

- Compact U-bracket power supplies with optional cover
- Universal input range 90 to 264 VAC
- 4000 VAC I/O-isolation
- High efficiency up to 93 %
- Operating temperature range: -25°C to +70°C max.
- Features active power factor correction
- Current limitation, short circuit and over voltage protection



UL 62368-1 IEC 62368-1

The TXH series is a family of power supplies in metal enclosure, designed for a wide range of cost critical applications. The very high efficiency of up to 93% admits of a compact design with free air convection cooling for the 120 and 240 Watt models. The units are equipped with screw terminal blocks and are easy to install in any equipment. These power supplies have universal input and comply with European EMC standards and the Low Voltage Directive (LVD).

Models				
Order Code	Output Power max.	Output Voltage nom. (adjustable)	Output Current max.	Efficiency typ.
TXH 120-112	120 W	12 VDC (11.4 - 13.2 VDC)	10'000 mA	90 %
TXH 120-124		24 VDC (22.8 - 26.4 VDC)	5'000 mA	93 %
TXH 120-148		48 VDC (45.6 - 52.0 VDC)	2'500 mA	93 %

Options	
TXH 120-COV	- Optional Cover: www.tracopower.com/products/txh120-cov.pdf

Input Specifications

Input Voltage	- AC Range	Operational Range: 90 - 264 VAC (Full Range)
	- DC Range	Rated Range: 100 - 240 VAC (Full Range) Operational Range: 120 - 370 VDC (Designed for, no certification) Polarity: irrelevant
Input Frequency		Operational Range: 47 - 440 Hz
		Certified: 50/60 Hz
Input Current	- Full Load & Vin = 230 VAC	1'000 mA max.
	- Full Load & Vin = 115 VAC	2'000 mA max.
Power Consumption	- No load & Vin = 230 VAC	2'000 mW max.
	- No load & Vin = 115 VAC	2'000 mW max.
Input Inrush Current	- At 230 VAC	60 A max.
	- At 115 VAC	30 A max.
Power Factor	- At 230 VAC	0.95 min. (Active Power Factor Correction)
	- At 115 VAC	0.99 min. (Active Power Factor Correction)
Recommended Input Fuse		(The need of an external fuse has to be assessed in the final application.)

Output Specifications

Output Voltage Adjustment		12 VDC model: 11.4 - 13.2 VDC
		24 VDC model: 22.8 - 26.4 VDC
		48 VDC model: 45.6 - 52.0 VDC
		(By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		±2% max.
Regulation	- Input Variation (Vmin - Vmax)	1% max.
	- Load Variation (0 - 100%)	1% max.
Ripple and Noise (20 MHz Bandwidth)	12 VDC model:	50 mVp-p max. (w/ 0.1 µF 4'7 µF)
	24 VDC model:	100 mVp-p max. (w/ 0.1 µF 4'7 µF)
	48 VDC model:	200 mVp-p max. (w/ 0.1 µF 4'7 µF)
Capacitive Load	12 VDC model:	40'000 µF max.
	24 VDC model:	20'000 µF max.
	48 VDC model:	1'200 µF max.
Minimum Load		1 % of Iout max.
Temperature Coefficient		±0.03 %/K max.
Hold-up Time	- At 230 VAC	20 ms min.
	- At 115 VAC	15 ms min.
Start-up Time	- At 230 VAC	650 ms max.
	- At 115 VAC	350 ms max.
Short Circuit Protection		Automatic recovery
Output Current Limitation		120 - 240% of Iout max.
Overvoltage Protection		105 - 145% of Vout nom.
Transient Response	- Response Deviation	2% max. (75% to 100% Load Step)
	- Response Time	500 µs typ. (75% to 100% Load Step)

Safety Specifications

Safety Standards	- IT / Multimedia Equipment	EN 60950-1 EN 62368-1 IEC 60950-1 IEC 62368-1 UL 60950-1 UL 62368-1
	- Certification Documents	www.tracopower.com/overview/txh120
Protection Class		Class I (Prepared): Connection to PE

All specifications valid at nominal voltage, 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	EN 61000-6-3 (Generic Residential)
- Conducted Emissions	EN 55032 class B (internal filter)
- Radiated Emissions	EN 55032 class B (internal filter)
- Harmonic Current Emissions	EN 61000-3-2, class D
- Voltage Fluctuations & Flicker	EN 61000-3-3
EMS Immunity	EN 55024 (IT Equipment)
	EN 55035 (Multimedia)
- Electrostatic Discharge	Air: EN 61000-4-2, ± 8 kV, perf. criteria A
	Contact: EN 61000-4-2, ± 4 kV, perf. criteria A
- RF Electromagnetic Field	EN 61000-4-3, 3 V/m, perf. criteria A
- EFT (Burst) / Surge	EN 61000-4-4, ± 1 kV, perf. criteria A
	L to L: EN 61000-4-5, ± 1 kV, perf. criteria A
	L to PE: EN 61000-4-5, ± 2 kV, perf. criteria A
- Conducted RF Disturbances	EN 61000-4-6, 3 Vrms, perf. criteria A
- PF Magnetic Field	Continuous: EN 61000-4-8, 1 A/m, perf. criteria A
- Voltage Dips & Interruptions	230 VAC / 50 Hz: EN 61000-4-11
	30%, 25 periods, perf. criteria C
	>95%, 0.5 periods, perf. criteria B
	>95%, 25 periods, perf. criteria C

General Specifications

Relative Humidity	95% max. (non condensing)
Temperature Ranges	- Operating Temperature - Storage Temperature
	-25°C to +70°C -25°C to +85°C
Power Derating	- High Temperature - Low Input Voltage
	3 %/K above 50°C Depending on model
	See application note: www.tracopower.com/overview/txh120
Cooling System	Natural convection (20 LFM)
Altitude During Operation	4'000 m max.
Switching Frequency	90 - 200 kHz (PWM) 100 kHz typ. (PWM)
Insulation System	Reinforced Insulation
Working Voltage (rated)	279 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 VAC 2'000 VAC 500 VAC
Creepage	- Input to Output
	4.8 mm min.
Clearance	- Input to Output
	4 mm min.
Leakage Current	- Earth Leakage Current - Touch Current
	600 μ A max. 500 μ A max.
Reliability	- Calculated MTBF
	120'000 h (MIL-HDBK-217F, ground benign)
Environment	- Vibration
	2 g, 3 axis, 60 min, 10-500 Hz, 10 min/cycle
Housing Type	U-Bracket
Mounting Type	Chassis Mount
Connection Type	Screw Terminal
Weight	382 g

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

Environmental Compliance - REACH Declaration

- RoHS Declaration

www.tracopower.com/info/reach-declaration.pdf

REACH SVHC list compliant

REACH Annex XVII compliant

www.tracopower.com/info/rohs-declaration.pdf

Exemptions: 7a, 7c-l

(RoHS exemptions refer to the component concentration only, not to the overall

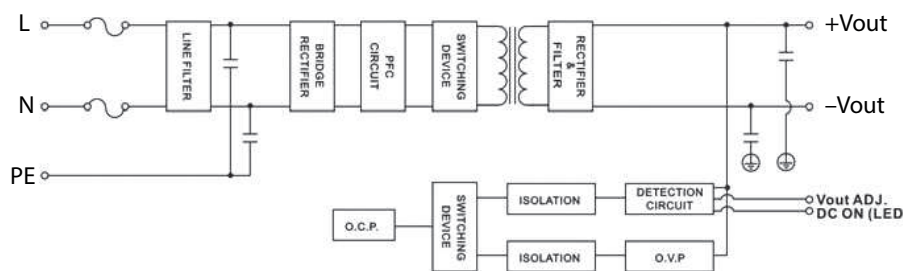
concentration in the product (O5A rule).
The SCIP number is provided on request.)

Supporting Documents

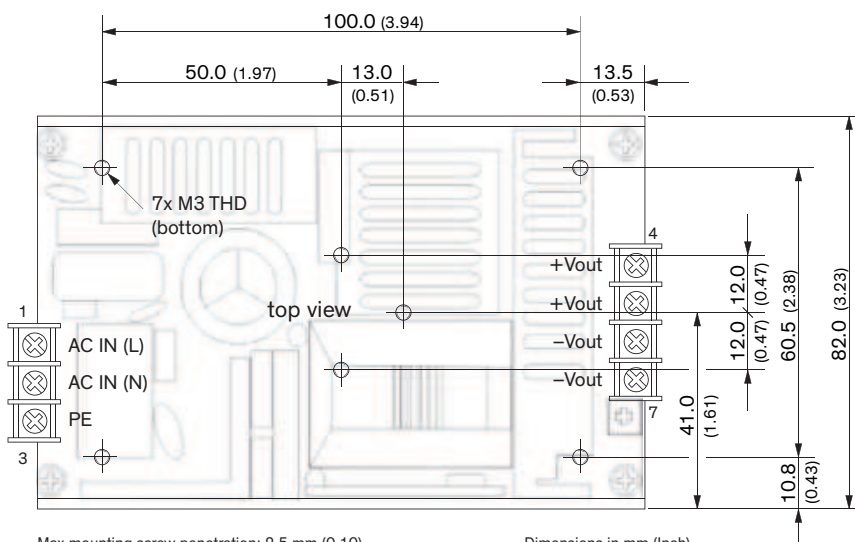
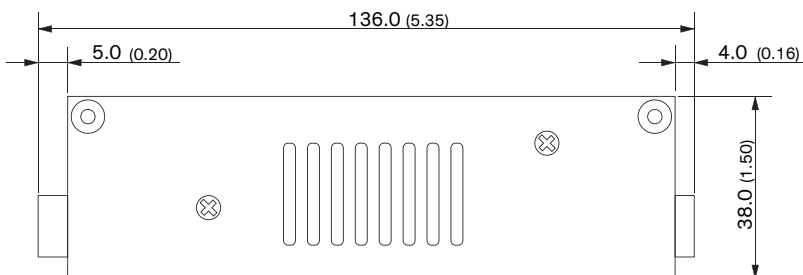
Overview Link (for additional Documents)

www.tracopower.com/overview/txh120

Blockdiagram



Outline Dimensions



Max mounting screw penetration: 2.5 mm (0.10)

Dimensions in mm (Inch)

Tolerances: ± 0.8 mm (± 0.03)

Mounting hole pitch tolerances: ± 0.5 mm (± 0.02)

Pin Connections

Pin	Function
1	AC IN (L)
2	AC IN (N)
3	PE
4, 5	+Vout
6, 7	−Vout

Rev. March 16, 2023

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