

- Compact metal case with screw terminal block
- Universal input 90-264 VAC
- I/O reinforced isolation 3000 VAC
- Internal EN 55032 class B filter
- High efficiency up to 86%
- Operating temperature range -30°C to 70+°C
- Compliance to EN 61000-3-2
- Short circuit, overvoltage and overload protection
- IEC/EN/UL 62368-1 safety approvals
- 3-year product warranty



The TXN 25 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. The TXN 25 power supplies are completely convection cooled and internal EMC filter, high IO-isolation and wide temperature range qualify them for numerous industrial applications. All models within the TXN 25 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 25-103	16 W	3.3 VDC (3.036 - 3.564 VDC)	5'000 mA	75 %
TXN 25-105	20 W	5 VDC (4.6 - 5.4 VDC)	5'000 mA	80 %
TXN 25-112	25 W	12 VDC (11.04 - 12.96 VDC)	2'100 mA	82 %
TXN 25-115		15 VDC (13.8 - 16.2 VDC)	1'700 mA	84 %
TXN 25-124		24 VDC (22.08 - 25.92 VDC)	1'100 mA	86 %
TXN 25-148		48 VDC (44.16 - 51.84 VDC)	570 mA	86 %

### 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>1'000 mW max.</b>
	- No load & Vin = 115 VAC	<b>1'000 mW max.</b>
Input Current	- Full load & Vin = 230 VAC	<b>330 mA max.</b>
	- Full load & Vin = 115 VAC	<b>650 mA max.</b>
Input Inrush Current	- At 230 VAC	<b>70 A max.</b>
	- At 115 VAC	<b>30 A max.</b>
Power Factor	- At 230 VAC	<b>0.5 min.</b>
	- At 115 VAC	<b>0.5 min.</b>
Input Protection		<b>T 3.15 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		<b>±8%</b> (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		<b>±3% max.</b>
Regulation	- Input Variation (Vmin - Vmax)	<b>0.5% max.</b>
	- Load Variation (10 - 90%)	<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 typ.</b> (w/ 0.1 µF    47 µF)
	5 VDC model:	<b>80 mVp-p typ.</b> (w/ 0.1 µF    47 µF)
	12 VDC model:	<b>120 mVp-p typ.</b> (w/ 0.1 µF    47 µF)
	15 VDC model:	<b>120 mVp-p typ.</b> (w/ 0.1 µF    47 µF)
	24 VDC model:	<b>120 mVp-p typ.</b> (w/ 0.1 µF    47 µF)
	48 VDC model:	<b>200 mVp-p typ.</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>20 ms min.</b>
	- At 115 VAC	<b>20 ms min.</b>
Start-up Time	- At 230 VAC	<b>2'000 ms max.</b>
	- At 115 VAC	<b>2'000 ms max.</b>
Short Circuit Protection		<b>Automatic recovery</b>
Output Current Limitation		<b>110 - 160% of Iout max.</b>
Oversoltage Protection		<b>110 - 140% of Vout nom.</b>
Transient Response	- Response Deviation	<b>4% typ. / 5% max.</b> (50% to 100% Load Step)
	- Response Time	<b>300 µs typ. / 500 µs max.</b> (50% to 100% Load Step)

### 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/txn25">www.tracopower.com/overview/txn25</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

<b>EMI (Emissions)</b>	- 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	
<b>EMS (Immunity)</b>	- Electrostatic Discharge	Air: EN 61000-4-2, ±8 kV, perf. criteria B Contact: EN 61000-4-2, ±6 kV, perf. criteria B	
	- RF Electromagnetic Field	EN 61000-4-3, 10 V/m, perf. criteria B	
	- EFT (Burst) / Surge	EN 61000-4-4, ±2 kV, perf. criteria B	
	- Conducted RF Disturbances	L to L: EN 61000-4-5, ±1 kV, perf. criteria B	
	- PF Magnetic Field	L to PE: EN 61000-4-5, ±2 kV, perf. criteria B	
	- Voltage Dips & Interruptions	EN 61000-4-6, 10 V <sub>rms</sub> , perf. criteria A Continuous: EN 61000-4-8, 30 A/m, perf. criteria A 230 VAC / 50 Hz: EN 61000-4-11 30%, 25 periods, perf. criteria B >95%, 0.5 periods, perf. criteria C >95%, 250 periods, perf. criteria B	
	<b>EMC / Environmental</b>	- Certification Documents	<a href="http://www.tracopower.com/overview/txn25">www.tracopower.com/overview/txn25</a>

## General Specifications

<b>Relative Humidity</b>		95% max. (non condensing)
<b>Temperature Ranges</b>	- Operating Temperature	-30°C to +70°C
	- Storage Temperature	-30°C to +80°C
<b>Power Derating</b>	- High Temperature	Depending on model
	- Low Input Voltage	Depending on model
		See application note: <a href="http://www.tracopower.com/overview/txn25">www.tracopower.com/overview/txn25</a>
<b>Cooling System</b>		Natural convection (20 LFM)
<b>Altitude During Operation</b>		5'000 m max.
<b>Regulator Topology</b>		Flyback Converter
<b>Switching Frequency</b>		62 - 68 kHz (PWM)
		65 kHz typ. (PWM)
<b>Insulation System</b>		Reinforced Insulation
<b>Working Voltage (rated)</b>		248 VAC
<b>Isolation Test Voltage</b>	- 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
<b>Creepage</b>	- Input to Output	7.3 mm min.
	- Input to Case or PE	3.2 mm min.
	- Output to Case or PE	2 mm min.
<b>Clearance</b>	- Input to Output	6.1 mm min.
	- Input to Case or PE	3.2 mm min.
	- Output to Case or PE	1 mm min.
<b>Isolation Resistance</b>	- Input to Output, 500 VDC	100 MΩ min.
<b>Isolation Capacitance</b>	- Input to Output, 100 kHz, 1 V	2'200 pF typ.
<b>Leakage Current</b>	- Earth Leakage Current	1000 μA max.
<b>Distance Through Isolation</b>		7.2 mm
<b>Reliability</b>	- Calculated MTBF	875'000 h (MIL-HDBK-217F, ground benign)
<b>Washing Process</b>		Not allowed
<b>Environment</b>	- Vibration	2 g, 3 axis, 60 min, 10-500 Hz, 10 min/cycle
	- Mechanical Shock	20 g, 3 axis, 3 shocks
	- Thermal Shock	MIL-STD-810F
<b>Case Ingress Protection</b>		IP 20 (acc. IEC 60529)
<b>Housing Material</b>		Metal Aluminum (Chassis)

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

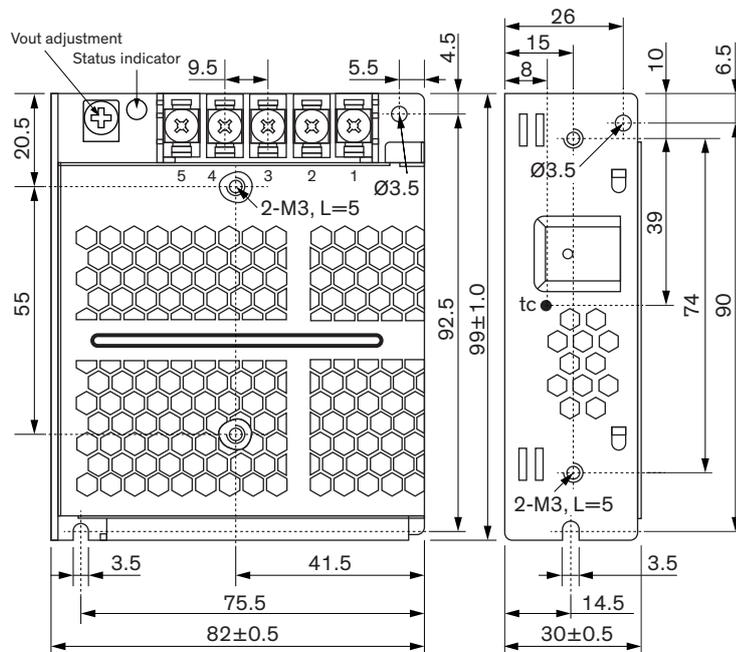
Housing Type	Metal Case
Mounting Type	Chassis Mount
Connection Type	Screw Terminal
Weight	190 g
Status Indicator	Indicated by green LED
Environmental Compliance	- REACH Declaration <a href="http://www.tracopower.com/info/reach-declaration.pdf">www.tracopower.com/info/reach-declaration.pdf</a> REACH Annex 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.) 8ffd0e36-8b57-428e-bd95-965cf921bb78
	- SCIP Reference Number

### Supporting Documents

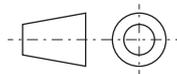
Overview Link (for additional Documents)

[www.tracopower.com/overview/txn25](http://www.tracopower.com/overview/txn25)

### 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>

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