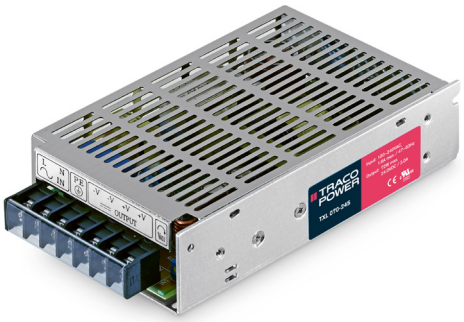
TRACO POWER

AC/DC Enclosed Power Supply

TXL 060/070 Series, 50-70 Watt

- **Compact metal case with screw terminal block**
- **Multiple output models with isolated outputs**
- **Universal input 85 – 264 Vac**
- **EMI/EMC compliance with EN 61000-6-3 and EN 61000-6-1**
- **Compliance to EN 61000-3-2**
- **Short circuit and overvoltage protection**
- **International safety approvals**
- **3 year product warranty**



ErP ready · CE · CB Scheme · cULus UL 60950-1

The TRACO POWER TXL series is a family of encased power supplies designed for a wide range of cost critical applications. With a low profile metal case and screw terminal block connection, they 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	Power	Output voltage			Output current max.			Efficiency
	max.	Vout 1	Vout 2	Vout 3	Vout 1	Vout 2	Vout 3	typ.
TXL 060-3.3S	50 W	3.3 VDC			15.0 A			74 %
TXL 060-05S	60 W	5 VDC			12.0 A			77 %
TXL 070-12S	72 W	12 VDC			6.0 A			83 %
TXL 070-15S	72 W	15 VDC			4.8 A			84 %
TXL 070-24S	72 W	24 VDC			3.0 A			85 %
TXL 070-48S	72 W	48 VDC			1.5 A			87 %
TXL 060-0512DI [1]	60 W	+5 VDC	+12 VDC		8.0 A	4.0 A		78 %
TXL 060-0524DI [1]	60 W	+5 VDC	+24 VDC		6.0 A	2.2 A		79 %
TXL 060-0521TI [1]	60 W	+5 VDC	+12 VDC	–5 VDC	8.0 A	3.5 A	1.0 A	77 %
TXL 060-0522TI [1]	60 W	+5 VDC	+12 VDC	–12 VDC	7.0 A	3.5 A	1.0 A	78 %
TXL 060-0533TI [1]	60 W	+5 VDC	+15 VDC	–15 VDC	7.0 A	3.0 A	1.0 A	79 %
TXL 060-0534TI [1]	60 W	+5 VDC	+12 VDC	+24 VDC	6.0 A	1.5 A	1.2 A	80 %

[1] Total power should not exceed max. output power

Input Specifications

Input voltage range	– nominal – AC range (universal input) – DC range		100 – 240 VAC 85 – 264 VAC 120 – 375 VDC
Input frequency			47 – 63 Hz
Input current at full load	– at 100 VAC		1.8 A max.
Input inrush current	– at 115 VAC / 230 VAC		30 A max. / 60 A max.
Zero load power consumption		only single output models:	0.75 W max. (green mode design)
Recommended circuit breaker (characteristic C or slow bow fuse)			5 A

Output Specifications

Output voltage adjustment range			±10 % (only Vout 1)
Regulation	– Input variation – Load variation (20 - 100%)	 main output: Vout 2, Vout 3:	1.0 % max. 2.0 % max. 5.0 % max.
Minimum load		single output models: dual output models: triple output models:	not required Vout 1 requires 1.0 A Vout 1 requires 0.5 A
Temperature coefficient			0.02 %/K
Start-up time			1 s max.
Rise time			20 ms max.
Hold-up time	– at 230 VAC		60 ms min.
Ripple and noise (20Mhz Bandwidth)	– measured with external capacitors: – Vout 1, Vout 2, Vout 3:	 3.3 & 5 Vout: 12 Vout: 15 Vout: 24 Vout: 48 Vout:	0.1 µF and 47 µF parallel capacitor 70 mVp-p typ. 120 mVp-p typ. 150 mVp-p typ. 200 mVp-p typ. 250 mVp-p typ.
Overload protection by current limitation			105 – 150 % of Iout max.
Short circuit protection			hiccup mode (automatic recovery)
Overvoltage protection (Latch off, recovery after restart)			115 – 140 % of nominal Vout (only Vout 1)
Capacitive load			www.tracopower.com/products/txl-capload.pdf

General Specifications

Temperature ranges	– Operating – Storage	–20°C to +70°C (with derating) –40°C to +85°C
Output power derating	– Temperature – Low input voltage	2.5 %/K above +45°C 0.7 %/V below 100 VAC
Cooling		natural convection (20 lfm), no internal fan
Humidity (non condensing)		20 – 90 % rel. H max.
Altitude during operation		2000 m
Isolation voltage (60 sec.)	– Input / Output – Input / PE – Output / PE	3000 VAC 1500 VAC 500 VAC
Isolation resistance (at 500 VDC)		100 MOhm min.
Leakage current (at 264 VAC/60Hz)		1 mA max.

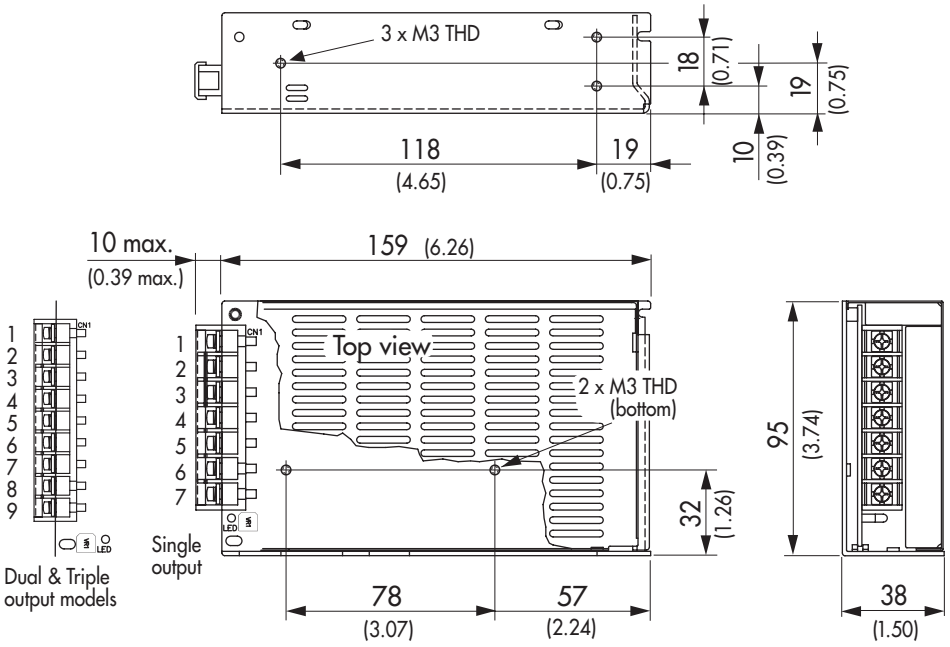
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

General Specifications (continued)

Switching frequency		65 kHz typ. (pulse width modulation)
Reliability (calculated MTBF)	single output models:	> 300‘000 h
	dual output models:	> 260‘000 h
	dual output models:	> 258‘000 h
Electromagnetic compatibility (EMC), emissions		
– Conducted input RI suppression		EN 55022 class B, FCC Part 15 level B
– Harmonic current emissions		IEC/EN 61000-3-2, class A
– Voltage flicker		IEC/EN 61000-3-3 (built-in PFC choke)
Electromagnets compatibility (EMC), immunity		according EN 55024
– Electrostatic discharge ESD		IEC/EN 61000-4-2, 4 kV / 8 kV, perf. criteria A
– RF field immunity		IEC/EN 61000-4-3, 3 V/m, perf. criteria A
– Electrical fast transients/burst immunity		IEC/EN 61000-4-4, ±2 kV, perf. criteria A
– Surge		IEC/EN 61000-4-5, 1 kV / 2 kV, perf. criteria A
– Conducted RF		IEC/EN 61000-4-6, 3 Vrms perf. criteria A
– Magnetic field		IEC/EN 61000-4-8, 3 A/m perf. criteria A
– Voltage dip		IEC/EN 61000-4-11 >95 %, perf. criteria A, 0.5 periods 30 %, perf. criteria A, 25 periods >95 % perf. criteria B, 250 periods
Safety standards		UL 60950-1, IEC/EN 60950-1
Safety approvals	– UL/cUL	www.ul.com → certifications → File: e188913
	– CB report	www.tracopower.com/overview/txl
Environmental compliance	– Reach	www.tracopower.com/products/reach-declaration.pdf
	– RoHS	RoHS directive 2011/65/EU
Connection	single output models:	7 pole terminal pitch (9.5mm with plastic cover)
	dual / triple output models:	9 pole terminal pitch (7.62mm with plastic cover)
Casing material		nickel plated steel (cover), aluminium (chassis)
Weight	single output models:	0.60 kg
	dual output models:	0.58 kg
	triple output models:	0.60 kg

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

Outline Dimensions



Dimensions in [mm], () = Inch
Tolerances ±0.5 (±0.02)

Screw Terminal			
Pin	**Single**	**Dual**	**Triple**
1	AC L	AC L	AC L
2	AC N	AC N	AC N
3	PE	PE	PE
4	– Vout	No con.	+ Vout 3 *
5	– Vout	No con.	– Vout 3 *
6	+ Vout	– Vout 1	– Vout 1
7	+ Vout	+ Vout 1	+ Vout 1
8	–	– Vout 2	– Vout 2
9	–	+ Vout 2	+ Vout 2

* Opposite polarity for TXL 060-0534TI