

- Compact U-bracket power supplies with optional cover
- Universal input range 90 to 264 VAC
- 5656 VDC 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 60950-1 IEC 60950-1

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 inclusive screws
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Input Specifications

Input Voltage	- AC Range	90 - 264 VAC (Full Range)
	- DC Range	120 - 370 VDC (Designed for, no certification)
Input Frequency		47 - 63 Hz
Input Current	- Full Load & Vin = 230 VAC	1'000 mA max.
	- Full Load & Vin = 115 VAC	2'000 mA max.
Power Consumption	- at no Load	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)

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. (with 0.1 µF // 47 µF)
	24 VDC model:	100 mVp-p max. (with 0.1 µF // 47 µF)
	48 VDC model:	200 mVp-p max. (with 0.1 µF // 47 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
Overload Protection		Indefinite Mode
Output Current Limitation		120 - 140% 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	IEC 60950-1 EN 60950-1 UL 60950-1
	- Certification Documents	www.tracopower.com/overview/txh120
Protection Class		Class I Prepared: Connection to PE
Pollution Degree		PD 2
Over Voltage Category		OVC II

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

EMC Specifications

EMC 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
EMC Immunity		EN 55024 (IT Equipment)
- 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)		EN 61000-4-4, ± 1 kV, perf. criteria A
- Surge		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		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

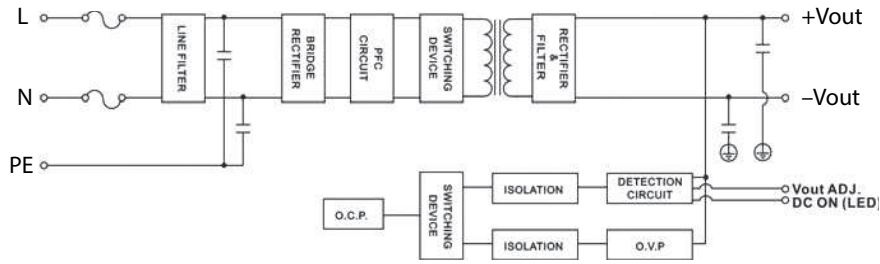
Relative Humidity		95% max. (non condensing)
Temperature Ranges		
- Operating Temperature		-25°C to +70°C
- Storage Temperature		-25°C to +85°C
Power Derating		
- High Temperature		3 %/K above 50°C
- Low Input Voltage		see application note
		www.tracopower.com/overview/txh120
Cooling System		Natural convection (20 LFM)
Altitude During Operation		2'000 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		5'656 VDC
- Input to Case or PE, 60 s		2'828 VDC
- Output to Case or PE, 60 s		707 VDC
Creepage	- Input to Output	4.8 mm min.
Clearance	- Input to Output	4 mm min.
Leakage Current		
- Earth Leakage Current		600 μ A max.
- Touch Current		500 μ A max.
Reliability	- Calculated MTBF	120'000 h (MIL-HDBK-217F, ground benign)
Environment	- Vibration	3 axis, 10 - 500 Hz, 2 g, 10 min/cycle, 60 min
Connection Type		Screw Terminal
Weight		382 g
Environmental Compliance		
- Reach		www.tracopower.com/info/reach-declaration.pdf
- RoHS		www.tracopower.com/info/rohs-declaration.pdf

Supporting Documents

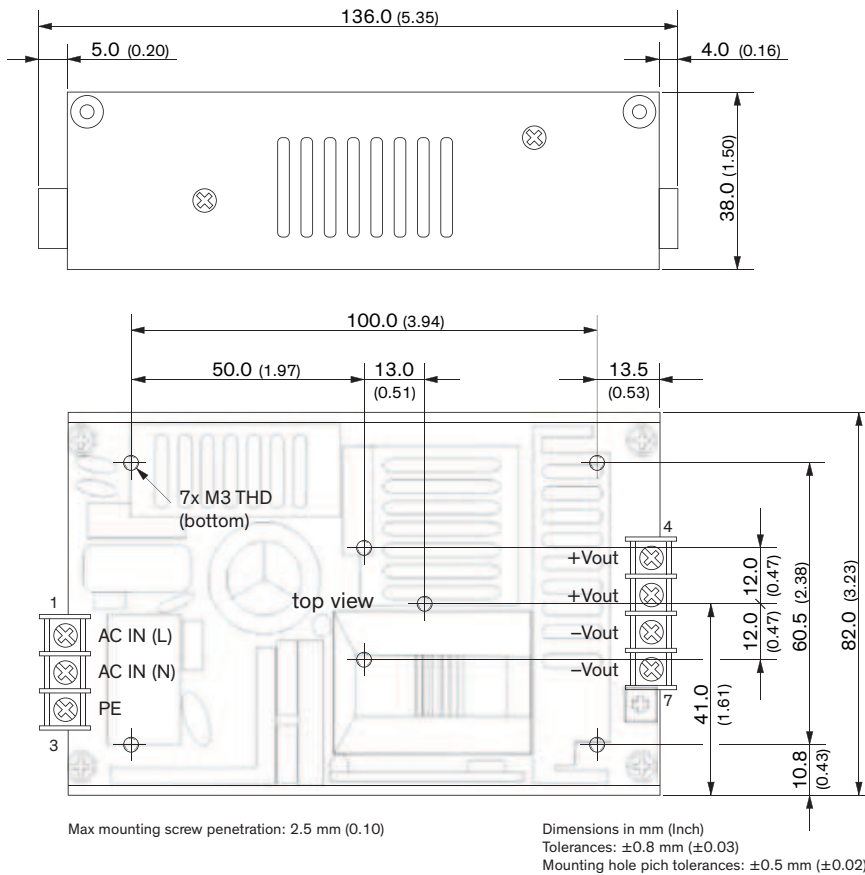
Overview Link (for additional Documents)	www.tracopower.com/overview/txh120
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Blockdiagram



Outline Dimensions



Pin Connections

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