

# HPS and SPS (3.3kW-45kW)

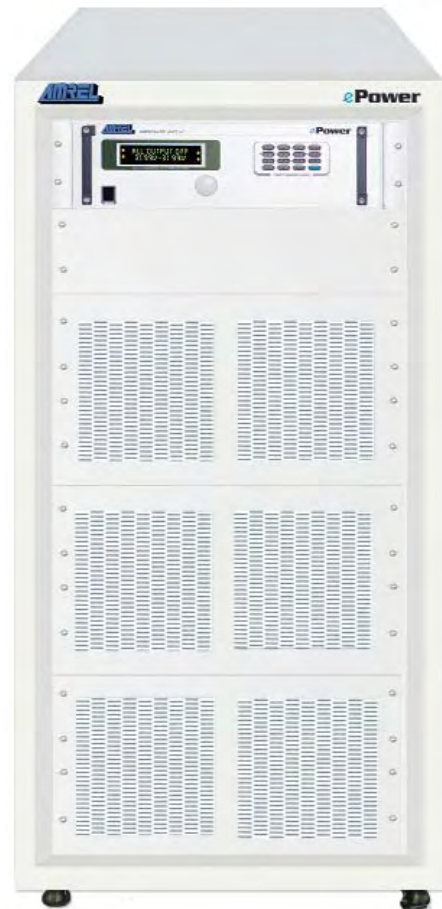
## PROGRAMMABLE SWITCH MODE POWER SUPPLIES

### Features for SPS 3.3kW-45kW and ALL HPS High Power Switching Power Supplies



SPS 3.3kW and above Rackmount Models

- 20X2 VFD Displays Easy-to-read and Accurate Constant Voltage and Constant Current Settings and Values
- Digital OVP, OCP,  $I_{LIST}$  and  $V_{LIST}$  Display for easy function recognition
- Real-time Encoder provides precise and on-the-fly voltage and current control
- Automatic Constant Voltage & Constant Current Mode Crossover
- Multi-functional Front Panel Keypad for high resolution and precise digital OVP, OCP,  $I_{LIST}$ ,  $V_{LIST}$ , current, and voltage control
- Remote Programming Control with standardized SCPI commands for advanced and integrated ATE testing
- MCU-2 Master Controller can control up to 8 SPS and cascaded for up to 800 SPS units – for extensive and versatile control of highly complex and integrated systems
- Embedded Ethernet and USB Interface Option without the need for interface converters
- Remote Inhibit (RI) and Interlock provides external output shutdown capability – in case of hazardous faults
- External Fault (FLT) and Remote Inhibit (RI) Signal for scaled remote ATE system integration
- Remote/Front Panel Lockout to ensure protection for remote ATE systems
- In-field GPIB, RS232, USB, Ethernet, and Firmware Upgrades to prevent down-time, satisfy new and dynamic system applications and provide up-to-date software maintenance
- 16 bit Readback and Programming A-D/D-A yields high resolution and accuracy for standalone or burn-in testing without the need for external measuring equipment
- Convenient and Robust Automated Testing - Four 20 Step profiles; Electronic Local/Remote Closed-case Calibration will minimize down-time, reduce maintenance costs, and elevate Return on Investment (ROI)
- Remote Sensing to compensate for measurement errors due to large line drops
- Increased control precision and convenience for external programming applications achieved through User-Selectable CV/CC/OV External Control, as well as Automated  $V_{LIST}$  and  $I_{LIST}$  Profiles
- LabVIEW/LabWindows Drivers



HPS Series High Power, Cabinet Mount Models

## Common Specifications

**Input voltage (Factory Configured):**

208/240 Vac, 50-400 Hz, 3φ  
 380/415 Vac, 50-400 Hz, 3φ  
 440/480 Vac, 50-400 Hz, 3φ

**Line regulation:**

Voltage Mode: ±.004% of full scale  
 Current Mode: ±.02% of full scale

**Load regulation:**

Voltage Mode: ±.01% of full scale  
 Current Mode: ±.04% of full scale

**Stability:** 0.10 % for 8 hours after 30 minute warm up

**Load transient response:**

2 ms to recover within ±1% of regulated output with a 50% to 100% or 100% to 50% step load change

**Efficiency:** Greater than 86%

**Temperature coefficient:** 0.04 %/°C of maximum output current

**Isolation:**

Maximum input voltage to ground: ±2500 Vdc  
 Maximum output voltage to ground: ±1000 Vdc  
 User inputs and outputs: referenced to earth ground

**Power Factor:** Greater than 92% at maximum power

**Ambient Temperature:** 0 to 50°C

**Storage Temperature:** -25 to +85°C

**Remote sense limits:** 3% maximum voltage drop from output terminals to load

**Digital programming accuracy of full scale:**

Voltage set point: ±.50%  
 Current set point: ±.75%  
 Over voltage trip set point: ±.50%  
 Over current trip set point: ±.75%

**Digital readback accuracy of full scale:**

Output voltage: ±.50%  
 Output current: ±.75%

**Dimensions SPS Models:**

5¼"H x 19"W x 24"D (3.3kW to 15kW)  
 10¼"H x 19"W x 24"D (20kW to 30kW)  
 15 ¾"H x 19W x 24"D (45kW)

**Dimensions HPS Models:**

38 ½"H x 22"W x 29"D (30kW to 60kW)  
 49"H x 22"W x 29"D (75kW)  
 62 ½"H x 48"W x 31½"D (100kW, 150kW)

## Models and Ratings

3.3kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )	3.3kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )
SPS5-600	5	600	50	SPS125-26	125	26	100
SPS8-400	8	400	40	SPS160-20	160	20	120
SPS10-300	10	300	40	SPS200-16	200	16	125
SPS16-200	16	200	35	SPS250-13	250	13	130
SPS20-165	20	165	40	SPS375-8	375	8	170
SPS32-100	32	100	40	SPS500-6	500	6	220
SPS40-82	40	82	40	SPS600-5	600	5	250
SPS60-55	60	55	40	SPS800-4	800	4	270
SPS80-41	80	41	60	SPS1000-3	1000	3	300
SPS100-33	100	33	60				

6.6kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )	6.6kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )
SPS8-800	8	800	40	SPS125-53	125	53	100
SPS10-600	10	600	40	SPS160-41	160	41	120
SPS16-400	16	400	35	SPS200-33	200	33	125
SPS20-330	20	330	40	SPS250-26	250	26	130
SPS32-200	32	200	40	SPS375-17	375	17	170
SPS40-165	40	165	40	SPS500-13	500	13	220
SPS50-130	50	130	50	SPS600-10	600	10	250
SPS60-110	60	110	50	SPS800-8	800	8	270
SPS80-82	80	82	60	SPS1000-6	1000	6	300
SPS100-66	100	66	60				

10kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )	10kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )
SPS10-900	10	900	40	SPS100-100	100	100	60
SPS16-600	16	600	35	SPS160-62	160	62	120
SPS20-500	20	500	40	SPS200-50	200	50	125
SPS32-300	32	300	40	SPS250-40	250	40	130
SPS40-250	40	250	40	SPS375-27	375	27	170
SPS50-200	50	200	50	SPS500-20	500	20	220
SPS60-167	60	167	50	SPS600-16	600	16	250
SPS80-125	80	125	60	SPS800-12	800	12	270
SPS125-80	125	80	100	SPS1000-10	1000	10	300

15kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )	15kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )
SPS16-900	16	900	35	SPS160-93	160	93	120
SPS20-750	20	750	40	SPS200-75	200	75	125
SPS32-450	32	450	40	SPS250-60	250	60	130
SPS40-375	40	375	40	SPS375-39	375	39	170
SPS50-300	50	300	50	SPS500-30	500	30	220
SPS60-250	60	250	50	SPS600-24	600	24	250
SPS80-186	80	186	60	SPS800-18	800	18	300
SPS100-150	100	150	60	SPS1000-15	1000	15	350
SPS100-151	100	150	60	SPS1000-16	1000	15	350
SPS125-120	125	120	100				

20kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )	20kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )
SPS16-1200	16	1200	35	SPS160-124	160	124	120
SPS20-1000	20	1000	40	SPS200-100	200	100	125
SPS32-600	32	600	40	SPS250-80	250	80	130
SPS40-500	40	500	40	SPS375-52	375	52	170
SPS50-400	50	400	50	SPS500-40	500	40	220
SPS60-333	60	333	50	SPS600-32	600	32	250
SPS80-248	80	248	60	SPS800-24	800	24	270
SPS100-200	100	200	60	SPS1000-20	1000	20	350
SPS125-160	125	160	100				

25kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )	25kW SPS Models	Output Voltage (Vdc)	Output Current (A <sub>dc</sub> )	Ripple (mV <sub>rms</sub> )
SPS16-1500	16	1500	35	SPS160-155	160	155	120
SPS20-1250	20	1250	40	SPS200-125	200	125	125
SPS32-750	32	750	40	SPS250-100	250	100	130
SPS40-625	40	625	40	SPS375-65	375	65	170
SPS50-500	50	500	50	SPS500-50	500	50	220
SPS60-416	60	416	50	SPS600-40	600	40	250
SPS80-310	80	310	60	SPS800-30	800	30	300
SPS100-250	100	250	60	SPS1000-25	1000	25	350
SPS125-200	125	200	100				

30kW SPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)	30kW SPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)
SPS16-1800	16	1800	35	SPS160-186	160	186	120
SPS20-1500	20	1500	40	SPS200-150	200	150	125
SPS32-900	32	900	40	SPS250-120	250	120	130
SPS40-750	40	750	40	SPS375-78	375	78	170
SPS50-600	50	600	50	SPS500-60	500	60	220
SPS60-500	60	500	50	SPS600-48	600	48	250
SPS80-372	80	372	60	SPS800-36	800	36	300
SPS100-300	100	300	60	SPS1000-30	1000	30	350
SPS125-240	125	240	100				

45kW SPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)	45kW SPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)
SPS16-2700	16	2700	35	SPS160-279	160	279	120
SPS20-2250	20	2250	40	SPS200-225	200	225	125
SPS32-1350	32	1350	40	SPS250-180	250	180	130
SPS40-1125	40	1125	40	SPS375-117	375	117	170
SPS50-900	50	900	50	SPS500-90	500	90	220
SPS60-750	60	750	50	SPS600-72	600	72	250
SPS80-558	80	558	60	SPS800-54	800	54	300
SPS100-450	100	450	60	SPS1000-45	1000	45	350
SPS125-360	125	360	100				

30kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)	30kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)
HPS16-1800	16	1800	35	HPS160-186	160	186	120
HPS20-1500	20	1500	40	HPS200-150	200	150	125
HPS32-900	32	900	40	HPS250-120	250	120	130
HPS40-750	40	750	40	HPS375-78	375	78	170
HPS50-600	50	600	50	HPS500-60	500	60	220
HPS60-500	60	500	50	HPS600-48	600	48	250
HPS80-372	80	372	60	HPS800-36	800	36	300
HPS100-300	100	300	60	HPS1000-30	1000	30	350
HPS125-240	125	240	100				

45kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)	45kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)
HPS16-2700	16	2700	35	HPS160-279	160	279	120
HPS20-2250	20	2250	40	HPS200-225	200	225	125
HPS32-1350	32	1350	40	HPS250-180	250	180	130
HPS40-1125	40	1125	40	HPS375-117	375	117	170
HPS50-900	50	900	50	HPS500-90	500	90	220
HPS60-750	60	750	50	HPS600-72	600	72	250
HPS80-558	80	558	60	HPS800-54	800	54	300
HPS100-450	100	450	60	HPS1000-45	1000	45	350
HPS125-360	125	360	100				

60kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)	60kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)
HPS16-3600	16	3600	35	HPS160-372	160	372	120
HPS20-3000	20	3000	40	HPS200-300	200	300	125
HPS32-1800	32	1800	40	HPS250-240	250	240	130
HPS40-1500	40	1500	40	HPS375-156	375	156	170
HPS50-1200	50	1200	50	HPS500-120	500	120	220
HPS80-744	80	744	60	HPS600-96	600	96	250
HPS100-600	100	600	60	HPS800-72	800	72	300
HPS125-125	125	125	100	HPS1000-60	1000	60	350

75kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)	75kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)
HPS16-4500	16	4500	35	HPS160-465	160	465	120
HPS20-3750	20	3750	40	HPS200-375	200	375	125
HPS32-2250	32	2250	40	HPS250-300	250	300	130
HPS40-1875	40	1875	40	HPS375-195	375	195	170
HPS50-1500	50	1500	50	HPS500-150	500	150	220
HPS80-930	80	930	60	HPS600-120	600	120	250
HPS100-750	100	750	60	HPS800-90	800	90	300
HPS125-600	125	600	100	HPS1000-75	1000	75	350

100kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)	100kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)
HPS16-6000	0-16	0-6000	35	HPS250-400	0-250	0-400	130
HPS20-5000	0-20	0-5000	40	HPS375-270	0-375	0-270	170
HPS32-3000	0-32	0-3000	40	HPS500-200	0-500	0-200	220
HPS40-2500	0-40	0-2500	40	HPS600-160	0-600	0-160	250
HPS50-2000	0-50	0-2000	50	HPS800-120	0-800	0-120	300
HPS80-1250	0-80	0-1250	60	HPS1000-100	0-1000	0-100	400
HPS100-1000	0-100	0-1000	60	HPS1250-80	0-1250	0-80	500
HPS125-800	0-125	0-800	100	HPS1600-62	0-1600	0-62	600
HPS160-620	0-160	0-620	120	HPS2000-50	0-2000	0-50	800
HPS200-500	0-200	0-500	125	HPS2500-40	0-2500	0-40	900

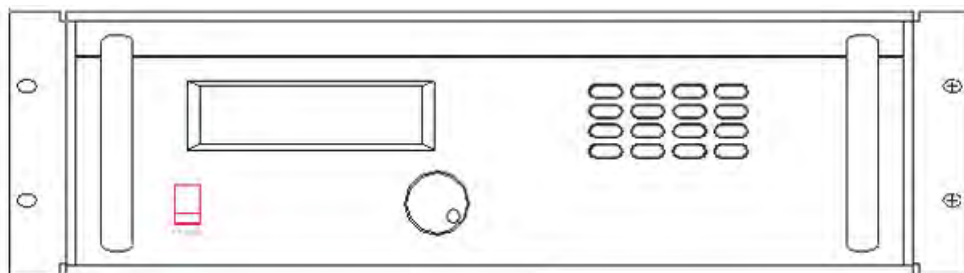
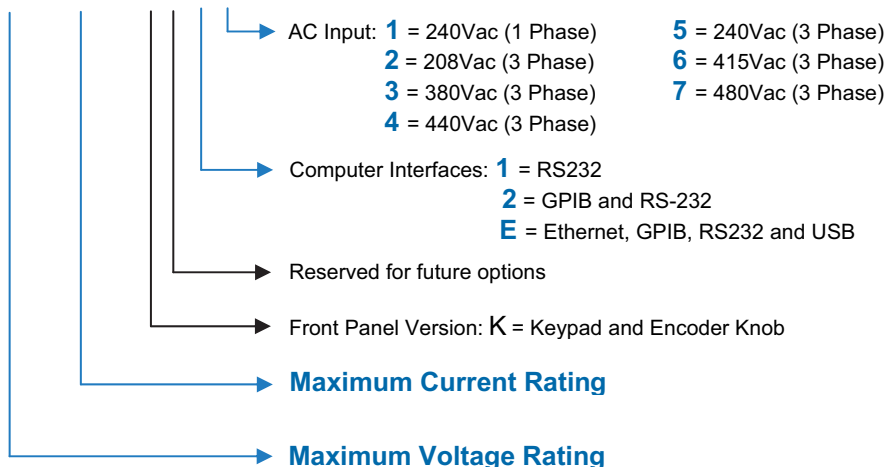
150kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)	150kW HPS Models	Output Voltage (Vdc)	Output Current (Adc)	Ripple (mVrms)
HPS25-6000	0-25	0-6000	40	HPS375-400	0-375	0-400	170
HPS32-4500	0-32	0-4500	40	HPS500-300	0-500	0-300	220
HPS40-3750	0-40	0-3750	40	HPS600-240	0-600	0-240	250
HPS50-3000	0-50	0-3000	50	HPS800-180	0-800	0-180	300
HPS80-1850	0-80	0-1850	60	HPS1000-150	0-1000	0-150	400
HPS100-1500	0-100	0-1500	60	HPS1250-120	0-1250	0-120	500
HPS125-1200	0-125	0-1200	100	HPS1600-90	0-1600	0-90	600
HPS160-900	0-160	0-900	120	HPS2000-75	0-2000	0-75	800
HPS200-750	0-200	0-750	125	HPS2500-60	0-2500	0-60	900
HPS250-600	0-250	0-600	130				

Please Note: Water-cooled models are available - contact AMREL for more information.

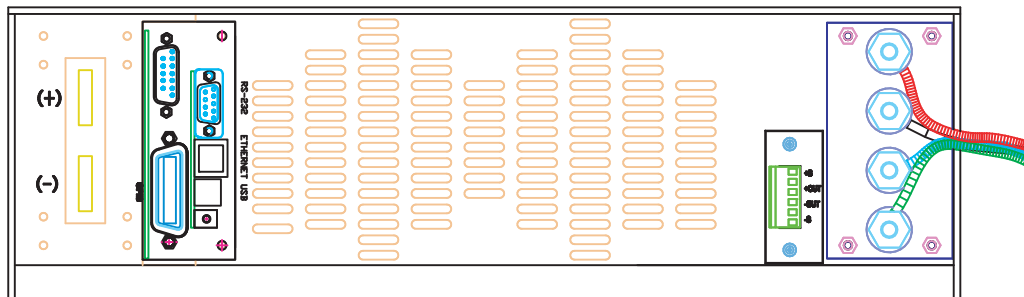
# ePower SELECTOR GUIDES

## for HPS & SPS (3.3kW-45kW) SWITCH MODE POWER SUPPLIES

### SPS XXX-XXX-K0XX



FRONT VIEW OF K-PANEL VERSION



REAR VIEW