

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

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	www.tracopower.com/txn50-safety-cert
Protection Class	See application note:	Class I (Prepared): Connection to PE www.tracopower.com/info/protection-class.pdf
Pollution Degree		PD 2
Over Voltage Category		OVC II

EMC Specifications

EMI (Emissions)	- Conducted Emissions - Radiated Emissions - Harmonic Current Emissions - Voltage Fluctuations & Flicker	EN 55032 class B (internal filter) EN 55032 class B (internal filter) EN 61000-3-2, class A EN 61000-3-3
EMS (Immunity)	- Electrostatic Discharge - RF Electromagnetic Field - EFT (Burst) / Surge - Conducted RF Disturbances - PF Magnetic Field - Voltage Dips & Interruptions	EN 55035 (Multimedia) Air: EN 61000-4-2, ± 8 kV, perf. criteria B Contact: EN 61000-4-2, ± 4 kV, perf. criteria B EN 61000-4-3, 10 V/m, perf. criteria B 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 EN 61000-4-6, 10 Vrms, perf. criteria B 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	www.tracopower.com/txn50-emc-cert

General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature - Storage Temperature	-30°C to +70°C -30°C to +80°C
Power Derating	- High Temperature - Low Input Voltage	2 %/K above 50°C (High Temperature) 2.0 %/K below -25°C (Low Temperature) 2 %/V below 100 VAC
	See application note:	www.tracopower.com/txn50-cc
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 - Input to Case or PE, 60 s - Output to Case or PE, 60 s	4'000 VDC 2'500 VDC 750 VDC
Creepage	- Input to Output - Input to Case or PE - Output to Case or PE	7.3 mm min. 3.2 mm min. 2 mm min.
Clearance	- Input to Output - Input to Case or PE - Output to Case or PE	6.1 mm min. 3.2 mm min. 2 mm min.
Isolation Resistance	- Input to Output, 500 VDC	100 M Ω min.
Isolation Capacitance	- Input to Output, 100 kHz, 1 V	1'000 pF max.

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

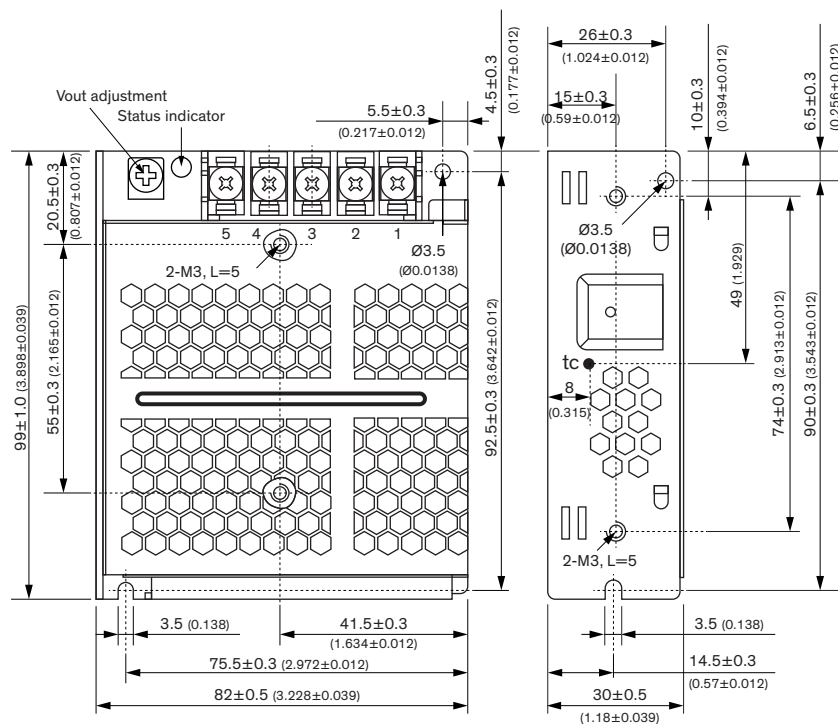
Leakage Current (at 240 VAC / 60 Hz)	- Earth Leakage Current	750 µA max.
Reliability	- Calculated MTBF	454'000 h (MIL-HDBK-217F, ground benign)
Washing Process		Not allowed
Environment	- Vibration - Mechanical Shock	2 g, 3 axis, 60 min, 10-500 Hz, 10 min/cycle 20 g, 3 axis, 3 shocks
Case Ingress Protection		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	www.tracopower.com/info/reach-declaration.pdf 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).) d043d24d-bd1f-4022-8bcb-23643dd4338a

Additional Information

Supporting Documents	www.tracopower.com/overview/txn50
Frequently Asked Questions	www.tracopower.com/glossary-faq
Glossary	www.tracopower.com/info/glossary.pdf

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Outline Dimensions



Dimensions in mm (inch)

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 mm²