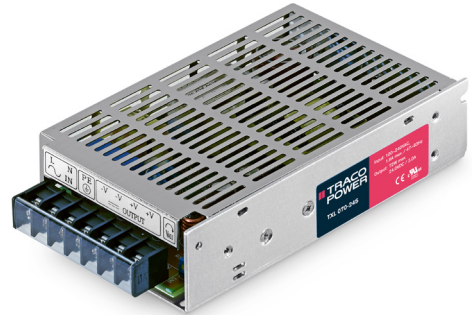


- Compact metal case with screw terminal block
- Multiple output models with isolated outputs
- Universal input 85 – 264 Vac
- EMI/EMC compliance with EN 61000-6-3 and EN 61000-6-1
- Compliance to EN 61000-3-2
- Short circuit and overvoltage protection
- International safety approvals
- 3 year product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



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 max.	Output voltage			Output current max.			Efficiency typ.
		Vout 1	Vout 2	Vout 3	Vout 1	Vout 2	Vout 3	
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 <sup>1)</sup>	60 W	+5 VDC	+12 VDC		8.0 A	4.0 A		78 %
TXL 060-0524DI <sup>1)</sup>	60 W	+5 VDC	+24 VDC		6.0 A	2.2 A		79 %
TXL 060-0521TI <sup>1)</sup>	60 W	+5 VDC	+12 VDC	-5 VDC	8.0 A	3.5 A	1.0 A	77 %
TXL 060-0522TI <sup>1)</sup>	60 W	+5 VDC	+12 VDC	-12 VDC	7.0 A	3.5 A	1.0 A	78 %
TXL 060-0533TI <sup>1)</sup>	60 W	+5 VDC	+15 VDC	-15 VDC	7.0 A	3.0 A	1.0 A	79 %
TXL 060-0534TI <sup>1)</sup>	60 W	+5 VDC	+12 VDC	+24 VDC	6.0 A	1.5 A	1.2 A	80 %

<sup>1)</sup> 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 (Designed for, no certification)
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%)	1.0 % max. main output: 2.0 % max. Vout 2, Vout 3: 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:	0.1 µF and 47 µF parallel capacitor 3.3 & 5 Vout: 70 mVp-p typ. 12 Vout: 120 mVp-p typ. 15 Vout: 150 mVp-p typ. 24 Vout: 200 mVp-p typ. 48 Vout: 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		<a href="http://www.tracopower.com/products/txl-capload.pdf">www.tracopower.com/products/txl-capload.pdf</a>

### 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.

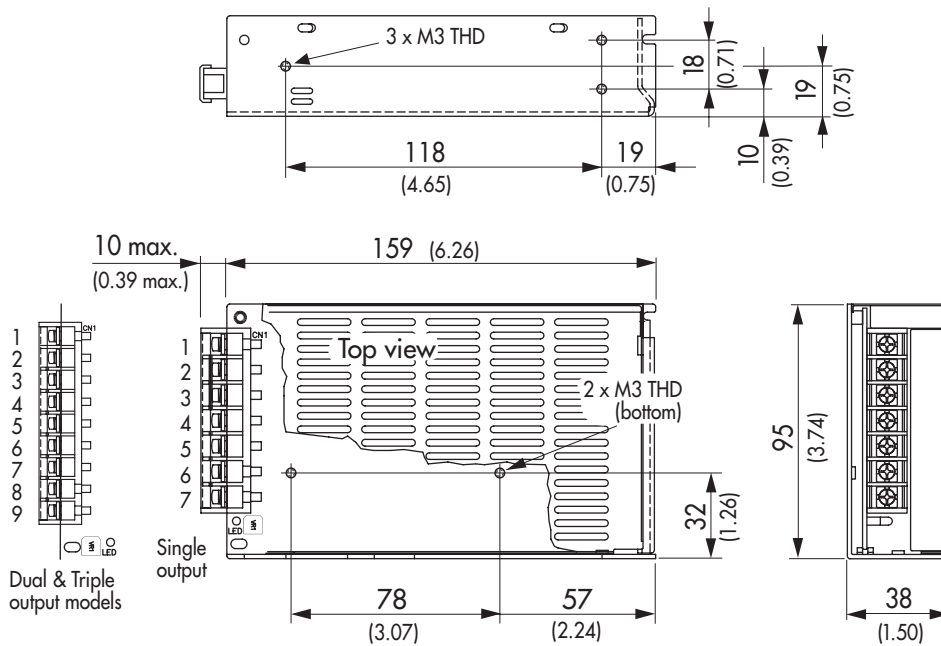
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

**General Specifications (continued)**

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

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  $\pm 0.5$  ( $\pm 0.02$ )

### 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