

## SmartOnline 120V 1kVA 800W Double-Conversion UPS, Tower, Extended Run, Network Card Options, USB, DB9 Serial

MODEL NUMBER: AL-84110



### Description

The Smart Online AL-84110 on-line, double conversion UPS protects critical server, networking or telecommunications equipment from blackouts, brownouts, voltage fluctuations and surges in an attractive all-black upright tower form factor. Large capacity 1kVA/800 watt UPS continuously converts incoming AC to DC, then back to perfect sine wave AC output at 120V AC (+/-2%). Removes harmonic distortion, fast electrical impulses, frequency fluctuations and other hard-to-solve power problems not addressed by other UPS systems.

True sine wave output and zero transfer time offers guaranteed compatibility with all equipment types. Highly efficient operation in optional economy mode setting, saving BTU heat output and energy costs. Includes 6 UPS supported outlets. 2 single-outlet load banks can be independently controlled via a software interface to selectively reboot remote equipment, or automatically shed less critical loads to extend battery runtime for the most critical equipment. Extended runtime available with optional AL-84128, AL-84129 or AL-84131 external battery packs. Includes slot for internal network management cards, plus DB9 enhanced serial monitoring port for unattended shutdown, remote control and monitoring of UPS system and power data. Network management interfaces support simultaneous communications via USB port, DB9 serial port and slot for network management card options. HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X. Includes PowerAlert UPS Power Management Software. Compatible Watchdog Service Monitoring/Rebooting Software.

### Features

- True on-line, double conversion UPS provides a constant, pure sine wave AC output
- Maintains continuous operation through blackouts, brownouts, voltage fluctuations and surges with zero transfer time
- Zero transfer time, on-line, double-conversion and economy-mode operation supported
- Removes harmonic distortion, electrical impulses, frequency variations and other hard to solve power problems
- Accepts input voltages between 80 and 150 (65 to 150 at loads under 70%), regulating output to 120V AC +/-2%
- 1000VA/800 watt output capacity with 6 total outlets (6 NEMA5-15R)
- Two built-in individually switchable load banks can be controlled via software interface to selectively reboot remote equipment or automatically shed less critical loads to extend battery runtime for the most critical equipment (2 banks of 1 outlet)
- Standard internal battery set provides 14 minutes runtime at half load and 4 minutes at full load

### Highlights

- 1000VA / 1kVA / 800 watt on-line double-conversion tower UPS
- 100/110/120V +/-2% output at 50/60Hz, high efficiency economy mode option
- Expandable runtime, Hot-swappable battery modules
- USB, RS232 & EPO ports; Network Management Card options
- Front panel status LEDs with detailed load and battery metering
- 2 independently switchable output load banks
- NEMA 5-15P input; 5-15R outlets

### Package Includes

- AL-84110 Online UPS System
- PowerAlert Software CD and cabling
- Owner's Manual with warranty information
- EPO (Emergency Power Off) cabling

- Extended runtime available with optional AL-84128, AL-84129 or AL-84131 external battery packs
- Some external battery configurations require the use of External Battery Configuration Software (see manual)
- Intelligent battery management system extends battery life
- Attractive all-black upright tower format
- Simultaneous communications use via HID-compliant USB port, serial port, and SNMP/web card slot
- HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X.
- DB9 serial network interface supports RS-232 and contact closure messaging
- Slot for optional network management cards; Compatible with UPS management card options AL-84126 & AL-84122  
Included PowerAlert UPS Power Management Software and cabling provides monitoring of in-depth site power conditions, full UPS status and fault warnings, output load level and load bank power control  
Compatible with WatchDog Service Monitoring/Rebooting Software
- Fault tolerant electronic bypass maintains utility output during a variety of UPS fault conditions
- Diagnostic LEDs
- \$250,000 Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only)

## Specifications

OUTPUT	
Output Volt Amp Capacity (VA)	1000
Output kVA Capacity (kVA)	1
Output Watt Capacity (Watts)	800
Output Capacity Details	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	0.8
Crest Factor	3:1
Nominal Output Voltage(s) Supported	100V; 110V; 120V
Nominal Voltage Details	120V default
Frequency Compatibility	50 / 60 Hz
Frequency Compatibility Details	Output frequency matches input nominal on startup, defaults to 60 Hz on cold-start
Output Voltage Regulation (Line Mode)	+/- 2%
Output Voltage Regulation (Economy Line Mode)	+/- 10%
Output Voltage Regulation (Battery Mode)	+/- 2%
Output Receptacles	(6) 5-15R
Load Management Receptacles	Two switchable single-outlet 5-15R load banks

Output AC Waveform (AC Mode)	Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
<b>INPUT</b>	
Rated input current (Maximum Load)	8.6A
Nominal Input Voltage(s) Supported	100V AC; 110V AC; 120V AC
UPS Input Connection Type	5-15P
Input Circuit Breakers	15A
UPS Input Cord Length (ft.)	10
UPS Input Cord Length (m)	3.0
Recommended Electrical Service	15A 120V
Input Phase	Single-Phase
<b>BATTERY</b>	
Full Load Runtime (min.)	4.5 min. (800w)
Half Load Runtime (min.)	14 min. (400w)
Expandable Battery Runtime	Extended runtime supported via optional external battery packs
External Battery Pack Compatibility	AL-84128(limit 1); AL-84129(limit 1); AL-84131(multi-pack compatible)
DC System Voltage (VDC)	24
Battery Recharge Rate (Included Batteries)	Less than 6 hours from 10% to 90% (typical, full load discharge)
Internal UPS Replacement Battery Cartridge	AL-84141
Battery Access	Battery access door
Battery Replacement Description	Hot-swappable, user replaceable batteries
Expandable Runtime	Yes
<b>VOLTAGE REGULATION</b>	
Voltage Regulation Description	Online, double-conversion power conditioning
Overvoltage Correction	2% output voltage regulation during overvoltages to 150
Undervoltage Correction	2% output voltage regulation during undervoltages to 80
Severe Undervoltage Correction	2% output voltage regulation during undervoltages to 65 (under 70% load only)
<b>USER INTERFACE, ALERTS &amp; CONTROLS</b>	
Switches	2 switches control off/on power status and alarm-cancel/self-test operation
Alarm Cancel Operation	Power2 switches control off power operation and on power status, alarm-cancel, self-test, cold start operation.-fail alarm can be silenced using alarm-cancel switch
Audible Alarm	Audible alarm indicates UPS startup, power-failure, low-battery, overload, UPS fault and remote shutdown conditions

LED Indicators	14 LEDs indicate line power, online mode, economy/bypass mode, on-battery, overload, battery low, replace battery and fault status information - includes 4-LED meter display for load and battery charge level
<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>	
Primary Form Factor	Tower
UPS Power Module Dimensions (hwd, in.)	10 x 6.8 x 13.2
UPS Power Module Dimensions (hwd, cm)	25.40 x 17.27 x 33.53
UPS Power Module Weight (lbs.)	29.8
UPS Power Module Weight (kg)	13.52
UPS Shipping Dimensions (hwd / in.)	14.2 x 10 x 18.5
UPS Shipping Dimensions (hwd / cm)	36.07 x 25.40 x 46.99
Shipping Weight (lbs.)	35.3
Shipping Weight (kg)	16
Cooling Method	Fan
UPS Housing Material	Steel
Primary UPS Height (mm)	254
Primary UPS Width (mm)	173
Primary UPS Depth (mm)	335
Shipping Height (mm)	361
Shipping Width (mm)	254
Shipping Depth (mm)	470
<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)	406.4
AC Economy Mode BTU / Hr. (Full Load)	173.6

Battery Mode BTU / Hr. (Full Load)	406.4
AC Mode Efficiency Rating (100% Load)	87%
AC Economy Mode Efficiency Rating (100% Load)	94%
Audible Noise	< 45 dB at front side 1m
<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	No transfer time (0 ms.) in online, double-conversion mode
Low Voltage Transfer to Battery Power (Setpoint)	80V (100% load), 65V (<70% 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 B (EMI)
<b>WARRANTY</b>	
Product Warranty Period (Worldwide)	2-year limited warranty
Connected Equipment Insurance (U.S., Canada & Puerto Rico)	\$250,000 Ultimate Lifetime Insurance

