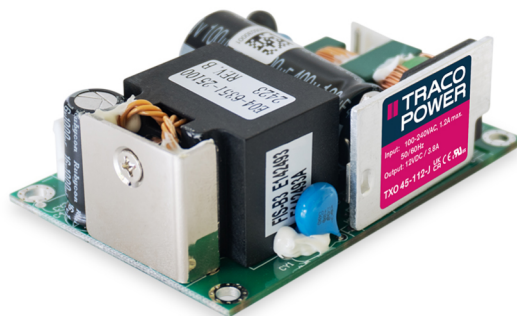


- Compact open frame power supply with pin connectors
- Universal input range 85 to 264 VAC
- Convection cooled (no-fan)
- Operating temperature range: -20°C to +70°C
- Internal EN55032 class B filter
- Short circuit, overvoltage and overload protection
- IEC/EN/UL 62368-1 safety approvals
- Compliance to EN 61000-3-2
- 3-year product warranty



UL 62368-1 IEC 62368-1

The TXO 45 is a compact 45 Watt AC/DC open frame module with reinforced I/O isolation designed for a wide range of cost sensitive applications. Excellent temperature behaviour allows full load operation from -20°C to +50°C while going up to +70°C with derating. The TXO 45 series features short circuit protection, over current limitation and overvoltage protection and complies with European EMC standards and the Low Voltage Directive (LVD).

Models

Order Code	Output Power max.	Output Voltage nom.	Output Current max.	Efficiency typ.
TXO 45-112-J	45 W	12 VDC	3'800 mA	85 %
TXO 45-115-J		15 VDC	3'000 mA	85 %
TXO 45-124-J		24 VDC	1'900 mA	85 %
TXO 45-148-J		48 VDC	940 mA	85 %

Options

TCI 130-DC	- Optional Cable: www.tracopower.com/overview/tci130-dc
TCI-AC1	- Optional Cable: www.tracopower.com/overview/tci-ac1
on demand (backorder with MOQ non stocking item)	- Optional model with 36 VDC and 1'250 mA - Optional model with 56 VDC and 800 mA

Input Specifications

Input Voltage	- AC Range	Operational Range: 85 - 264 VAC (Full Range) Rated Range: 100 - 240 VAC (Full Range)
	- DC Range	Operational Range: 120 - 370 VDC (Designed for, no certification) Polarity: irrelevant
Input Frequency		Operational Range: 47 - 63 Hz Certified: 50/60 Hz
Power Consumption	- No load & Vin = 230 VAC	100 mW max. (Ready to meet ErP directive)
	- No load & Vin = 115 VAC	100 mW max.
Input Current	- Full load & Vin = 230 VAC	600 mA max.
	- Full load & Vin = 115 VAC	950 mA max.
Input Inrush Current	- At 230 VAC	80 A max.
	- At 115 VAC	40 A max.
Input Protection		T 3.15 A / 250 VAC (Internal Fuse in L)
Recommended Input Fuse		3'150 mA (slow blow) (The need of an external fuse has to be assessed in the final application.)

Output Specifications

Voltage Set Accuracy		±2% max.
Regulation	- Input Variation (Vmin - Vmax)	0.5% max.
	- Load Variation (10 - 100%)	3% max.
Ripple and Noise (20 MHz Bandwidth)	12 VDC model:	120 mVp-p typ. (w/ 10 µF Alu 0.1 µF MLCC)
	15 VDC model:	150 mVp-p typ. (w/ 10 µF Alu 0.1 µF MLCC)
	24 VDC model:	240 mVp-p typ. (w/ 10 µF Alu 0.1 µF MLCC)
	36 VDC model:	360 mVp-p typ. (w/ 10 µF Alu 0.1 µF MLCC)
	48 VDC model:	480 mVp-p typ. (w/ 10 µF Alu 0.1 µF MLCC)
	56 VDC model:	560 mVp-p typ. (w/ 10 µF Alu 0.1 µF MLCC)
Capacitive Load	12 VDC model:	3'500 µF max.
	15 VDC model:	2'500 µF max.
	24 VDC model:	1'350 µF max.
	36 VDC model:	800 µF max.
	48 VDC model:	380 µF max.
	56 VDC model:	270 µF max.
Minimum Load		Not required
Temperature Coefficient		±3 %/K max.
Hold-up Time	- At 230 VAC	60 ms min.
	- At 115 VAC	16 ms min.
Start-up Time	- At 230 VAC	1.5 s max.
	- At 115 VAC	3 s max.
Short Circuit Protection		Continuous, Automatic recovery
Output Current Limitation		110 - 200% of Iout max.
Overvoltage Protection		110 - 170% of Vout nom. (Latch mode)
Transient Response	- Response Deviation	3% typ. / 5% max. (50% to 75% Load Step)
	- Response Time	1 ms typ. / 1.5 ms max. (50% to 75% Load Step)

Safety Specifications

Standards	- IT / Multimedia Equipment	EN 62368-1 IEC 62368-1 UL 62368-1
	- Certification Documents	www.tracopower.com/txo45-safety-cert
Protection Class		Class I & II (Prepared): Reinforced Insulation See application note: www.tracopower.com/overview/txo45

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

Pollution Degree	PD 2
Over Voltage Category	OVC II

EMC Specifications

EMI (Emissions)	- Conducted Emissions	EN 55032 class A (internal filter) EN 55032 class B (internal filter) FCC 47 Part 15 class A (internal filter) FCC 47 Part 15 class B (internal filter)
	- Radiated Emissions	EN 55032 class A (internal filter) EN 55032 class B (internal filter) FCC 47 Part 15 class A (internal filter) FCC 47 Part 15 class B (internal filter)
	- Harmonic Current Emissions - Voltage Fluctuations & Flicker	EN 61000-3-2, class A EN 61000-3-3
EMS (Immunity)	- Electrostatic Discharge	EN 55035 (Multimedia) Air: EN 61000-4-2, ± 8 kV, perf. criteria A Contact: EN 61000-4-2, ± 4 kV, perf. criteria A EN 61000-4-3, 3 V/m, perf. criteria A EN 61000-4-4, ± 1 kV, perf. criteria A
	- RF Electromagnetic Field - EFT (Burst) / Surge	L to L: EN 61000-4-5, ± 1 kV, perf. criteria A EN 61000-4-6, 3 Vrms, perf. criteria A
	- Conducted RF Disturbances - PF Magnetic Field	Continuous: EN 61000-4-8, 1 A/m, perf. criteria A 230 VAC / 50 Hz: EN 61000-4-11
	- Voltage Dips & Interruptions	30%, 25 periods, perf. criteria A >95%, 0.5 periods, perf. criteria A >95%, 250 periods, perf. criteria B
EMC / Environmental	- Certification Documents	www.tracopower.com/txo45-emc-cert

General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature	-20°C to +70°C
	- Approved Ambient Temp.	+70°C max. (for 50% load) +50°C max. (for 100% load) (for compliance to 62368-1)
	- Storage Temperature	-40°C to +85°C
Power Derating	- High Temperature	2.5 %/K above 50°C
	- Low Input Voltage	2 %/V below 90 VAC
	See application note: www.tracopower.com/txo45-cc	
Cooling System		Natural convection (20 LFM)
Altitude During Operation		2'000 m max.
Regulator Topology		Flyback Converter
Switching Frequency		65 kHz typ. (PWM)
Insulation System		Reinforced Insulation
Working Voltage (rated)		576 VAC
Isolation Test Voltage	- Input to Output, 60 s	3'000 VAC (4'242 VDC)
Creepage	- Input to Output	6 mm min.
Clearance	- Input to Output	6 mm min.
Isolation Resistance	- Input to Output, 500 VDC	100 M Ω min.
Leakage Current (at 264 VAC / 60 Hz)	- Touch Current	100 μ A max.
Reliability	- Calculated MTBF	100'000 h (MIL-HDBK-217F, ground benign)
Washing Process		Not allowed
Environment	- Vibration	2.4 g, 3 axis, random waveform, 30 min
	- Mechanical Shock	20 g, 3 axis, 6 shocks
Housing Type		Open Frame
Mounting Type		Chassis Mount

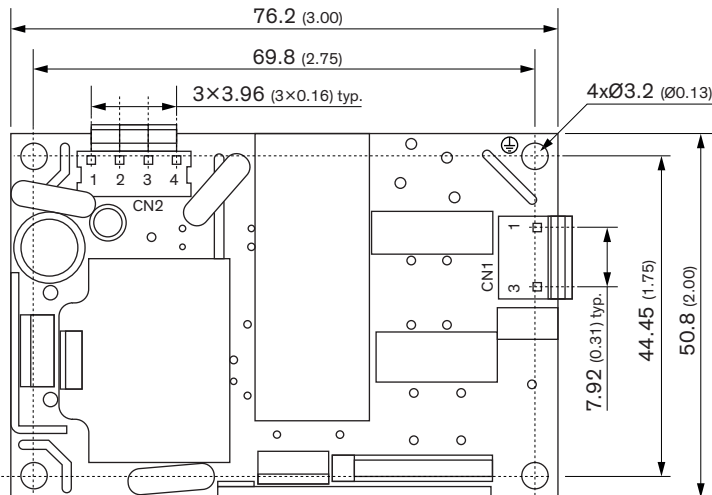
All specifications valid at 230 VAC, resistive full load and +25°C after warm-up time, unless otherwise stated.

Connection Type	Pin Connector
Weight	120 g
Environmental Compliance	- REACH Declaration - RoHS Declaration - SCIP Reference Number

Additional Information

Supporting Documents	www.tracopower.com/overview/txo45
Frequently Asked Questions	www.tracopower.com/glossary-faq
Glossary	www.tracopower.com/info/glossary.pdf

Outline Dimensions



Dimensions in mm (inch)
General tolerances: ± 0.5 (± 0.02)
Mounting screw tightening torque: 0.59 Nm max. (6.0 kgfcm max.)

Pin connectors			
Input (CN1)		Output (CN2)	
Pin	Function	Pin	Function
1	AC (L)	1	-Vout
3	AC (N)	2	
		3	+Vout
		4	

Input: JST series, B3P-VH(LF)(SN), 3.96mm mates with JST crimp terminal: SVH-21T-P1.1 or equivalent and terminal housing: VHR-3N or equivalent

Output: JST series, B4P-VH(LF)(SN), 3.96mm mates with JST crimp terminal: SVH-21T-P1.1 or equivalent and terminal housing: VHR-4N or equivalent