

- 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 (44.0 - 52.0 VDC)	1'100 mA	86 %
		50 W		

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)	
Minimum Load		Not required
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		Continuous, Automatic recovery
Output Current Limitation		<b>110 - 160%</b> of Iout max.
Overvoltage Protection		<b>110 - 130%</b> of Vout nom.

### 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/txn50">www.tracopower.com/overview/txn50</a>
Protection Class		<b>Class I</b> (Prepared): <b>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)	- Electrostatic Discharge	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	
	- Conducted RF Disturbances	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	
	- PF Magnetic Field	EN 61000-4-6, 10 Vrms, perf. criteria B	
	- Voltage Dips & Interruptions	Continuous: EN 61000-4-8, 30 A/m, perf. criteria A 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	1'500 VAC
	- Output to Case or PE, 60 s	500 VAC
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.
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	2 g, 3 axis, 60 min, 10-500 Hz, 10 min/cycle
	- Mechanical Shock	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

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

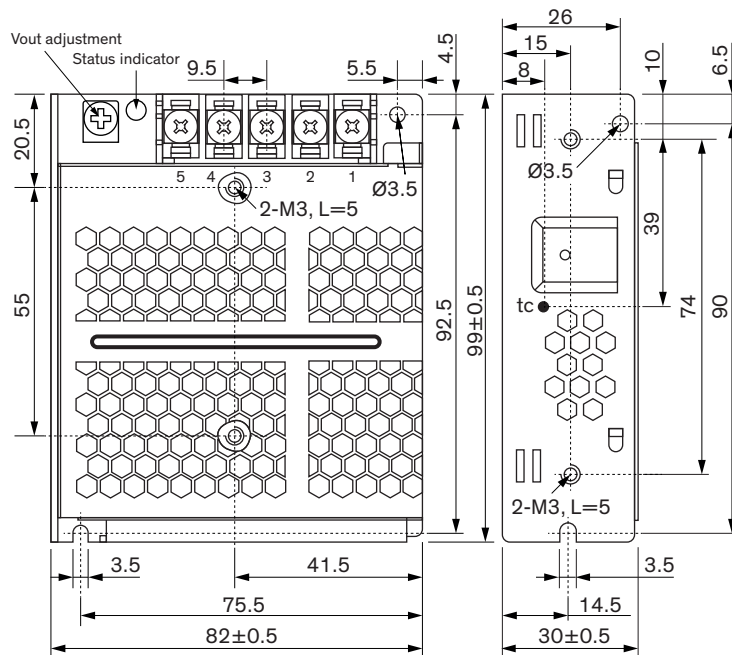
Connection Type	Screw Terminal
Weight	200 g
Status Indicator	Indicated by green LED
Environmental Compliance	- REACH Declaration <a href="http://www.tracopower.com/info/reach-declaration.pdf">www.tracopower.com/info/reach-declaration.pdf</a> REACH SVHC list compliant REACH Annex XVII compliant - RoHS Declaration <a href="http://www.tracopower.com/info/rohs-declaration.pdf">www.tracopower.com/info/rohs-declaration.pdf</a> Exemptions: 7a, 7c-l (RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule.)) - SCIP Reference Number
	d043d24d-bd1f-4022-8bcb-23643dd4338a

### Supporting Documents

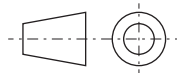
Overview Link (for additional Documents)

[www.tracopower.com/overview/txn50](http://www.tracopower.com/overview/txn50)

### Outline Dimensions



Dimensions in mm  
 Terminal screw tightening torque: Max. 1.0 Nm  
 Mounting screw tightening torque: Max. 0.8 Nm  
 Mounting screw penetration depth: Max. 3 mm  
 Mounting screw length: Max. 5 mm



### Pinout

Pin	Function
1	AC (L)
2	AC (N)
3	PE
4	-Vout
5	+Vout

**Wiring:** Conductor cross section 0.5 .. 3 mm<sup>2</sup>