

- 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



The TXN 350 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 350 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 350-112	325 W	12 VDC (10.0 - 13.2 VDC)	27'000 mA	86 %
TXN 350-115	330 W	15 VDC (13.5 - 15.5 VDC)	22'000 mA	87 %
TXN 350-124	350 W	24 VDC (20.0 - 26.4 VDC)	14'600 mA	88 %
TXN 350-148		48 VDC (41.0 - 56.0 VDC)	7'400 mA	89 %

Options	
TXN-AUX2	- Optional Cable: <a href="http://www.tracopower.com/overview/txn-aux2">www.tracopower.com/overview/txn-aux2</a>

### 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>2.2 A max.</b>
	- Full load & Vin = 115 VAC	<b>4.5 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>
		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)
	48 VDC model:	<b>240 mVp-p max.</b> (w/ 0.1 µF    47 µF)
Capacitive Load	12 VDC model:	<b>42'300 µF max.</b>
	15 VDC model:	<b>19'800 µF max.</b>
	24 VDC model:	<b>19'800 µF max.</b>
	48 VDC model:	<b>6'100 µF max.</b>
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/txn350-safety-cert">www.tracopower.com/txn350-safety-cert</a>
Protection Class		<b>Class I (Prepared): Connection to PE</b> See application note: <a href="http://www.tracopower.com/info/protection-class.pdf">www.tracopower.com/info/protection-class.pdf</a>
Energy Source	- Output, acc. to 62368-1	<b>ES1</b>

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

Power Source	- Output, acc. to 62368-1	PS3
Pollution Degree		PD 2
Over Voltage Category		OVC II

### 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)	- Electrostatic Discharge	EN 55035 (Multimedia) Air: EN 61000-4-2, $\pm 8$ kV, perf. criteria B Contact: EN 61000-4-2, $\pm 4$ 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	<a href="http://www.tracopower.com/txn350-emc-cert">www.tracopower.com/txn350-emc-cert</a>

### 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	2.0 %/K above 50°C
	- Low Input Voltage	1.0 %/V below 110 VAC
	See application note:	<a href="http://www.tracopower.com/txn350-cc">www.tracopower.com/txn350-cc</a>
Over Temperature Protection Switch Off	- Protection Mode	Automatic recovery
	- Measurement Point	Internal IC temperature
Cooling System		Forced air cooling (with internal fan)
Remote Control	- Voltage Controlled Remote (passive = on)	On: < 0.6 VDC or open circuit or short circuit Off: 4 to 10 VDC Refers to '+Remote' and '-Remote' Pin
	- Remote Pin Input Current	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	4'000 VDC
	- Input to Case or PE, 60 s	2'500 VDC
	- Output to Case or PE, 60 s	750 VDC
Isolation Resistance	- Input to Output, 500 VDC	100 M $\Omega$ min.
Leakage Current (at 240 VAC / 60 Hz)	- Earth Leakage Current	3.5 mA max.
Reliability	- Calculated MTBF	230'600 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

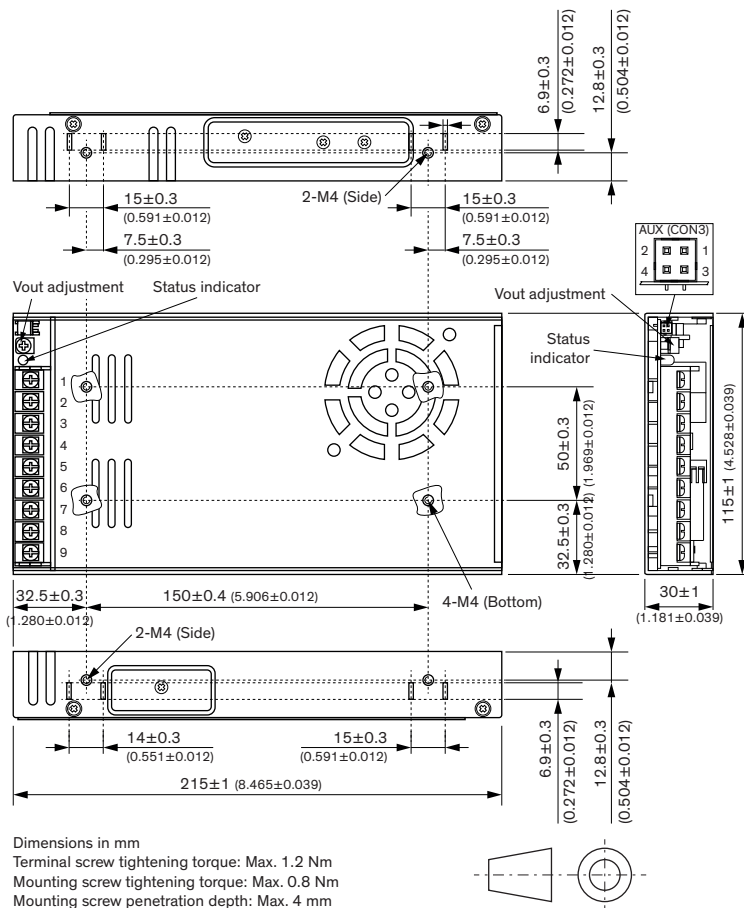
All specifications valid at 230 VAC, resistive full load and +25°C after warm-up time, unless otherwise stated.

Weight	800 g
Status Indicator	Indicated by green LED
Sense Function	(0.2 V max.)
Environmental Compliance	- REACH Declaration <a href="http://www.tracopower.com/info/reach-declaration.pdf">www.tracopower.com/info/reach-declaration.pdf</a> REACH SVHC list compliant REACH Annex XVII compliant - RoHS Declaration <a href="http://www.tracopower.com/info/rohs-declaration.pdf">www.tracopower.com/info/rohs-declaration.pdf</a> 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	<a href="http://www.tracopower.com/overview/txn350">www.tracopower.com/overview/txn350</a>
Frequently Asked Questions	<a href="http://www.tracopower.com/glossary-faq">www.tracopower.com/glossary-faq</a>
Glossary	<a href="http://www.tracopower.com/info/glossary.pdf">www.tracopower.com/info/glossary.pdf</a>

### Outline Dimensions



### Pin connectors

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

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