

- 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 - No load & Vin = 115 VAC	621 mW max. (Ready to meet ErP directive) 655 mW max.
Input Current	- Full load & Vin = 230 VAC - Full load & Vin = 115 VAC	2'700 mA max. 5'700 mA max.
Input Inrush Current	- At 230 VAC - At 115 VAC	50 A max. 20 A max.
Power Factor	- At 230 VAC - At 115 VAC	0.9 min. (Active Power Factor Correction) 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) - Load Variation (0 - 100%)	0.5% max. 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)
Capacitive Load		12 VDC model: 42'300 µF max. 15 VDC model: 42'300 µF max. 24 VDC model: 19'800 µF max. 36 VDC model: 13'000 µF max. 48 VDC model: 6'100 µF max.
Minimum Load		Not required
Hold-up Time	- At 230 VAC	6 ms min.
Start-up Time	- At 230 VAC	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 - Certification Documents	UL 62368-1 www.tracopower.com/overview/txn500
Protection Class		Class I (Prepared): Connection to PE See application note: www.tracopower.com/info/protection-class.pdf
Pollution Degree		PD 2
Over Voltage Category		OVC II

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

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)
EMS (Immunity)		EN 61000-6-2 (Generic Industrial)
	- Electrostatic Discharge	Air: EN 61000-4-2, ±4 kV, perf. criteria B Contact: EN 61000-4-2, ±8 kV, perf. criteria B
	- RF Electromagnetic Field	EN 61000-4-3, 10 V/m, perf. criteria B
	- EFT (Burst) / Surge	EN 61000-4-4, ±2 kV, perf. criteria B L to L: EN 61000-4-5, ±1 kV, perf. criteria B L to PE: EN 61000-4-5, ±2 kV, perf. criteria B
	- Conducted RF Disturbances	EN 61000-4-6, 10 Vrms, perf. criteria B
	- 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
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	2'500 VDC
	- Output to Case or PE, 60 s	500 VAC
Isolation Resistance	- Input to Output, 500 VDC	100 MΩ min.
Leakage Current (at 240 VAC)	- Earth Leakage Current	3.5 mA max.
	- Touch Current	250 μA 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.)

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

Environmental Compliance - REACH Declaration

www.tracopower.com/info/reach-declaration.pdf

- RoHS Declaration

REACH SVHC list compliant

REACH Annex XVII compliant

www.tracopower.com/info/rohs-declaration.pdf

Exemptions: 7(a), 7(c)-I

(RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule))

- SCIP Reference Number

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Additional Information

Supporting Documents

www.tracopower.com/overview/txn500

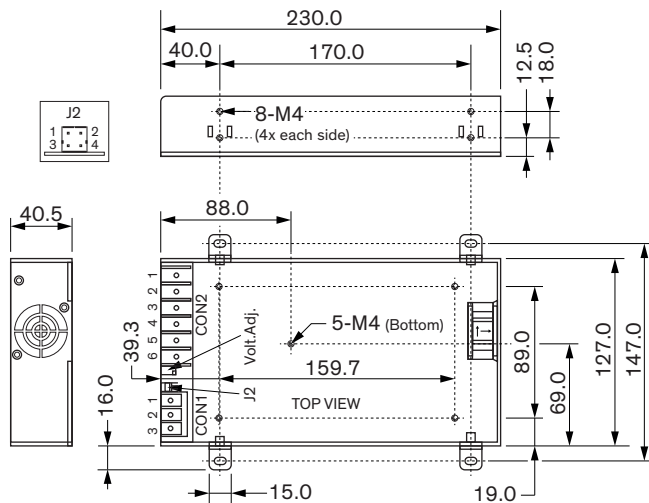
Frequently Asked Questions

www.tracopower.com/glossary-faq

Glossary

www.tracopower.com/info/glossary.pdf

Outline Dimensions

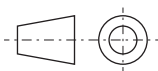


Dimensions in mm

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)			
1	-Sense	4	-Vout
2	+Sense	5	
3	-Remote	6	
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 ($\pm 0.32-3.3\text{mm}^2$)