

SMP Series: Super Slim Modular Power Supplies

These medium power, modular power supplies, from 250 through 1000 watts, are capable of up to 12 independent outputs. Modular design makes these units easy to customize for unusual voltage and power combinations. All units have power factor corrected inputs, an end mounted fan for cooling and a variety of built-in signals and controls. High reliability and a flexible design make these an excellent choice for process control and semiconductor fabrication applications.

Features

- Worldwide safety agency approval (UL, CSA and CE)
- 250, 350, 450, 600 & 1000 Watt Power Platforms
- Meets IEC 61000-3-2
- Power Factor Correction (0.99)
- Universal AC Input (90-264V)
- Single wire current share
- Power fail TTL signal
- Cover and End mounted fan
- Capable of up to 12 independent outputs
- Highly Accelerated Life Tested (HALT)
- Fully isolated outputs
- Thermal overload protection
- MTBF demonstrated >500,000 hours
- Two year warranty



Applications

- Process Control
- Semiconductor Fabrication
- Low Profile Chassis Mount
- Service Automation

Related Products

- GL Series
- SHP Series

Specifications

Description	Catalog Number				
	SM2	SM3	SM4	SM6	SM9
Input					
AC Input	90-264 Vac, 47-63 Hz single phase				
Inrush Current	Less than 20 A peak			Less than 40 A peak	
PFC and Harmonic Correction	Compliant with EN61000-3-2.				
Input Transient and ESD, AC	Compliant with EN61000-4-2,3,4,5,6 (Level 3 minimum)				
Output					
Line Regulation AC input	Less than 0.1% for line variations from 90-264 Vac. Less than 0.3% for dual and triple output modules				
Load Regulation	Less than 1.0% no load to full load and full load to no load, mains. Less than 2.0% for dual and triple output modules				
Cross Regulation	Less than 0.1% between single output modules. Less than 2% between dual outputs with 25% step load change on main output.				
Current Share	Single wire on all main outputs, droop on secondary outputs. Single wire parallel current share				
Output Adjustment Range	±10% of nominal on all Main outputs 5 - 15 volts on U and T module Auxiliary outputs			±5% min on all outputs	
Current Limit	140% nominal rating				
Overvoltage Protection	OVP is standard on all Main Output Modules and low voltage secondary outputs. 120-130% of nominal.			OVP is standard on all Main Output Modules and low voltage secondary outputs. 115-130% of nominal.	
Minimum Load	No preload is required on any Single, Dual output module. A min 1A, max 10% preload is required on main output of Triple and Slim-Line Dual (U) outputs in order to achieve specified regulation.				
Dynamic Response	±25% load change from a steady state 75% of nominal at a rate of 1A/µsec will result in an output deviation no greater than 2% or 100 mV peak. 125 mV for outputs 4V or less. Outputs should recover to within 1% of nominal voltage within 350 µsec.				
General					
Efficiency	75% typical at nominal line. 24 V+ single outputs 80%			75% typical at nominal line.	
EMC	Radiated and Conducted per CISPR 11 level B, CE compliant.			EN55022 Class B, EN61000-4-2, 3, 4, 5 & 6 Level 3	
Temperature Coefficient	0.02 - 0.03%/°C				
Holdup Time, AC Input	All AC Input units will maintain regulation within specifications for a period of not less than 16 msec for 60 Hz, (20 msec for 50 Hz) at full rated load from nominal 115/230 line voltage.			All AC Input units will maintain regulation within specifications for a period of not less than 16 msec for 60 Hz, (20 msec for 50 Hz) at full rated load from nominal 230 line voltage.	
Remote Sense	All main outputs incorporate remote sense and are able to compensate for a total cable drop up to 0.5 Vdc.			All single output, main output on triple outputs and dual output "D" modules incorporate remote sense and are able to compensate for a total cable drop up to 0.5 Vdc. Dual output "G" modules do not have remote sense.	
Cooling	Temperature performance curves are available. Contact Technical Services.				
Operating Temperature Range	0 to +70°C (full power to 50°C, derate linearly to 50% at 70°C).				
Storage Temperature	-40° to +85°C				
Operating Altitude	-350 to 7,500 feet with no derating				
Shock and Vibration	Commercial transportation ratings, suitable for International Air and Ground transport				
Dimensions					
Mounting	All platforms - two surfaces, bottom and one side			Chassis mount via threaded M4 holes on two surfaces.	
H x W x D (inches/mm)	1.56 x 5 x 9.5 (40 x 127 x 241)	1.56 x 5 x 10.5 (40 x 127 x 266)	1.68 x 5 x 10.5 (43 x 127 x 266)	2.5 x 5 x 11 (64 x 127 x 280)	2.5 x 7 x 11 (64 x 178 x 280)
Weight – (lbs/kg)	2.3 lbs (1.04 kg), Unit 3.5 lbs (1.59 kg) Shipping	2.9 lbs (1.32 kg), Unit 4.0 lbs (1.81 kg), Shipping	3.0 lbs (1.36 kg), Unit 4.5 lbs (2.04 kg), Shipping	3.2 lbs (1.45 kg), Unit 4.8 lbs (2.18 kg), Shipping	4.4 lbs (2 kg), Unit 6.6 lbs (3 kg), Shipping

Selection Tables

250 Watt, SM2 Series

Catalog Number	Output 1	Output 2	Output 3	Maximum Output
SM2-S3	5 V, 50 A	-	-	250 W
SM2-S4	12 V, 20 A	-	-	250 W
SM2-S5	15 V, 16.6 A	-	-	250 W
SM2-S6	24 V, 10 A	-	-	250 W
SM2-S7	28 V, 9 A	-	-	250 W
SM2-S9	48 V, 5 A	-	-	250 W
SM2-R2	15 V, 5 A	15 V, 5 A	-	250 W
SM2-U4	5 V, 40 A	24 V, 2.5 A	-	250 W
SM2-T1	5 V, 20 A	12 V, 4 A	12 V, 4 A	250 W
SM2-T2	5 V, 20 A	15 V, 3 A	-15 V, 0.5 A	250 W

350 Watt, SM3 Series

Catalog Number	Output 1	Output 2	Output 3	Output 4	Maximum Output
SM3-S3R1	5 V, 50 A	12 V, 6 A	12 V, 6 A	-	350 W
SM3-S3R2	5 V, 50 A	15 V, 5 A	15 V, 5 A	-	350 W
SM3-U4R1	5 V, 40 A	12 V, 6 A	12 V, 6 A	24 V, 2.5 A	350 W
SM3-U4R2	5 V, 40 A	15 V, 5 A	15 V, 5 A	24 V, 2.5 A	350 W
SM3-U2R6	5 V, 40 A	12 V, 6 A	2 V, 4 A	5 V, 8 A	350 W

450 Watt, SM4 Series

Catalog Number	Output 1	Output 2	Output 3	Output 4	Output 5	Maximum Output
SM4-S3S3	5 V, 50 A	5 V, 50 A	-	-	-	450 W
SM4-S3S6	5 V, 50 A	24 V, 10 A	-	-	-	450 W
SM4-S6S6	24 V, 10 A	24 V, 10 A	-	-	-	450 W
SM4-U2S3	5 V, 40 A	5 V, 50 A	12 V, 4 A	-	-	450 W
SM4-T6S3	5 V, 50 A	12 V, 10 A	12 V, 4 A	5 V, 4 A	-	450 W
SM4-U4T6	5 V, 40 A	12 V, 10 A	12 V, 4 A	5 V, 4 A	24 V, 2.5 A	450 W

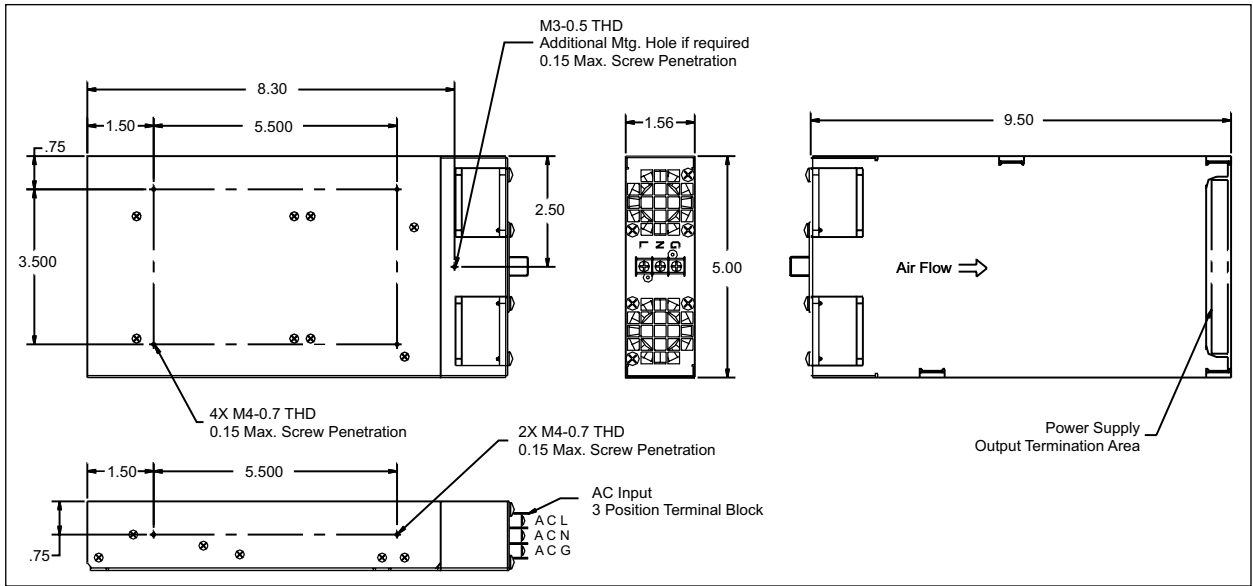
600 Watt, SM6 Series

Catalog Number	Output 1	Output 2	Output 3	Output 4	Maximum Output
SM6-C3	5 V, 100 A	-	-	-	600 W
SM6-C6	24 V, 21 A	-	-	-	600 W
SM6-C7	28 V, 18 A	-	-	-	600 W
SM6-C9	48 V, 10.5 A	-	-	-	600 W
SM6-B3B3	5 V, 60 A	5 V, 60 A	-	-	600 W
SM6-G3C3A4	5 V, 100 A	12 V, 10 A	12 V, 4 A	5 V, 8 A	600 W
SM6-B3A3A4A4	5 V, 60 A	12 V, 10 A	12 V, 10 A	5 V, 20 A	600 W
SM6-B3A3A5A5	5 V, 60 A	15 V, 8 A	15 V, 8 A	5 V, 20 A	600 W
SM6-A3A5A5A6	5 V, 20 A	15 V, 8 A	15 V, 8 A	24 V, 6 A	600 W

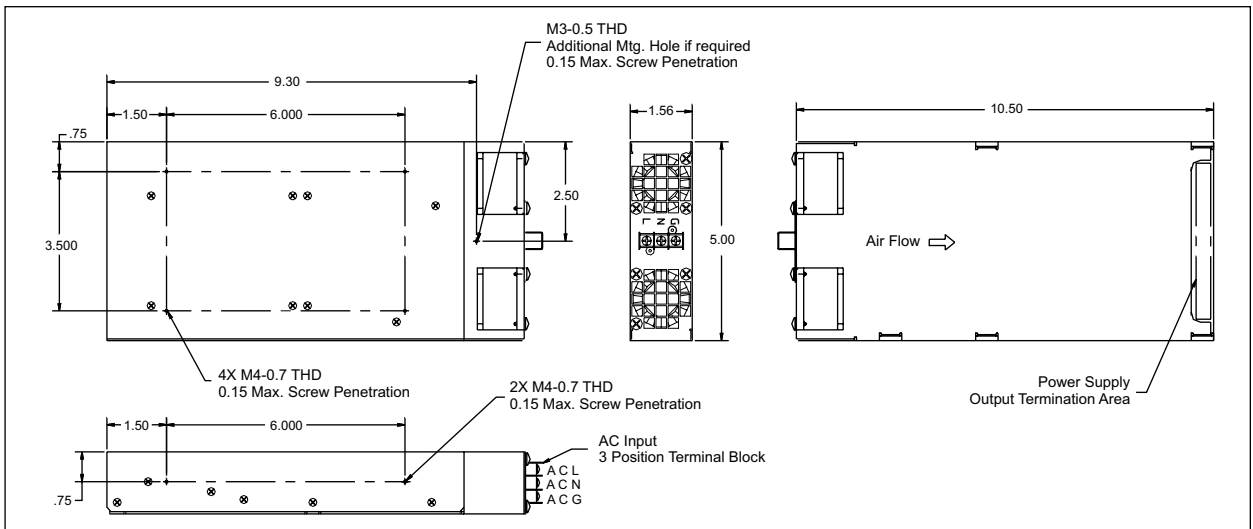
1000 Watt, SM9 Series

Catalog Number	Output 1	Output 2	Output 3	Output 4	Output 5	Maximum Output
SM9-C6C6	24 V, 42 A	-	-	-	-	1000 W
SM9-C3C3	5 V, 100 A	5 V, 100 A	-	-	-	1000 W
SM9-D1C3B4	5 V, 100 A	12 V, 25 A	12 V, 10 A	5 V, 10 A	-	1000 W
SM9-B3B4A4A6	5 V, 60 A	12 V, 25 A	12 V, 10 A	24 V, 6 A	-	1000 W
SM9-B3B5A5A6	5 V, 60 A	15 V, 20 A	15 V, 8 A	24 V, 6 A	-	1000 W
SM9-E3C3B4	5 V, 100 A	12 V, 25 A	12 V, 10 A	15 V, 2 A	-15 V, 2 A	1000 W
SM9-D3B3B4B4	5 V, 60 A	12 V, 25 A	12 V, 25 A	5 V, 10 A	24 V, 5 A	1000 W
SM9-D3B3B5B5	5 V, 60 A	15 V, 20 A	15 V, 20 A	5 V, 10 A	24 V, 5 A	1000 W
SM9-E1C3A6	5 V, 100 A	5 V, 20 A	12 V, 2 A	-12 V, 2 A	24 V, 6 A	1000 W

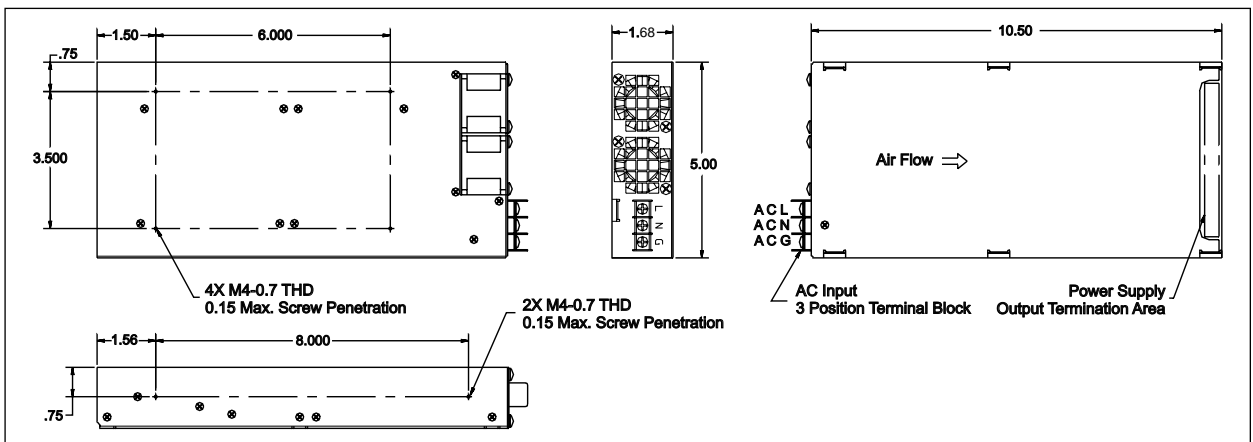
Mechanical Dimensions



SM2



SM3



SM4