

- 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 89%
- Operating temperature range -30°C to 70+°C
- Short circuit, overvoltage and overload protection
- IEC/EN/UL 62368-1 safety approvals
- 3-year product warranty



UL 62368-1 IEC 62368-1

The TXN 200 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 200 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 200-112	200 W	12 VDC (10.0 - 13.2 VDC)	16'600 mA	87 %
TXN 200-115		15 VDC (13.5 - 15.5 VDC)	13'300 mA	87 %
TXN 200-124		24 VDC (20.0 - 26.4 VDC)	8'300 mA	88 %
TXN 200-148		48 VDC (41.0 - 56.0 VDC)	4'200 mA	89 %

### Options

on demand (backorder with MOQ non stocking item)	- Optional model with 36 VDC and 5'500 mA
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### Input Specifications

Input Voltage	- AC Range	Operational Range: <b>90 - 264 VAC</b> (Full Range) Rated Range: <b>100 - 240 VAC</b> (Full Range)
	- DC Range	Operational Range: <b>140 - 340 VDC</b> (Designed for, no certification) Polarity: <b>+DC: L / -DC: N</b>
Input Frequency		Operational Range: <b>47 - 63 Hz</b> Certified: <b>50/60 Hz</b>
Power Consumption	- No load & Vin = 230 VAC	<b>6 W max.</b>
	- No load & Vin = 115 VAC	<b>6 W max.</b>
Input Current	- Full load & Vin = 230 VAC	<b>1.3 A max.</b>
	- Full load & Vin = 115 VAC	<b>3 A max.</b>
Input Inrush Current	- At 230 VAC	<b>60 A max.</b>
	- At 115 VAC	<b>30 A max.</b>
Power Factor	- At 230 VAC	<b>0.9 min.</b> (Active Power Factor Correction)
	- At 115 VAC	<b>0.95 min.</b> (Active Power Factor Correction)
Input Protection		<b>T 6.3 A / 250 VAC</b> (Internal Fuse in L)
Recommended Input Fuse		(The need of an external fuse has to be assessed in the final application.)

### Output Specifications

Output Voltage Adjustment		12 VDC model: <b>10.0 - 13.2 VDC</b>
		15 VDC model: <b>13.5 - 15.5 VDC</b>
		24 VDC model: <b>20.0 - 26.4 VDC</b>
		36 VDC model: <b>32.4 - 39.6 VDC</b>
		48 VDC model: <b>41.0 - 56.0 VDC</b> (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		<b>±1% max.</b>
Regulation	- Input Variation (Vmin - Vmax)	<b>0.5% max.</b>
	- Load Variation (10 - 90%)	<b>1% max.</b>
Ripple and Noise (20 MHz Bandwidth)	12 VDC model:	<b>150 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	15 VDC model:	<b>150 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	24 VDC model:	<b>150 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	36 VDC model:	<b>240 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	48 VDC model:	<b>240 mVp-p max.</b> (w/ 0.1 µF    47 µF)
Minimum Load		<b>Not required</b>
Temperature Coefficient		<b>±0.03 %/K max.</b>
Hold-up Time	- At 230 VAC	<b>8 ms min.</b>
	- At 115 VAC	<b>8 ms min.</b>
Start-up Time	- At 230 VAC	<b>1.5 s max.</b>
	- At 115 VAC	<b>1.5 s max.</b>
Short Circuit Protection		<b>Continuous, Automatic recovery</b>
Output Current Limitation		<b>110 - 160% of Iout max.</b>
Overvoltage Protection		<b>110 - 140% of Vout nom.</b>

### Safety Specifications

Standards	- IT / Multimedia Equipment	<b>EN 62368-1</b> <b>IEC 62368-1</b> <b>UL 62368-1</b>
	- Certification Documents	<a href="http://www.tracopower.com/overview/txn200">www.tracopower.com/overview/txn200</a>
Protection Class		<b>Class I (Prepared): Connection to PE</b>
Pollution Degree		<b>PD 2</b>
Over Voltage Category		<b>OVC II</b>

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 B (internal filter)
	- Radiated Emissions	EN 55032 class B (internal filter)
	- Harmonic Current Emissions	EN 61000-3-2, class A
	- Voltage Fluctuations & Flicker	EN 61000-3-3
EMS (Immunity)		EN 55035 (Multimedia)
	- Electrostatic Discharge	Air: EN 61000-4-2, $\pm 8$ kV, perf. criteria B Contact: EN 61000-4-2, $\pm 6$ kV, perf. criteria B
	- RF Electromagnetic Field	EN 61000-4-3, 10 V/m, perf. criteria A
	- EFT (Burst) / Surge	EN 61000-4-4, $\pm 2$ kV, perf. criteria A
		L to L: EN 61000-4-5, $\pm 1$ kV, perf. criteria B
		L to PE: EN 61000-4-5, $\pm 2$ kV, perf. criteria B
	- Conducted RF Disturbances	EN 61000-4-6, 10 Vrms, perf. criteria B
	- PF Magnetic Field	Continuous: EN 61000-4-8, 30 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
	EMC / Environmental	- Certification Documents

## 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 %/K above 50°C
	- Low Input Voltage	1 %/V below 110 VAC
		See application note: <a href="http://www.tracopower.com/overview/txn200">www.tracopower.com/overview/txn200</a>
Over Temperature Protection Switch Off	- Protection Mode	Automatic recovery
	- Measurement Point	Internal IC temperature
Cooling System		Natural convection (20 LFM)
Remote Control	- Voltage Controlled Remote (passive = on)	Off: 4 to 10 VDC Refers to '+Remote' and '-Remote' Pin
	- Remote Pin Input Current	On: < 0.6 VDC or open circuit or short circuit 0.5 to 2.5 mA
Altitude During Operation		5'000 m max.
Regulator Topology		Forward Converter
Switching Frequency		75 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	1'500 VAC
	- Output to Case or PE, 60 s	500 VAC
Isolation Resistance	- Input to Output, 500 VDC	10 M $\Omega$ min.
Leakage Current (at 240 VAC / 60 Hz)	- Earth Leakage Current	3.5 mA max.
Reliability	- Calculated MTBF	225'800 h (MIL-HDBK-217F, ground benign)
Washing Process		Not allowed
Environment	- Vibration	2 g, 3 axis, 60 min, 10-500 Hz, 10 min/cycle
	- Mechanical Shock	20 g, 3 axis, 3 shocks
Housing Material		Aluminum (Chassis)
Housing Type		Metal Case
Mounting Type		Chassis Mount
Connection Type		Screw Terminal
Weight		800 g
Status Indicator		Indicated by green LED
Sense Function		0.2% max. of Vout nom.

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

- RoHS Declaration

REACH SVHC list compliant

REACH Annex XVII compliant

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

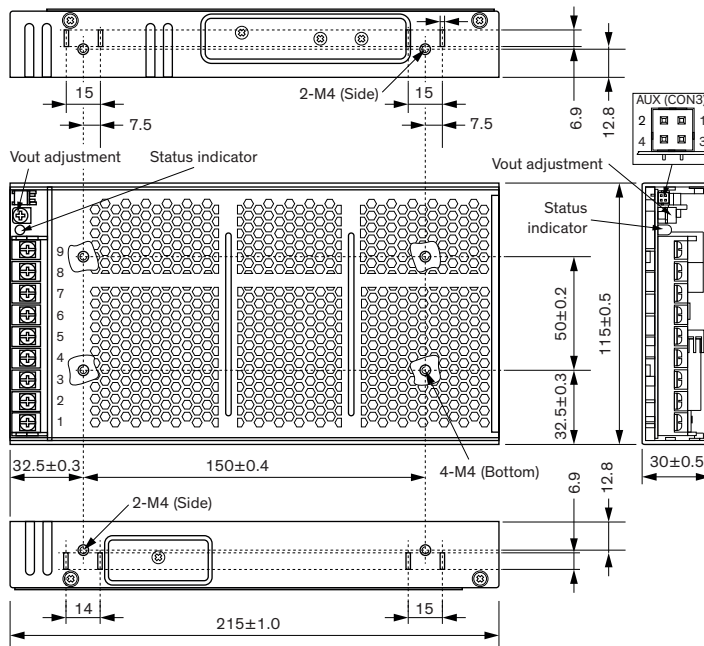
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### Supporting Documents

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

[www.tracopower.com/overview/txn200](http://www.tracopower.com/overview/txn200)

### Outline Dimensions



### Pin connectors

Input/Output		AUX	
Pin	Function	Pin	Function
1	AC (L)	1	+Remote
2	AC (N)	2	-Remote
3	PE	3	+Sense
4	-Vout	4	-Sense
5			
6	+Vout		
7			
8			
9			

**Input/Output:**

Wire dimension range: 22 - 12 AWG  
0.324 - 3.31 mm<sup>2</sup>

Dimensions in mm

Terminal screw tightening torque: Max. 1.2 Nm

Mounting screw tightening torque: Max. 0.8 Nm

Mounting screw penetration depth: Max. 4 mm

