

## SmartOnline 120V 2.2kVA 1.8kW Double-Conversion UPS, 2U, Extended Run, Network Card Slot, LCD, USB, DB9

MODEL NUMBER: AL-84111



### Specifications

OUTPUT	
Output Volt Amp Capacity (VA)	2200
Output kVA Capacity (kVA)	2.2
Output Watt Capacity (Watts)	1800
Output kW Capacity (kW)	1.8
Output Capacity Details	ON LINE MODE: Maximum output capacity is reduced to 1620 watts at 115V nominal and 1440 watts at 100V nominal; FREQUENCY REGULATION / CONVERSION MODE: Maximum output ratings are reduced in frequency regulation / conversion mode (127/120V 1260 watts / 115V 1134 watts / 110V 1071 watts / 100V 1008 watts) OVERLOAD CAPACITY: Supports inverter operation up to 105% load continuously, 125% load for 3 minutes; 150% load for 30 seconds and >150% load for 0.5 seconds before switching to BYPASS (when bypass input voltage and frequency are WITHIN bypass limits) or SHUTDOWN (when bypass input voltage or frequency are OUTSIDE bypass limits)
Power Factor	0.82
Crest Factor	3:1
Nominal Output Voltage(s) Supported	100V; 110V; 115V; 120V; 127V
Nominal Voltage Details	120V factory-default nominal voltage
Frequency Compatibility	50 / 60 Hz; Supports 50 to 60 Hz and 60 to 50 Hz conversion
Frequency Compatibility Details	ON LINE MODE: Output frequency is automatically configured to match nominal input frequency on startup; Output matches input frequency when +/-5Hz of nominal; Output is regulated to +/-0.05Hz when input frequency exceeds +/-5Hz of nominal. UPS switches to battery mode when input frequency is below 40Hz or above 70Hz. FREQUENCY REGULATION / CONVERSION MODE: Output is regulated to +/-0.05Hz of selected output frequency input is 40 to 70Hz; UPS switches to battery mode when input frequency is below 40Hz or above 70Hz. BATTERY MODE: Output is regulated to +/-0.05Hz.

Output Voltage Regulation (Line Mode)	+/- 2%
Output Voltage Regulation (Economy Line Mode)	+/- 10%
Output Voltage Regulation (Battery Mode)	+/- 3%
Output Receptacles	(6) 5-15/20R; (1) L5-20R
Load Management Receptacles	Two switchable three-outlet 5-15/20R load banks
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
<b>INPUT</b>	
Rated input current (Maximum Load)	16A
Nominal Input Voltage(s) Supported	100V AC; 110V AC; 115V AC; 120V AC; 127V AC
Nominal Input Voltage Description	120V factory default
UPS Input Connection Type	5-20P
Input Circuit Breakers	30A
UPS Input Cord Length (ft.)	10
UPS Input Cord Length (m)	3.0
Recommended Electrical Service	20A 120V
Input Phase	Single-Phase
<b>BATTERY</b>	
Full Load Runtime (min.)	4 min. (1800w)
Half Load Runtime (min.)	12 min. (900w)
Expandable Battery Runtime	Extended runtime supported via optional external battery packs
External Battery Pack Compatibility	AL-84135 (limit 1); AL-84137 (multi-pack compatible)
Expandable Runtime Description	Some external battery configurations require the use of External Battery Configuration Software, see manual for details
DC System Voltage (VDC)	48
Battery Recharge Rate (Included Batteries)	Less than 3 hours recharge to 90% (typical, full load discharge)
Internal UPS Replacement Battery Cartridge	AL-84162
Battery Access	Front panel battery access
Battery Replacement Description	Hot-swappable, user replaceable batteries
Expandable Runtime	Yes
<b>VOLTAGE REGULATION</b>	

Voltage Regulation Description	Online, double-conversion power conditioning maintains 2% output voltage regulation during brownouts and overvoltages
Overvoltage Correction	Corrects overvoltages to 150V (0-100% load)
Undervoltage Correction	Corrects undervoltages to 100V at full load (90V at 100V nominal)
Severe Undervoltage Correction	Corrects brownouts to 70V (70% load) & 55V (33% load)
<b>USER INTERFACE, ALERTS &amp; CONTROLS</b>	
Front Panel LCD Display	Front panel LCD information and configuration screen offers detailed UPS and site power status and operating data, plus configuration of voltage, frequency, operating mode, alarm function and a variety of additional options
Switches	2 switches control off/on power status and alarm-cancel operation; 2 additional scroll-down and scroll-up / select options enable LCD status viewing and configuration options
Alarm Cancel Operation	Power-fail alarm can be temporarily silenced using alarm-cancel switch; silent mode alarm configuration option available
Audible Alarm	Audible alarm indicates UPS startup, power-failure, low-battery, overload, UPS fault and remote shutdown conditions
LED Indicators	7 front panel LEDs indicate line power availability, AC to DC conversion, battery mode operation, inverter mode, eco mode operation, bypass mode operation and AC output status
<b>SURGE / NOISE SUPPRESSION</b>	
UPS AC Suppression Joule Rating	570
UPS AC Suppression Response Time	Instantaneous
UPS Dataline Suppression	1 line TEL/DSL (1 in / 1 out); 10/100Base T Ethernet
EMI / RFI AC Noise Suppression	Yes
<b>PHYSICAL</b>	
Included Mounting Accessory Description	Includes 4 post rackmount installation accessories
Installation Form Factors Supported with Optional Accessories	2 post rackmount(AL-84125); Tower(AL-84123)
Primary Form Factor	Rackmount
UPS Power Module Dimensions (hwd, in.)	3.5 x 17.5 x 19
UPS Power Module Dimensions (hwd, cm)	8.89 x 44.45 x 48.26
Rack Height (U Spaces)	2
Minimum Required Rack Depth (inches)	26
Minimum Required Rack Depth (cm)	66.04
UPS Power Module Weight (lbs.)	48.5
UPS Power Module Weight (kg)	22.00
UPS Shipping Dimensions (hwd / in.)	9.5 x 20 x 24

UPS Shipping Dimensions (hwd / cm)	24.13 x 50.80 x 60.96
Shipping Weight (lbs.)	61.5
Shipping Weight (kg)	27.9
Cooling Method	Fan
UPS Housing Material	Steel
Minimum Required Rack Depth (mm)	660
Primary UPS Height (mm)	89
Primary UPS Width (mm)	444
Primary UPS Depth (mm)	483
Shipping Height (mm)	241
Shipping Width (mm)	508
Shipping Depth (mm)	610
<b>ENVIRONMENTAL</b>	
Operating Temperature Range	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius
Storage Temperature Range	+5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius
Relative Humidity	0 to 95%, non-condensing
AC Mode BTU / Hr. (Full Load)	683
AC Economy Mode BTU / Hr. (Full Load)	390
Battery Mode BTU / Hr. (Full Load)	838
AC Economy Mode Efficiency Rating (100% Load)	94%
Operating Elevation (ft.)	0-3000m / 0-10,000 ft.
Audible Noise	57 dBA at 1m front side
Operating Elevation (m)	0-3000 m
<b>COMMUNICATIONS</b>	
Communications Interface	USB (HID enabled); DB9 Serial; Contact closure; EPO (emergency power off); Slot for SNMP/Web interface
Network Management Cards	AL-84126; AL-84122
Network Monitoring Port Description	Supports detailed monitoring of UPS and site power conditions; DB9 port supports RS232 and contact closure communications
PowerAlert Software	Included
Communications Cable	USB and DB9 cabling included
WatchDog Compatibility	Supports Watchdog application, OS and hard-reboot restart options for remote applications
<b>LINE / BATTERY TRANSFER</b>	

Transfer Time	Zero (0 milliseconds) in double-conversion mode; 4 milliseconds economy mode
Low Voltage Transfer to Battery Power (Setpoint)	100V at full load (90V full load at 100V nominal setting); 70V at 70% load; 55V at 33% load
High Voltage Transfer to Battery Power (Setpoint)	150
<b>SPECIAL FEATURES</b>	
Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Automatic inverter bypass; Hot swappable batteries
Green Energy-Saving Features	High efficiency economy mode operation; Individually controllable load banks; Schedulable daily hours of economy mode operation
<b>CERTIFICATIONS</b>	
UPS Certifications	Tested to UL1778 (USA); Tested to CSA (Canada); Meets FCC Part 15 Category A (EMI); ROHS (Restriction of Hazardous Substances); ENERGY STAR Qualified
<b>WARRANTY</b>	
Product Warranty Period (Worldwide)	2-year limited warranty
Connected Equipment Insurance (U.S., Canada & Puerto Rico)	\$250,000 Ultimate Lifetime Insurance

