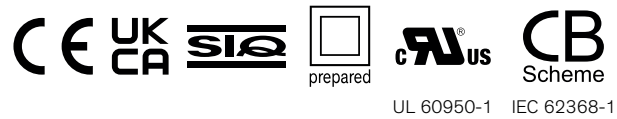
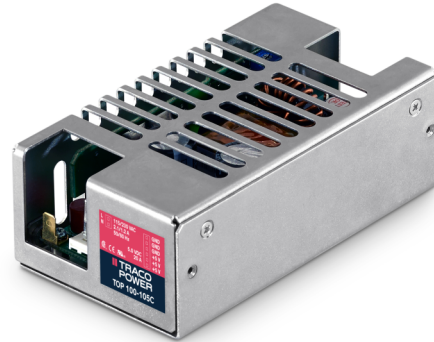


AC/DC Power Supply

TOP 100C Series, 100 Watt

Not recommended for new designs

- 100 W power supply in 2.0"x 4.0" footprint!
- Full load operation up to +50°C with convection cooling
- Highest efficiency, 90 % typ.
- EMI filter meets EN 55032, level B
- Compliance with EN 61000-3-2
- Low leakage current
- Safety class I and class II operation
- 3-year product warranty



The new TOP 100C Series AC/DC Power Supplies feature the highest power rating in the industry standard 2.0" x 4.0" (50.8 x 101.6 mm) footprint. They can supply up to 100 W output power with convection cooling over an industrial operating temperature range of -25°C to +50°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.

Also see: www.tracopower.com/info/top100_article_e1.pdf

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. (adjustable)	Output Current max.	Efficiency typ.
TOP 100-105C *	100 W	5 VDC (5.0 - 5.2 VDC)	20'000 mA	91 %
TOP 100-112C *		12 VDC (12.0 - 13.0 VDC)	8'300 mA	91 %
TOP 100-124C *		24 VDC (24.0 - 26.0 VDC)	4'200 mA	91 %
TOP 100-148C *		48 VDC (48.0 - 52.0 VDC)	2'100 mA	91 %

Note * Not recommended for new designs

Input Specifications

Input Voltage		Operational Range: 90 - 132 VAC / 187 - 264 VAC (Auto Range)
Input Frequency		Operational Range: 47 - 63 Hz Certified: 50/60 Hz
Power Consumption	- No load & $V_{in} = 230$ VAC - No load & $V_{in} = 115$ VAC	2'600 mW max. 3'600 mW max.
Input Inrush Current	- At 230 VAC	60 A max.
Power Factor	- At 230 VAC - At 115 VAC	0.51 min. 0.59 min.
Input Protection		T 3.15 A / 250 VAC (Internal Fuse in L & N)
Recommended Input Fuse		6'000 mA (slow blow) (The need of an external fuse has to be assessed in the final application.)

Output Specifications

Output Voltage Adjustment		5 VDC model: 5.0 - 5.2 VDC 12 VDC model: 12.0 - 13.0 VDC 24 VDC model: 24.0 - 26.0 VDC 48 VDC model: 48.0 - 52.0 VDC (By trim potentiometer) Output power must not exceed rated power!
Voltage Set Accuracy		±1.5% max.
Regulation	- Input Variation ($V_{min} - V_{max}$) - Load Variation (0 - 100%)	0.5% max. 1% max.
Ripple and Noise (20 MHz Bandwidth)		5 VDC model: 150 mVp-p max. 12 VDC model: 150 mVp-p max. 24 VDC model: 150 mVp-p max. 48 VDC model: 200 mVp-p max.
Capacitive Load		10'000 μF max.
Minimum Load		Not required
Temperature Coefficient		±0.02 %/K max.
Hold-up Time	- At 230 VAC - At 115 VAC	15 ms min. 10 ms min.
Start-up Time	- At 230 VAC - At 115 VAC	2'000 ms max. 3'500 ms max.
Short Circuit Protection		Automatic recovery 60% typ. of I_{out} nom.
Overload Protection		Foldback Mode
Output Current Limitation		150% max. of I_{out} max. (depending on model) 25 A max. (5 V_{out} model) 11 A max. (12 V_{out} model) 6 A max. (24 V_{out} model) 3 A max. (48 V_{out} model)
Overvoltage Protection		135% typ. of V_{out} nom. (depending on model) 6 V typ. (5 V_{out} model) 16 V typ. (12 V_{out} model) 30 V typ. (24 V_{out} model) 60 V typ. (48 V_{out} model)
Transient Response	- Peak Variation - Response Time	400 mV max. (10% to 90% Load Step) 3'000 μs max. (10% to 90% Load Step)

All specifications valid at 230 VAC, resistive full load and +25°C after warm-up time, unless otherwise stated.

Safety Specifications

Standards	- IT / Multimedia Equipment	EN 60950-1 EN 62368-1 IEC 60950-1 IEC 62368-1 UL 60950-1
	- Certification Documents	www.tracopower.com/top100c-safety-cert
Protection Class		Class I & II (Prepared): Reinforced Insulation
	See application note:	www.tracopower.com/info/protection-class.pdf
Energy Source	- Output, acc. to 62368-1	ES1
Power Source	- Output, acc. to 62368-1	PS3
Pollution Degree		PD 2
Over Voltage Category		OVC II

EMC Specifications

EMI (Emissions)	- Conducted Emissions	EN 61000-6-3 (Generic Residential) EN 55032 class A (internal filter) EN 55032 class B (internal filter)
	- Radiated Emissions	EN 55032 class A (internal filter) EN 55032 class B (internal filter)
	- Harmonic Current Emissions	EN 61000-3-2, class A
EMS (Immunity)	- RF Electromagnetic Field	EN 61000-4-3, 10 V/m, perf. criteria A
	- EFT (Burst) / Surge	EN 61000-4-4, ±2 kV, perf. criteria A
		L to L: EN 61000-4-5, ±1 kV, perf. criteria A
		L to PE: EN 61000-4-5, ±2 kV, perf. criteria A
	- 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
		1 s: EN 61000-4-8, 1000 A/m, perf. criteria A
	- Voltage Dips & Interruptions	230 VAC / 50 Hz: EN 61000-4-11
		115 VAC / 60 Hz: EN 61000-4-11

General Specifications

Relative Humidity		95% max. (non condensing)
Temperature Ranges	- Operating Temperature	-25°C to +70°C
	- Storage Temperature	-40°C to +80°C
Power Derating	- High Temperature	2.0 %/K above 40°C (5 Vout model) 2.0 %/K above 50°C (other models)
	- Low Input Voltage	3.8 %/V below 103 VAC (low input range) 1.0 %/V below 207 VAC (high input range)
Cooling System		Natural convection (20 LFM)
Altitude During Operation		2'000 m max.
Regulator Topology		Soft switch half bridge Converter
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 MΩ min.
Isolation Capacitance	- Input to Output, 100 kHz, 1 V	1'120 pF typ.

All specifications valid at 230 VAC, resistive full load and +25°C after warm-up time, unless otherwise stated.

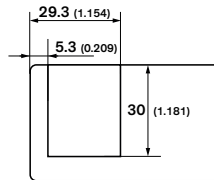
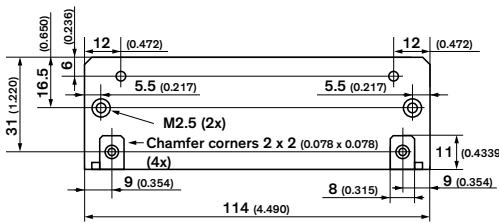
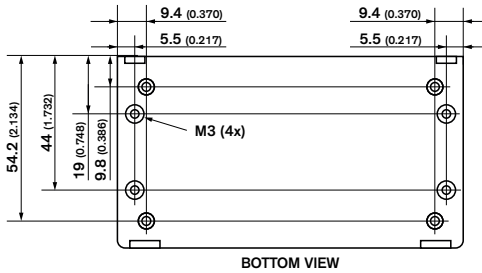
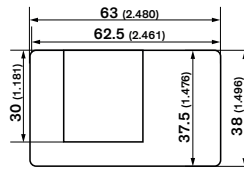
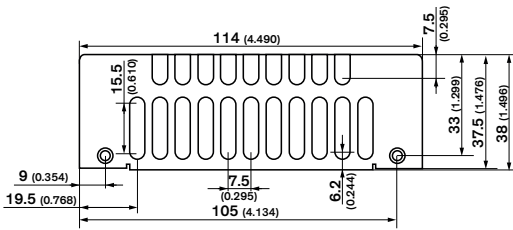
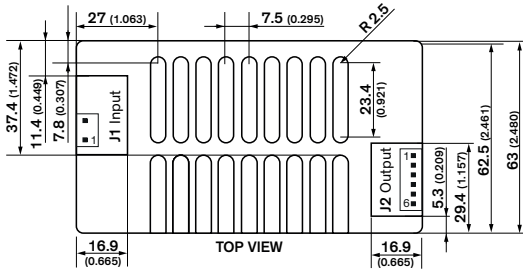
Leakage Current	- Earth Leakage Current - Touch Current	500 μ A max. 100 μ A max.
Reliability	See application note:	www.tracopower.com/top100c-mtbf
Environment	- Vibration - Mechanical Shock	IEC 60068-2-6 1 g, 3 axis, sine sweep, 10-55 Hz, 1 oct/min IEC 60068-2-27 10 g, 3 axis, half sine, 11 ms 20 g, 3 axis, 3 shocks
Housing Material		Aluminum
Housing Type		Metal Case
Mounting Type		Chassis Mount
Connection Type		Pin Connector
Weight		350 g
Power Back Immunity	5 VDC model: 12 VDC model: 24 VDC model: 48 VDC model:	6.3 VDC max. (7 VDC for 1 s) 16 VDC max. (18 VDC for 1 s) 35 VDC max. (40 VDC for 1 s) 63 VDC max. (68 VDC for 1 s)
Environmental Compliance	- REACH Declaration - RoHS Declaration - SCIP Reference Number	www.tracopower.com/info/reach-declaration.pdf REACH SVHC list compliant REACH Annex XVII compliant www.tracopower.com/info/rohs-declaration.pdf Exemptions: 7(a), 7(c)-I (RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule).) 31cfb2de-eb31-4fc2-ad98-946c7c211c4e

Additional Information

Supporting Documents	www.tracopower.com/overview/top100c
Frequently Asked Questions	www.tracopower.com/glossary-faq
Glossary	www.tracopower.com/info/glossary.pdf

All specifications valid at 230 VAC, resistive full load and +25°C after warm-up time, unless otherwise stated.

Outline Dimensions



Max. Screw Penetration 4.0 (0.160)

Mounting screw tightening torque: 0.9 - 1.1 Nm

Dimensions in mm (inch)

Tolerances: ±0.008 (±0.2)



Input (J1)

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

Output (J2)

Pin	Function
1	- Vout
2	- Vout
3	- Vout
4	+ Vout
5	+ Vout
6	+ Vout

J1: Molex Series 41791

mates with Molex crimp terminal: 08-52-0072
and terminal housing: 09-50-3031

J2: Molex Series 41791

mates with Molex crimp terminal: 08-52-0072
and terminal housing: 09-50-3061