



Harsh Environment UPS

Single Phase, 2.1 to 17kW

RELIABLE POWER FOR TOUGH CONDITIONS

Online Power's Harsh Environment Unit is built for Indoor/Outdoor power needs where a controlled room isn't an option. It features Conformal Coated Electronics, Filtered Ventilation, and a NEMA 3R Steel Enclosure, with an optional Air Conditioner (Heating & Cooling) to maintain internal temperatures at 75°F \pm 5°F, and an optional Intrusion Switch for added security.



Photo: Shows Optional Air Conditioner installed on Cabinet II.



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STANDARD FEATURES

- ✓ 90 Minute Backup Design at Full Load
- ✓ Listed to UL924 and UL1778 Standards by CSA
- ✓ Compatible with Self-Ballast Fluorescent, Incandescent, Halogen, Quartz Re-strike, HID, HPS and LED
- ✓ True Online, Double Conversion, Technology with **Zero Transfer Time**
- ✓ Pure Sinusoidal Waveform
- ✓ High Frequency Pulse Width Modulation (PWM) for Conditioned Power to the Load
- ✓ TVSS Input Transient Voltage Surge Suppressor (Class C)
- ✓ Tamper-proof Triple-Lock Design includes Internal Steel Bars, Key-lock and Padlocking Door Handle
- ✓ Standard Steel Enclosure with Filtered Ventilation
- ✓ Conformal Coated Electronics
- ✓ Input Power Factor Correction and Full Voltage Regulation
- ✓ Multiple Output Voltages
- ✓ Self-Testing and Battery Exerciser
- ✓ DC Breakers for Ease of Maintenance

OPTIONAL FEATURES

- Global Monitoring (GMS):
 - GMS 1: Local event Logger with Memory (PC Connections via RS232 and RS485) 500 Events
 - GMS 2: Remote Monitoring with Local Network Connection (WiFi, Ethernet or Modem)
 - GMS 3: Remote Monitoring with Cellular Network Connection
- Remote Status Panel
- Battery Monitoring (String or Per Battery)
- Load Control Relays
- Dry Contacts Normally Open
- Dry Contact Normally Open and Normally Closed
- Main Input & Output Circuit Breaker (UL489)
- Normally ON and/or Normally OFF Auxiliary Breakers (12 or 24 MAX) (DEPENDENT ON CABINET SIZE)
- Custom Rated KAIC Breakers
- 65 KAIC Total System Short Circuit Current Rating
- Thermal Runaway Control
- Internal or External Maintenance Bypass Switch
- High Temperature Batteries
- Long Life Battery 20 Year Warranty
- Time Delayed Transfer to Battery
- Time Delayed Transfer from Battery
- Heater Strip with Thermostat Control
- Stainless Steel or Aluminum Cabinets
- Maintenance:
 - Extended Warranty
 - Preventative Maintenance Plans

NEW OPTIONS:

- Intrusion Switch
- *Air Conditioning (Heating & Cooling)
Maintains an internal unit temperature of 75°F, with a \pm 5°F tolerance, when external environmental temperatures range from -20°C to +50°C.

* The Air Conditioner option requires an additional 1.25kW for operation during a power outage. Additional load will be required to accommodate for the load.



SPECIFICATIONS

Harsh Environment UPS

Single Phase
2.1 to 17kW

*All units are 90 minutes battery backup time @ full load.
Consult factory for backup times (up to 120 minutes)

SAFETY STANDARDS

UL924, UL1778, NFPA101, NFPA70, NEMA, and ANSI
Listed to UL924 and UL1778 by CSA

INPUT

AC Voltage: -15% / +10%

Frequency: 60Hz ±3%

OUTPUT

AC Voltage Regulation: Less than 5%,

2 wires plus-ground for single voltage outputs,
3 wires plus-ground for dual voltage outputs

Wave Form: Sinusoidal

Harmonic Distortion: < 5% THD; < 3% Single
Harmonic

PROTECTION

Overload: 115% for 5 - 10 min, 125% for 30 sec

BATTERY

Battery: Sealed, maintenance free VRLA
lead acid battery

Recharge Time: Conforms to UL standards

NOISE ISOLATION

Common Mode: -120 dB

Transverse Mode: -60 dB

ENVIRONMENT

Operating Temp: -20° to +50°C (-4° - 122°F)

Humidity: 0% to 95% (non-condensation)

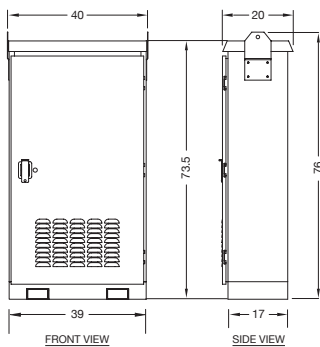
Altitude: Up to 13,000 ft

Cabinet Dimensions

(Inches) Width x Height x Depth

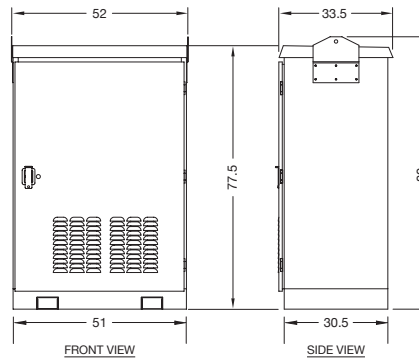
Cabinet I (2.1kW to 5kW)

40"W x 76"H x 20"D



Cabinet II (6kW to 17kW)

52"W x 80"H x 33.5"D



Cabinet Dimension w/ Optional Air Conditioner

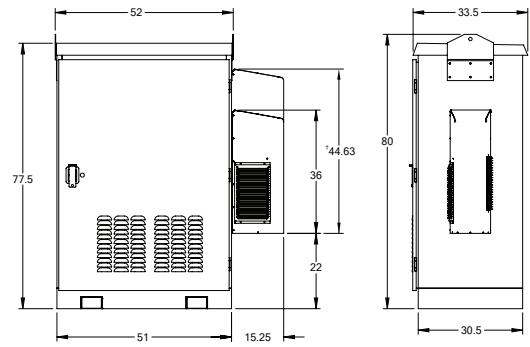
ALL UNITS capacities (2.1 to 17kW) with added AC Temperature Controller option uses the same cabinet size.

65.25"W x 80"H x 33.5"D

Operating Temperature with AC Temperature Controller:

Outside Operating Temperature Range: -20° to +50°C (-4° - 122°F)

Internal Temperature with Optional AC: 75° ±5°F



Air Conditioner Dimensions Based on Voltage :

120V or 240V: 36"H x 11.8"W x 15.02"D *480V: 44.63"H x 11.8"W x 15.02"D

Model Numbers

Model number will be reflected on name plate, not designed for ordering or specifications.

CAUTION: Additional 1.25kW capacity is required for AC operation during power outages. Please refer to the Ordering Guide for "Max Load w/ AC Option". The Air Conditioner option is exclusive to the 5800T1 output voltage.

Unit Name	Capacity (kW)	Input (Volts)	Output (Volts)
HE Harsh Environment UPS	2.1 2.1kW	A 120V	0100N1 120V
	3.0 3kW	B 208V	1300N1 208V
	5.0 5kW	D 240V	0400N1 240V
	6.0 6kW	R 277V	2500N1 277V
	8.0 8kW	H 480V	*5800T1 120V/240V
	010 10kW		120V/277V
	012 12.5kW		277V/480V
	015 15kW		120V/240V/277V
	017 17kW		

* The 5800T1 part number supports dual- and multi-voltage outputs. For 120V needs, we recommend the 120V/240V configuration, which delivers two hot wires to a panel.

BTU / Weight

Capacity (kW)	*Weight (LBs)		# Cabinets
	90min (standard)	120min (standard)	
2.1	896	968	1
3.0	1066	1138	1
5.0	1284	1893	1
6.0	1284	1656	1
8.0	1464	1960	1
10	2870	3142	1
12.5	3777	3777	1
15	4512	5212	1
17	4512	5574	2

* Approximately 1000 BTU's per hour for every 3 kilowatts. The approximation is worst case BTU output, measured during recharge following a discharge. Cabinet size, weight and quantity may change based on Battery Type. Please consult factory for details.

For units with the AC Option, add approximately 150 lbs to the weight of the cabinet.

Warranty

Standard warranty is eighteen (18) months from ship date or twelve (12) months from start up, whichever occurs first. Optional second year warranty with factory performed preventative maintenance available.



ORDERING GUIDE

PROJECT NAME :

REP / DISTRIBUTOR :

ORDER NUMBER **DOES NOT** REFLECT MODEL NUMBER. PLEASE CONSULT FACTORY.

HE UPS Series

Example: HE-3.0-A02-S90-N08A40-FT-LCR20A(3)-GMS3-PM2

ELECTRICAL DESIGNER / ENGINEER :

DATE :

HE-

HE	3.0	A02	S90	N08A40	FT + LCR20A(3) + GMS3	PM2	
MODEL SERIES	KW RATING	VOLTAGE INPUT/OUTPUT	BATTERY TYPE	AUX BREAKERS (UL1077)	OPTIONS	WARRANTY & SERVICES	
HE: HE Outdoor UPS	2.1: 2.1kW 3.0: 3kW 5.0: 5kW 6.0: 6kW 8.0: 8kW 010: 10kW 012: 12.5kW 015: 15kW 017: 17kW	MAX LOAD W/ AC OPTION 0.85kW 1.75kW 3.75kW 4.75kW 6.75kW 8.75kW 10.75kW 13.75kW 15.75kW	INPUT * A - 120V B - 208V D - 240V R - 277V H - 480V OUTPUT 01 - 120V 02 - 208V 03 - 240V 04 - 277V 05 - 120V / 240V 06 - 277V / 480V 07 - 120V / 277V ** 08 - 120V / 240V / 277V	S90: Standard @ 90min * L90: Long Life @ 90 min H90: Hi Temp @ 90 min U90: USA @ 90 min (required for BAA and BABA compliance) S120: Standard @ 120min * L120: Long Life @ 120 min H120: Hi Temp @ 120 min U120: USA @ 120 min (required for BAA and BABA compliance) * Long Life 20 Yr. Pro Rata Battery. Cabinet size and quantity may change based on Battery Type. Please consult factory.	AUX BREAKERS EXAMPLE N 08 A 40 OUTPUT N: Normally ON F: Normally OFF **FD: Normally OFF w/ Time Delay BREAKERS *01 - 12 (Max 12) CABINET I *01 - 24 (Max 24) CABINET II AMP RATING*** 10, 15, 20, 25, 30, 40, 50, 60 STANDARD: 20 AMP VOLTAGE A - 120V, 1P B - 208V, 2P C - 240V, 2P D - 277V, 1P E - 480V, 2P * Max poles will depend on cabinet size. ** Allows you to have individual circuits remain on battery even when utility is restored for a period of time. Must be a normally OFF circuit. *** Consult factory for custom AMP RATING.	PICK ANY: LCR20A(#): Load Control Relay, Single Flex Stud Mounting (#): Qty LCR20(#): Load Control Relay, No Flex (#): Qty MB: Internal Maintenance Bypass EB: Ex. Maintenance Wraparound Bypass Switch SCCR: 65 KAIC Total System Short Circuit Current Rating IB: Input Breaker (UL 489) OB: Output Breaker (UL 489) HS: Heat Strip DS: Drip Shield Hood AL: Aluminum Enclosure SS: Stainless Steel Enclosure CL: Corbin Lock SWT: Intrusion Switch (Requires DCT2 Option) AC: Air Conditioner (Heating & Cooling) Helps maintains internal temperature 75°F ±5°F. Units with the Air Conditioner option require Cabinet II and 1.25kW reserved for operation. It is recommended to size up the capacity. BATTERY OPTIONS FC: Fast Charge (12 hrs or less) TR: Thermal Runaway Gassing Control without Battery Disconnect (IFC 1206.2) MONITORING OPTIONS DO: Dry Contacts Open Signal DCT2: Dual, Open and Closed Dry Contacts A: Local Audible Alarm with Silencer Switch CP: RS 232 Connecting Port P: Remote Status Panel (Hard Wired with Extended Cable) SYSTEM TRANSFER FT: Fast Transfer with 2 Milliseconds TD(B): User Selectable Time Delay to Battery for Capacitor Discharge During EM (Standard 45 Milliseconds) TD(U): User Selectable Time Delay Back to Utility During Power Restoration for Facility Inrush Reduction BATTERY MONITORING SYSTEM (BMS) PICK ONE: SM: String Monitoring BM: Battery Monitoring BM-TS: Temperature Sensor GLOBAL MONITORING SYSTEM (GMS) PICK ONE: GMS 1: Local Accessible Event Logger with Unit Audible Alarm GMS 2: Testing Logs with Remote Accessibility Through Local Network GMS 3: Testing Logs with Remote Accessibility through Local Network and GPRS for Cellular Text Alerts	PICK ANY: Blank: Standard Onsite Startup and Warranty ADDITIONAL: EXT: Additional One Year Extended Warranty (Includes First Year Preventative Maintenance) PM (2-3): Onsite Preventative Maintenance (Once Per Year, up to 3 Years) T1: Additional 4 Hour Training at Time of Start Up T2: Additional Training day up to 8 hours

OnLine

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For Units with Air Conditioner Option, Additional 1.25kW is Required.



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