

PHOTO COMING SOON

SM42P SERIES

30-48 WATT MEDICAL & ITE SWITCHING POWER SUPPLIES

UNIVERSAL INPUT

FEATURES

- ◆ Medical and industrial approvals
- ◆ Compact size 2" x4" x1.18"
- ◆ Single, dual and triple outputs
- ◆ Wide-range input 90-264 VAC
- ◆ Low earth leakage current
- ◆ Level B emissions
- ◆ RoHS compliant

DESCRIPTION

The SM42P series of compact, open PCB constructed, AC-DC switching power supplies are capable of delivering 30-48 watts of continuous output power at convection. They operate at 90-264 VAC input voltage without the need of voltage selection, and are suited for medical, information technology and industrial applications. Approval to both EN60601-1 and EN60950-1 Safety Standards improves design-in time and reduces end equipment compliance costs.

INPUT SPECIFICATIONS

Input Voltage:	90-264 VAC
Input Frequency:	47-63 Hz
Input Current:	0.9 A (rms) for 100 VAC 0.5 A (rms) for 240 VAC
Earth Leakage Current:	150 μ A max. @ 264 VAC, 63 Hz

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature:	-10°C to +70°C
Storage Temperature:	-40°C to +85°C
Relative Humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50°C linearly to 50% at +70°C

GENERAL SPECIFICATIONS

Switching Frequency:	62 K \pm 5 KHz
Efficiency:	80-88% typical except SM42P31-3A and SM42P31-5A at 75% typical
Hold-up Time:	12 msec minimum at 110 VAC
Line Regulation:	\pm 0.5% maximum at full load
Inrush Current:	25 A @ 115 VAC, or 50 A @ 230 VAC, at 25°C cold start
Withstand Voltage:	4000 VAC from input to output 1500 VAC from input to ground 500 VAC from output to ground
MTBF (25°C ambient):	400,000 hours at full load at 25°C ambient, calculated per MIL-HDBK-217F

EMC PERFORMANCE

EN55011 / EN55022:	Class B conducted, class B radiated
FCC:	Class B conducted, class B radiated
VCCI:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class A and D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, \pm 8 KV air and \pm 6 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, \pm 2 KV
EN61000-4-5:	Surge, \pm 1 KV diff, \pm 2 KV com.
EN61000-4-6:	Conducted immunity, 3V rms
EN61000-4-8:	Magnetic field immunity, 3A/m
EN61000-4-11:	Voltage dips, 30% reduction for 500 ms 60% reduction for 100 ms >95% reduction for 10 ms

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart
Maximum output power:	See rating chart
Ripple and noise:	2% peak to peak on 5.0 V model, 1% peak to peak on other models.
Overvoltage protection:	Provided on output #1 only; set at 112–132% of its nominal output voltage
Overcurrent protection:	All outputs protected to short circuit conditions
Temperature coefficient:	All outputs \pm 0.04% /°C maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 μ s after a 25% step load change

SAFETY PENDING

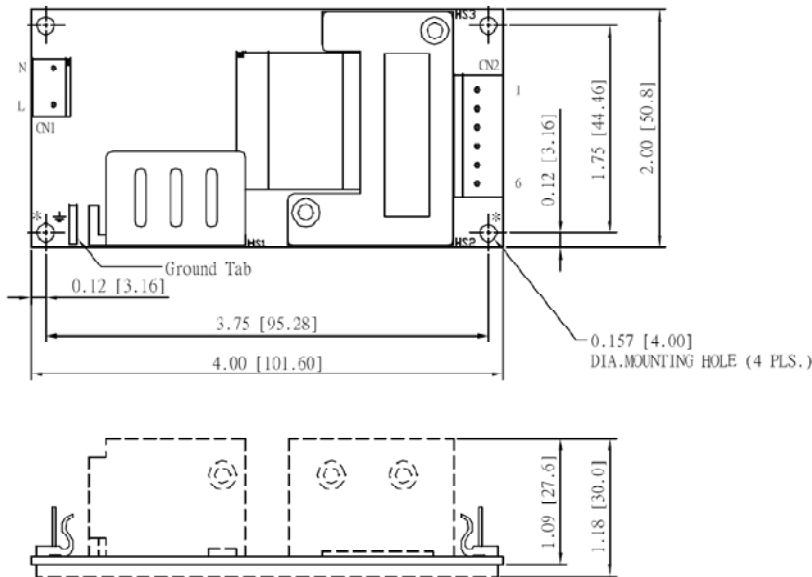


OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output #1				Output #2				Output #3				Max. Power
	Vnom	Imin	I _{max}	Tol.	Vnom	Imin	I _{max}	Tol.	Vnom	Imin	I _{max}	Tol.	
SM42P10A	5V	0A	8.0A	2%	(N/A)				(N/A)				40W
SM42P12A	12V	0A	3.5A	2%	(N/A)				(N/A)				42W
SM42P13A	15V	0A	3.0A	2%	(N/A)				(N/A)				45W
SM42P14A	24V	0A	2.0A	2%	(N/A)				(N/A)				48W
SM42P18A	48V	0A	1.0A	2%	(N/A)				(N/A)				48W
SM42P23A	+5V	0.5A	6A	3%	+12V	0.1A	2A	5%	(N/A)				40W
SM42P25A	+5V	0.5A	6A	3%	+24V	0.1A	1A	5%	(N/A)				40W
SM42P31A	+5V	0.5A	6A	3%	+12V	0.1A	2A	5%	-12V	0A	0.3A	4%	40W
SM42P31-3A	+3.3V	0.8A	6A	3%	+5V	0.1A	2A	5%	+12V	0A	0.3A	4%	30W
SM42P31-5A	+5V	0.5A	6A	3%	+3.3V	0A	1.5A	5%	+12V	0A	0.3A	4%	30W
SM42P32A	+5V	0.5A	6A	3%	+15V	0.1A	1.5A	5%	-15V	0A	0.3A	4%	40W
SM42P39A	+5V	0.5A	6A	3%	+24V	0.1A	1A	5%	-12V	0A	0.3A	4%	40W

Notes: Safety approvals are for PCB form only. To order unit with cover fitted, change suffix "A" to "C".

MECHANICAL SPECIFICATIONS



1. Dimensions shown in inches [mm]
2. Tolerance 0.02 [0.5] maximum
3. Input connector mates with Molex housing 09-50-3031 and Molex 2878 series crimp terminal.
4. Output connector mates with Moles housing 09-50-3061 and Moles 2878 series crimp terminal.
5. Ground tab is 0.25 [6.35] x 0.032 [0.8]
6. To ensure compliance with level B emissions, connect the two "*" marked mounting holes with metallic standoffs to chassis.
7. Weight: 205 grams (0.45 lbs.) approx.

PIN CHART

MODEL	PIN	1	2	3	4	5	6
SM42P10A SM42P12A SM42P14A	SM42P13A SM42P18A	+V1	+V1	RTN	RTN	N.C	N.C
SM42P23A	SM42P25A	+V1	+V1	RTN	RTN	N.C	+V2
SM42P31A	SM42P32A SM42P39A	+V1	+V1	RTN	RTN	-V3	+V2
SM42P31-3A	SM42P31-5A	+V1	+V1	RTN	RTN	+V3	+V2

Note: All data are subject to change without notice