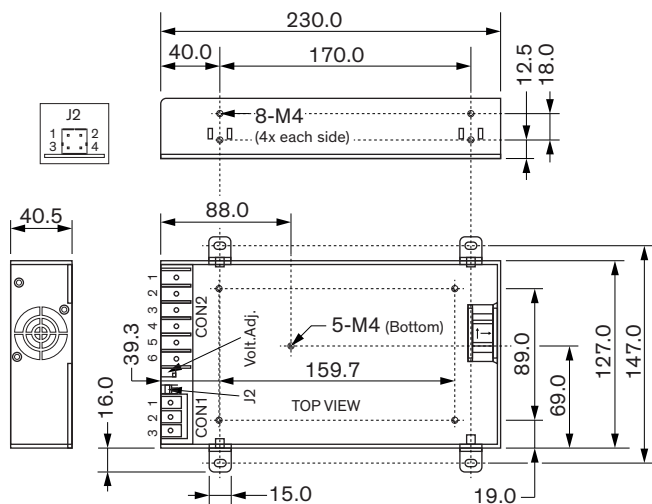
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Supporting Documents

Overview Link (for additional Documents)

www.tracopower.com/overview/txn500

Outline Dimensions

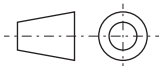


Dimensions in mm

Terminals screw tightening torque: Max. 1.2 Nm

Mounting screw tightening torque: Max. 0.8 Nm

Mounting screw penetration depth: Max. 3 mm



Pin connectors

Input (CON1)		Output (CON2)	
Pin	Function	Pin	Function
1	PE	1	+Vout
2	AC (N)	2	
3	AC (L)	3	
AUX (J2)		4	-Vout
1	-Sense	5	
2	+Sense	6	
3	-Remote		
4	+Remote		

Input: Screw terminal, M4×7

Wire gauge range: 22-12 AWG ($\pm 0.32-3.3\text{mm}^2$)

Output: Screw terminal, M4×7

Wire gauge range: 22-12 AWG ($\pm 0.32-3.3\text{mm}^2$)