Sorensen

SL Series

AC and DC Electronic Loads

Applications

- AC & DC Power Supply Testing
- Rechargeable batteries and chargers
- Fuel cell test - cells and stacks
- PFC circuit test
- Pulsed LED Test and Burn-in
- Laser Diode Drive

SL Series

Flexible AC and DC Electronic Loads

From the leader in programmable power products, Sorensen introduces the SL series electronic loads which offer the best value with the most flexible platform. A wide range of loads are available from 75-1800W with both DC and AC input in benchtop, modular and standalone form factors.

Modular

SLM Chassis

The SLM chassis are available in a convenient single-bay configuration for benchtop/ desktop applications or a four-bay configuration for multichannel and ATE requirements. Either chassis is compatible with SLM- and SLD- loads. Each chassis contains non-volatile memory capable of storing up to 150 module setups and nine 16-step sequences for automated, standalone testing. Or for more complex test sequences, the chassis come with GPIB (optional on SLM-1) and RS-232 as standard interfaces.

SLM Family

The SLM family includes 11 models of fully programmable, single input AC or DC modular electronic loads. DC models are offered to test power supplies, battery chargers, battery discharge, power supply transient response and integration into ATE systems. AC models are ideal to test low power inverters.

The DC models support operation in Constant Current, Constant Voltage, Constant Resistance or Constant Power mode as well as a short simulation. Engineers have ultimate control of current waveforms by using either the analog input or CC dynamic mode. An analog input (single input DC models) allows arbitrary current waveforms up to 20kHz with an external 0-10V signal. In dynamic mode, the pulse generator allows fast state switching between two programmed current levels with programmed slew rate and dwell times.

SLD Family

The SLD family offers six models of fully programmable, dual input modular electronic loads. These DC modules are specifically designed for low power, high channel count testing and provide the highest channel density available.

Standalone

SLH Family

Fully programmable, high power AC or DC electronic loads. The 500V models are for PFC testing, power transformers and various other AC or DC power sources. The 300V models are used for testing of UPSs, automatic voltage regulators (AVR), and batteries.

- High current, 60V DC models for general purpose power supply testing
- High voltage, AC/DC models are intended for inverter test, Power Factor Correction (PFC) circuit testing (500V) and UPS testing (300V)

SLM: Chassis

SLM: DC Module

SLM: AC Module

SLD: Dual Input DC Module

SLD: Dual Input DC Module

SLH: DC Electronic Load

SLH: AC Electronic Load

Features and Benefits:

Flexible Product Line

Features:

- Low power DC modules
- Low power AC modules
- High power DC, 19" rack mounted loads
- High power AC, 19" rack mounted loads
- 26 Total Models

Benefits:

- Single supplier for all loads
- Scale up from lab setup to production
- Highest channel density for low power applications

Flexible Control

Features:

- Remote: GPIB, RS-232, Analog
- Custom: Analog
- Manual: Front Panel
- DC Modes: CC, CR, CV, CP
- AC Modes: CR, CC with crest factor control

Benefits:

- Multi Function Use: test varying types of power sources in production, design verification testing
- Reusable equipment and software code in development and production
- Simple integration for ATE and troubleshooting

Flexible Data Feedback

Features:

- GPIB, RS-232
- Current monitor output (SLM DC only)
- Front panel

Benefits:

- Easy integration
- Eliminate Test Equipment

Electronic Load Selection

Often the selection of programmable power supplies is based upon volts and amps capability. However when selecting an electronic load, it is important to account for volts, amps and power. The power limit is displayed on a constant power curve. A load must be selected so that the operating points are within the Power Curve (see Figure 1). For many applications in which different power sources are tested, there may be high voltage, low current requirements as well as low voltage, high current requirements. A single load may be able to handle both with good programming resolution. In cases where a single load may not work, the broad range of current, power and voltage available in the SL-series allows optimum selection depending upon the voltage, current, power required.

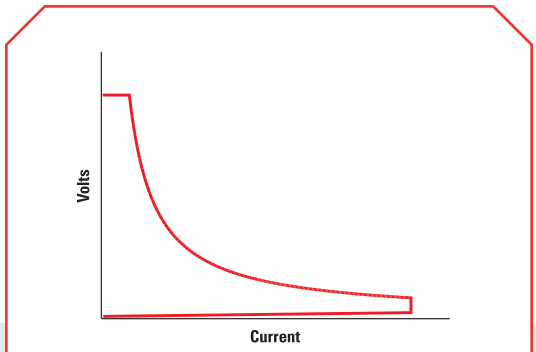
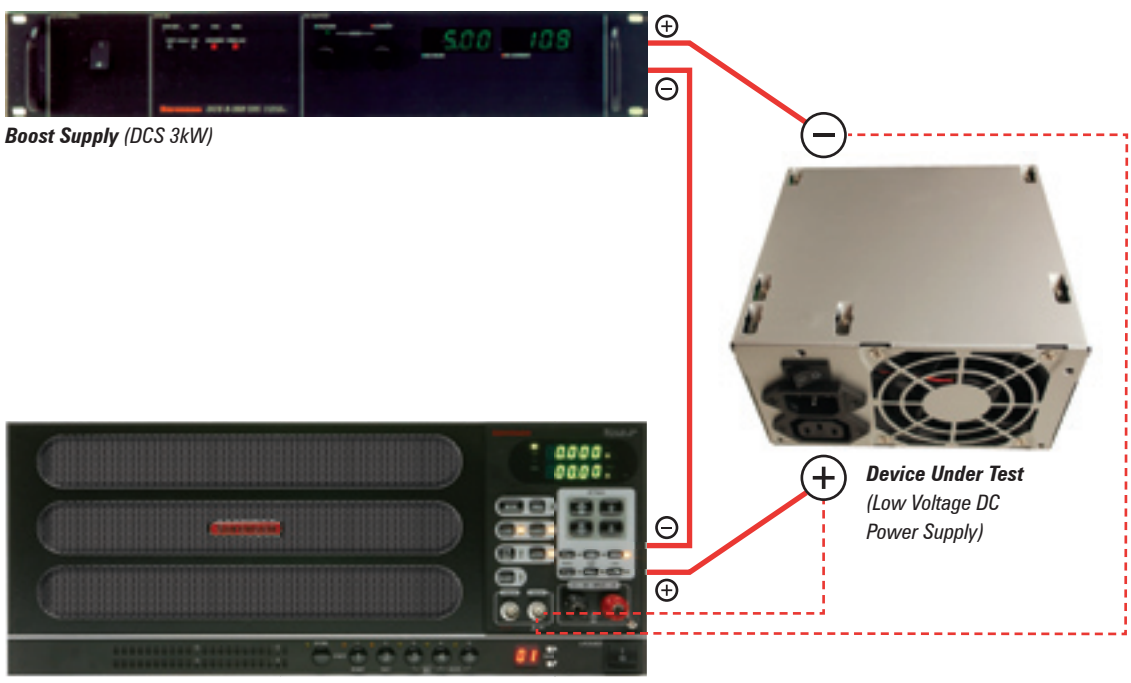


Fig. 1 - Power Curve

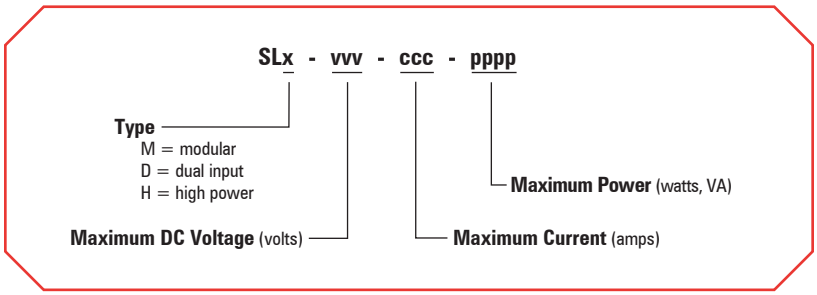
Applications

LOW VOLTAGE OPERATION

All SL series loads operate well below 1V. However in many applications, such as fuel cell research and microprocessor voltage regulator modules (VRM), the voltage at the load inputs can be 0.1 to 0.2V. This low voltage does not allow the load transistors to fully turn-on (bottom right corner of the power contour). To utilize the full rated current of an electronic load, a boost supply can be placed in series to boost the voltage. While a fixed voltage DC-DC converter can be used as the boost supply, a programmable power supply is preferred to keep the load voltage at the minimum to draw full current as the device under test ramps up in voltage.



Model Numbering (Individual Modules and High Power)

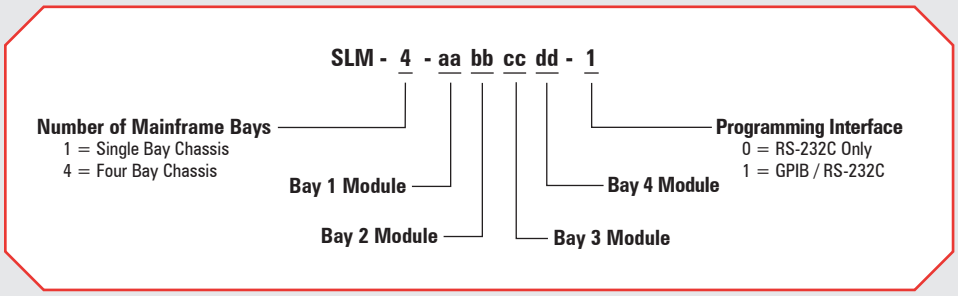


SLH - High Power Loads

Model Number	Description
SLH-60-120-600	60V / 120A / 600W rack mounted, programmable DC load
SLH-60-120-1200	60V / 120A / 1200W rack mounted, programmable DC load
SLH-60-120-1800	60V / 120A / 1800W rack mounted, programmable DC load
SLH-60-240-1200	60V / 240A / 1200W rack mounted, programmable DC load
SLH-60-240-1800	60V / 240A / 1800W rack mounted, programmable DC load
SLH-60-360-1800	60V / 360A / 1800W rack mounted, programmable DC load
SLH-500-4-1200	500Vdc/300Vrms / 4A / 1200W rack mounted, programmable AC/DC load
SLH-500-6-1800	500Vdc/300Vrms / 6A / 1800W rack mounted, programmable AC/DC load
SLH-300-12-1200	300Vrms / 12A / 1200W rack mounted, programmable AC/DC load
SLH-300-12-1800	300Vrms / 12A / 1800W rack mounted , programmable AC/DC load
SLH-300-18-1800	300Vrms / 18A / 1800W rack mounted , programmable AC/DC load

All SLH models include rackmount handles with ears.

Chassis Configuration



SL Series Modular Loads - Configured System Codes

Code	Module / Chassis	Description
C	SLM-4	Mainframe Chassis, Four (4) Bay for SLM, SLD modular loads includes GPIB/RS-232C
C	SLM-1	Mainframe Chassis, Single bay for SLM, SLD modular loads
10	SLM-60-30-150	DC Module, 60V / 30A / 150W
11	SLM-60-60-300	DC Module, 60V / 60A / 300W
12	SLM-250-10-300	DC Module, 250V / 10A / 300W
14	SLM-500-10-300	DC Module, 500V / 10A / 300W
15	SLM-60-15-75	DC Module, 60V / 15A / 75W
32	SLD-60-20-102	DC dual input module, 60V / 20A / 100W x 2
30	SLD-60-505-255	DC dual input module, 60V / 50A / 250W, 60V / 5A / 50W
31	SLD-61-505-255	DC dual input module, 60V / 50A / 250W, -60V / 5A / 50W
33	SLD-61-5-752	DC dual input module, 60V / 5A / 75W, -60V / 5A / 75W
34	SLD-62-5-752	DC dual input module, -60V / 5A / 75W x 2
35xx	SLD-60-105-550	DC dual input module, 60V / 100A / 500W, 60V / 5A / 50W
50	SLM-60-20-300	AC/DC Module, 60V / 20A / 300W
51	SLM-150-8-300	AC/DC Module, 150V / 8A / 300W
52	SLM-300-4-300	AC/DC Module, 300V / 4A / 300W
53	SLM-500-1-300	AC/DC Module, 500Vdc/300Vrms / 1A / 300W
BB	SLM-BB	Blank Panel

SLM-4 chassis includes rackmount handles with ears.

SL Series
Common Specifications

INPUT POWER
Line: 115V / 230V±10%, switch selectable
or 100V / 200V±10%, switch selectable
(optional)

Frequency: 50/60Hz
Power Consumption: 100W Maximum

SLM CHASSIS
Memory
150 memory settings for DC modules
5 memory settings for AC modules
Memory settings store entire chassis condition

SEQUENCER (see Figure 2)
Control: Front panel
Timing: 100ms-9.9secs per step
Maximum Steps per Sequence: 16
Number of Sequences: 9

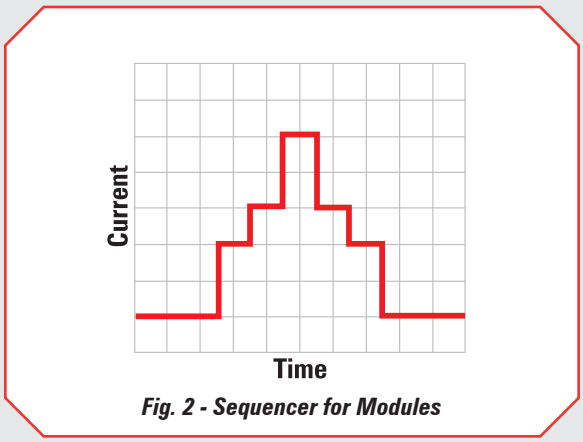


Fig. 2 - Sequencer for Modules

PROGRAMMING
All Parameters: 12-bit resolution

AC Crest Factor (see Figure 3)
Sinewave: √2, 1.5-3.5, Resolution: 0.1
Squarewave: 1.0-3.4, Resolution: 0.1
DC: √2, 2.0-3.5, Resolution: 0.5
Maximum Peak Current = 2 x Rated Current

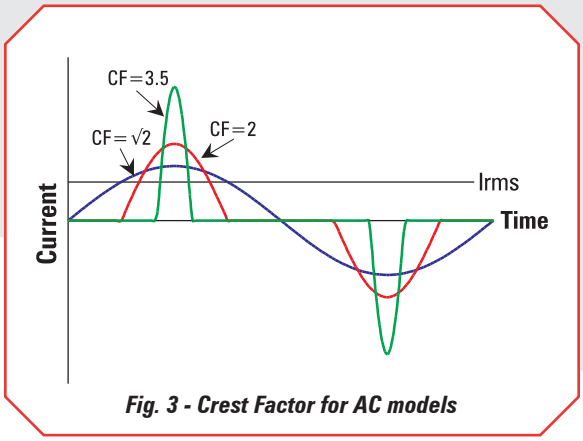


Fig. 3 - Crest Factor for AC models

SLH MEMORY
150 Settings for DC
5 Settings for AC

READBACK
Voltage, Current, Power: 16-bit resolution
VA: Vrms x Arms

ANALOG INPUT
SLM: DB9 connector
SLH: BNC connector

DC, Single Input (SLH or SLM)
CC Mode: 0-10V = 0 – FS
Bandwidth: 20kHz
Sums Current with Programmed Value

AC (SLH or SLM)
Sync signal on zero crossing

PROTECTION
AC input fuses
OVP, OCP, OPP: ~5% above rated maximum
OTP: ~85°C Heat sink temperature
DC Loads: Reverse Polarity
All protection modes turn off LOAD input

Hardware Input Voltage Limit:

60V Rated DC Input:	100V
250V Rated DC Input:	400V
500V Rated DC and all AC Input:	900V

SOFTWARE
LabVIEW Driver can be downloaded at no cost:
www.elgar.com/support/downloads.htm

REGULATORY
Certified to UL/CSA 61010 and IEC/EN 61010-1
CE Compliant (LVD and EMC Directives)

ENVIRONMENTAL
Operating Temperature: 0° to 40°C
Storage Temperature: -10° to 65°C

COOLING
Front, Side, Top Air Inlets
Rear Exhaust
Units may be rackmounted without spacing.

REMOTE PROGRAMMING
SLM-1: RS-232C, GPIB (Optional)
SLM-4: RS-232C, GPIB, ANALOG
SLH: RS-232C, GPIB, ANALOG

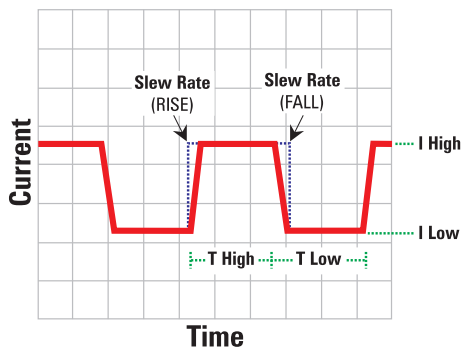
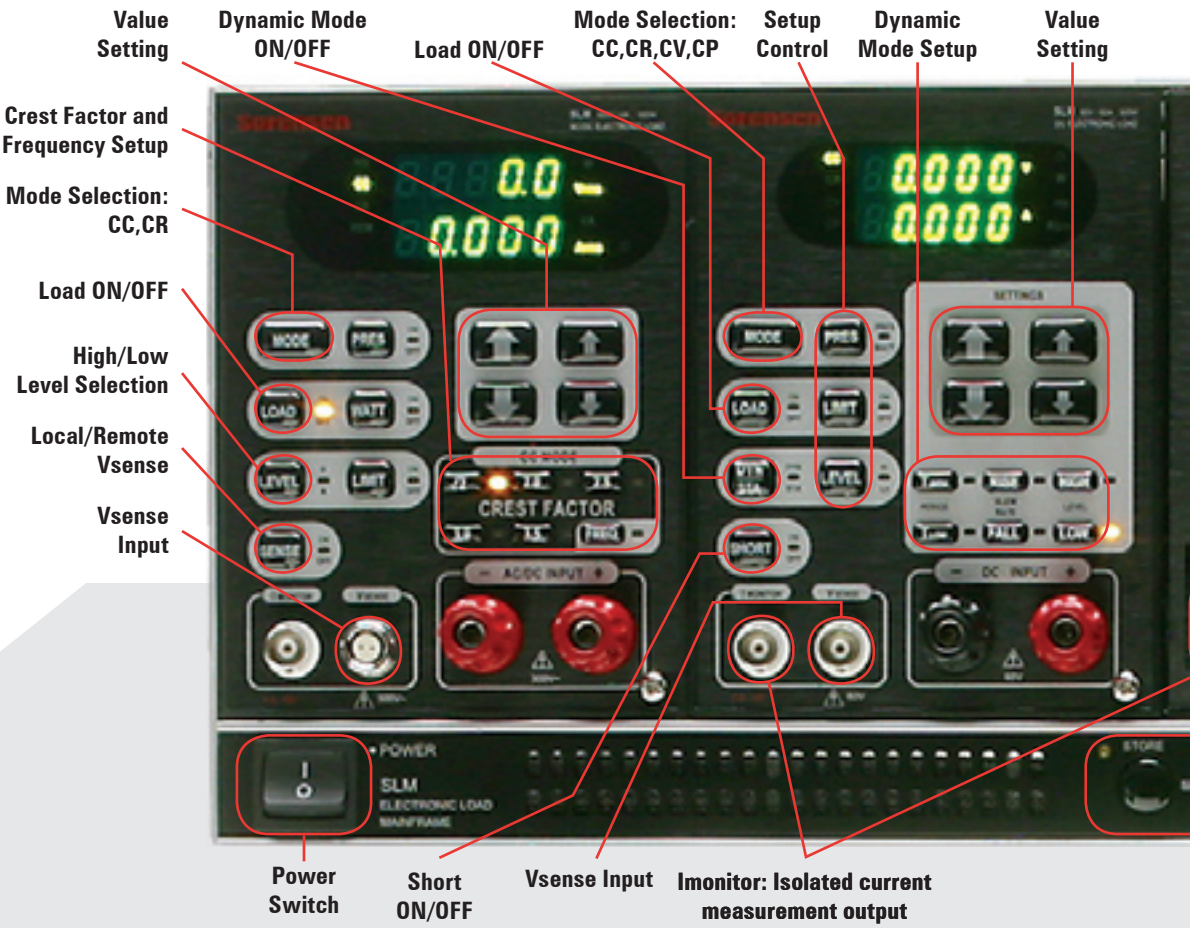
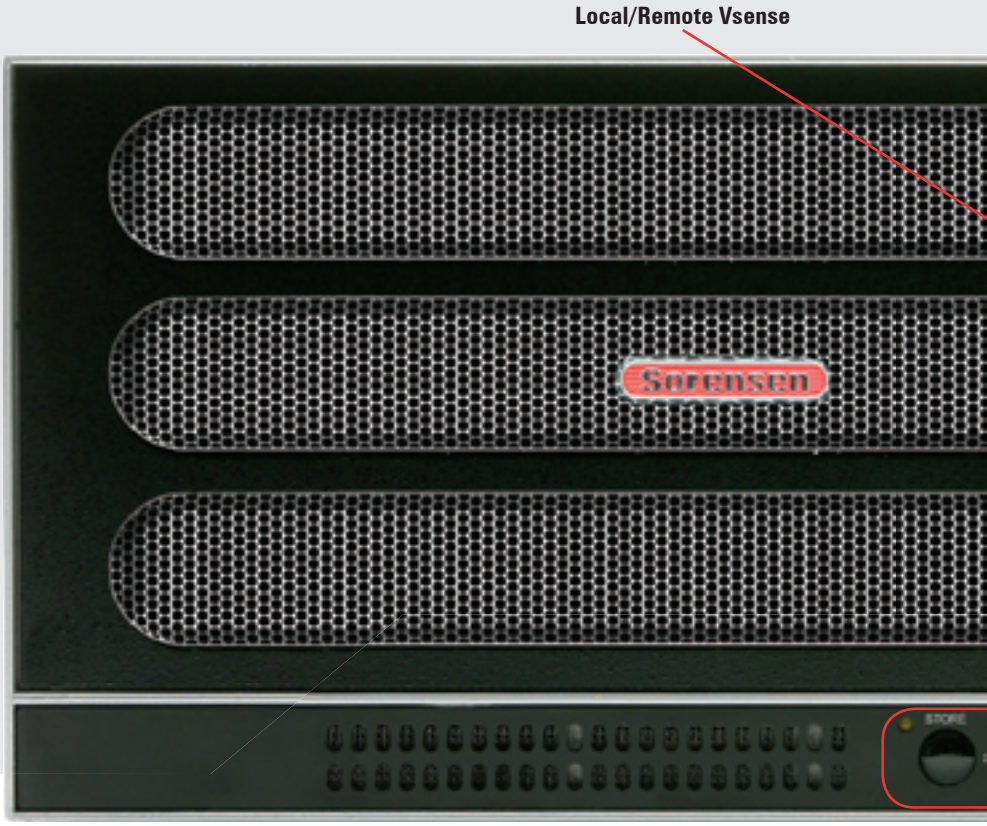
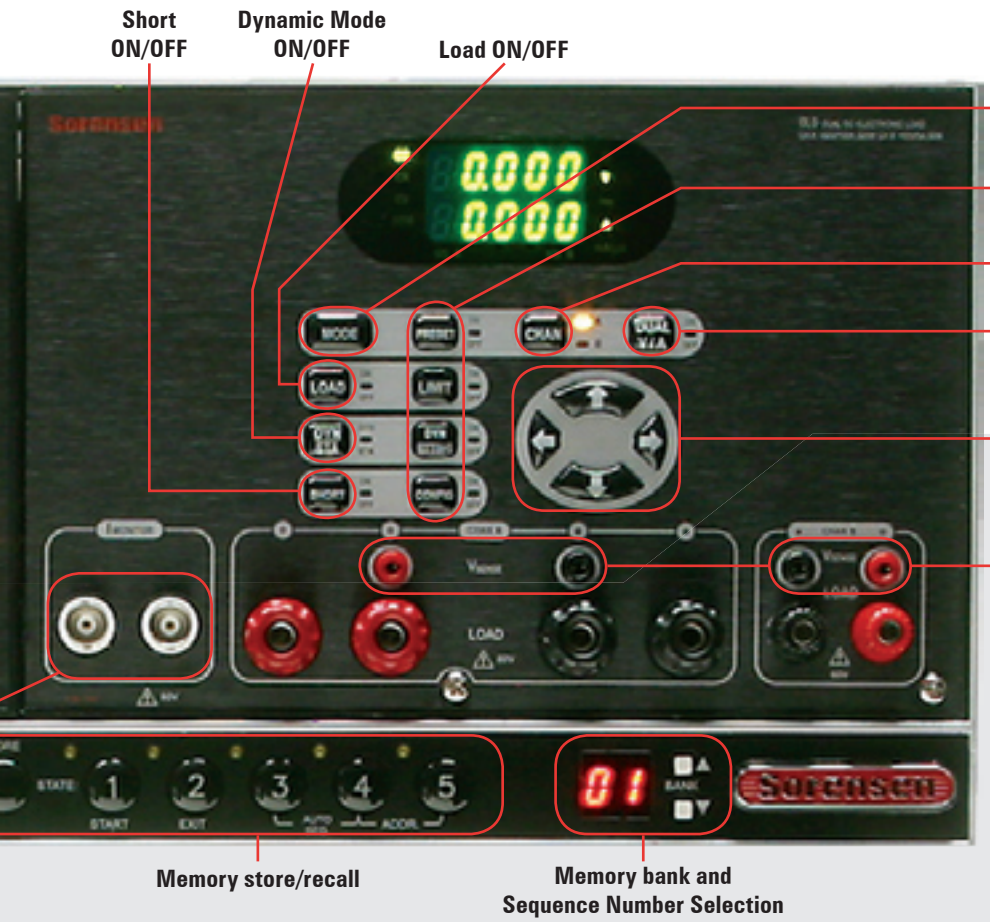


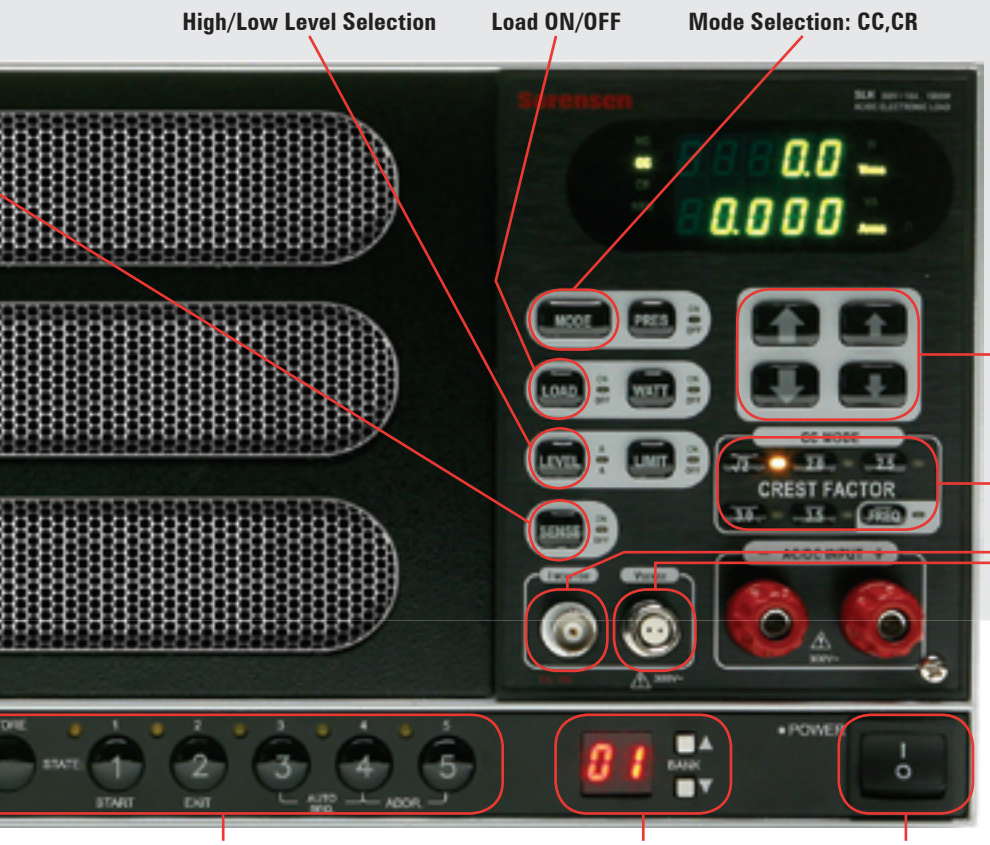
Fig. 4 - Dynamic Mode for DC models

DYNAMIC OPERATION (DC MODELS)
(see Figure 4)
Mode: CC
Thigh, Tlow: 50us to 9.999sec
Slew Rate: See Specification Tables
I high, I low: 0 to Rated Current


Value Setting
Dynamic Mode ON/OFF
Load ON/OFF
Mode Selection: CC,CR,CV,CP
Setup Control
Dynamic Mode Setup
Value Setting
Crest Factor and Frequency Setup
Mode Selection: CC,CR
Load ON/OFF
High/Low Level Selection
Local/Remote Vsense
Vsense Input
CREST FACTOR
POWER
SLM
Power Switch
Short ON/OFF
Vsense Input
Imonitor: Isolated current measurement output


Local/Remote Vsense
Sorensen


Short ON/OFF
Dynamic Mode ON/OFF
Load ON/OFF
Mode Selection: CC,CR,CV
Setup Control
Channel Selection
Readout Control
Value Setting
Vsense Inputs
Memory store/recall
Memory bank and Sequence Number Selection


High/Low Level Selection
Load ON/OFF
Mode Selection: CC,CR
Value Setting
Crest Factor and Frequency Setup
Imonitor: Isolated current measurement output
Vsense Input
Memory store/recall
Memory bank and Sequence Number Selection
Power Switch

Standalone AC

SLH - Standalone AC Loads					
Model:	**SLH-500-4-1200**	**SLH-500-6-1800**	**SLH-300-12-1200**	**SLH-300-12-1800**	**SLH-300-18-1800**
Input Ratings:					
Power:	1200VA	1800VA	1200VA	1800VA	1800VA
Current:	4Arms	6Arms	12Arms	12Arms	18Arms
Voltage:	300Vrms / 500Vdc	300Vrms / 500Vdc	300Vrms	300Vrms	300Vrms
Frequency:	DC, 40 - 70Hz (CC Mode) ; DC - 70Hz (CR Mode)				
CC Mode:					
Range:	0-2 / 2-4A	0-3 / 3-6A	0-6 / 6-12A	0-6 / 6-12A	0-9 / 9-18A
Resolution:	0.5 / 1mA	0.75 / 1.5mA	1.5 / 3mA	1.5 / 3mA	2.25 / 4.5mA
Accuracy:	±0.5% of (setting + range)				
Low Current:	0 - 0.2A	0 - 0.3A	0 - 0.6A	0 - 0.6A	0 - 0.9A
Accuracy:	±(0.5% of reading + 0.2% of range)				
Maximum Peak Current:	8A	12A	24A	24A	18A
CR Mode:					
Range 1: (I>0.5% of rating)	50 - 200,000Ω	33.33 - 133,000Ω	20 - 80,000Ω	20 - 80,000Ω	13.3 - 53,333Ω
Range 2: (I>50% of rating)	12.5 - 50Ω	8.33 - 33.33Ω	5 - 20Ω	5 - 20Ω	3.33 - 13.33Ω
4 1/2 DVM:					
Range:	0-500V	0-500V	300V	300V	300V
Resolution:	0.1V	0.1V	0.1V	0.1V	0.1V
Accuracy:	±(0.5% of reading + 0.2% of range)				
4 1/2 DAM:					
Range:	0-4A	0-6A	0-12A	0-12A	0-18A
Resolution:	1mA	1mA	1mA	1mA	1mA
Accuracy:	±(0.5% of reading + 2% of range) ; ±0.5% of (reading + range) @ 50/60Hz				
4 1/2 Watt Meter:					
Range:	0-1200W	0-1800W	0-1200W	0-1800W	0-1800W
Resolution:	0.1W				
Accuracy:	± (0.5% of reading)±3W				
VA / Power Meter:	Vrms × Arms				
Weight	18.5kgs/40.7lbs	21.5kgs/47.3lbs	18.5kgs/40.7lbs	21.5kgs/47.3lbs	21.5kgs/47.3lbs

Modular AC

SLM - AC Modules				
Model:	**SLM-60-20-300**	**SLM-150-8-300**	**SLM-300-4-300**	**SLM-500-1-300**
Input Ratings:				
Power:	300VA	300VA	300VA	300VA
Current:	20Arms	8Arms	4Arms	1Arms
Voltage:	60Vrms	150Vrms	300Vrms	300Vrms / 500Vdc
Frequency:	DC, 40 - 70Hz (CC Mode) ; DC - 70Hz (CR Mode)			
CC Mode:				
Range:	0-10 / 10-20A	0-4 / 4-8A	0-2 / 2-4A	0-0.5 / 0.5-1A
Resolution:	2.5 / 5mA	1 / 2mA	0.5 / 1mA	0.125 / 0.25mA
Accuracy:	±0.5% of (setting + range)			
Low Current:	0 - 1A	0 - 0.4A	0 - 0.2A	0 - 0.05A
Accuracy:	±2% of (setting + range)			
Maxium Peak Current:	40A	16A	8A	2A
CR Mode (1):				
Range 1: (I>0.5% of rating)	1.2-4,800Ω	7.5-30,000Ω	30 - 120,000Ω	200 - 800000Ω
Range 2: (I>50% of rating)	0.3 - 1.2Ω	1.875 - 7.5Ω	7.5 - 30Ω	50 - 200Ω
4 1/2 DVM:				
Range:	60V	150V	300V	500V
Resolution:	0.01V	0.01V	0.1V	0.1V
Accuracy:	±(0.5% of reading + 0.2% of range)			
4 1/2 DAM:				
Range:	20A	8A	4A	1A
Resolution:	0.01A	0.001A	0.001A	0.001A
Accuracy:	±(0.5% of reading + 2% of range); ±0.5% of (reading + range) @ 50/60Hz			
4 1/2 Watt Meter:				
Range:	300W			
Resolution:	0.1W			
Accuracy:	±(0.5% of reading)±3W			
VA / Power Meter:	Vrms × Arms			
Weight	3.5kgs/7.7lbs			

SLM - DC Modules										
Model:	**SLM-60-30-150**		**SLM-60-60-300**		**SLM-250-10-300**		**SLM-500-10-300**		**SLM-60-15-75**	
Input Ratings:										
Voltage:	60V		60V		250V		500V		60V	
Current:	30A		60A		10A		10A		15A	
Power:	150W		300W		300W		300W		75W	
Minimum Voltage: (Full Current)	0.6V @ 30A		0.5V @ 60A		0.8V @ 10A		4.5V @ 10A		0.3V @ 15A	
CC Mode:										
Range 1: | Range 2:	0-3A	0-30A	0-6A	0-60A	0-1A	0-10A	0-1A	0-10A	0-1.5A	0-15A
Resolution:	0.8mA	8.0mA	1.6mA	16.0mA	0.268mA	2.68mA	0.268mA	2.68mA	0.4mA	4.0mA
Accuracy:	± 0.2% of (Setting + Range)									
CR Mode:										
Range 1: (I > 0.02% of RATING)	2-7.5KΩ		1-3.75KΩ		25-18.75KΩ		50-18.75KΩ		4-15KΩ	
Range 2: (I > 0.2% of RATING)	0.1067-2Ω		0.0534-1Ω		1.333-25Ω		2.67-50Ω		0.213-4Ω	
CV Mode:										
Range:	0-60V		0-60V		0-250V		0-500V		0-60V	
Resolution:	0.016V		0.016V		0.067V		0.133V		0.016V	
Accuracy:	± 0.1% of (Setting + Range)									
CP Mode:										
Range:	0-150W		0-300W		0-300W		0-300W		0-75W	
Resolution:	0.04W		0.08W		0.08W		0.08W		0.02W	
Accuracy:	± 0.5% of (Setting + Range)									
Short Mode:										
Resistance:	0.02Ω		8mΩ		0.08Ω		0.45Ω		0.02Ω	
Current:	30A		60A		10A		10A		15A	
Dynamic:										
T High & T Low:	50μs to 9.999s									
Rise/Fall of Range 1:	2.0-125mA/μs		4-250mA/μs		0.8-50mA/μs		0.8-50mA/μs		1.0-62.5mA/μs	
Rise/Fall of Range 2:	0.2-1.2A/μs		0.04-2.5A/μs		8.0-500mA/μs		8.0-500mA/μs		10-625mA/μs	
Accuracy:	± 10% of Setting									
4 1/2 DVM:										
Range:	15.0V	60.0V	15.0V	60.0V	30.0V	250.0V	199.99V	500.0V	15.0V	60.0V
Resolution:	0.001V	0.002V	0.001V	0.002V	0.001V	0.01V	0.01V	0.1V	0.001V	0.002V
Accuracy:	± 0.05% of (Reading + Range)									
4 1/2 DAM:										
Range:	3.0A	30.0A	6.0A	60.0A	1.0A	10.0A		10.0A	1.5A	15.0A
Resolution:	0.001A	0.01A	0.001A	0.01A	0.0001A	0.001A		0.001A	0.0001A	0.001A
Accuracy:	± 0.2% of (Reading + Range)									
Current Monitor:	3.0A/V		6.0A/V		N/A		N/A		1.5A/V	
Load ON Volt:										
Range:	0.1-25V				0.2-50V		0.4-100V		0.1-25V	
Resolution:	0.1V				0.2V		0.4V		0.1V	
Accuracy:	1% of Setting + 0.25V				1% + 0.5V		1% of Setting + 1V		1% of Setting + 0.25V	
Load OFF Volt:										
Range:	0-25V				0-50V		0-100V		0-25V	
Resolution:	0.01V				0.01V		0.02V		0.01V	
Accuracy:	1% of Setting + 0.25V				1% + 0.5V		1% of Setting + 1V		1% of Setting + 0.25V	
Weight:	3.5kgs/7.7lbs									

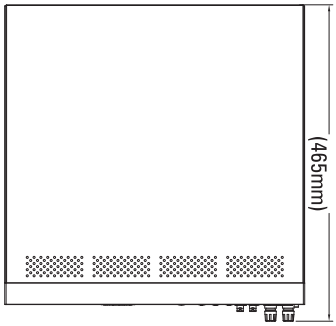
SLD - Dual Input DC Modules

Model:	SLD-60-505-255		SLD-61-505-255		SLD-80-20-102		SLD-61-5-752		SLD-62-5-752		SLD-60-105-550	
Input Rating:												
Channel:	A	B	A	B	A	B	A	B	A	B	A	B
Voltage (Volt):	+60V	+60V	+60V	-60V	+80V	+80V	+60V	-60V	-60V	-60V	+60V	+60V
Current (Ampere):	50A	5A	50A	5A	20A	20A	5A	5A	5A	5A	100A	5A
Power (VA):	250W	50W	250W	50W	100W	100W	75W	75W	75W	75W	500W	50W
Minimum Voltage: (Full Current)	0.4V @ 50A	0.4V @ 5A	0.4V @ 50A	0.9V @ 5A	0.4V @ 20A	0.4V @ 20A	0.4V @ 5A	0.4V @ 5A	0.4V @ 5A	0.4V @ 5A	0.4V @ 100A	0.4V @ 5A
CC Mode:												
Range:	0 - 5A / 50A	0 - 0.5A / 5A	0 - 5A / 50A	0 - 0.5A / 5A	0 - 2.0A / 20A	0 - 2.0A / 20A	0 - 0.5A / 5A	0 - 0.5A / 5A	0 - 0.5A / 5A	0 - 0.5A / 5A	0 - 10A / 100A	0 - 0.5A / 5A
Resolution:	1.34 / 13.4mA	0.134 / 1.34mA	1.34 / 13.4mA	0.134 / 1.34mA	0.533 / 5.33mA	0.533 / 5.33mA	0.134 / 1.34mA	0.134 / 1.34mA	0.134 / 1.34mA	0.134 / 1.34mA	2.66 / 26.6mA	0.134 / 1.34mA
Accuracy:	0.2% of (Setting + Range)											
CR Mode:												
Range 1: (Ω) (I>0.02% of rating)	1.2 - 4500	12 - 45000	1.2 - 4500	12 - 45000	3 - 11250	3 - 11250	12 - 45000	12 - 45000	12 - 45000	12 - 45000	0.6 - 2250	12 - 45000
Range 2: (Ω) (I>0.2% of rating)	0.04-1.2	0.4-12	0.04-1.2	0.4-12	0.1-3	0.1-3	0.4-12	0.4-12	0.4-12	0.4-12	0.02-0.6	0.4-12
CV Mode:												
Range:	0 – 60V			0 – (-60)V	0 – 60V			0 – (-60)V			0 – 60V	
Resolution:	16mV											
Accuracy:	0.2% of (Setting + Range)											
Short Mode:												
Resistance:	8mΩ	0.08Ω	8mΩ	0.18Ω	0.02Ω	0.02Ω	0.02Ω	0.06Ω	0.06Ω	0.06Ω	4mΩ	0.08Ω
Current:	50A	5A	50A	5A	20A	20A	5A	5A	5A	5A	100A	5 A
Dynamic Mode:												
T High / T Low:	50μs to 9.999s											
Slew Rate: (mA/μs)	4-200 40-2000	0.4-20 4-200	4-200 40-2000	0.4-20 4-200	1.6-80 16-800	1.6-80 16-800	0.4-20 4-200	0.4-20 4-200	0.4-20 4-200	0.4-20 4-200	8-400 80-4000	0.4-20 4-200
Resolution: (mA/μs)	0.8 8	0.08 0.8	0.8 8	0.08 0.8	0.32 3.2	0.32 3.2	0.08 0.8	0.08 0.8	0.08 0.8	0.08 0.8	1.6 16	0.08 0.8
Accuracy:	5% of (Setting + Range)											
4 1/2 DVM:												
Range:	15 V / 60.00 V											
Resolution:	0.001 V / 0.01 V											
Accuracy:	0.05% of (Reading + Range)											
4 1/2 DAM:												
Range:	15A / 50A	1.5A / 5A	15A / 50A	1.5A / 5A	2.0A / 20A	2.0A / 20A	1.5A / 5A	1.5A / 5A	1.5A / 5A	1.5A / 5A	10 / 100A	1.5A / 5A
Resolution:	1mA / 10mA	0.1mA / 1mA	1mA / 10mA	0.1mA / 1mA	0.1mA / 1mA	0.1mA / 1mA	0.1mA / 1mA	0.1mA / 1mA	0.1mA / 1mA	0.1mA / 1mA	1 / 10mA	0.1mA / 1mA
Accuracy:	0.2% of (Reading + Range)											
Load ON Voltage:												
Range:	0.1-25V											
Resolution:	0.1V											
Accuracy:	1% of Setting +0.25V											
Load OFF Voltage:												
Range:	0-25V											
Resolution:	0.01V											
Accuracy:	1% of Setting +0.25V											

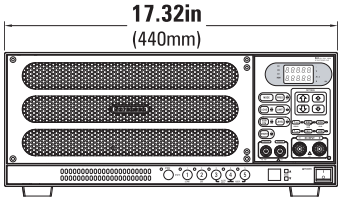
SLH - Standalone DC Loads							
Model:	**SLH-60-120-600**	**SLH-60-120-1200**	**SLH-60-120-1800**	**SLH-60-240-1200**	**SLH-60-240-1800**	**SLH-60-360-1800**	**SLH-500-60-1800**
Input Ratings:							
Voltage:	60V						500 V
Current:	120A			240A		360A	60 A
Power:	600W	1200W	1800W	1200W	1800W	1800W	1800 W
Minimum Voltage: (Full Current)	0.5V @ 120A	0.4V @ 120A	0.3V @ 120A	0.5V @ 240A	0.5V @ 240A	0.4 @ 360A	3V @ 60A
CC Mode:							
Range:	0-12 / 0-120A			0-24 / 0-240A		0 - 36 / 360A	0 - 6/60 A
Resolution:	3.2 / 32mA			6.4 / 64mA		9.6 / 96mA	1.6/16 mA
Accuracy:	±0.2% OF (SETTING + RANGE)						
CR Mode:							
Range 1: (I>0.05% of rating)	0.5 - 1875Ω			0.25 - 937.50Ω		0.167 - 624.9Ω	8.33 - 31250Ω
Range 2: (I>0.5% of rating)	0.027 - 0.5Ω			0.0133 - 0.25Ω		8.3 - 167mΩ	5.33 - 8.33Ω
CV Mode:							
Range:	0 - 60V						0 - 500 V
Resolution:	0.016V						0.133V
Accuracy:	±0.1% OF (SETTING + RANGE)						
CP Mode:							
Range:	0 - 600W	0 - 1200W	0 - 1800W	0 - 1200W	0 - 1800W	0 - 1800W	0-1800W
Resolution:	0.16W	0.32W	0.48W	0.32W	0.48W	0.48W	0.48W
Accuracy:	±0.5% OF (SETTING + RANGE)						
Short Mode:							
Maximum Resistance:	4.2mΩ	3.3mΩ	2.5mΩ	2.1mΩ		1.1mΩ	0.43 Ω
Current:	120A			240A		360A	60A
Dynamic Mode:							
T High / T Low:	50μs to 9.999s						
Slew Rate Low:	8mA - 500mA/μs			16mA - 1A/μs		24mA - 1.5A/μs	4-250 mA/ms
Slew Rate High:	80mA - 5A/μs			0.160A - 10A/μs		0.24A - 15A/μs	0.04-2.5 A/ms
Accuracy:	±10% OF SETTING						
4 1/2 DVM:							
Range:	0 - 20.00 / 60.00V						0 - 60.00/600.0
Resolution:	0.001 / 0.01V						0.01/0.1V
Accuracy:	±0.05% OF (READING + RANGE)						
4 1/2 DAM:							
Range:	0 - 12A / 0 - 120A			0 - 24A / 0 - 240A		0 - 36A / 0 - 360A	0 - 6/60 A
Resolution:	1mA / 4mA			1mA / 10mA		1.2mA / 12mA	0.001A/0.01A
Accuracy:	±0.5% OF (READING + RANGE)						
Current Monitor:	12A/V			24A/V		36A/V	N/A
Load ON Volt:							
Range:	0.1 - 25V						0.4 - 100V
Resolution:	0.1V						
Accuracy:	1% of SETTING +0.25V						
Load OFF Volt:							
Range:	0 - 25V						0 - 100V
Resolution:	0.1V						
Accuracy:	1% of SETTING +0.25V						
Weight	15.2kgs./33.4lbs	19.4kgs/42.7lbs	23.6kgs/51.9lbs	19.4kgs/42.7lbs	23.6kgs/51.9lbs	23.6kgs/51.9lbs	23.6 kgs. / 51.9 lbs.

SLH - AC & DC Electronic Loads

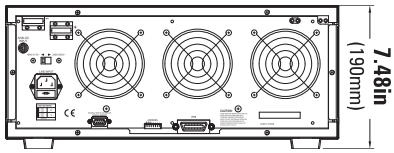
TOP



FRONT PANEL

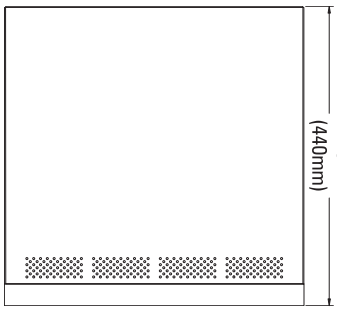


REAR PANEL



SLM-4 - Four Bay Chassis

TOP



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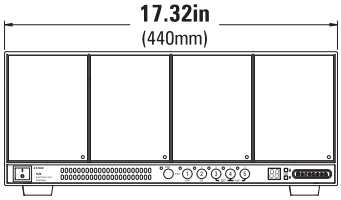

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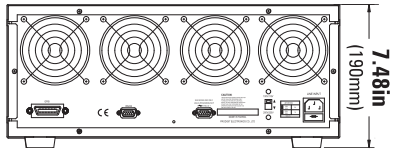
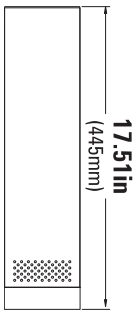


SLM-1 - Single Bay Chassis

TOP



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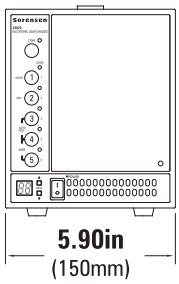

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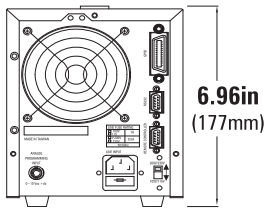

POWER EVOLVED

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