

SM800 Series

LABORATORY POWER SUPPLY

FEATURES

- 800W Laboratory Supply
- Ranges 0-7.5V to 0-400V and 0-80A to 0 - 4A
- Designed for long life at full power
- Excellent dynamic response to load changes
- Protected against all overload and short circuit conditions
- EMC surpasses CE requirements for low emission & high Immunity Optional High speed programming. Interfaces Optional
- Extra Isolation. Sequencer. Digital Encoders. Power Sink Low audible noise - fans are temperature controlled
- Master/Slave parallel and series operation with voltage and current sharing
- High power system configuration from multiple units
- 19" rack mounting for for laboratory use (feet included)
- Stacking is allowed & space between units is not required

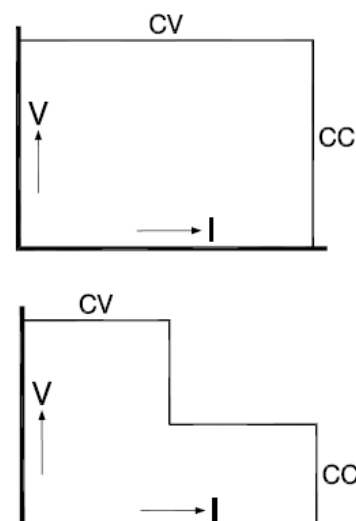


SPECIFICATIONS

INPUT	
Input voltages	90 - 265Vac
Input Frequency	48 - 62Hz
Power Factor	Better than 0.99 at full load
Input Current	1.0A @ 230Vac
Inrush current	22A at 230VAC
Internal Fuse	12.5AT
Standby Input Current	14W when $V_o = I_o = 0$
OUTPUT	
Output Voltage Range	0-7.5V to 0-400V Auto ranging models See Selection Table
Output Current Range	0-80A to 0-4A Auto ranging models See Selection Table
Output Power Range	0 to 800W See Selection Table
ENVIRONMENTAL	
Operating Temperature	-20°C to +50°C (100% load) Derate output to 75% at 60°C
Temperature coefficient	0.02%/°C
Storage temperature	-40°C to 85°C.
Thermal Protection	Output shuts down in case of insufficient cooling
Humidity	max 95% RH, non condensing, up to 40°C max 75% RH, non condensing, up to 50°C

STANDARDS & APPROVALS	
Power supply standard	EN61204-3, CISPR22-Class B
General Emission	EN61000-6-3 (EN55022-B)
General Immunity	EN61000-6-2
Safety	EN60950/EN61010
MECHANICAL	
Mounting	Stacking of units allowed, air flow is from left to right.
Input Connector	IEC320/C20, EN60320/C20
Output Terminals	M5 bolts
Programming Connector	15 pole D-connector at rear panel (FEMALE)
Enclosure	IP20 Protection
Dimensions	86 x 221 x 406mm Behind front panel (feet removed) 89 x 222mm, Front panel (1/2 19" 2U)
Weight	5.4kg

Function



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SPECIFICATIONS

ANALOG PROGRAMMING		OPERATING	
Programming Inputs: CV	Input Range: 0 - 5V Accuracy: +/-0.2% Offset: -0.1...+1.3mV (on 5V) Temp. coeff. offset:: 10uV/C Input Impedance: > 1Mohm	Relay Outputs	ACF: AC-Fail, both NOP and NC contact DCF: DC-Fail, both NO and NC contact output voltages +/-5% beyond set point
Programming Inputs: CC	Input Range: 0 - 5V Accuracy: +/-0.5% Offset: 0...+2.2mV (on 5V) Temp. coeff. offset:: 50uV/C Input Impedance: > 1Mohm	Status Outputs	CC operation: 5V = logic1, (Ro = 500 Ohm) CV or CC limit: 5V = logic1, (Ro = 500 Ohm) OT: Over Temp: 5V = logic1, (Ro = 500 Ohm) PSOL, Powersink Overload: 5V = logic1, (Ro = 500 Ohm) ACF, AC Fail: 5V = logic1, (Ro = 500 Ohm) DCF DC Fail 5V = logic1, (Ro = 500 Ohm)
Monitoring Outputs: CV	Input Range: 0 - 5V Accuracy: +/-0.2% Offset: -1.1..0mV (on 5V) Temp. coeff. offset:: 3uV/C Output Impedance: > 2 ohm / max 4mA	Remote ShutDown	> with +5V, 1mA or relay contact
Monitoring Outputs: CC	Input Range: 0 - 5V Accuracy: +/-0.5% Offset: -1.1..0mV (on 5V) Temp. coeff. offset:: 60uV/C Output Impedance: > 2 ohm / max 4mA	Interlock	Contact at rear of panel
Reference voltage	Vref: 5.114V +/-15mV (Ro = 2ohm, max 4mA) TC: 20ppm	Indicators	Voltage meter, Amp meter, AC-Fail, DC-Fail, Over Temperature, Power Sink Overload, Remote Shutdown,, Remote-CV, Remote-CC, Output On,CV-limite, CV- and CC- mode
+12V output	Vo: 12V+/-0.23V Imax: 0.2A Ro: 3ohm	Controls	Mains on/off switch, CV and VV potmeter, CV and CC limit potmeter, Display Settings button, Display limits button, Remote/Local button, Output On/off button, Fron panel lock button
		Series Operation	Max total voltage 600V Master / Slave operation yes
		Parallel Operation	Max total current - No limit Master / Slave operation - max 4 units (including master)
		Remote Sensing	Max volt, drop per load lead: 2V
		Limits	Voltage adjust range: 0 - 102% Current adjust range: 0 - 102%
		Potentiometers & Encoders	From front panel: Standard .03% Screw driver adj: Option P001 (at front panel) Digital Encoders: Option P220
		Efficiency	87% Typical
		Isolation	Input - Output: 3750Vrms(1 min) Creepage clearance; 8mm Input - Case: 2500Vrms Output - Case: 600VDC
		MTBF	500,000hrs

SELECTION TABLE

OUTPUT	SM 7.5-80	SM 18-50	SM 70-AR-24	SM 400-AR-4
Output Voltage Range	0 - 7.5V	0 - 18V	0 - 70V	0 - 400V
Output Current Range	0 - 80A	0 - 50A	0 - 24A	0 - 4A
Autoranging (2 Ranges)	No	No	Yes	Yes
Max Output Current/Voltage	-	-	24A / 0-35V	4A / 0-200V
	-	-	12A / 35 - 70V	2A / 200 - 400V
Meters	3.5 digit	3.5 digit	3.5 digit	3.5 digit
Scale voltage	0 - 7.500 V	0 - 18.0 V	0 - 70.0 V	0 - 400.0 V
Scale current	0 - 80 A	0 - 50.0 A	0 - 24.0 A	0 - 4.0 A
Accuracy	0.5% + 2 digit	0.5% + 2 digit	0.5% + 2 digit	0.5% + 2 digit

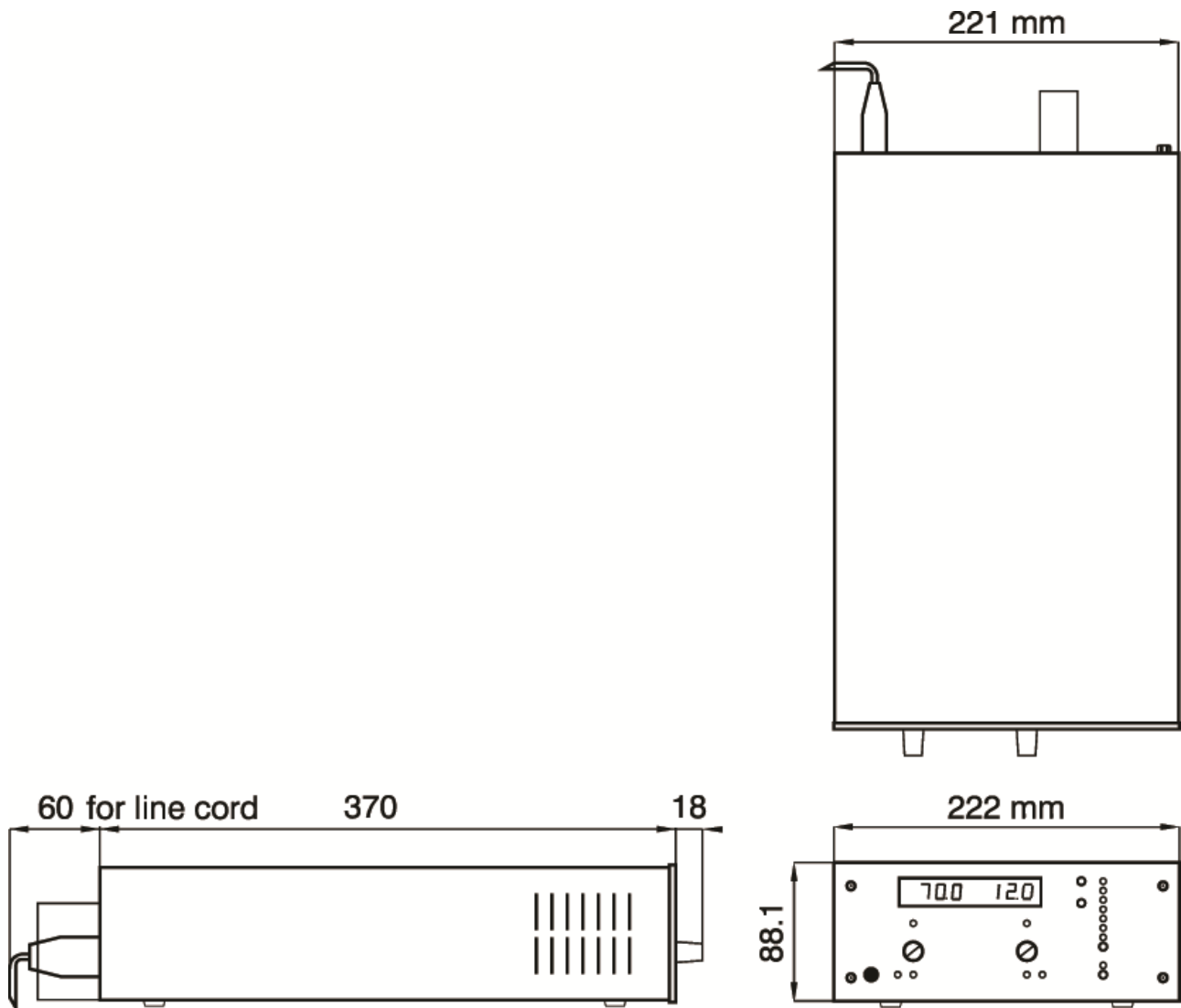
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SELECTION TABLE

PROGRAMMING SPEED STANDARD VERSION	SM 7.5-80	SM 18-50	SM 70-AR-24	SM 400-AR-4
Rise time (10 - 90%)				
Output voltage step	0 - 7.5 V	0 - 16 V	0 - 35 V	0 - 200 V
Time, (100 % load)	6.5 ms	12 ms	6 ms	4 ms
Time, (10 % load)	2.5 ms	5 ms	2.5 ms	2 ms
Output voltage step			0 - 70 V	0 - 400 V
Time, (100 % load)	-	-	10 ms	8 ms
Time, (10 % load)			7 ms	5 ms
Fall time (90 - 10%)				
Output voltage step	7.5 - 0 V	16 - 0 V	35 - 0 V	200 - 0 V
Time, (100 % load)	6.5 ms	12 ms	6 ms	4 ms
Time, (10 % load)	62 ms	120 ms	60 ms	42 ms
Output voltage step			70 - 0 V	400 - 0 V
Time, (100 % load)	-	-	25 ms	15 ms
Time, (10 % load)			250 ms	155 ms

TECHNICAL ILLUSTRATIONS



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TECHNICAL ILLUSTRATIONS

