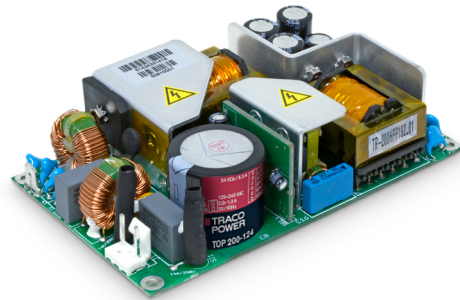


- Highest power density in 5.0" x 3.0" footprint
- Supplies 200 W (convection cooling!)
- Highest efficiency up to 95%
- Operating temperature range -25°C to +70°C
- Universal input 85 – 264 VAC
- Compliance with EN 61000-3-2
- Power Back immunity
- Low leakage current
- Protection class I and class II
- 3-year product warranty



UL 60950-1 IEC 62368-1

The new TOP 200 Series AC/DC Power Supplies feature the highest power rating in the industry standard 3.0" x 5.0" (76.2 x 127 mm) footprint. They can supply up to 200 W output power with convection cooling over an industrial operating temperature range of -25°C to +70°C. This performance could be realized by a state of the art design providing an extremely high efficiency of >90 % which eliminates the need for a dedicated power supply cooling fan.

Compliance with global safety and EMC standards qualify these power supplies for worldwide markets. Approved for Class I and Class II applications, these switchers are suitable for industrial and IT systems but also for consumer products. High reliability is provided by use of industrial quality grade components and an excellent thermal management. This product offers an interesting power supply solution for many space and cost critical applications in commercial and industrial electronic equipment.

Models

Order Code	Output Power max.	Output Voltage nom.	Output Current max.	Efficiency typ.
TOP 200-112	200 W	12 VDC	16'000 mA	93 %
TOP 200-115		15 VDC	13'000 mA	93 %
TOP 200-124		24 VDC	8'300 mA	95 %
TOP 200-148		48 VDC	4'200 mA	95 %

Options

on demand (backorder with MOQ non stocking item)	- Encased version: www.tracopower.com/overview/top200c
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Input Specifications

Input Voltage		85 - 264 VAC (Full Range)
Input Frequency		47 - 63 Hz
Power Consumption	- At no load	3'600 mW max.
Input Inrush Current	- At 230 VAC	40 A max.
Input Protection		T 4 A (Internal Fuse in L & N)
Recommended Input Fuse		6000 mA (slow blow) (The need of an external fuse has to be assessed in the final application.)

Output Specifications

Voltage Set Accuracy		±3% max.
Regulation	- Input Variation (Vmin - Vmax) - Load Variation (0 - 100%)	1% max. 1% max.
Ripple and Noise (20 MHz Bandwidth)	12 VDC model: 15 VDC model: 24 VDC model: 48 VDC model:	120 mVp-p max. 120 mVp-p max. 120 mVp-p max. 150 mVp-p max.
Capacitive Load	12 VDC model: 15 VDC model: 24 VDC model: 48 VDC model:	15'000 µF max. 15'000 µF max. 4'000 µF max. 1'000 µF max.
Minimum Load		Not required
Hold-up Time	- At 230 VAC - At 115 VAC	10 ms min. 10 ms min.
Start-up Time	- At 230 VAC - At 115 VAC	2'000 ms max. 3'000 ms max.
Short Circuit Protection		Automatic recovery
Overload Protection		Foldback Mode
Output Current Limitation		120 - 150% of Iout max.
Overvoltage Protection		150% typ. of Vout nom. (depending on model): 20 V typ. (12 Vout model) 25 V typ. (15 Vout model) 35 V typ. (24 Vout model) 60 V typ. (48 Vout model)

Safety Specifications

Safety Standards	- IT / Multimedia Equipment - Certification Documents	EN 60950-1 EN 62368-1 IEC 60950-1 IEC 62368-1 UL 60950-1 www.tracopower.com/overview/top200
Protection Class		Class I & II (Prepared): Reinforced Insulation
Pollution Degree		PD 2
Over Voltage Category		OVC II

EMC Specifications

EMI Emissions	- Conducted Emissions - Radiated Emissions - Harmonic Current Emissions	EN 61000-6-3 (Generic Residential) EN 55032 class B (internal filter) EN 55032 class B (internal filter) EN 61000-3-2, class A (conductive plane to be connected to safety earth to meet all EMI specifications)
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All specifications valid at nominal voltage, full load and +25°C after warm-up time unless otherwise stated.

EMS Immunity	- RF Electromagnetic Field	EN 61000-4-3, 20 V/m, perf. criteria A
	- EFT (Burst) / Surge	EN 61000-4-4, ± 2 kV, perf. criteria B
		L to L: EN 61000-4-5, ± 1 kV, perf. criteria B
		L to PE: EN 61000-4-5, ± 2 kV, perf. criteria B
	- Conducted RF Disturbances	EN 61000-4-6, 10 Vrms, perf. criteria A
	- PF Magnetic Field	Continuous: EN 61000-4-8, 100 A/m, perf. criteria A
	- Voltage Dips & Interruptions	230 VAC / 50 Hz: EN 61000-4-11
		115 VAC / 60 Hz: EN 61000-4-11
		30%, 25 periods, perf. criteria A
		60%, 10 periods, perf. criteria B
		>95%, 1 period, perf. criteria B
		20%, 250 periods, perf. criteria A
		EN 61000-4-11
		30%, 25 periods, perf. criteria B
		60%, 10 periods, perf. criteria B
		>95%, 1 period, perf. criteria B
		20%, 250 periods, perf. criteria A

General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature	-25°C to +70°C
Power Derating	- High Temperature	2 %/K above 40°C (12 & 15 Vout models)
		2 %/K above 50°C (24 & 48 Vout models)
	- Low Input Voltage	1 %/V below 115 VAC (12 & 15 Vout models)
		1.5 %/V below 108 VAC (24 & 48 Vout models)
Cooling System		Natural convection (20 LFM)
Remote Control	- Voltage Controlled Remote	See application note: www.tracopower.com/overview/top200
	- Current Controlled Remote	See application note: www.tracopower.com/overview/top200
Altitude During Operation		2'000 m max.
Switching Frequency		100 kHz typ. (PWM)
Insulation System		Reinforced Insulation
Isolation Test Voltage	- Input to Output, 60 s	3'000 VAC
	- Input to Case or PE, 60 s	1'500 VAC
	- Output to Case or PE, 60 s	500 VAC
Creepage	- Input to Output	7 mm min.
	- Input to Case or PE	4 mm min.
	- Output to Case or PE	1 mm min.
Clearance	- Input to Output	5 mm min.
	- Input to Case or PE	2.5 mm min.
	- Output to Case or PE	0.5 mm min.
Isolation Resistance	- Input to Output, 500 VDC	100 M Ω min.
Leakage Current	- Earth Leakage Current	500 μ A max.
	- Touch Current	100 μ A max.
Reliability	- Calculated MTBF	(see application note)
Environment	- Vibration	IEC 60068-2-6
		3 axis, sine sweep, 10-55 Hz, 0.075 mm
	- Mechanical Shock	IEC 60068-2-27
		15 g, 3 axis, half sine, 11 ms
Connection Type		Plug-in
Weight		315 g
Power Back Immunity	12 VDC model:	16 V max. (18 V for 1 s)
	15 VDC model:	20 V max. (23 V for 1 s)
	24 VDC model:	35 V max. (40 V for 1 s)
	48 VDC model:	63 V max. (68 V for 1 s)

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

Environmental Compliance - REACH Declaration

www.tracopower.com/info/reach-declaration.pdf

REACH SVHC list compliant

REACH Annex XVII compliant

- RoHS Declaration

www.tracopower.com/info/rohs-declaration.pdf

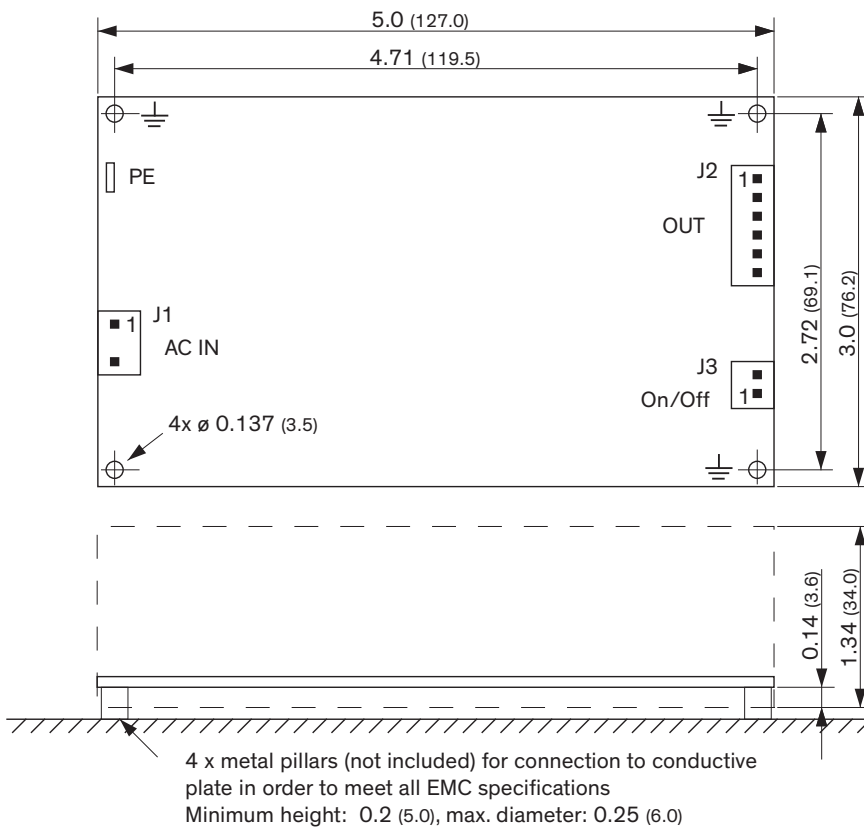
Exemptions: 6a, 6c, 7a, 7c-I, 7c-II

Supporting Documents

[Overview Link](#) (for additional Documents)

www.tracopower.com/overview/top200

Outline Dimensions



Input	
J1	
Pin	Function
1	AC (L)
2	AC (N)

Output	
J2	
Pin	Function
1-3	+ Vout
4-6	- Vout

On / Off	
J3	
Pin	Function
1	-
2	+

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