

- 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 90%
- Operating temperature range -30°C to +70°C
- Short circuit, overvoltage and overload protection
- Remote ON/OFF function
- IEC/EN/UL 62368-1 safety approvals
- 3-year product warranty



The TXN 150 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 150 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 150-105	150 W	5 VDC (4.75 - 5.5 VDC)	30'000 mA	86 %
TXN 150-112		12 VDC (10.2 - 13.2 VDC)	12'500 mA	88 %
TXN 150-115		15 VDC (14.25 - 16.5 VDC)	10'000 mA	89 %
TXN 150-124		24 VDC (21.6 - 26.4 VDC)	6'300 mA	89 %
TXN 150-148		48 VDC (43.2 - 52.8 VDC)	3'200 mA	90 %

Options	
TXN-AUX1	- Optional Cable: <a href="http://www.tracopower.com/overview/txn-aux1">www.tracopower.com/overview/txn-aux1</a>
on demand (backorder with MOQ non stocking item)	- Optional model with 36 VDC and 4'200 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>4'000 mW max.</b>
	- No load & Vin = 115 VAC	<b>4'000 mW max.</b>
Input Current	- Full load & Vin = 230 VAC	<b>1'000 mA max.</b>
	- Full load & Vin = 115 VAC	<b>2'000 mA 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 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		-15% to +10% (12 Vout) -5% to +10% (5 / 15 Vout) ±10% (24 / 36 / 48 Vout) (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		±2% max.
Regulation	- Input Variation (Vmin - Vmax)	<b>0.5% max.</b>
	- Load Variation (10 - 90%)	<b>1% max.</b>
Ripple and Noise (20 MHz Bandwidth)	5 VDC model:	<b>100 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	12 VDC model:	<b>100 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	15 VDC model:	<b>100 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	24 VDC model:	<b>100 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	36 VDC model:	<b>150 mVp-p max.</b> (w/ 0.1 µF    47 µF)
	48 VDC model:	<b>250 mVp-p max.</b> (w/ 0.1 µF    47 µF)
Capacitive Load	5 VDC model:	<b>62'100 µF max.</b>
	12 VDC model:	<b>62'100 µF max.</b>
	15 VDC model:	<b>19'800 µF max.</b>
	24 VDC model:	<b>19'800 µF max.</b>
	36 VDC model:	<b>13'000 µF max.</b>
	48 VDC model:	<b>6'100 µF max.</b>
Minimum Load		<b>Not required</b>
Temperature Coefficient		±0.03 %/K max.
Hold-up Time	- At 230 VAC	<b>16 ms min.</b>
	- At 115 VAC	<b>16 ms min.</b>
Start-up Time	- At 230 VAC	<b>1'000 ms max.</b>
	- At 115 VAC	<b>1'000 ms max.</b>
Short Circuit Protection		<b>Automatic recovery</b>
Output Current Limitation		<b>105 - 135% of Iout max.</b>
Overvoltage Protection		<b>110 - 135% of Vout nom.</b>
Transient Response	- Response Deviation	<b>3% typ. / 5% max.</b> (50% to 100% Load Step)

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/txn150">www.tracopower.com/overview/txn150</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 55011 class B (with external filter)
		External filter proposal: <a href="http://www.tracopower.com/overview/txn150">www.tracopower.com/overview/txn150</a>
	- Harmonic Current Emissions	EN 61000-3-2, class A
	- Voltage Fluctuations & Flicker	EN 61000-3-3
EMS (Immunity)		EN 55035 (Multimedia)
	- Electrostatic Discharge	Air: EN 61000-4-2, $\pm 4$ 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 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 A
	- 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
EMC / Environmental	- Certification Documents	<a href="http://www.tracopower.com/overview/txn150">www.tracopower.com/overview/txn150</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	Depending on model
	- Low Input Voltage	Depending on model
	See application note:	<a href="http://www.tracopower.com/overview/txn150">www.tracopower.com/overview/txn150</a>
Over Temperature Protection Switch Off	- Protection Mode	110°C typ. (Automatic recovery at 75°C typ.)
	- Measurement Point	Transformer
Cooling System		Natural convection (20 LFM)
Remote Control	- Voltage Controlled Remote (passive = on)	On: < 1.0 VDC or open circuit or short circuit Off: 4 to 10 VDC
		Refers to '+Remote' and '-Remote' Pin
	- Off Idle Input Current	10 mA max.
	- Remote Pin Input Current	0.5 to 2.5 mA
Altitude During Operation		5'000 m max.
Regulator Topology		Forward Converter
Switching Frequency		58 - 71 kHz (PWM)
		65 kHz typ. (PWM)
Insulation System		Reinforced Insulation
Working Voltage (rated)		248 VAC
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
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.

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

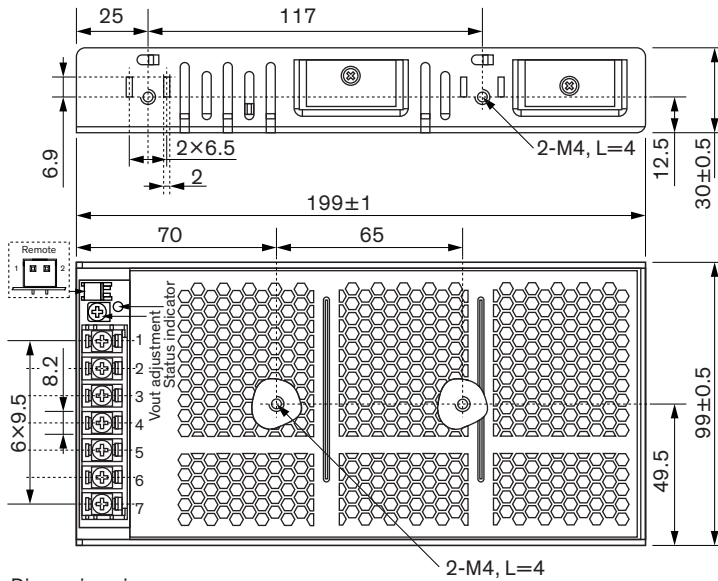
Clearance	- Input to Output	7.3 mm min.
	- Input to Case or PE	3.2 mm min.
	- Output to Case or PE	2 mm min.
Isolation Resistance	- Input to Output, 500 VDC	100 MΩ min.
Isolation Capacitance	- Input to Output, 100 kHz, 1 V	2'200 pF typ.
Leakage Current	- Earth Leakage Current	1000 µA max.
	- Touch Current	2000 µA max.
Distance Through Isolation		6.5 mm
Reliability	- Calculated MTBF	281'000 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		Metal Aluminum (Chassis)
Housing Type		Metal Case
Mounting Type		Chassis Mount
Connection Type		Screw Terminal
Weight		600 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: 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	cf584cc0-5be0-4e36-a406-9f8667f8dd25

### Additional Information

Supporting Documents	<a href="http://www.tracopower.com/overview/txn150">www.tracopower.com/overview/txn150</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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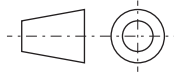
### Outline Dimensions



Dimensions in mm

Mounting screw tightening torque: Max. 0.8 Nm

Mounting screw penetration depth: Max. 3 mm



### Pin connectors

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

**Input/Output:** Screw terminal, M4×7

Terminal screw tightening torque: Max. 1.2 Nm