

Features

- ◆ Compact Metal Case with Screw Terminal Block
- ◆ Dual and Triple Output Models with isolated Outputs
- ◆ Universal Input 85-264 VAC, 50/60 Hz
- ◆ 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
- ◆ High Efficiency
- ◆ International Safety Approvals
- ◆ Industrial Grade Components
- ◆ 3 Year Product Warranty



The TRACOPOWER TXL series is a family of encased power supplies designed for a wide range of cost critical industrial applications. With a low profile metal case and screw terminal block connection they are easy to install in any equipment. There are 57 models in this range with single-, dual-, and triple output voltages from 3.3VDC to 48VDC in 10 power ranges from 25W to 600W.

These power supplies have Universal Input 85-240VAC and comply also with European EMC standards and the Low Voltage Directive (LVD). The high quality of this product is supported by a 3 year warranty.

Models with Single Output

Order Code	Case Size	Output Power max.	Output Voltage nom.	Output Current max.
TXL 025-3.3S	C	25 Watt	3.3 VDC	6.0 A
TXL 025-05S			5 VDC	5.0 A
TXL 025-12S			12 VDC	2.1 A
TXL 025-15S			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	D	35 Watt	3.3 VDC	9.0 A
TXL 035-05S			5 VDC	7.0 A
TXL 035-12S			12 VDC	3.0 A
TXL 035-15S			15 VDC	2.4 A
TXL 035-24S			24 VDC	1.5 A
TXL 035-48S			48 VDC	0.75 A
TXL 050-05S	E	50 / 60 Watt	5 VDC	10.0 A
TXL 060-12S			12 VDC	5.0 A
TXL 060-15S			15 VDC	4.0 A
TXL 060-24S			24 VDC	2.5 A
TXL 060-3.3S	E	60 / 70 Watt	3.3 VDC	15.0 A
TXL 060-05S			5 VDC	12.0 A
TXL 070-12S			12 VDC	6.0 A
TXL 070-15S			15 VDC	4.8 A
TXL 070-24S			24 VDC	3.0 A
TXL 070-48S			48 VDC	1.5 A

Models with Single Output

Order Code	Case	Output Power max.	Output Voltage nom.	Output Current max.
TXL 100-3.3S TXL 100-05S TXL 100-12S TXL 100-15S TXL 100-24S TXL 100-48S	J	100 Watt	3.3 VDC 5 VDC 12 VDC 15 VDC 24 VDC 48 VDC	25.0 A 20.0 A 8.5 A 6.8 A 4.5 A 2.1 A
TXL 120-12S TXL 120-15S TXL 120-24S TXL 120-48S	K	120 Watt	12 VDC 15 VDC 24 VDC 48 VDC	10.0 A 8.0 A 5.0 A 2.5 A
TXL 150-05S TXL 150-12S TXL 150-24S TXL 150-48S	L	150 Watt	5 VDC 12 VDC 24 VDC 48 VDC	30.0 A 12.5 A 6.3 A 3.2 A
TXL 220-12S TXL 220-24S TXL 220-48S	N	220 Watt	12 VDC 24 VDC 48 VDC	18.4 A 9.2 A 4.6 A
TXL 300-24S TXL 300-48S	O	300 Watt	24 VDC 48 VDC	12.5 A 6.5 A
TXL 600-24S TXL 600-48S	P	600 Watt	24 VDC 48 VDC	25.0 A 12.5 A

Models with Multiple Output

Order Code	Case	Output Power max.	* Output 1	* Output 2	* Output 3
TXL 035-0512D TXL 035-0524D TXL 035-1212D TXL 035-1515D	D	35 Watt	+5 VDC/ 4.0 A +5 VDC/ 4.0 A +12 VDC/ 1.5 A +15 VDC/ 1.3 A	+12 VDC/ 1.5 A +24 VDC/ 1.3 A -12 VDC/ 1.5 A -15 VDC/ 1.3 A	
TXL 060-0512DI TXL 060-0524DI TXL 060-0521TI TXL 060-0522TI TXL 060-0533TI TXL 060-0534TI	E	60 Watt	+5 VDC/ 8.0 A +5 VDC/ 6.0 A +5 VDC/ 8.0 A +5 VDC/ 7.0 A +5 VDC/ 7.0 A +5 VDC/ 6.0 A	+12 VDC/ 4.0 A +24 VDC/ 2.2 A +12 VDC/ 3.5 A +12 VDC/ 3.5 A +15 VDC/ 3.0 A +12 VDC/ 1.5 A	-5 VDC/ 1.0 A -12 VDC/ 1.0 A -15 VDC/ 1.0 A +24 VDC/ 1.2 A
TXL 100-0512DI TXL 100-0524DI TXL 100-0521TI TXL 100-0522TI TXL 100-0533TI TXL 100-0534TI	J	100 Watt	+5 VDC/ 12.0 A +5 VDC/ 10.0 A +5 VDC/ 12.0 A +5 VDC/ 12.0 A +5 VDC/ 12.0 A +5 VDC/ 12.0 A	+12 VDC/ 6.0 A +24 VDC/ 4.0 A +12 VDC/ 5.0 A +12 VDC/ 5.0 A +15 VDC/ 3.0 A +12 VDC/ 3.0 A	-5 VDC/ 1.5 A -12 VDC/ 1.5 A -15 VDC/ 1.5 A +24 VDC/ 2.0 A

* Total power must not exceed specified max. output power

Input Specifications

Input voltage range		85 – 264 VAC 88 – 264 VAC (TXL 100 & TXL 300 models)																														
Input frequency		47 – 63 Hz																														
Input current (at full load)		<table border="0"> <tr> <td></td> <td>Vin = 115 VAC</td> <td>Vin = 230 VAC</td> </tr> <tr> <td>TXL 025 models</td> <td>0.54 A typ.</td> <td>0.22 A typ.</td> </tr> <tr> <td>TXL 035 models</td> <td>0.70 A typ.</td> <td>0.42 A typ.</td> </tr> <tr> <td>TXL 060/ 070 models</td> <td>1.00 A typ.</td> <td>0.60 A typ.</td> </tr> <tr> <td>TXL 100 models</td> <td>1.65 A typ.</td> <td>0.95 A typ.</td> </tr> <tr> <td>TXL 120 models</td> <td>1.30 A typ.</td> <td>0.65 A typ.</td> </tr> <tr> <td>TXL 150 models</td> <td>2.10 A typ.</td> <td>1.10 A typ.</td> </tr> <tr> <td>TXL 220 models</td> <td>3.00 A typ.</td> <td>1.60 A typ.</td> </tr> <tr> <td>TXL 300 models</td> <td>3.30 A typ.</td> <td>1.70 A typ.</td> </tr> <tr> <td>TXL 600 models</td> <td>6.30 A typ.</td> <td>3.10 A typ.</td> </tr> </table>		Vin = 115 VAC	Vin = 230 VAC	TXL 025 models	0.54 A typ.	0.22 A typ.	TXL 035 models	0.70 A typ.	0.42 A typ.	TXL 060/ 070 models	1.00 A typ.	0.60 A typ.	TXL 100 models	1.65 A typ.	0.95 A typ.	TXL 120 models	1.30 A typ.	0.65 A typ.	TXL 150 models	2.10 A typ.	1.10 A typ.	TXL 220 models	3.00 A typ.	1.60 A typ.	TXL 300 models	3.30 A typ.	1.70 A typ.	TXL 600 models	6.30 A typ.	3.10 A typ.
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Recommended circuit breaker (characteristic C) or slow blow fuse	<table border="0"> <tr> <td>TXL 025/ 035/ 060/070 models</td> <td>5 A</td> </tr> <tr> <td>TXL 100/120/150/ 220 models</td> <td>10 A</td> </tr> <tr> <td>TXL 300 models</td> <td>15 A</td> </tr> <tr> <td>TXL 600 models</td> <td>20 A</td> </tr> </table>	TXL 025/ 035/ 060/070 models	5 A	TXL 100/120/150/ 220 models	10 A	TXL 300 models	15 A	TXL 600 models	20 A																							
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Output Specifications

Output voltage adjustment range		±10% - 35 Watt dual output models: range Vout 1-2 - other multi output models: Vout 1														
Regulation	<ul style="list-style-type: none"> - Input variation - Load variation (10–100%) - Minimum load on main output of multiple output models (for to assure the regulation on the auxillary outputs) 	<table border="0"> <tr> <td>single output models</td> <td>1 % max.</td> </tr> <tr> <td>multiple output models</td> <td>2 % max.</td> </tr> <tr> <td></td> <td>4 % max. for main output</td> </tr> <tr> <td></td> <td>6 % max. for output 2/3 (20–100% load)</td> </tr> <tr> <td></td> <td>0.3A for TXL 035</td> </tr> <tr> <td></td> <td>1.0A for TXL 060</td> </tr> <tr> <td></td> <td>1.5A for TXL 100</td> </tr> </table>	single output models	1 % max.	multiple output models	2 % max.		4 % max. for main output		6 % max. for output 2/3 (20–100% load)		0.3A for TXL 035		1.0A for TXL 060		1.5A for TXL 100
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Ripple and noise (20Mhz Bandwidth)	<table border="0"> <tr> <td>3.3VDC output</td> <td>< 50mV</td> </tr> <tr> <td>Output 3 (of triple output models)</td> <td>< 1.5% of Vout</td> </tr> <tr> <td>all other output voltages</td> <td>< 1.0% of Vout nom.</td> </tr> </table>	3.3VDC output	< 50mV	Output 3 (of triple output models)	< 1.5% of Vout	all other output voltages	< 1.0% of Vout nom.									
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Output current limitation		105 % – 150% of Iout max.														
Overload protection mode		Fold back, automatic recovery														
Over voltage protection (only output 1)		115 % – 140 % of Vout nom. (depending on model)														
Capacitive load, max.	<table border="0"> <tr> <td>3.3 –12 VDC output models</td> <td>10'000 µF</td> </tr> <tr> <td>TXL 070: 24 VDC & 48VDC output models</td> <td>10'000 µF</td> </tr> <tr> <td>TXL 100/150: 24 VDC & 48VDC output models</td> <td>4'700 µF</td> </tr> <tr> <td>TXL 035/ 120: 24 VDC & 48VDC output models</td> <td>1'000 µF</td> </tr> <tr> <td>TXL 025/ TXL 220: models</td> <td>5'000 µF</td> </tr> <tr> <td>TXL 300 models</td> <td>17'000 µF</td> </tr> <tr> <td>TXL 600 models</td> <td>44'000 µF</td> </tr> </table>	3.3 –12 VDC output models	10'000 µF	TXL 070: 24 VDC & 48VDC output models	10'000 µF	TXL 100/150: 24 VDC & 48VDC output models	4'700 µF	TXL 035/ 120: 24 VDC & 48VDC output models	1'000 µF	TXL 025/ TXL 220: models	5'000 µF	TXL 300 models	17'000 µF	TXL 600 models	44'000 µF	
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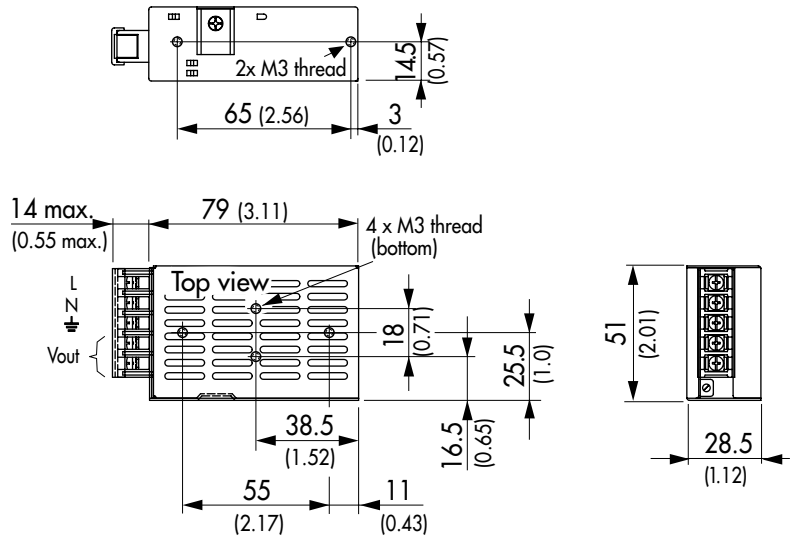
General Specifications

Temperature ranges	<ul style="list-style-type: none"> – Operating – Load derating above 45°C – Storage (non operating) 	<ul style="list-style-type: none"> – 10 °C...+70 °C 2% /°K (2.5%/°K for TXL 120/220) – 10 °C...+75 °C
Temperature coefficient		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 (60sec)	<ul style="list-style-type: none"> – Input / output – Input / case – Output / case – Output / Output 	<ul style="list-style-type: none"> 3'000 VAC 1'500 VAC 500 VAC
	<ul style="list-style-type: none"> 60-100 Watt multiple output models: 35 Watt dual output models: 	<ul style="list-style-type: none"> 500 VAC (for all outputs of triple output models!) outputs not isolated
Reliability /calculated MTBF (MIL-HDBK-217F)		> 250'000 h @ 25°C typ.
Electromagnetic compatibility (EMC), Emissions	<ul style="list-style-type: none"> – Conducted input RI suppression – Harmonic current emissions – Flicker 	<ul style="list-style-type: none"> EN 55022, class B, FCC part 15, level B IEC / EN 61000-3-2, class D (TXL 120/150/220) IEC / EN 61000-3-2, class A (others) IEC / EN 61000-3-3
Electromagnets compatibility (EMC), Immunity	<ul style="list-style-type: none"> – Electrostatic discharge ESD – RF field immunity – Electrical fast transients/burst immunity – Surge – Conducted RF – Magnetic field – Voltage dip 	<ul style="list-style-type: none"> IEC / EN 61000-4-2 4 kV / 8 kV IEC / EN 61000-4-3 3 V/m IEC / EN 61000-4-4 1 kV IEC / EN 61000-4-5 1 kV / 2 kV IEC / EN 61000-4-6 3 V/m IEC / EN 61000-4-8 3 A/m IEC / EN 61000-4-11
Safety standards		UL 60950-1, IEC 60950-1, EN 60950-1
Safety approval		cUL /UL File E188913
Case material	<ul style="list-style-type: none"> TXL 025/035 TXL 50/60/70/100 others 	<ul style="list-style-type: none"> nickel plated steel (chassis & cover) aluminium (chassis), Nickel plated steel (cover) aluminium (chassis & cover)

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

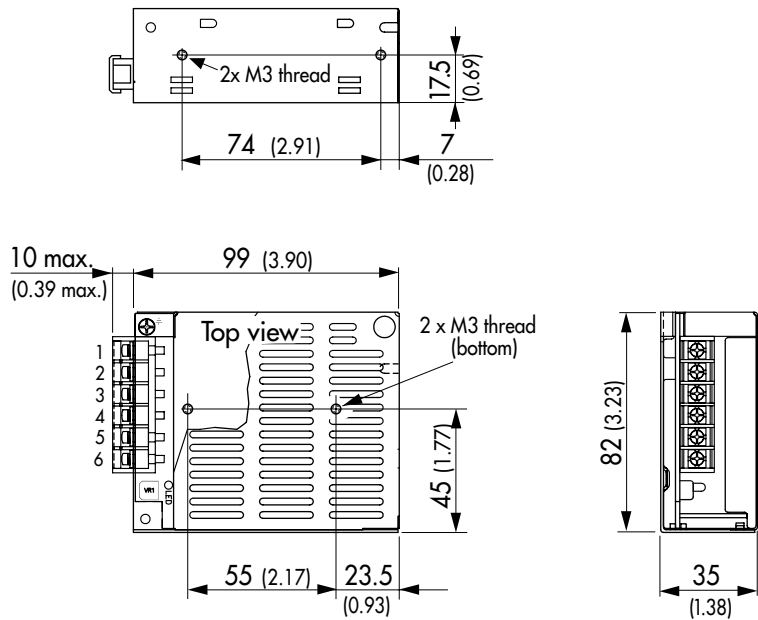
Outline Dimensions

Case C



Weight: 0.19 kg (6.7 oz)

Case D



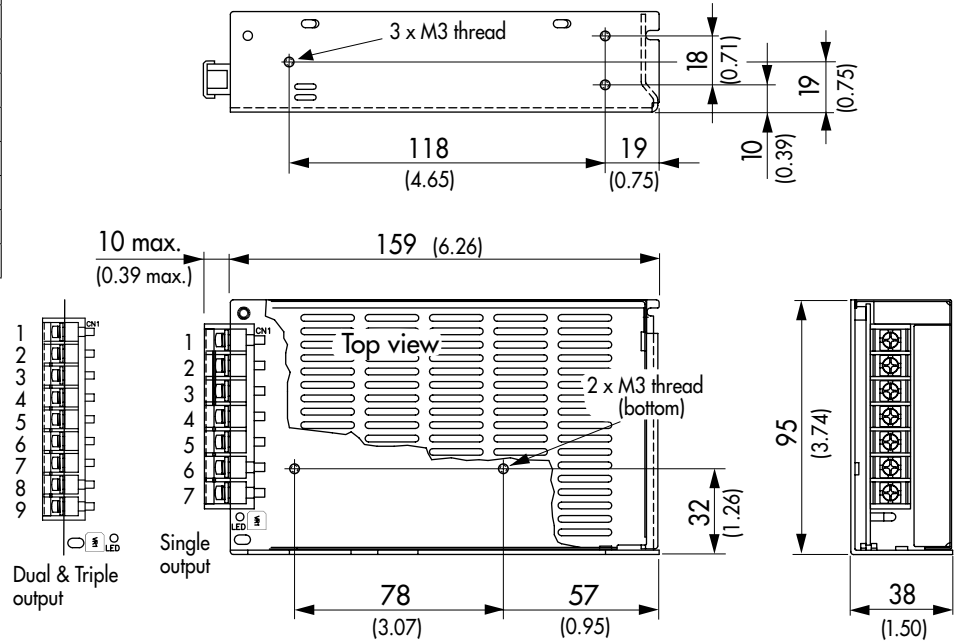
Weight: 0.3 kg (10 oz)

Connection		
	single	dual
1	AC L	AC L
2	AC N	AC N
3	AC FG	AC FG
4	-V out	Common
5	+V out	V out 1
6	No con.	V out 2

Outline Dimensions

Case E

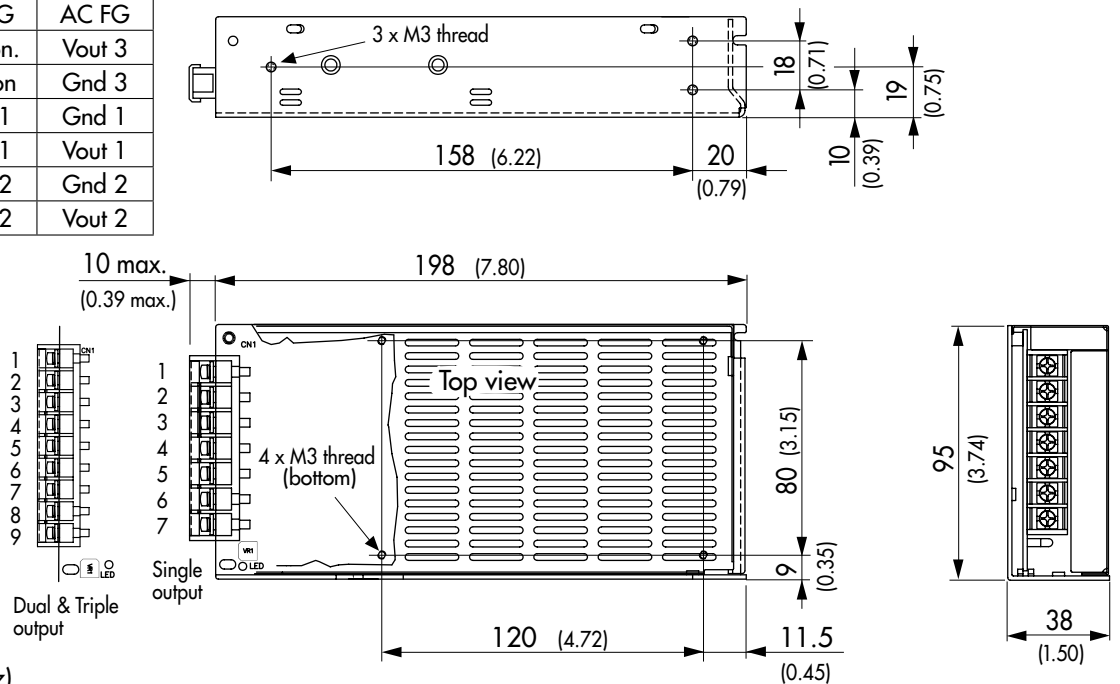
Pin-Out			
	Single	Dual	Triple
1	AC L	AC L	AC L
2	AC N	AC N	AC N
3	AC FG	AC FG	AC FG
4	-Vout	No con.	Vout 3
5	-Vout	No con.	Gnd 3
6	+Vout	Gnd 1	Gnd 1
7	+Vout	Vout 1	Vout 1
8	-	Gnd 2	Gnd 2
9	-	Vout 2	Vout 2



Weight: 0.7 kg (25 oz)

Case J

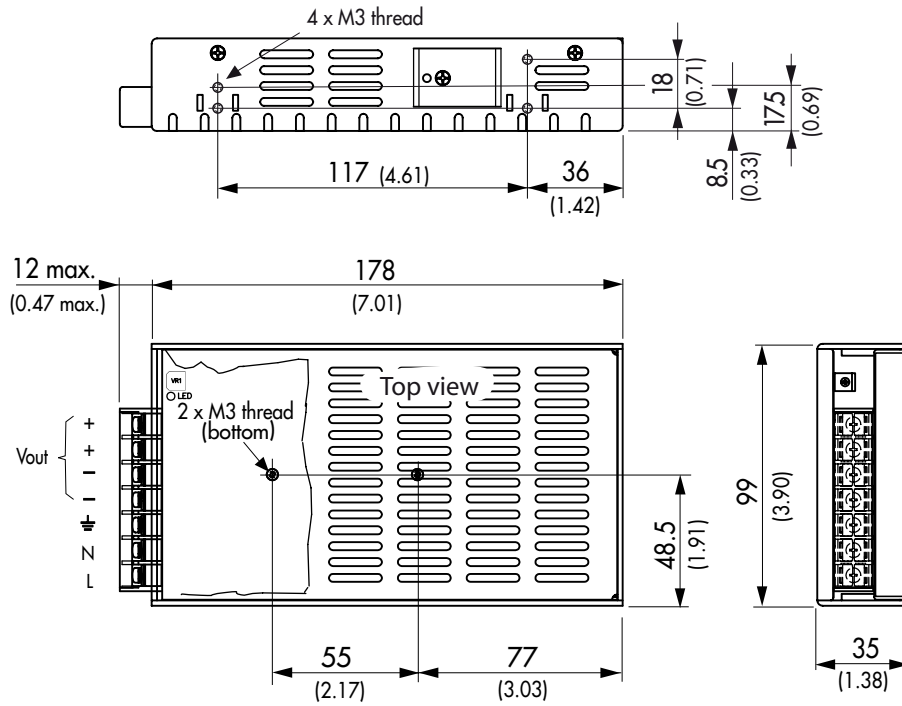
Pin-Out			
	Single	Dual	Triple
1	AC L	AC L	AC L
2	AC N	AC N	AC N
3	AC FG	AC FG	AC FG
4	-Vout	No con.	Vout 3
5	-Vout	No con.	Gnd 3
6	+Vout	Gnd 1	Gnd 1
7	+Vout	Vout 1	Vout 1
8	-	Gnd 2	Gnd 2
9	-	Vout 2	Vout 2



Weight: 0.8 kg (28 oz)

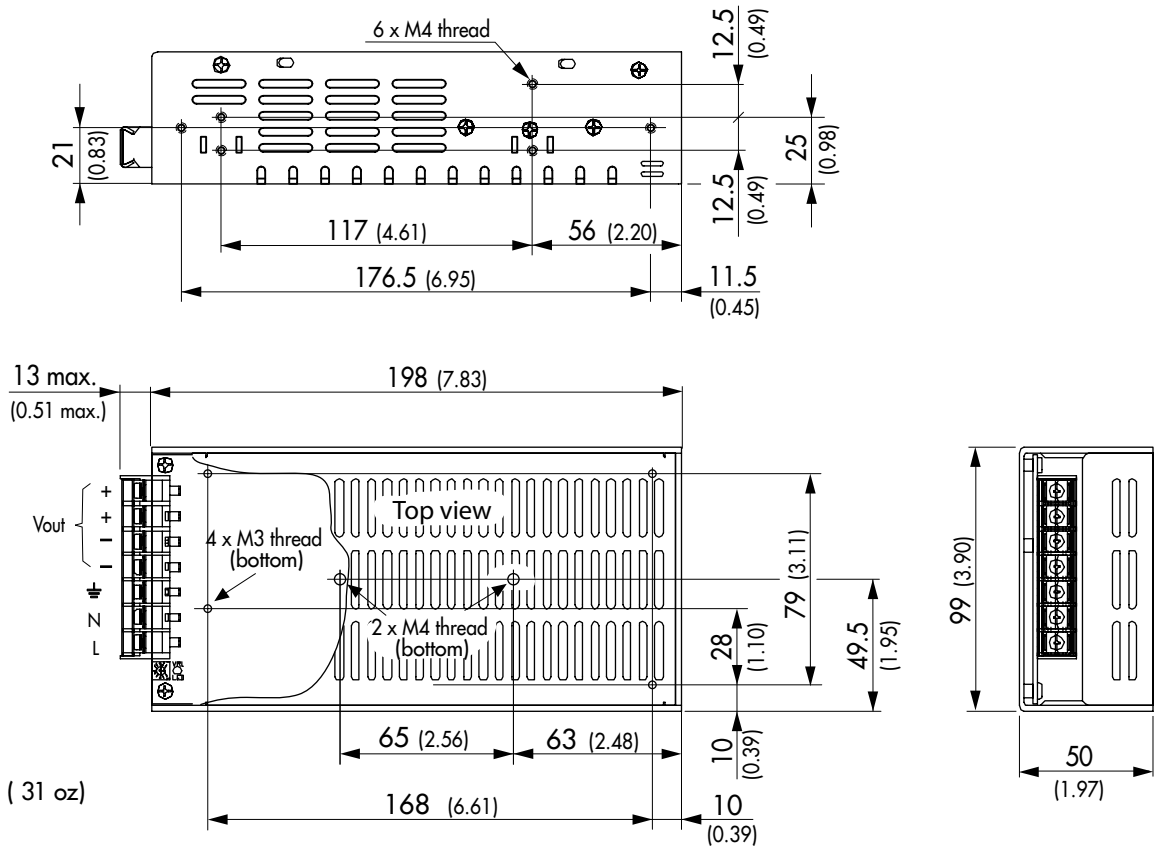
Outline Dimensions

Case K



Weight: 0.82 kg (29 oz)

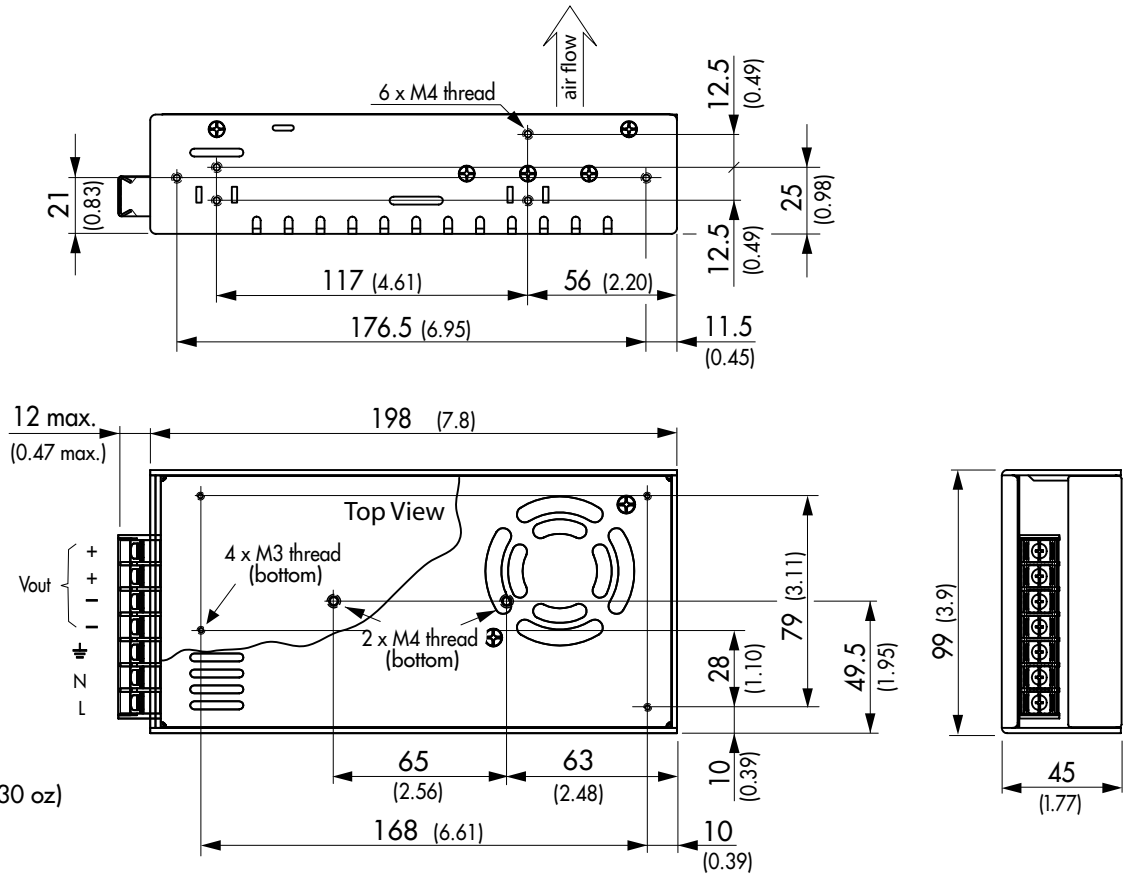
Case L



Weight: 0.89 kg (31 oz)

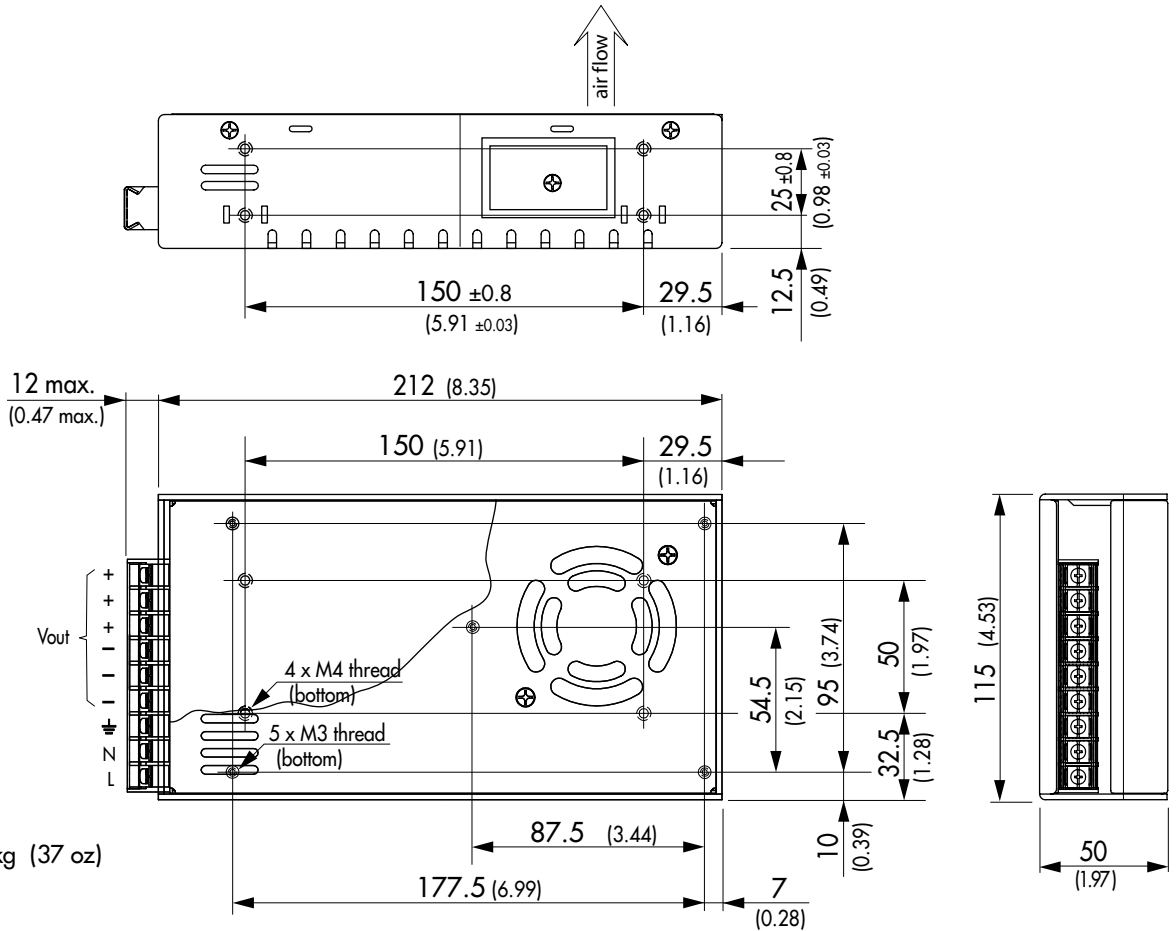
Outline Dimensions

Case N



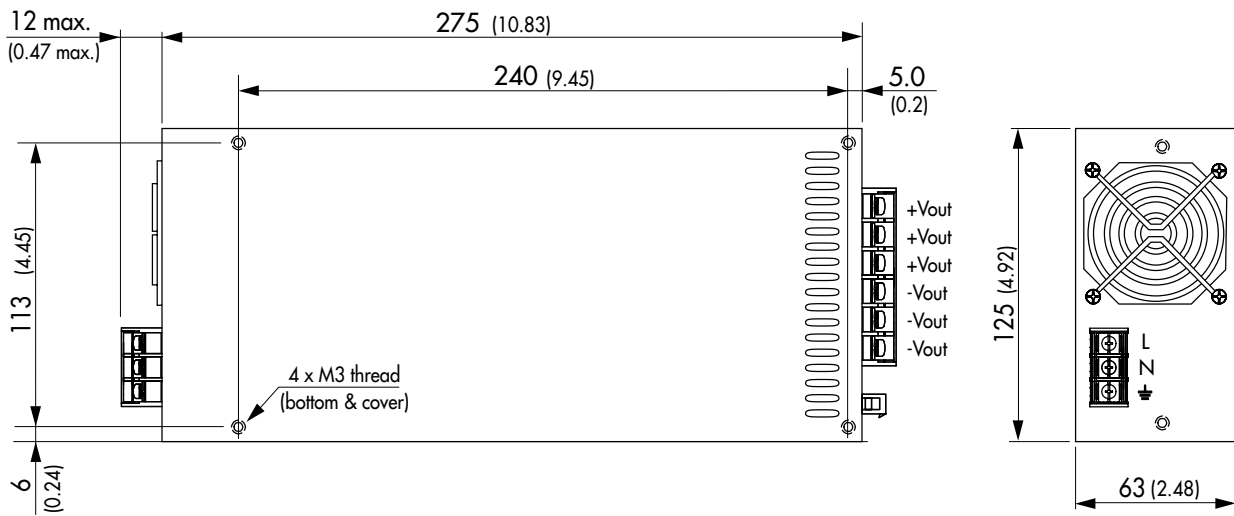
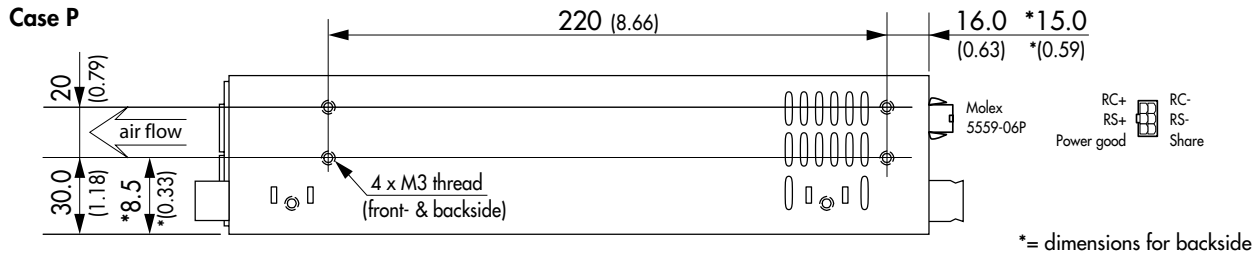
Weight: 0.86 kg (30 oz)

Case O



Weight: 1.05 kg (37 oz)

Outline Dimensions



Weight: 2.3 kg (81 oz)

Dimensions in [mm], () = Inch
 Tolerances ± 0.8 (0.03)
 Mounting hole pitch tolerances ± 0.5 (0.02)
 Mounting holes screw in depth: 3.0 (0.12) max.

Specifications can be changed without notice