chanhvinh.com

TRACO POWER

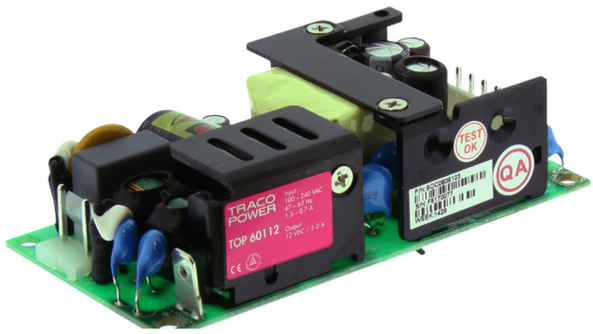
AC/DC Power Supplies

TOP 60 Series, 60 Watt

CB Scheme

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°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 alouds 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

chanhvinh.com

TRACO POWER

AC/DC Power Supplies

TOP-60 Series **60 Watt**

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: multi output models, output 1: multi output models, other outputs:	2 % max. 3 % max. 5 % max.
Regulation	– Input – Load variation	 single output models: multi output models, output 1: multi output models, other outputs:	0.5 % max. 2 % max. 3 % max. 5 % max.
Minimum load (to meet regulation specs)		multi output models, output 1: multi output models, output 2:	0.5 A 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: 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		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

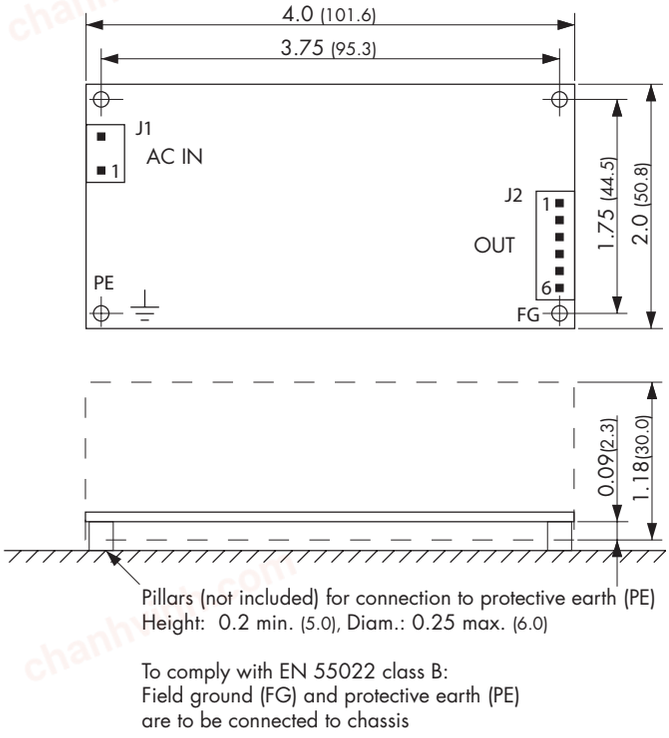
Temperature ranges	– Operating – Storage (non-operating)	–10°C to +70°C –40°C to +85°C
Power derating		2.5 %/K above +50°C
Humidity (non condensing)		0 – 95 % rel. H max.
Efficiency		80 – 88 % 75 % for TOP 60316 & TOP 60317
Switching frequency		62 kHz typ. (pulse width modulation)
Altitude during operation		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

chanhvinh.com

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 – Certification documents	IEC/EN/UL 62368-1 IEC/EN 60950-1 www.tracopower.com/overview/top60
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	Function
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	NC	NC	Vout 3
6	NC	Vout 2	Vout 2

NC = Not connected

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