

## Hi-power programmable power supplies



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 more 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.

VSP 600W	VSP 1200W	VSP 2400W	VSP 3600W	VSP 7200W
0-10V/0-60A	0-20V/0-60A	0-20V/0-100A	0-20V/0-180A	0-30V/0-240A
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	

### 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
- **LabView®** and **LabWindow®** drivers
- Active power factor correction at the input with wide input window
- Three digit seven segment LED display for voltage and current read back
- Standard 19" rack mount suitable for ATE and OEM applications
- Parallel operation with active current sharing
- Wide choice of interface RS232, RS485, GPIB for external programming
- Isolated analog programming and monitoring surface
- Optional Ethernet interface card-kit

## General Specifications

<b>AC input voltage</b>	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
<b>Input power factor</b>	For all models	0.99 typical @ full Load, nominal line
<b>Switching frequency</b>	For all models	45KHz nominal
<b>Time delay</b>	For all models	7 sec. maximum from power ON until output stable
<b>Voltage mode transient response</b>	For all models	Better than 200uS for load change from 40% to 90%.
<b>Mimimum voltage differential</b>	For all models	±600V DC from output to safety ground
<b>Remote analog programming</b>	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
<b>Remote analog monitoring</b>	For all models	Isolated voltage & current monitoring outputs 0-5V (default), 0-10V
<b>Remote programming &amp; monitoring accuracy</b>	For all models	0.5% for 0 to 100% output
<b>Maximum remote sense compensation</b>	For all models	1V/Line
<b>Operating temperature</b>	For all models	0 to 50°C
<b>Storage temperature</b>	For all models	-20 to 70°C
<b>Humidity</b>	For all models	Upto 90% RH non-condensing
<b>Front panel voltage &amp; current controls</b>	For all models	10 turn potentiometers for voltage, current & over voltage set/digital rotary encoder
<b>Input Ac connection</b>	600W	10A, 250V line socket
	1200W	16A, 250V line socket/3core, 16A, 250V line cord with American plug
	2400W	3 way-terminal 30A, 415V terminal block/3 core, 20A, 250V line cord without plug
	3600W	4 way-terminal 30A, 250V terminal block
	7200W	4-terminal 30A, 250V terminal block
<b>Dimensions &amp; Weight</b>	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), 3 U (H), 450 mm, 22 Kgs.
	7200W	19"(W), 6 U (H), 450 mm, 20 Kgs.
<b>Conforming standards</b>	CE mark: meets EN55022, class A, safety standard EN60950	

Specification subject to change without notice.

# Electrical Specifications

## VSP600W Specifications

Models	VSP1060	VSP2030	VSP3020	VSP4015	VSP6010	VSP12005
<b>OUTPUT RATING</b>						
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					
<b>LINE REGULATION</b>						
Voltage	0.1%					
Current	0.1%					
<b>LOAD REGULATION</b>						
Voltage	0.1%					
Current	0.1%					
<b>METER ACCURACY</b>						
Voltage	0.2% ±3 counts					
Current	0.2% ±3 counts					
<b>OUTPUT NOISE (90-20MHz)</b>						
Voltage (peak to peak)	<45mV p-p					
<b>OUTPUT RIPPLE (RMS)</b>						
Voltage	<10mV					
Current	<20mA	<10mA	<10mA	<10mA	<10mA	<10mA
<b>TEMP. COEFFICIENT</b>						
Voltage	0.05%(of Vmax./°C)					
Current	0.05%(of Imax./°C)					

## VSP1200W Specifications

Models	VSP2060	VSP3040	VSP4030	VSP6020	VSP8015	VSP12010
<b>OUTPUT RATING</b>						
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					
<b>LINE REGULATION</b>						
Voltage	0.1%					
Current	0.1%					
<b>LOAD REGULATION</b>						
Voltage	0.1%					
Current	0.1%					
<b>METER ACCURACY</b>						
Voltage	0.2% ±3 counts					
Current	0.2% ±3 counts					
<b>OUTPUT NOISE (90-20MHz)</b>						
Voltage (peak to peak)	<45mV p-p					
<b>OUTPUT RIPPLE (RMS)</b>						
Voltage	<10mV	<10mV	<10mV	<10mV	<20mV	<20mV
Current	<20mA	<10mA	<10mA	<10mA	<10mA	<10mA
<b>TEMP. COEFFICIENT</b>						
Voltage	0.05%(of Vmax./°C)					
Current	0.05%(of Imax./°C)					



Dimensions in mm

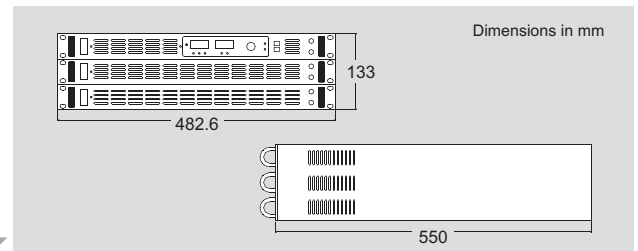
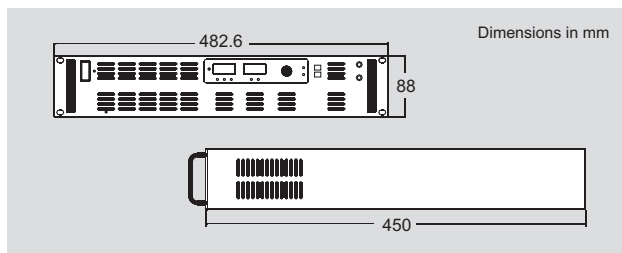
Specification subject to change without notice.

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

## Electrical Specifications

### VSP2400W Specifications

Models	VSP20100	VSP3080	VSP4060	VSP6040	VSP8030	VSP12020
<b>OUTPUT RATING</b>						
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					
<b>LINE REGULATION</b>						
Voltage	0.1%					
Current	0.1%					
<b>LOAD REGULATION</b>						
Voltage	0.1%					
Current	0.1%					
<b>METER ACCURACY</b>						
Voltage	0.2% ±3 counts					
Current	0.2% ±3 counts					
<b>OUTPUT NOISE (90-20MHz)</b>						
Voltage (peak to peak)	<45mV p-p					
<b>OUTPUT RIPPLE (RMS)</b>						
Voltage	<10mV	<10mV	<10mV	<10mV	<20mV	<20mV
Current	<20mA	<20mA	<20mA	<10mA	<10mA	<10mA
<b>TEMP. COEFFICIENT</b>						
Voltage	0.05%(of Vmax./°C)					
Current	0.05%(of Imax./°C)					



### VSP3600W Specifications

Models	VSP20180	VSP30120	VSP4090	VSP6060	VSP8045	VSP12030
<b>OUTPUT RATING</b>						
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					
<b>LINE REGULATION</b>						
Voltage	0.5%					
Current	0.5%					
<b>LOAD REGULATION</b>						
Voltage	0.5%					
Current	0.5%					
<b>METER ACCURACY</b>						
Voltage	0.2% ±3 counts					
Current	0.2% ±3 counts					
<b>OUTPUT NOISE (90-20MHz)</b>						
Voltage (peak to peak)	<45mV p-p					
<b>OUTPUT RIPPLE (RMS)</b>						
Voltage	<10mV	<10mV	<10mV	<10mV	<20mV	<20mV
Current	<20mA	<10mA	<10mA	<10mA	<10mA	<10mA
<b>TEMP. COEFFICIENT</b>						
Voltage	0.05%(of Vmax./°C)					
Current	0.05%(of Imax./°C)					

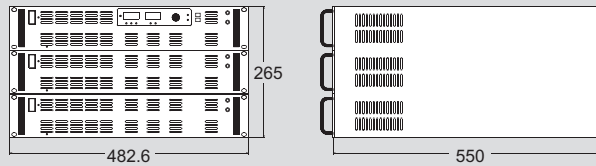
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Specifications indicate typical performance at 25°C ±5°C, nominal input of 120V AC/230V AC

# Electrical Specifications

## VSP7200W Specifications

Models	VSP30240	VSP40180	VSP60120	VSP8090	VSP12060
<b>OUTPUT RATING</b>					
O/P voltage	0-30V	0-40V	0-60V	0-80V	0-120V
O/P Current	0-240A	0-180A	0-120A	0-90A	0-60A
O/P power	7200W				
<b>LINE REGULATION</b>					
Voltage	0.5%				
Current	0.5%				
<b>LOAD REGULATION</b>					
Voltage	0.5%				
Current	0.5%				
<b>METER ACCURACY</b>					
Voltage	0.2% ±3 counts				
Current	0.2% ±3 counts				
<b>OUTPUT NOISE (90-20MHz)</b>					
Voltage (peak to peak)	<45mV p-p				
<b>OUTPUT RIPPLE (RMS)</b>					
Voltage	<10mV	<10mV	<10mV	<20mV	<20mV
Current	<20mA	<20mA	<10mA	<10mA	<10mA
<b>TEMP. COEFFICIENT</b>					
Voltage	0.05% (of Vmax./°C)				
Current	0.05% (of Imax./°C)				



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 XXXXX - XXXX

- ODI - Rs232 Interface- ASCII protocol
- ODII - GPIB- IEEE488-2- SCPI compatible protocol
- ODIII - Rs485- SCPI compatible protocol
- ODIV - Ethernet