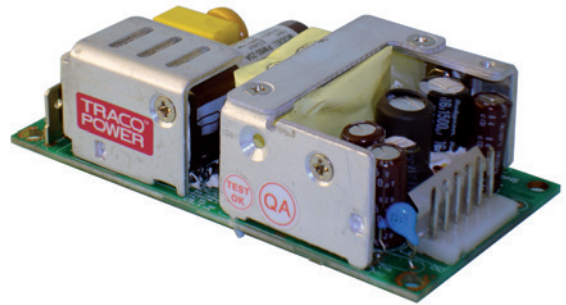


Features

- ◆ 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	<ul style="list-style-type: none"> - 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)	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Input - Load variation 	single output models: 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	<ul style="list-style-type: none"> - Vin = 110 VAC - Vin = 230 VAC 	12 ms typ. 15 ms typ.

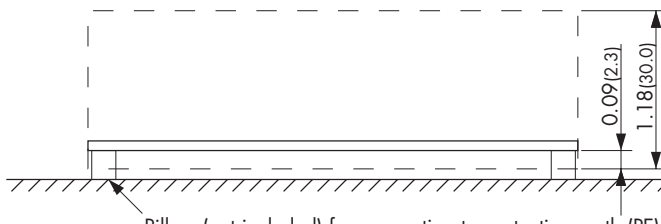
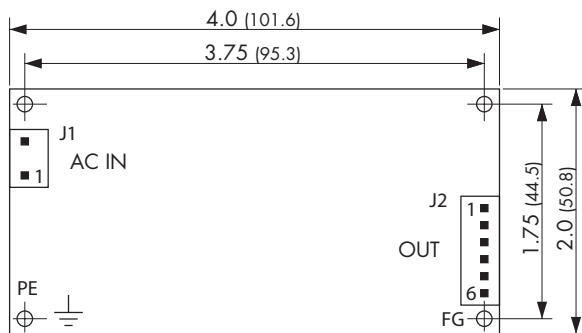
General Specifications

Temperature ranges	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Vin = 115 VAC - Vin = 230 VAC 	<3.5s <2s
Electromagnetic compatibility	<ul style="list-style-type: none"> - 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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