

Enclosed Power Supplies

TXL Series, 15-1000 Watt

Features

- Compact metal case with screw terminal block
- Dual and triple 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 (PFC)
- Short circuit and overvoltage protection
- International safety approvals
- 3-year product warranty



The TRACOPOWER 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.

There are 64 models in this range with single, dual, and triple output voltages from 3.3 VDC to 48 VDC in 12 power ranges from 15 W to 1000 W. These power supplies have universal input and comply with European EMC standards and the Low Voltage Directive (LVD).

Models with Single Output				
Order Code	Case Type	Output Power max.	Output Voltage nom.	Output Current max.
TXL 015-3.3S			3.3 VDC	3.0 A
TXL 015-05S			5 VDC	3.0 A
TXL 015-12S	В	15 Watt	12 VDC	1.3 A
TXL 015-15S	D	15 Wan	15 VDC	1.0 A
TXL 015-24S			24 VDC	0.63 A
TXL 015-48S			48 VDC	0.32 A
TXL 025-3.3S			3.3 VDC	6.0 A
TXL 025-05S			5 VDC	5.0 A
TXL 025-12S	С	25 Watt	12 VDC	2.1 A
TXL 025-15S		25 Wan	15 VDC	1.7 A
TXL 025-24S			24 VDC	1.1 A
TXL 025-48S			48 VDC	0.57 A
TXL 035-3.3S			3.3 VDC	9.0 A
TXL 035-05S			5 VDC	7.0 A
TXL 035-12S		25 \\/-4	12 VDC	3.0 A
TXL 035-15S		35 Watt	15 VDC	2.4 A
TXL 035-24S	D		24 VDC	1.5 A
TXL 035-48S			48 VDC	0.8 A
TXL 050-05S			5 VDC	10.0 A
TXL 060-12S		50 / 60 Watt	12 VDC	5.0 A
TXL 060-15S		30 / 60 Wali	15 VDC	4.0 A
TXL 060-24S			24 VDC	2.5 A



Models with Single Output				
Order Code	Case Type	Output Power max.	Output Voltage nom.	Output Current max.
TXL 060-3.3S			3.3 VDC	15.0 A
TXL 060-05S			5 VDC	12.0 A
TXL 070-12S	-	60 / 70 Watt	12 VDC	6.0 A
TXL 070-15S	E		15 VDC	4.8 A
TXL 070-24S			24 VDC	3.0 A
TXL 070-48S			48 VDC	1.5 A
TXL 100-3.3S			3.3 VDC	23.0 A
TXL 100-05S			5 VDC	20.0 A
TXL 100-12S	J	100 Watt	12 VDC	8.5 A
TXL 100-15S	J	100 Wall	15 VDC	7.0 A
TXL 100-24S			24 VDC	4.3 A
TXL 100-48S			48 VDC	2.3 A
TXL 150-05S		150 Watt	5 VDC	30.0 A
TXL 150-12S	L		12 VDC	12.5 A
TXL 150-24S	L		24 VDC	6.3 A
TXL 150-48S			48 VDC	3.2 A
TXL 230-12S			12 VDC	19.2 A
TXL 230-24S	N	230 Watt	24 VDC	9.6 A
TXL 230-48S			48 VDC	4.8 A
TXL 350-24S	0	350 Watt	24 VDC	14.7 A
TXL 350-48S	0	555 Wali	48 VDC	7.5 A
TXL 750-24S	Р	750 Watt	24 VDC	31.3 A
TXL 750-48S	r	/ 50 Wali	48 VDC	15.8 A
TXL 1000-24S	Q	1000 Watt	24 VDC	40.0 A
TXL 1000-48S	<u>u</u>	1000 Wali	48 VDC	21.0 A

Models with Multiple Output					
Order Code	Case Type	Output Power	* Output1	* Output 2	* Output 3
		max.	(Main Output)		
TXL 035-0512D			+5 VDC/ 4.0 A	+12 VDC/ 2.5 A	
TXL 035-0524D	D	35 Watt	+5 VDC/ 4.0 A	+24 VDC/ 1.3 A	
TXL 035-1212D	ע		+12 VDC/ 3.0 A	-12 VDC/ 1.5 A	
TXL 035-1515D			+15 VDC/ 2.4 A	-15 VDC/ 1.5 A	
TXL 060-0512DI			5 VDC/ 8.0 A	12 VDC/ 4.0 A	
TXL 060-0524DI	E	40.14.11	5 VDC/ 6.0 A	24 VDC/ 2.2 A	
TXL 060-0521TI			5 VDC/ 8.0 A	12 VDC/ 3.5 A	5 VDC/ 1.0 A
TXL 060-0522TI		60 Watt	5 VDC/ 7.0 A	12 VDC/ 3.5 A	12 VDC/ 1.0 A
TXL 060-0533TI			5 VDC/ 7.0 A	15 VDC/ 3.0 A	15 VDC/ 1.0 A
TXL 060-0534TI			5 VDC/ 6.0 A	12 VDC/ 1.5 A	24 VDC/ 1.2 A
TXL 100-0512DI			5 VDC/ 12.0 A	12 VDC/ 7.0 A	
TXL 100-0524DI	J		5 VDC/ 12.0 A	24 VDC/ 3.5 A	
TXL 100-0521TI		100 Watt	5 VDC/ 12.0 A	12 VDC/ 5.0 A	5 VDC/ 1.5 A
TXL 100-0522TI			5 VDC/ 12.0 A	12 VDC/ 5.0 A	12 VDC/ 1.5 A
TXL 100-0533TI			5 VDC/ 12.0 A	15 VDC/ 4.0 A	15 VDC/ 1.5 A
TXL 100-0534TI			5 VDC/ 12.0 A	12 VDC/ 4.0 A	24 VDC/ 2.0 A

 $^{^{\}star}$ Total power must not exceed specified max. output power



Input Specifications Input voltage range	- nominal		100 – 240 VAC	
inpor vollage range	– Norminai – AC range (universal input)		85 – 264 VAC for 15 to 350 Watt model	
	– DC range			750 & 1000 Watt models 15 to 350 Watt model
				750 & 1000 Watt models
Input voltage frequency			47 – 63 Hz	
Input current (at full load)		TXL 015/025 models: TXL 035 models: TXL 060/070 models: TXL 100 models: TXL 150 models: TXL 230 models: TXL 350 models: TXL 750 models: TXL 750 models:	Vin = 115 VAC 0.50 A typ. 0.70 A typ. 1.00 A typ. 1.65 A typ. 2.10 A typ. 3.20 A typ. 3.30 A typ. 8.0 A typ. 11.0 A typ.	Vin = 230 VAC 0.22 A typ. 0.42 A typ. 0.60 A typ. 0.95 A typ. 1.10 A typ. 1.70 A typ. 1.70 A typ. 3.90 A typ. 5.0 A typ.
Input current (at no load)		TXL 015/025 models: TXL 035 models: TXL 230/350 models: TXL 750 models: TXL 1000 models: other models:	Vin = 115 VAC 10 mA typ. 50 mA typ. 115 mA typ. 210 mA typ. 330 mA typ. 100 mA typ.	Vin = 230 VAC 17 mA typ. 55 mA typ. 140 mA typ. 220 mA typ. 350 mA typ. 80 mA typ.
Recommended circuit break (characteristic C) or slow blo	ow fuse	up to 70 Watt models: up to 350 Watt models: 50 & 1000 Watt models:	5 A 10 A 16 A	
Output Specifications	S			
Output voltage adjustment r	range		±10 % - 35 Watt dual outp - other multi output r	out models: range Vout 1–2 models: Vout 1
Regulation	Input variationLoad variation (10–100%)Minimum load on main outp (to provide the regulation or		•	output t 2/3 (20–100 % load)
Ripple and noise (20 MHz bandwidth) 3.3 VDC output Output 3 (on triple output models) all other output voltages			< 50 mV < 1.5 % of Vout < 1.0 % of Vout nom	n.
Output current limitation		. 3	105 % – 150 % of lo	out max.
Overload protection mode			Fold back, automati	c recovery
Over voltage protection (only output 1)			115 % – 140 % of V (depending on mod	
Capacitive load, max.			www.tracopower.com/products/txl-capload.pdf	



Temperature ranges	- Operating	−10°C to +70°C
	Load derating above +45°CStorage (non operating)	2 %/°K (2.5 %/°K for TXL 120/230/1000) -10°C to +75°C
Temperature coefficient	- Slorage (from operaling)	0.02 %/°C
Efficiency		70 - 84 % (depending on model)
Humidity (non condensing)		85 % rel max. (non condensing)
Switching frequency		50 kHz typ. (pulse width modulation)
Hold-up time		20 ms min.
Isolation voltage (60 sec.)	- Input/Output	3′000 VAC
	- Input/Case	1′500 VAC
	Output/CaseOutput/Output	500 VAC
	60–100 Watt multiple output model	s: 500 VAC (for all outputs of triple output models!)
	35 Watt dual output model	
Reliability /calculated MTBF	(MIL-HDBK-217F, at +25°C typ., ground benign)	>250′000 h
	- Conducted input RI suppression	EN 55022, class B, FCC part 15, level B
(EMC), Emissions	- Harmonic current emissions	IEC/EN 61000-3-2, class D (TXL 120/150/220)
	– Flicker	IEC/EN 61000-3-2, class A (others) IEC/EN 61000-3-3
The account of the control of the co		
(EMC), Immunity	Electrostatic discharge ESDRF field immunity	IEC/EN 61000-4-2 4 kV / 8 kV IEC/EN 61000-4-3 3 V/m
(LIVIC), miniormy	- Electrical fast transients/burst immunity	IEC/EN 61000-4-4 1 kV
	- Surge	IEC/EN 61000-4-5 1 kV / 2 kV
	- Conducted RF	IEC/EN 61000-4-6 3 V/m
	- Magnetic field	IEC/EN 61000-4-8 3 A/m
	- Voltage dip	IEC/EN 61000-4-11
Safety standards		UL 60950-1, IEC/EN 60950-1 2nd edition
Safety approvals	- UL/cUL	www.ul.com -> certifications -> File: e188913
		s: www.tracopower.com/products/txl015-cb.pdf
	TXL 025 model TXL 035 model	
	TXL 060/070 model	
	TXL 100 model	
		s: www.tracopower.com/products/txl150-cb.pdf
	TXL 230 model	s: www.tracopower.com/products/txl230-cb.pdf
	TXL 350 model	
	TXL 750 model	
	TXL 1000 model	1 1 1
Environmental compliance	- Reach - RoHS	www.tracopower.com/products/txl-reach.pdf RoHS directive 2011/65/EU
Casing material	TXL 025/03	5 nickel plated steel (chassis & cover)
	TXL 50/60/70/10	
	othe	rs aluminium (chassis & cover)

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

Case Dimensions

Case B

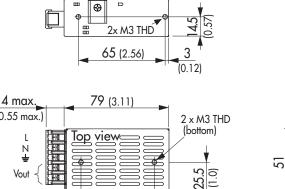


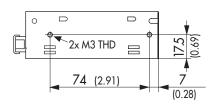


Case D

6

Weight: 0.19 kg (6.7 oz)





99 (3.90)

10 max.

Connection dual single 1 AC L AC L AC N AC N 2 3 AC FG AC FG 4 -Vout Common 5 +Vout Vout 1

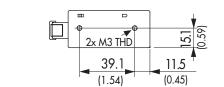
0.3 kg (10 oz) Weight:

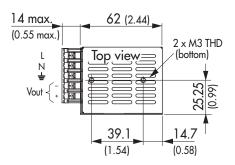
No con.

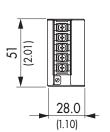
(0.39 max.) 2 x M3 THD Top view= (bottom) 82 (3.23) 23.5 55 (2.17) (0.93)

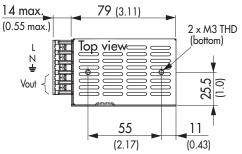


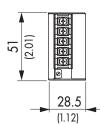
Vout 2











35

(1.38)

Case Dimensions

Case E

Connection					
	Single	Dual	Triple		
1	AC L	AC L	AC L		
2	AC N	AC N	AC N		
3	AC FG	AC FG	AC FG		
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		

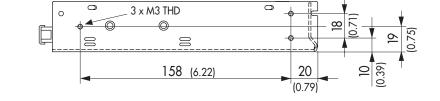
^{*} Opposite polarity for TXL 060-0534TI

3 x M3 THD 118 (4.65)(0.75) 10 max. 159 (6.26) (0.39 max.) 123456789 Top view 2 x M3 THD (bottom) (3.74)4 5 6 7 95 Single output Dual & Triple output models 57 38 78 (3.07)(0.95)(1.50)

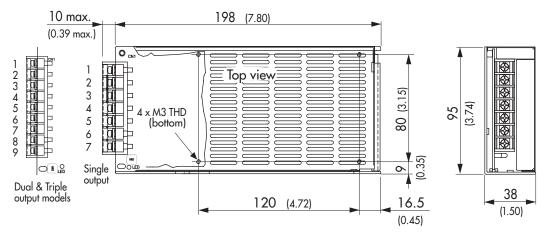
Weight: 0.7 kg (25 oz)

Case J

Connection					
	Single	Dual	Triple		
1	AC L	AC L	AC L		
2	AC N	AC N	AC N		
3	AC FG	AC FG	AC FG		
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 100-0534TI

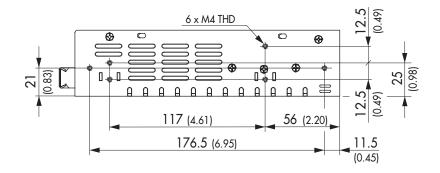


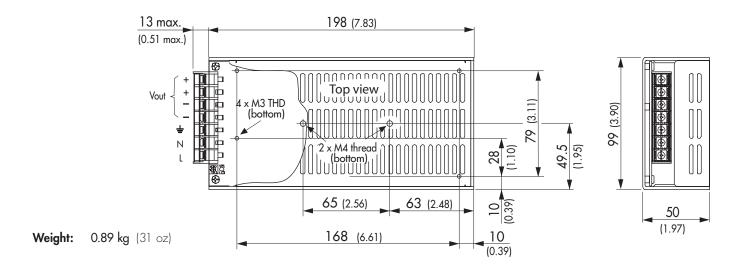
Weight: 0.8 kg (28 oz)

Max mounting screw penetration: 3.0 mm (0.12)

Case Dimensions

Case L

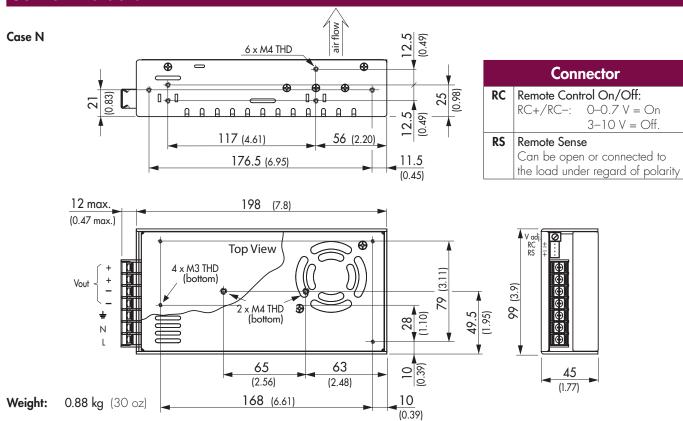




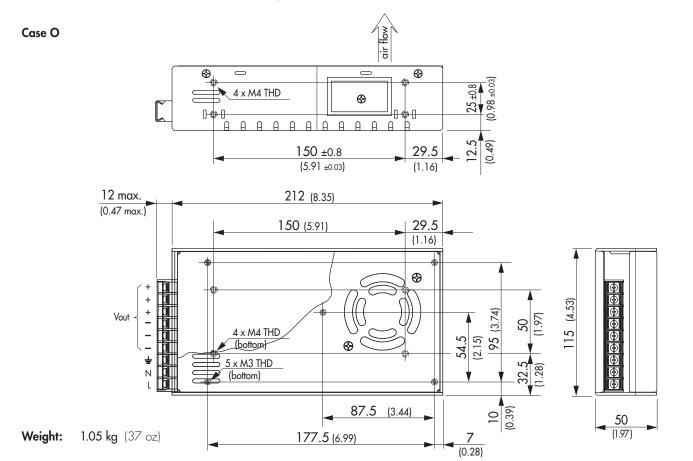
4x TXL-CMB chassis mount brackets included in shipment

Max mounting screw penetration: 3.0 mm (0.12)

Outline Dimensions



4x TXL-CMB chassis mount brackets included in shipment



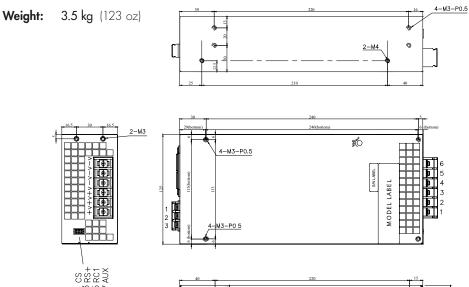
4x TXL-CMB chassis mount brackets included in shipment

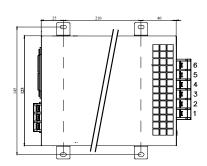
Max mounting screw penetration: 3.0 mm (0.12)



Outline Dimensions

Case P





TXL-CMB chassis mount bracket set (4pcs) included in shipment. For dimensions see page 11.

Max mounting screw penetration: 3.0 mm (0.12)

CN3 pin consideration:

CN3

Pin 1: Current sharing to interconnect up to 3 units at parallel operation

2-M4

air flow

Max power = units \times 0.9, max deviation of voltage adjustment among units = 100 mV

Pin 2: Power Good Signal. TTL (3mA max.): 0 - 1 VDC = DC-Off, 3.3 - 5.6 VDC = DC-OK

Pin 3/4: Remote sense to be connected at load side under regard of polarity

Pin 5/6: Remote control input RC1& RC2

PG 2 RS-4 RC2 6 GND 8

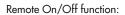
Pin 7/8 Auxillary output 12VDC/0.1A for remote control function

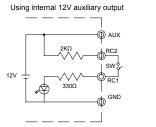
Mating connector:

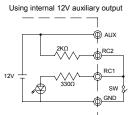
Housing: HRS DF11-08DS-2C Terminal: HRS DF11-EP22SCB

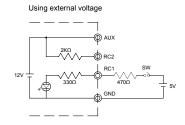
Mating cable with 500mm flyind leeds included!

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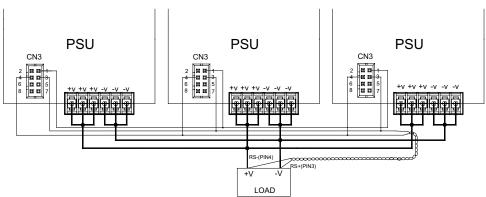








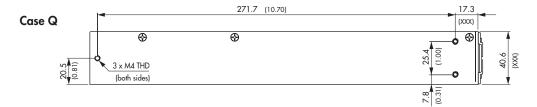
Parallel operation:

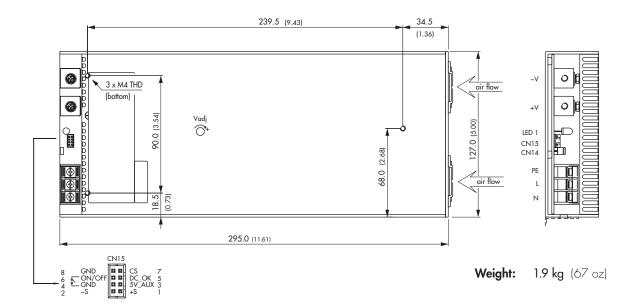


All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.



Outline Dimensions





Caution! Max mounting screw penetration: 3.0 mm (0.12)

TXL-CMB1 chassis mount bracket set (4pcs) included in shipment. For dimensions see page 11.

Dimensions in [mm], () = Inch Tolerances $\pm 0.8 \ (\pm 0.03)$ Monting hole pich tolerances $\pm 0.5 \ (\pm 0.02)$

CN14 Jumper on CN14 disables the Remote Off function

CN15 On/Off (pin 4 & 6): Contact closed = Power On, Contact open = Power Off

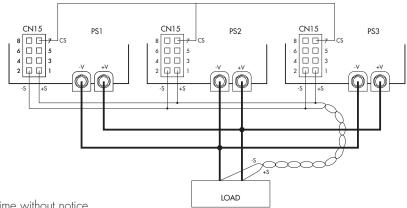
CN15 -S/+S (pin 1 & 2): Remote sense to be connected at load side under regard of polarity

CN15 5V Aux (pin 3 & 8): Auxiliary output 5 VDC / 0.5 A

CN15 DC-OK (pin 5 & 8): TTL signal (2.2 mA max.): 0 - 1 VDC = DC-Off, 3.3 - 5.6 VDC = DC-OK

CN15 CS (pin 7): Current Sharing to interconnect up to 4 units at parallel operation Max power = units \times 0.9, max deviation of voltage adjustment among units = 100 mV

Parallel operation:



Specifications can be changed any time without notice.



Chassi Mount Brackets

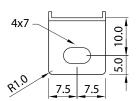
The chassi mount brackets are bypacked along with the following models:

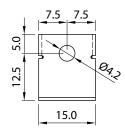
Order code: TXL-CMB

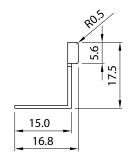
contains 4pcs brackets and screws

For series models:

- TXL 150; Case L
- TXL 230; Case N
- TXL 350; Case O
- TXL 750; Case P





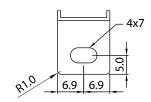


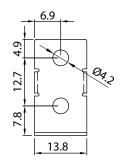
Order code: TXL-CMB1

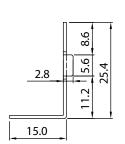
contains 4pcs brackets and screws

For series models:

• TXL 1000; Case Q







Note:

1. Material: S.P.C.C. 2. Thickness: 0.8mm 3. Treatment: Nickel plated

4. Unit: mm