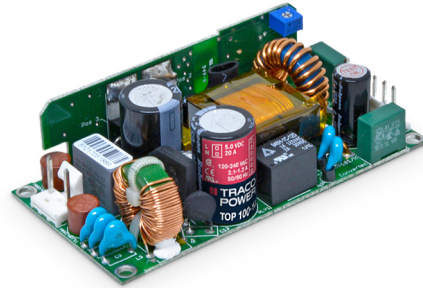


- 100 W power supply in 2.0"x 4.0" footprint!
- Full load operation up to +50°C with convection cooling
- Highest efficiency, 90 % typ.
- EMI filter meets EN 55032, level B
- Compliance with EN 61000-3-2
- Low leakage current
- Safety class I and class II operation
- 3-year product warranty



The new TOP 100 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 100-103 * | 100 W | 3.3 VDC (3.3 - 3.5 VDC) | 20'000 mA | 87 % |
| TOP 100-105 | | 5 VDC (5.0 - 5.2 VDC) | 20'000 mA | 91 % |
| TOP 100-112 | | 12 VDC (12.0 - 13.0 VDC) | 8'300 mA | 91 % |
| TOP 100-115 | | 15 VDC (15.0 - 16.0 VDC) | 6'700 mA | 91 % |
| TOP 100-124 | | 24 VDC (24.0 - 26.0 VDC) | 4'200 mA | 91 % |
| TOP 100-148 | | 48 VDC (48.0 - 52.0 VDC) | 2'100 mA | 91 % |

| Options | |
|----------|---|
| Suffix C | - Encased version: www.tracopower.com/overview/top100c |

Note * End of life

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 & Vin = 230 VAC - No load & Vin = 115 VAC | 2'600 mW max. 3'500 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 | | 3.3 VDC model: 3.3 - 3.5 VDC 5 VDC model: 5.0 - 5.2 VDC 12 VDC model: 12.0 - 13.0 VDC 15 VDC model: 15.0 - 16.0 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 (Vmin - Vmax) - Load Variation (0 - 100%) | 1% max. (3.3 Vout model) 0.5 % max. (other models) 1.5% max. (3.3 Vout model) 1 % max. (other models) |
| Ripple and Noise (20 MHz Bandwidth) | | 3.3 VDC model: 150 mVp-p max. 5 VDC model: 150 mVp-p max. 12 VDC model: 150 mVp-p max. 15 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 Iout nom. |
| Overload Protection | | Foldback Mode |
| Output Current Limitation | | 150% max. of Iout max. (depending on model) 25 A max. (3.3 Vout model) 25 A max. (5 Vout model) 11 A max. (12 Vout model) 10 A max. (15 Vout model) 6 A max. (24 Vout model) 3 A max. (48 Vout model) |

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

| | | |
|------------------------|-------------------------------------|--|
| Overvoltage Protection | | 135% typ. of Vout nom. (depending on model) 5 V typ. (3.3 Vout model) 6 V typ. (5 Vout model) 16 V typ. (12 Vout model) 20 V typ. (15 Vout model) 30 V typ. (24 Vout model) 60 V typ. (48 Vout model) |
| Transient Response | - Peak Variation - Response Time | 400 mV max. (10% to 90% Load Step) 3'000 µs max. (10% to 90% Load Step) |

Safety Specifications

| | | |
|-----------------------|-----------------------------|--|
| Safety Standards | - IT / Multimedia Equipment | EN 60950-1 EN 62368-1 IEC 60950-1 IEC 62368-1 UL 60950-1 |
| | - Certification Documents | www.tracopower.com/overview/top100 |
| 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) |
| EMS Immunity | - RF Electromagnetic Field - EFT (Burst) / Surge - Conducted RF Disturbances - PF Magnetic Field - Voltage Dips & Interruptions | EN 61000-4-3, 10 V/m, perf. criteria A 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 EN 61000-4-6, 10 Vrms, perf. criteria A Continuous: EN 61000-4-8, 100 A/m, perf. criteria A 1 s: EN 61000-4-8, 1000 A/m, perf. criteria A 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 - Storage Temperature | -25°C to +70°C -40°C to +80°C |
| Power Derating | - High Temperature - Low Input Voltage | 1.8 %/K above 40°C (3.3 Vout model) 2.0 %/K above 40°C (5 Vout model) 2.0 %/K above 50°C (other models) 3.8 %/V below 103 VAC (3.3 Vout model) 0.9 %/V below 207 VAC (3.3 Vout model) 3.8 %/V below 103 VAC (other models) 1.0 %/V below 207 VAC (other models) |
| Cooling System | | Natural convection (20 LFM) |
| Altitude During Operation | | 2'000 m max. |
| Switching Frequency | | 100 kHz typ. (PWM) |
| Insulation System | | Reinforced Insulation |

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

| | | |
|--------------------------|---------------------------------|--|
| 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. |
| Leakage Current | - Earth Leakage Current | 500 μA max. |
| | - Touch Current | 100 μA max. |
| Reliability | - Calculated MTBF | (see application note) |
| Environment | - Vibration | IEC 60068-2-6 1 g, 3 axis, sine sweep, 10-55 Hz, 1 oct/min |
| | - Mechanical Shock | IEC 60068-2-27 10 g, 3 axis, half sine, 11 ms |
| | | 20 g, 3 axis, 3 shocks |
| Housing Type | | Open Frame |
| Mounting Type | | Chassis Mount |
| Connection Type | | Pin Connector |
| Weight | | 170 g |
| Power Back Immunity | 3.3 VDC model: | 5 VDC max. (6 VDC for 1 s) |
| | 5 VDC model: | 6.3 VDC max. (7 VDC for 1 s) |
| | 12 VDC model: | 16 VDC max. (18 VDC for 1 s) |
| | 15 VDC model: | 20 VDC max. (23 VDC for 1 s) |
| | 24 VDC model: | 35 VDC max. (40 VDC for 1 s) |
| | 48 VDC model: | 63 VDC max. (68 VDC for 1 s) |
| 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: 7a, 7c-I (RoHS exemptions refer to the component concentration only, not to the overall concentration in the product (O5A rule).) |
| | - SCIP Reference Number | 14dcee4b-8b62-447f-a548-9bdfc3eceaa4 |

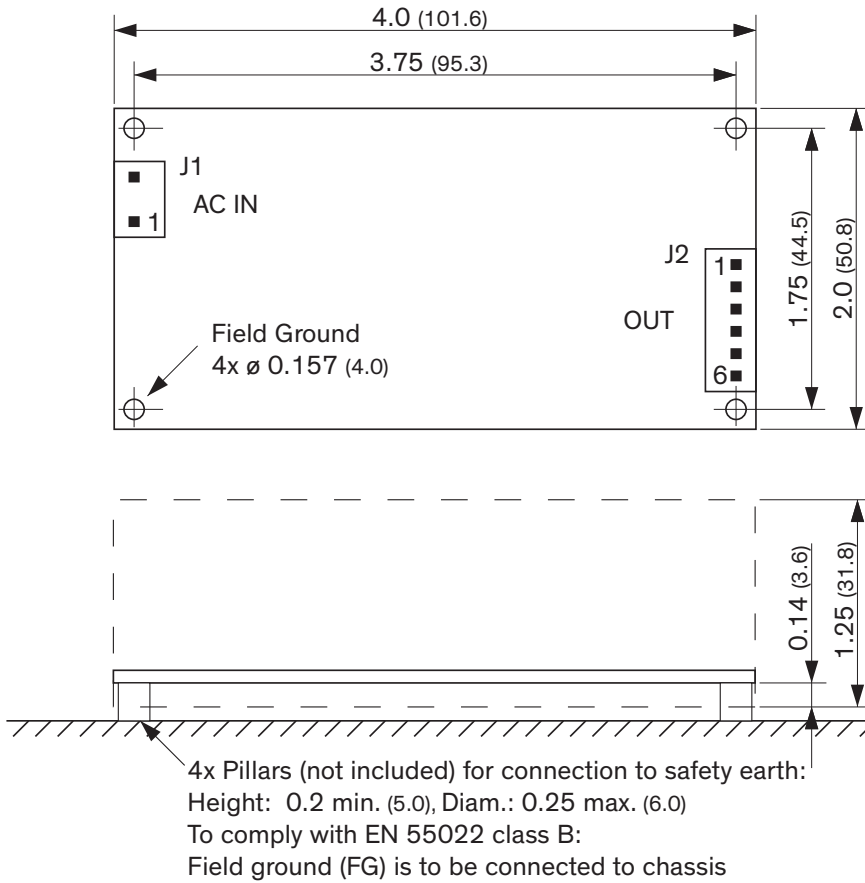
Supporting Documents

Overview Link (for additional Documents)

www.tracopower.com/overview/top100

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

Outline Dimensions



Dimensions in Inch (mm)
 Tolerances: ± 0.008 (± 0.2)

| Input (J1) | | Output (J2) | |
|------------|----------|-------------|----------|
| Pin | Function | Pin | Function |
| 1 | AC in | 1 | - Vout |
| 2 | AC in | 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