

- Compact metal case with screw terminal block
- Universal input 90-264 VAC
- High efficiency up to 86%
- Compliance to EN 61000-3-2
- Short circuit, overvoltage and overload protection
- IEC/EN/UL 62368-1 safety approvals
- 3-year product warranty



The new TXN line comprises a series of cost efficient, metal enclosed AC/DC power supplies 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. The TXN 50 power supplies are completely convection cooled. Internal EMC filter, high IO-isolation and wide temperature range qualify them for numerous industrial applications. These power supplies have universal input 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 50-103	33 W	3.3 VDC (2.9 - 3.6 VDC)	10'000 mA	84 %
TXN 50-105		5 VDC (4.5 - 5.5 VDC)	10'000 mA	83 %
TXN 50-112		12 VDC (10.8 - 13.2 VDC)	4'200 mA	85 %
TXN 50-115		15 VDC (13.5 - 16.5 VDC)	3'400 mA	85 %
TXN 50-124		24 VDC (21.6 - 26.4 VDC)	2'100 mA	85 %
TXN 50-148		48 VDC (44.16 - 51.84 VDC)	1'100 mA	86 %

Options	
on demand (backorder with MOQ non stocking item)	- Optional model with 36 VDC and 1'400 mA

### 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>1 W max.</b>
	- No load & Vin = 115 VAC	<b>1 W max.</b>
Input Current	- Full load & Vin = 230 VAC	<b>550 mA max.</b>
	- Full load & Vin = 115 VAC	<b>1 A max.</b>
Input Inrush Current	- At 230 VAC	<b>60 A max.</b>
	- At 115 VAC	<b>30 A max.</b>
Input Protection		<b>T 3.15 A / 250VAC</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		<b>±8%</b> (36 & 48 Vout output models) <b>±10%</b> (other output models) (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		<b>±2% max.</b> (3.3 & 5 Vout models) <b>±1% max.</b> (other models)
Regulation	- Input Variation (Vmin - Vmax)	<b>0.5% max.</b>
	- Load Variation (0 - 100%)	<b>2% max.</b> (3.3 & 5 Vout models) <b>1% max.</b> (other models)
Ripple and Noise (20 MHz Bandwidth)	3.3 VDC model:	<b>80 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	5 VDC model:	<b>100 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	12 VDC model:	<b>120 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	15 VDC model:	<b>120 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	24 VDC model:	<b>120 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	36 VDC model:	<b>200 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	48 VDC model:	<b>200 mVp-p max.</b> (w/ 0.1 µF    47 µF)
Capacitive Load	3.3 VDC model:	<b>62'100 µF max.</b>
	5 VDC model:	<b>19'800 µF max.</b>
	12 VDC model:	<b>12'100 µF max.</b>
	15 VDC model:	<b>6'100 µF max.</b>
	24 VDC model:	<b>2'000 µF max.</b>
	36 VDC model:	<b>1'100 µF max.</b>
	48 VDC model:	<b>200 µF max.</b>
Minimum Load		<b>Not required</b>
Temperature Coefficient		<b>±0.03 %/K max.</b>
Hold-up Time	- At 230 VAC	<b>20 ms min.</b>
	- At 115 VAC	<b>30 ms min.</b>
Start-up Time	- At 230 VAC	<b>2.5 s max.</b>
	- At 115 VAC	<b>700 ms max.</b>
Start-up Overshoot Voltage		<b>5% max.</b>
Short Circuit Protection		<b>Continuous, Automatic recovery</b>
Output Current Limitation		<b>110 - 160% of Iout max.</b>
Overvoltage Protection		<b>110 - 130% of Vout nom.</b>

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

## Safety Specifications

Standards	- IT / Multimedia Equipment	EN 62368-1 IEC 62368-1 UL 62368-1
	- Certification Documents	<a href="http://www.tracopower.com/overview/txn50">www.tracopower.com/overview/txn50</a>
Protection Class		Class I (Prepared): Connection to PE
	See application note:	<a href="http://www.tracopower.com/info/protection-class.pdf">www.tracopower.com/info/protection-class.pdf</a>
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 B	
	- EFT (Burst) / Surge	EN 61000-4-4, $\pm 2$ kV, perf. criteria B	
		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/overview/txn50">www.tracopower.com/overview/txn50</a>

## General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature	-30°C to +70°C
	- Storage Temperature	-30°C to +80°C
Power Derating	- High Temperature	2 %/K above 50°C (High Temperature) 2.0 %/K below -25°C (Low Temperature)
	- Low Input Voltage	2 %/V below 100 VAC
	See application note:	<a href="http://www.tracopower.com/overview/txn50">www.tracopower.com/overview/txn50</a>
Cooling System		Natural convection (20 LFM)
Altitude During Operation		5'000 m max.
Regulator Topology		Flyback Converter
Switching Frequency		65 kHz typ. (PWM)
Insulation System		Reinforced Insulation
Working Voltage (rated)		540 VAC
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	750 VDC
Creepage	- Input to Output	7.3 mm min.
	- Input to Case or PE	3.2 mm min.
	- Output to Case or PE	2 mm min.
Clearance	- Input to Output	6.1 mm min.
	- Input to Case or PE	3.2 mm min.
	- Output to Case or PE	2 mm min.
Isolation Resistance	- Input to Output, 500 VDC	100 M $\Omega$ min.
Isolation Capacitance	- Input to Output, 100 kHz, 1 V	1'000 pF max.

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Leakage Current (at 240 VAC / 60 Hz)	- Earth Leakage Current	750 $\mu$ A max.
Reliability	- Calculated MTBF	454'000 h (MIL-HDBK-217F, ground benign)
Washing Process		Not allowed
Environment	- Vibration - Mechanical Shock	2 g, 3 axis, 60 min, 10-500 Hz, 10 min/cycle 20 g, 3 axis, 3 shocks
Case Ingress Protection		IP 20 (acc. IEC 60529)
Housing Material		Aluminum (Chassis)
Housing Type		Metal Case
Mounting Type		Chassis Mount
Connection Type		Screw Terminal
Weight		200 g
Status Indicator		Indicated by green LED
Environmental Compliance	- REACH Declaration  - RoHS Declaration  - SCIP Reference Number	<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 <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.)) d043d24d-bd1f-4022-8bcb-23643dd4338a

### Additional Information

Supporting Documents	<a href="http://www.tracopower.com/overview/txn50">www.tracopower.com/overview/txn50</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>

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