

- Compact enclosed power supplies
- Screw terminal block
- Very high efficiency up to 91 %
- Universal input 90 – 264 VAC
- Adjustable output voltage
- EMI/EMC compliance with EN 61000-6-3 and EN 61000-6-1
- Compliance to EN 61000-3-2 (PFC)
- Current limitation and short circuit, over voltage and over temperature protection
- 3-year product warranty



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 480-112	480 W	12 VDC (10.8 - 13.2 VDC)	40'000 mA	88 %
TXH 480-124		24 VDC (21.6 - 26.4 VDC)	20'000 mA	90 %
TXH 480-148		48 VDC (43.2 - 50.4 VDC)	10'000 mA	91 %

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	3'000 mA max.
	- Full Load & Vin = 115 VAC	5'500 mA max.
Power Consumption	- at no Load	2'500 mW max.
Input Inrush Current	- at 230 VAC	70 A max.
	- at 115 VAC	50 A max.
Power Factor	- at 230 VAC	0.9 min. (Active Power Factor Correction)
	- at 115 VAC	0.95 min. (Active Power Factor Correction)
Input Protection		T 10 A / 250 VAC

Output Specifications

Output Voltage Adjustment	12 VDC model:	10.8 - 13.2 VDC
	24 VDC model:	21.6 - 26.4 VDC
	48 VDC model:	43.2 - 50.4 VDC
		(By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		±2% max.
Regulation	- Input Variation (Vmin - Vmax)	0.5% max.
	- Load Variation (0 - 100%)	1% max.
Ripple and Noise (20 MHz Bandwidth)	12 VDC model:	100 mVp-p max. (with 0.1 µF // 47 µF)
	24 VDC model:	200 mVp-p max. (with 0.1 µF // 47 µF)
	48 VDC model:	300 mVp-p max. (with 0.1 µF // 47 µF)
Capacitive Load	12 VDC model:	180'000 µF max.
	24 VDC model:	75'000 µF max.
	48 VDC model:	25'000 µF max.
Minimum Load		5 % of Iout max.
Temperature Coefficient		±0.03 %/K max.
Hold-up Time	- at 230 VAC	10 ms min.
	- at 115 VAC	10 ms min.
Start-up Time	- at 230 VAC	500 ms max.
	- at 115 VAC	500 ms max.
Short Circuit Protection		Automatic recovery
Overload Protection		Indefinite Mode
Output Current Limitation		110 - 160% of Iout max.
Overvoltage Protection		105 - 145% of Vout nom. (By Zener diode)
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/txh480
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

EMI Emissions	- Conducted Emissions - Harmonic Current Emissions - Voltage Fluctuations & Flicker	EN 55032 class B (internal filter) EN 61000-3-2, class A EN 61000-3-3
EMS Immunity	- Electrostatic Discharge - RF Electromagnetic Field - EFT (Burst) - Surge - Conducted RF Disturbances - PF Magnetic Field - Voltage Dips & Interruptions	EN 55024 (IT Equipment) 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 L to L: EN 61000-4-5, ± 2 kV, perf. criteria A L to PE: EN 61000-4-5, ± 2 kV, perf. criteria A EN 61000-4-6, 3 Vrms, perf. criteria A Continuous: EN 61000-4-8, 1 A/m, perf. criteria A 230 VAC / 50 Hz: EN 61000-4-11 30%, 25 periods, perf. criteria A >95%, 0.5 periods, perf. criteria A >95%, 250 periods, perf. criteria B

General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature - Storage Temperature	-20°C to +70°C -25°C to +85°C
Power Derating	- High Temperature - Low Input Voltage	2.5 %/K above 50°C (all models) 2.0 %/K below 5°C (for 12 VDC model) 1 %/V below 100 VAC
Over Temperature Protection Switch Off	- Protection Mode	Automatic recovery
Cooling System		Forced air cooling (with internal fan)
Fan Power Source	- Characteristic - Output Voltage - Output Current	Variable fan speed (temperature regulated) 12 VDC 500 mA max.
Standby Power Source	- Output Voltage - Output Current	5 VDC 600 mA max.
Remote Control	- Voltage Controlled Remote	On: open circuit Off: short circuit Refers to '+Remote' and '-Remote' Pin
Altitude During Operation		2'000 m max.
Switching Frequency		60 - 280 kHz (PWM) 63 kHz typ. (PWM)
Insulation System		Reinforced Insulation
Working Voltage (rated)		310 VAC
Isolation Test Voltage	- Input to Output, 60 s - Input to Case or PE, 60 s - Output to Case or PE, 60 s	3'000 VAC 1'500 VAC 500 VAC
Creepage	- Input to Output	5 mm min.
Clearance	- Input to Output	4 mm min.
Leakage Current	- Earth Leakage Current - Touch Current	1100 μ A max. 500 μ A max.
Reliability	- Calculated MTBF	100'000 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		1050 g

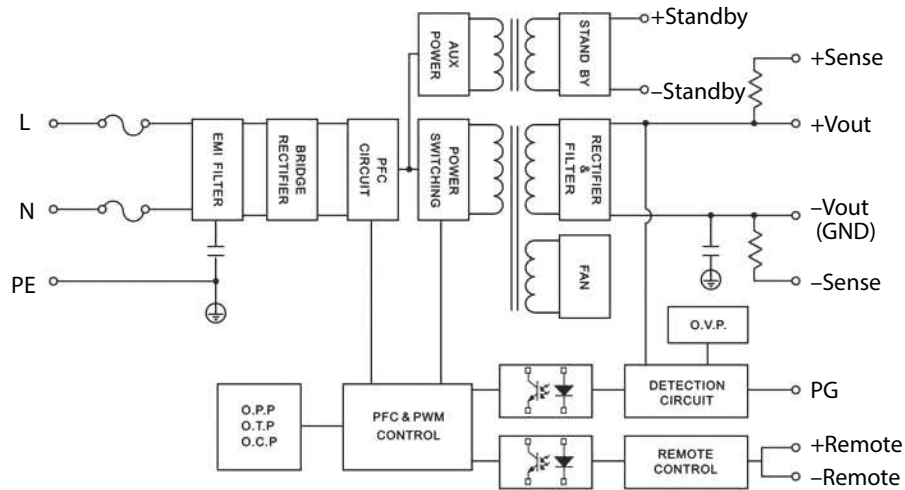
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Power OK Signal	- Power OK	Voltage source output High level Low level (Refers to 'PG' and 'GND' Pin)
	- Power Off	
	- Active Output Signal	12 VDC model: 5 VDC ±1 VDC 24 VDC model: 5 VDC ±1 VDC 48 VDC model: 5 VDC ±1 VDC Low output signal: 0 - 1 VDC
Environmental Compliance	- Reach	www.tracopower.com/info/reach-declaration.pdf
	- RoHS	www.tracopower.com/info/rohs-declaration.pdf

Supporting Documents

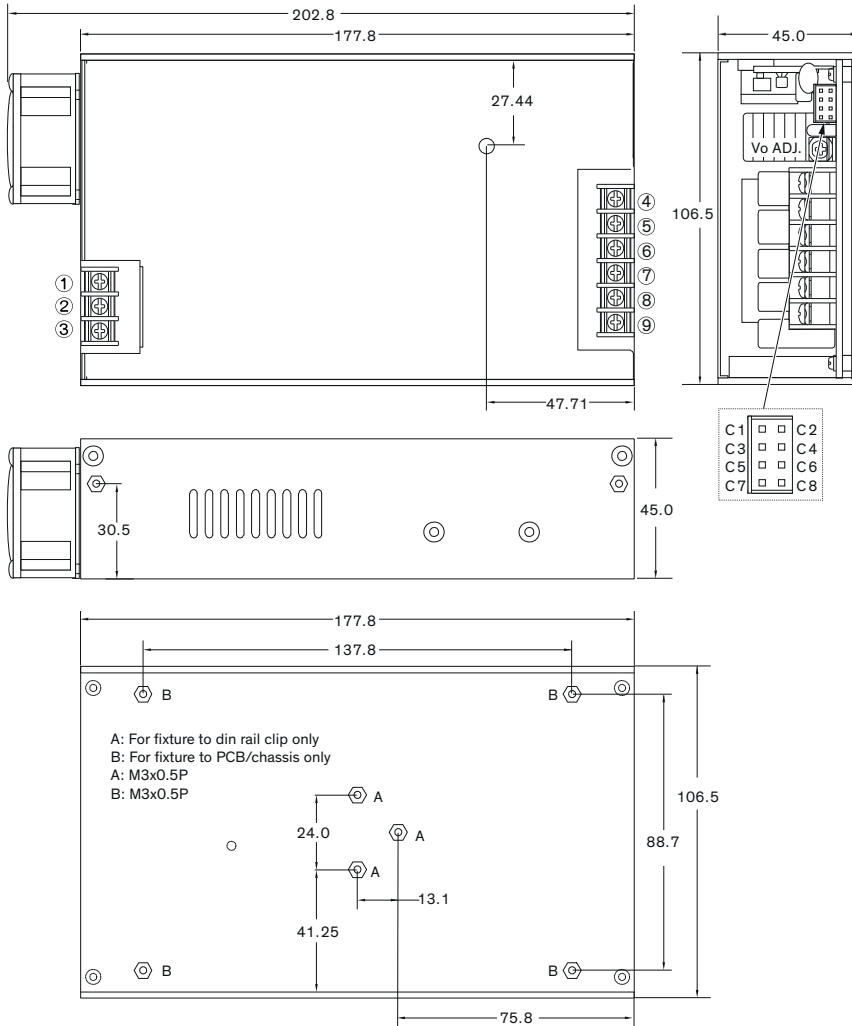
Overview Link (for additional Documents) www.tracopower.com/overview/txh480

Blockdiagram



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

Outline Dimensions



Input	
Pin	Function
1	AC IN (N)
2	AC IN (L)
3	PE

Output	
Pin	Function
4 - 6	+Vout
7 - 9	-Vout

Auxillary	
Pin	Function
C1	+Sense
C2	-Sense
C3	+Remote
C4	-Remote
C5	PG
C6	GND
C7	+Standby
C8	-Standby

Dimensions in mm, () = inch
Tolerances: ± 0.5 mm (± 0.02)
Pin tolerances: ± 0.1 mm

Mounting/locking kit should not be screwed in more than 2mm.

Mating connector:
Housing: JST PHDR-08VS
Crimp: JST SPHD-002T-P0.5

Connection cable with 500mm flying leads included!