

- Enclosed power supplies with screw terminal block
- Universal input range 90 to 264 VAC
- Ready to meet ErP directive, < 0.3 W no load power consumption
- Adjustable output voltage
- 4242 VDC I/O-isolation
- High efficiency up to 88 %
- Operating temperature range: -30°C to +70°C max.
- Short circuit and over voltage protection



The TXH 060 series is a family of power supplies in metal enclosure, designed for a wide range of cost critical applications. The high efficiency of up to 88% is achieved through an innovative design for free air convection cooling. This design also qualifies the power supply to meet the ErP directive (< 0.3 W no load power consumption). 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 060-105	50 W	5.0 VDC	10'000 mA	81 %
TXH 060-112	60 W	12 VDC	5'000 mA	87 %
TXH 060-115	60 W	15 VDC	4'000 mA	87 %
TXH 060-124	60 W	24 VDC	2'500 mA	88 %
TXH 060-148	60 W	48 VDC	1'250 mA	88 %

Input Specifications

Input voltage	– AC Input	90 – 264 VAC
	– DC Input	all models: derating of 2%/V below 100 VAC required 120 – 370 VDC
Input frequency		47 – 63 Hz
Leakage current		< 0.75 mA
Inrush current* (115/230 VAC)		35 A max. / 70 A max.
No-load power consumption (at input voltage < 230 VAC)		< 0.3 W

Output Specifications

Voltage accuracy		± 2 % typ.
Voltage adjustment		± 5 %
Regulation	– Input variation	1.0 % typ.
	– Load variation (5–100 %)	1.0 % typ.
Minimum load		not required
Hold-up time (at input voltage ≥ 115 VAC)		10 ms min.
Ripple and Noise (20MHz bandwidth) (measured with 0.1µF & 47µF parallel capacitor)	5 VDC model:	75 mVp-p max.
	12 VDC model:	100 mVp-p max.
	15 VDC model:	125 mVp-p max.
	24 VDC model:	150 mVp-p max.
	48 VDC model:	200 mVp-p max.
Current limitation		at 150% of nominal I _{out} typ.
Short circuit current		hiccup, automatic recovery
Output overvoltage protection		zener diode
Maximum capacitive load	5 VDC model:	10'000 µF
	12 VDC model:	5'000 µF
	15 VDC model:	4'000 µF
	24 VDC model:	2'000 µF
	48 VDC model:	1'000 µF

General Specifications

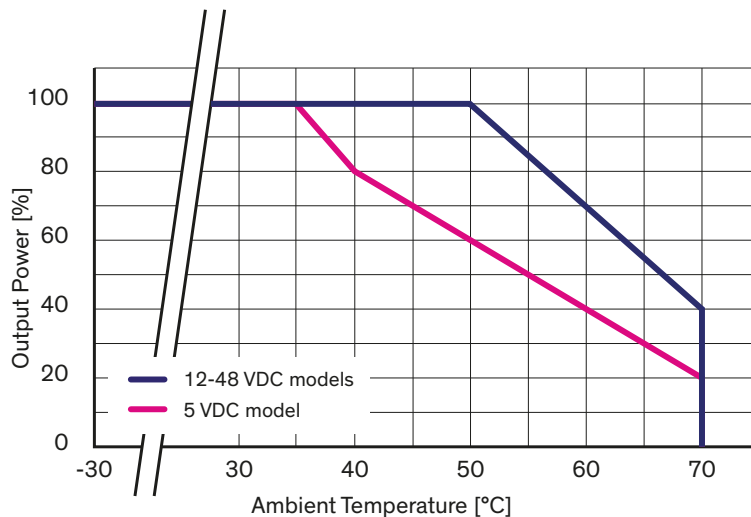
Temperature ranges	– operational (natural convection 20 LFM)	–30°C to +70°C max.
	– Storage temperature	–50°C to +85°C max.
Power derating		see derating graph on page 3
Temperature coefficient		0.02 %/K
Cooling		convection cooling, no internal fan
Humidity (non condensing)		95 % rel. H max.
Altitude during operation		3100 m max.
Switching frequency (at 230 VAC)		65 kHz typ.
Isolation	– Input/Output	4242 VDC
	– Input/Ground	2121 VDC
	– Output/Ground	707 VDC

* An external Thermistor has to be integrated in the circuit at the converter input L (in series).
Thermistor recommendation: 10R / 15z

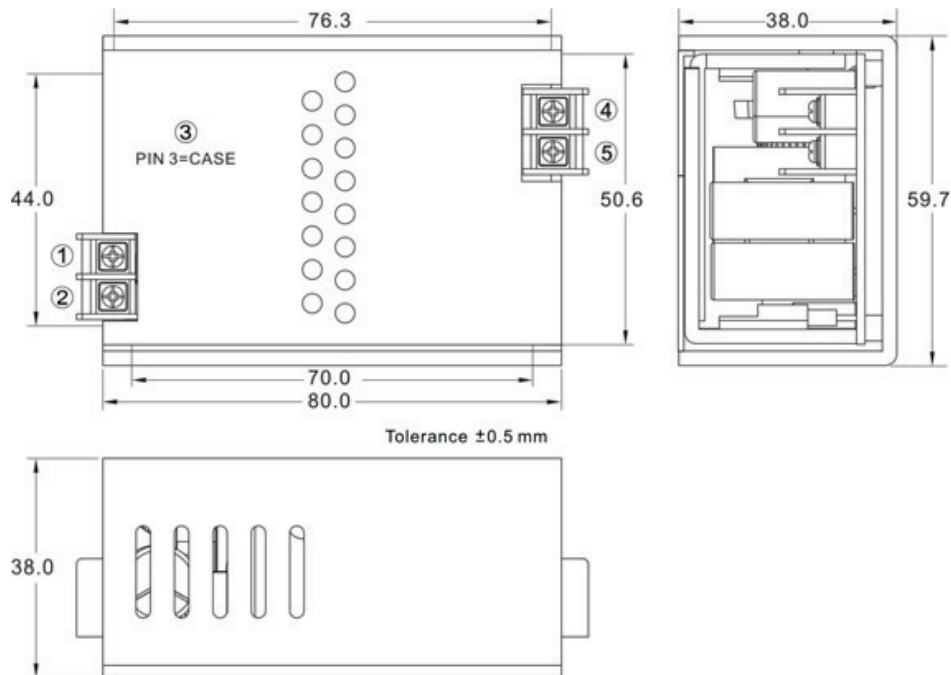
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

General Specifications (continued)

MTBF (MIL-HDBK-217F, at 25 °C ground benign)	> 130'000 h
Vibration	10-500 Hz, 2G 10 min./1 cycle 60 min each along X, Y, Z axes.
Protection class	class I
Safety standards	IEC/EN 60950-1 UL 60950-1 – Certification documents www.tracopower.com/overview/txh060
Electromagnetic compatibility (EMC), Emissions – Conducted/Radiated RI suppression on input	EN 55022 class B
Electromagnetic compatibility (EMC), Immunity – Electrostatic discharge (ESD) – Radiated RF field immunity – Electrical fast transient / burst immunity – Surge immunity – Immunity to conducted RF disturbances – Magnetic field immunity – Mains voltage dips and interruptions	EN 55024 IEC/EN 61000-4-2, 4 kV / 8 kV, criteria A IEC/EN 61000-4-3, 10 V/m, criteria A IEC/EN 61000-4-4, 2 kV, criteria A IEC/EN 61000-4-5, 1 kV, criteria A IEC/EN 61000-4-6, 10 V, criteria A IEC/EN 61000-4-8, 30 A/m, criteria A IEC/EN 61000-4-11 >95 %, 250 periods, perf. criteria C 30 %, 25 periods, perf. criteria A >95 %, 0.5 periods, perf. criteria A
Case material	metal enclosure
Environmental compliance – Reach – RoHS	www.tracopower.com/products/reach-declaration.pdf RoHS directive 2011/65/EU

TXH 060 derating graph:


Outline Dimensions



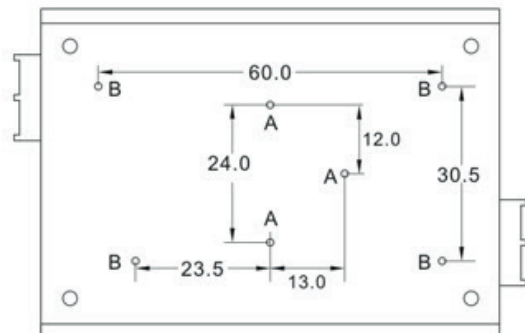
Pinout	
Pin	Single
1	AC IN (N)
2	AC IN (L)
3	GND
4	+Vout
5	-Vout

Weight: 220 g (7.76 oz)

Dimensions in [mm]

Tolerances: ± 0.5 mm

Pin tolerances: ± 0.1 mm



A: For fixture to din rail clip only. A=M3×0.5P
 B: For fixture to PCB/chassis only. B=M3×0.5P
 Mounting/locking kit should not be screwed in more than 3mm.