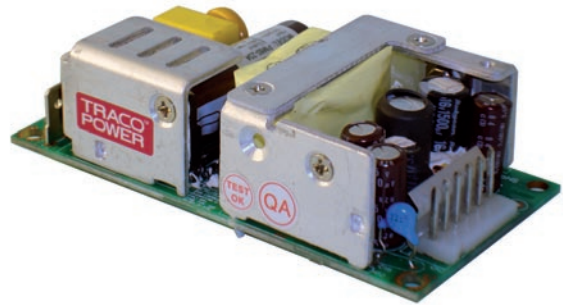


Features

- ◆ 60 W power supply in 2.0" x 4.0" footprint
- ◆ Supplies 60 W with convection cooling
- ◆ 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
- ◆ Low leakage current
- ◆ Protection class II
- ◆ 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) ²⁾	+12 VDC / 3.0 A	
TOP 60254	55 W	+5.0 VDC / 6.0 A (8.0 A) ²⁾	+24 VDC / 1.5 A	
TOP 60522	55 W	+5.0 VDC / 6.0 A (8.0 A) ²⁾	+12 VDC / 3.0 A	-12 VDC / 0.5 A
TOP 60533	55 W	+5.0 VDC / 6.0 A (8.0 A) ²⁾	+15 VDC / 2.4 A	-15 VDC / 0.5 A
TOP 60316	38 W	+3.3 VDC / 6.0 A (8.0 A) ²⁾	+5.2 VDC / 3.0 A	+12 VDC / 0.5 A
TOP 60317	38 W	+5.0 VDC / 6.0 A (8.0 A) ²⁾	+3.3 VDC / 1.5 A	+12 VDC / 0.5 A
TOP 60318	55 W	+5.0 VDC / 6.0 A (8.0 A) ²⁾	+24 VDC / 1.5 A	-12 VDC / 0.5 A

¹⁾ Total power should not exceed nominal power

²⁾ Peak current for max. 10 sec. or with forced air cooling

Input Specifications

Input voltage range	90 – 264 VAC (universal input)	
Input frequency	47 – 63 Hz	
Harmonic limits	EN 61000-3-2, class A	
Earth leakage current	150 μ A max. @264 VAC, 63 Hz	
Inrush current	– 115 VAC (< 2ms, cold start at 25°C) – 230 VAC	30 A typ. 60 A typ.
Recommended circuit breaker	5 A (characteristic C or slow blow fuse)	

Output Specifications

Regulation	– Input – Load variation	0.5 % max. single output models: 2 % max. multi output models, output 1: 3 % max. multi output models, other outputs: 5 % max.
Ripple and noise (20Mhz Bandwidth)	3.3 & 5 VDC models: other models:	<100 mVp-p 1% Vout
Overvoltage protection (output 1 only)		at 110 % – 135 % of Vout nominal
Short circuit protection		foldback (automatic recovery)
Capacitive load		tba.
Transient response (25% load step change)		500 μ s typ.
Hold-up time	– Vin = 110 VAC – Vin = 230 VAC	12 ms typ. 15 ms typ.

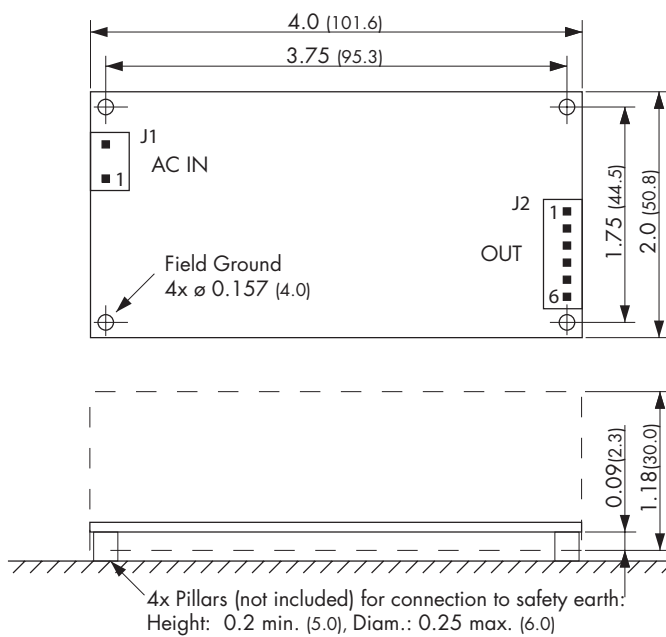
General Specifications

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)
Start-up time	– Vin = 115 VAC – Vin = 230 VAC	<3.5s <2s
Isolation voltage	– Input / Output – Input / Field Ground – Output / Field Ground	4000 VAC 1500 VAC 500 VAC
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
Electromagnetic compatibility	– Electrostatic discharge ESD – RF field susceptibility – Electrical fast transient / burst immunity input – Electrical fast transient / burst immunity output – Surge immunity line – neutral – 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 \pm 2 kV EN 61000-4-4 \pm 2 kV EN 61000-4-5, \pm 2 kV EN 61000-4-5 \pm 1 kV EN 61000-4-6 10 Vrms EN 61000-4-8 3 A/m EN 61000-4-11 30 % 10 ms 60 % 100 ms 95 % 5000 ms

General Specifications

Safety standards	– Information technology equipment	IEC/EN 60950-1
Safety approvals	– CB certificate for IEC 60950-1 – TÜV certificate for IEC/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



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 any time without notice.