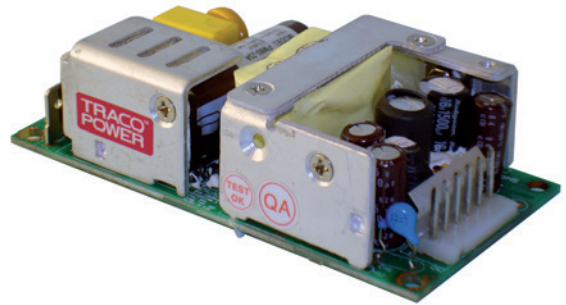


Features

- ◆ 60 W power supply in 2.0" x 4.0" footprint
- ◆ Single-, dual- and triple output models
- ◆ Highest efficiency of 88% typ.
- ◆ Operating temperature range -10°C to $+70^{\circ}\text{C}$
- ◆ EMI filter meets EN 55022, level B
- ◆ Compliance with EN 61000-3-2
- ◆ 3-year product warranty



The new TOP-60 series AC/DC open frame power supplies with Industry standard 2.0" x 4.0" (50.8 x 101.6 mm) footprint feature single-, dual- and triple output models with up to 60 Watt continuous output power. The high efficiency allows an operation up to 70°C with convection cooling.

Compliance with global safety and EMC standards qualify these power supplies for industrial and IT applications.

| Models | | | | |
|------------|----------------------|--|------------------------|------------------------|
| Order Code | Output Power nominal | Output 1 | Output 2 ¹⁾ | Output 3 ¹⁾ |
| TOP 60105 | 55 W | 5.0 VDC / 11.0 A | | |
| TOP 60112 | 60 W | 12 VDC / 5.0 A | | |
| TOP 60115 | 64 W | 15 VDC / 4.3 A | | |
| TOP 60124 | 64 W | 24 VDC / 2.7 A | | |
| TOP 60148 | 64 W | 48 VDC / 1.35 A | | |
| TOP 60252 | 55 W | +5.0 VDC / 6.0 A (8.0 A) ¹⁾ | +12 VDC / 3.0 A | |
| TOP 60254 | 55 W | +5.0 VDC / 6.0 A (8.0 A) ¹⁾ | +24 VDC / 1.5 A | |
| TOP 60522 | 55 W | +5.0 VDC / 6.0 A (8.0 A) ¹⁾ | +12 VDC / 3.0 A | -12 VDC / 0.5 A |
| TOP 60533 | 55 W | +5.0 VDC / 6.0 A (8.0 A) ¹⁾ | +15 VDC / 2.4 A | -15 VDC / 0.5 A |
| TOP 60316 | 38 W | +3.3 VDC / 6.0 A (8.0 A) ¹⁾ | +5.2 VDC / 3.0 A | +12 VDC / 0.5 A |
| TOP 60317 | 38 W | +5.0 VDC / 6.0 A (8.0 A) ¹⁾ | +3.3 VDC / 1.5 A | +12 VDC / 0.5 A |
| TOP 60318 | 55 W | +5.0 VDC / 6.0 A (8.0 A) ¹⁾ | +24 VDC / 1.5 A | -12 VDC / 0.5 A |

¹⁾ Peak current for max. 10 sec. or with forced air cooling
Total power should not exceed nominal power

Input Specifications

| | | |
|---|---|---|
| Input voltage | – nominal – AC input range – DC input range | 100 – 240 VAC (universal input) 90 – 264 VAC (with derating at low input) 110 – 370 VDC (max. 40 W output power at input below 120 VDC) |
| Input frequency | | 47 – 63 Hz |
| Harmonic limits | | EN 61000-3-2, class A |
| Earth leakage current | | 150 µA max. @264 VAC, 63 Hz |
| Inrush current (< 2ms, cold start at 25°C) | – 115 VAC – 230 VAC | 30 A typ. 60 A typ. |
| Input protection | | T3.15 A internal fuses (line and neutral) |
| Recommended circuit breaker | | 5 A (characteristic C or slow blow fuse) |

Output Specifications

| | | |
|--|---|---|
| Voltage set accuracy | | single output models: 2 % max. multi output models, output 1: 3 % max. multi output models, other outputs: 5 % max. |
| Regulation | – Input – Load variation | single output models: 0.5 % max. 2 % max. multi output models, output 1: 3 % max. multi output models, other outputs: 5 % max. |
| Minimum load (to meet regulation specs) | | multi output models, output 1: 0.5 A multi output models, output 2: 0.1 A (not required for single output models and output 3 of multi output models) |
| Ripple and noise (20Mhz Bandwidth) | | 3.3 & 5 VDC models: <100 mVp-p other models: 1 % Vout |
| Overvoltage protection (output 1 only) | | at 110 % – 135 % of Vout nominal |
| Short circuit protection | | foldback (automatic recovery) |
| Capacitive load | TOP 60105/60112/60115/60124/60148 models: TOP 60252/60254 models: TOP 60522/60316/60317/60533/60318 models: | 3300/2200/1500/470/0 µF max. 2200/82 µF max. 1500/5600/1200/470/330 µF max. |
| Transient response (25 % load step change) | | 500 µs typ. |
| Hold-up time | – Vin = 110 VAC – Vin = 230 VAC | 12 ms typ. 15 ms typ. |

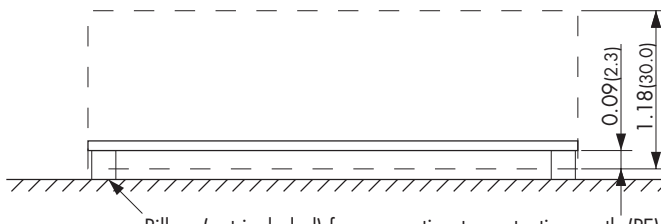
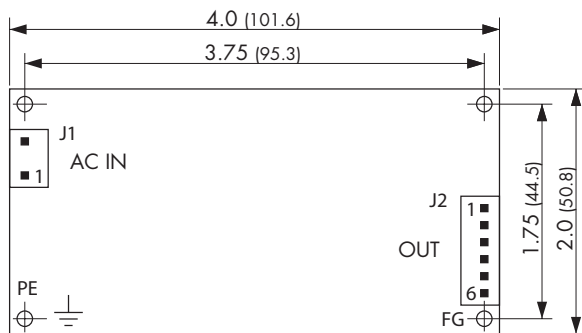
General Specifications

| | | |
|-------------------------------|--|--|
| Temperature ranges | – Operating – Storage (non-operating) | –10°C to +70°C –40°C to +85°C |
| Power derating | | 2.5 %/K above +50°C |
| Humidity (non condensing) | | 0 – 95 % rel. H max. |
| Efficiency | | 80 – 88 % 75 % for TOP 60316 & TOP 60317 |
| Switching frequency | | 62 kHz typ. (pulse width modulation) |
| Altitude during operation | | up to 3'000 m (10'000 ft) approved |
| Start-up time | – Vin = 115 VAC – Vin = 230 VAC | <3.5s <2s |
| Electromagnetic compatibility | – Electrostatic discharge ESD – RF field susceptibility – Electrical fast transient / burst immunity input – Electrical fast transient / burst immunity output – Surge immunity line – neutral ground – Surge immunity output – Immunity to conducted RF disturbances – Magnetic field immunity – Mains voltage dips and interruptions | EN 61000-4-2 ±8 kV / ±6 kV EN 61000-4-3 3 V/m EN 61000-4-4 ±2 kV EN 61000-4-4 ±2 kV EN 61000-4-5, ±2 kV EN 61000-4-5 ±1 kV EN 61000-4-6 3 Vrms EN 61000-4-8 3 A/m EN 61000-4-11 30 % 500 ms, 60 % 100 ms, >95 % 10 ms |

General Specifications

| | | |
|---|---|--|
| Electromagnetic compatibility (EMC), Emissions | – Conducted input RI suppression – Harmonic current emissions | EN 55022 class B, FCC Part 15 class B IEC/EN 61000-3-2, class A & D |
| Isolation voltage | – Input / Output – Input / Field Ground – Output / Field Ground | 4000 VAC 1500 VAC 500 VAC |
| Reliability /calculated MTBF (MIL-HDBK-217F, at +25°C, ground benign) | | >400'000 h |
| Safety standards | – Information technology equipment | IEC/EN 60950-1 |
| Safety approvals | – CB certificate (IEC 60950-1) – TÜV certificate (UL 60950-1) | www.tracopower.com/products/top60-cb.pdf www.tracopower.com/products/top60-tuv.pdf |
| Environment | – Vibration acc. IEC 60068-2-6; – Shock acc. IEC 60068-2-27 | 3 axis, sine sweep, 10-55Hz, 1g, 1oct/min 3 axis, 15g half sine, 11msShock 20 G (3 directions each 3 times) |
| Connection | | pin connector (Molex) |
| Weight | | 205 g (7.23 oz) |

Dimensions



Pillars (not included) for connection to protective earth (PE)
Height: 0.2 min. (5.0), Diam.: 0.25 max. (6.0)

To comply with EN 55022 class B:
Field ground (FG) and protective earth (PE)
are to be connected to chassis

Dimensions in Inch, () = mm

Input J1

| Pin | |
|-----|-------|
| 1 | AC in |
| 2 | AC in |

J1: Molex Series 41791
mates with Molex crimp terminal: 08-52-0072
and terminal housing: 09-50-3031

Output J2

| Pin | Single output | Dual output | Triple output |
|-----|---------------|-------------|---------------|
| 1 | +Vout 1 | Vout 1 | Vout 1 |
| 2 | +Vout 1 | Vout 1 | Vout 1 |
| 3 | -Vout 1 | com. | com. |
| 4 | -Vout 1 | com. | com. |
| 5 | no con. | no con. | Vout 3 |
| 6 | no con. | Vout 2 | Vout 2 |

J2: Molex Series 41791
mates with Molex crimp terminal: 08-52-0072
and terminal housing: 09-50-3061

Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at www.tracopower.com



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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