PROGRAMMABLE DC POWER SUPPLY

VSP+ SERIES

Aplab

Nonstop Performance.

VSP+ Series of Programmable Power Supplies set a new standard for flexible, reliable AC to DC power systems in OEM, Industrial and Laboratory applications. These are designed with excellent thermal management and can be conveniently stacked in rack mounts without any space between them for ventilation. The zero Voltage soft-switching technique employed in them virtually eliminates the switching transients to derive lower noise, which is closer to linear levels. This also helps increasing the overall conversion efficiency which in turn decreases the heat generation, thus reducing the stress on the power components which results in greater reliability.

Feature:

- Zero voltage soft switching technique, low ripple and noise
- Use of reliable digital encoder for voltage and current setting
- Micro controller for digital programming
- Constant voltage/constant current mode with auto mode crossover
- Active power factor correction at the input with wide input window
- Five digit OLED display for voltage and current read back
- Standard 19" rack mount suitable for ATE and OEM applications
- Parallel operation with active current sharing
- Default interface RS485 & USB for external programming
- Isolated analog programming and monitoring surface
- Optional Ethernet interface

PRODUCT SELECTION GUIDE

VSP+600W	VSP+1200W	VSP+2400W	VSP+3600W	VSP+7200W	VSP+12000W
0-10V/0-60A	0-20V/0-60A	0-20V/0-100A	0-20V/0-180A	0-30V/0-240A	0-120V/0-100A
0-20V/0-30A	0-30V/0-40A	0-30V/0-80A	0-30V/0-120A	0-40V/0-180A	
0-30V/0-20A	0-40V/0-30A	0-40V/0-60A	0-40V/0-90A	0-60V/0-120A	
0-40V/0-15A	0-60V/0-20A	0-60V/0-40A	0-60V/0-60A	0-80V/0-90A	
0-60V/0-10A	0-120V/0-10A	0-80V/0-30A	0-120V/0-30A	0-120V/0-60A	
0-120V/0-5A	0-80V/0-15A	0-120V/0-20A	0-80V/0-45A		

GENERAL SPECIFICATIONS

AC input voltage	600W	95 to 264V AC, 45 to 63Hz, 1 Phase
	1200W	95 to 264V AC, 45 to 63Hz, 1 Phase
	2400W	175 to 264V AC, 45 to 63Hz, 1 Phase
	3600W	300 to 457V AC, 45 to 63Hz, 3 phase, 4 Wire
	7200W	300 to 457V AC, 45 to 63Hz, 3 phase, 4 Wire
	12000W	300 to 457V AC, 45 to 63Hz, 3 phase, 4 Wire
Input power factor	For all models	0.99 typical @ full Load, nominal line
Switching frequency	For all models	45KHz nominal
Time delay	For all models	7 sec. maximum from power ON until output stable
Voltage mode transient response	For all models	Better than 200uS for load change from 40% to 90%.
Mimimum voltage differential	For all models	±600V DC from output to safety ground
Remote analog programming	For all models	Voltage & current programming inputs through 0-5V (default), 0-10V or 0-4.85K for 0 to 100% output voltage & current change
Remote analog monitoring	For all models	Isolated voltage & current monitoring outputs 0-5V (default), 0-10V
Remote programming & monitoring accuracy	For all models	0.5% for 0 to 100% output
Maximum remote sense compensation	For all models	1V/Line
Operating temperature	For all models	0 to 50°C
Storage temperature	For all models	-20 to 70°C
Humidity	For all models	Upto 90% RH non-condensing
Front panel voltage & current controls	For all models	Digital Encoder for voltage, current & over voltage setting
Input Ac connection	600W	10A, 250V line socket
	1200W	16A, 250V line socket/3core, 16A, 250V line cord with American plug
	2400W	16A, 250V line socket/3core, 16A, 250V line cord with American plug
	3600W	4 way-terminal 30A, 250V terminal block
	7200W	4-terminal 30A, 250V terminal block
	12000W	4-terminal 60A, 250V terminal block
Dimensions & Weight	600W	19"(W), 1 U (H), 450 mm, 7 Kgs.
	1200W	19"(W), 1 U (H), 450 mm, 7 Kgs.
	2400W	19"(W), 2 U (H), 450 mm, 13 Kgs.
	3600W	19"(W), 11 U (H), 735 mm, 51 Kgs.
	7200W	19"(W), 11 U (H), 735 mm, 68 Kgs.
	12000W	19"(W), 11 U (H), 735 mm, 94 Kgs.
Conforming standards	CE mark: meets EN55022, class A, safety standard EN60950	

Specification subject to change without notice.

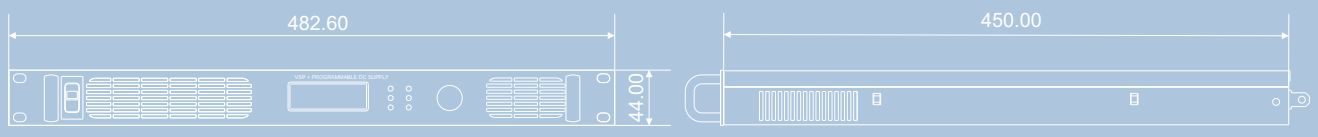
ELECTRICAL SPECIFICATIONS

VSP+600W Specifications

Models	VSP+1060	VSP+2030	VSP+3020	VSP+4015	VSP+6010	VSP+12005
OUTPUT RATING						
O/P voltage	0-10V	0-20V	0-30V	0-40V	0-60V	0-120V
O/P Current	0-60A	0-30A	0-20A	0-15A	0-10A	0-5A
O/P power			600W			
LINE REGULATION						
Voltage			0.1%			
Current			0.1%			
LOAD REGULATION						
Voltage			0.1%			
Current			0.1%			
METER ACCURACY						
Voltage			0.2% ±3 counts			
Current			0.2% ±3 counts			
OUTPUT NOISE (90-20MHz)						
Voltage (peak to peak)			<45mV p-p			
OUTPUT RIPPLE (RMS)						
Voltage			<10mV			
Current	<20mA	<10mA	<10mA	<10mA	<10mA	<10mA
TEMP. COEFFICIENT						
Voltage			0.05%(of Vmax./°C)			
Current			0.05%(of Imax./°C)			

VSP1200W Specifications

Models	VSP+2060	VSP+3040	VSP+4030	VSP+6020	VSP+8015	VSP+12010
OUTPUT RATING						
O/P voltage	0-20V	0-30V	0-40V	0-60V	0-80V	0-120V
O/P current	0-60A	0-40A	0-30A	0-20A	0-15A	0-10A
O/P power			1200W			
LINE REGULATION						
Voltage			0.1%			
Current			0.1%			
LOAD REGULATION						
Voltage			0.1%			
Current			0.1%			
METER ACCURACY						
Voltage			0.2% ±3 counts			
Current			0.2% ±3 counts			
OUTPUT NOISE (90-20MHz)						
Voltage (peak to peak)			<45mV p-p			
OUTPUT RIPPLE (RMS)						
Voltage	<10mV	<10mV	<10mV	<10mV	<20mV	<20mV
Current	<20mA	<10mA	<10mA	<10mA	<10mA	<10mA
TEMP. COEFFICIENT						
Voltage			0.05%(of Vmax./°C)			
Current			0.05%(of Imax./°C)			



Dimensions in mm

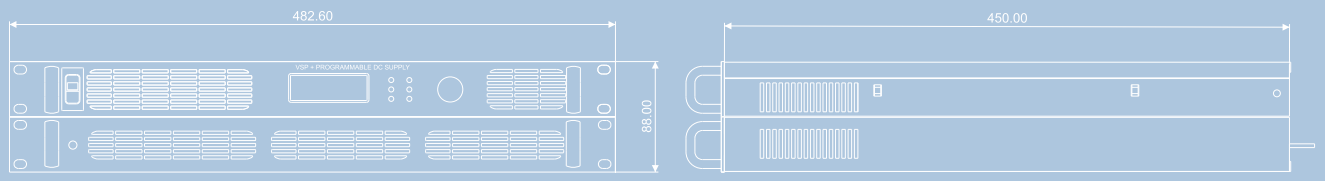
Specification subject to change without notice.

Specifications indicate typical performance at 25°C ±5°C, nominal input of 120V AC/230V AC

ELECTRICAL SPECIFICATIONS

VSP+2400W Specifications

Models	VSP+20100	VSP+3080	VSP+4060	VSP+6040	VSP+8030	VSP+12020
OUTPUT RATING						
O/P voltage	0-20V	0-30V	0-40V	0-60V	0-80V	0-120V
O/P Current	0-100A	0-80A	0-60A	0-40A	0-30A	0-20A
O/P power	2400W					
LINE REGULATION						
Voltage	0.1%					
Current	0.1%					
LOAD REGULATION						
Voltage	0.1%					
Current	0.1%					
METER ACCURACY						
Voltage	0.2% ±3 counts					
Current	0.2% ±3 counts					
OUTPUT NOISE (90-20MHz)						
Voltage (peak to peak)	<45mV p-p					
OUTPUT RIPPLE (RMS)						
Voltage	<10mV	<10mV	<10mV	<10mV	<20mV	<20mV
Current	<20mA	<20mA	<20mA	<10mA	<10mA	<10mA
TEMP. COEFFICIENT						
Voltage	0.05%(of Vmax./°C					
Current	0.05%(of Imax./°C)					



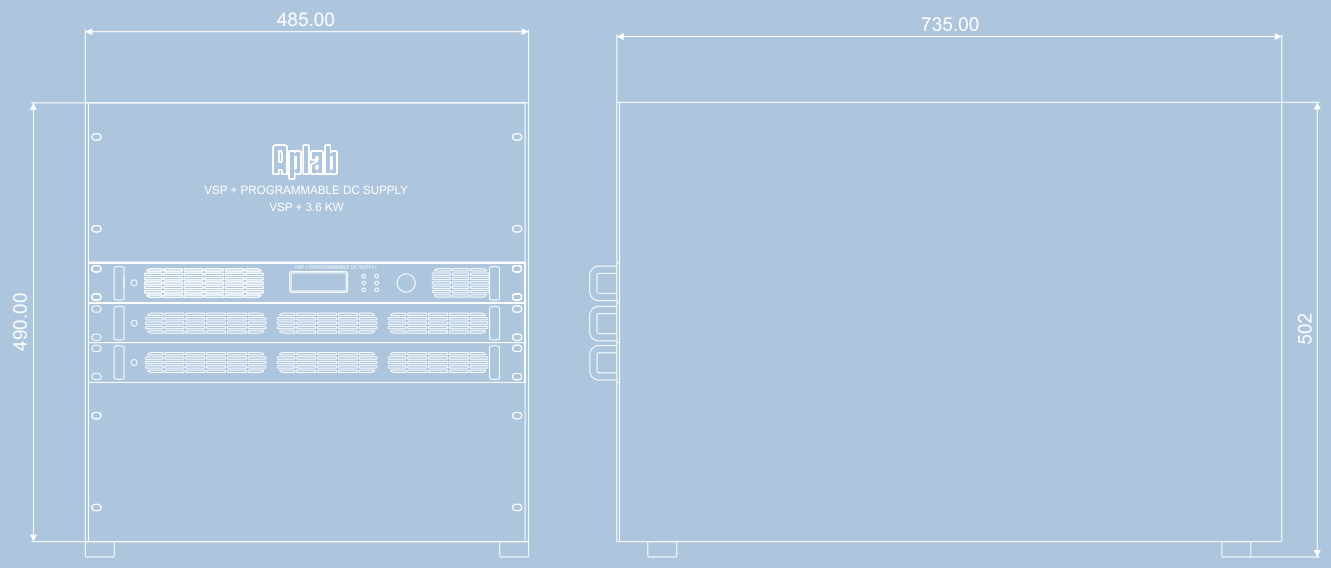
Dimensions in mm

Specification subject to change without notice.

Specifications indicate typical performance at 25°C ±5°C, nominal input of 120V AC/230V AC

VSP3600W Specifications

Models	VSP+20180	VSP+30120	VSP+4090	VSP+6060	VSP+8045	VSP+12030
OUTPUT RATING						
O/P voltage	0-20V	0-30V	0-40V	0-60V	0-80V	0-120V
O/P current	0-180A	0-120A	0-90A	0-60A	0-45A	0-30A
O/P power			3600W			
LINE REGULATION						
Voltage			0.5%			
Current			0.5%			
LOAD REGULATION						
Voltage			0.5%			
Current			0.5%			
METER ACCURACY						
Voltage			0.2% ±3 counts			
Current			0.2% ±3 counts			
OUTPUT NOISE (90-20MHz)						
Voltage (peak to peak)			<45mV p-p			
OUTPUT RIPPLE (RMS)						
Voltage	<10mV	<10mV	<10mV	<10mV	<20mV	<20mV
Current	<20mA	<10mA	<10mA	<10mA	<10mA	<10mA
TEMP. COEFFICIENT						
Voltage			0.05%(of Vmax./°C)			
Current			0.05%(of Imax./°C)			



Dimensions in mm

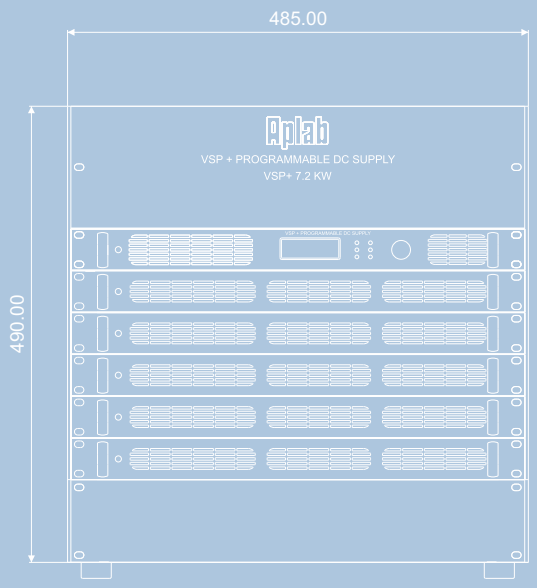
Specification subject to change without notice.

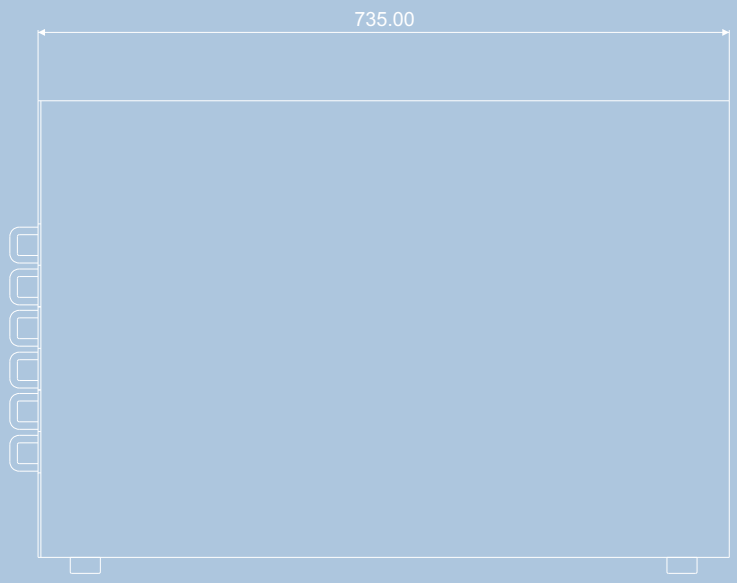
Specifications indicate typical performance at 25°C ±5°C, nominal input of 120V AC/230V AC

ELECTRICAL SPECIFICATIONS

VSP+7200W / VSP+12000W Specifications

Models	VSP+30240	VSP+40180	VSP+60120	VSP+8090	VSP+12060	VSP+120100
OUTPUT RATING						
O/P voltage	0-30V	0-40V	0-60V	0-80V	0-120V	0-120V
O/P Current	0-240A	0-180A	0-120A	0-90A	0-60A	0-100A
O/P power			7200W			12000W
LINE REGULATION						
Voltage	0.5%					
Current	0.5%					
LOAD REGULATION						
Voltage	0.5%					
Current	0.5%					
METER ACCURACY						
Voltage	0.2% ±3 counts					
Current	0.2% ±3 counts					
OUTPUT NOISE (90-20MHz)						
Voltage (peak to peak)	<45mV p-p					
OUTPUT RIPPLE (RMS)						
Voltage	<10mV	<10mV	<10mV	<20mV	<20mV	<20mV
Current	<20mA	<20mA	<10mA	<10mA	<10mA	<20mA
TEMP. COEFFICIENT						
Voltage	0.05%(of Vmax./°C)					
Current	0.05%(of Imax./°C)					





Dimensions in mm

Specification subject to change without notice.

Specifications indicate typical performance at 25°C ±5°C, nominal input of 120V AC/230V AC

Ordering Information:
VSP+ XXXXXX XX

- SU - Standard with USB & RS485 Interface
- CU - Customized with USB & RS485 Interface
- SL - Standard with LAN Interface
- CL - Customized with LAN Interface

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