MODULAR ONLINE UPS · 480 V · LITHIUM-READY

INFINITE

100–600 kVA

Online double conversion in 100 kVA hot-swappable modules with two control cards: 100 and 200 kVA cabinets, and up to three 200 kVA cabinets in parallel for 600 kVA, for 480 V three-wire loads on lead-acid or AEC L6 lithium batteries.



INFINITE · THE CABINET, 100 OR 200 kVA

100 kVA
per hot-swappable module

SiC
silicon carbide: 97.3 % peak online, 99 % in ECO

2 + 1
modules, and two control cards

UL 1778
and FCC Part 15 Class A

Product Overview
INFINITE 100–600 kVA

Key features of the INFINITE series.

100 kVA
Power modules, 1+1 or 2+1
100 kVA modules: 1+1 in the 100 kVA cabinet, 2+1 in the 200 kVA cabinet; a failed module isolates itself.

2×
Two control cards
Two identical system control cards back each other up; every card in the control box is hot-swappable.

SiC
Silicon carbide
SiC in the PFC stage of every module: 97.3 % published peak, ≥ 97.0 % at 50 % load guaranteed, up to 99 % in ECO.

Li
Lithium-ready
Lead-acid 360–600 V or lithium 384–640 V; the BMS card talks to the AEC L6 lithium cabinets.

7"
Color touchscreen
Power flow, records, smart wave capture, energy storage and every setting; status light and five indicators.

×3
Parallel and dual bus
Up to three 200 kVA cabinets in parallel for 600 kVA, current sharing within 3 %; BSC synchronizes up to three buses.

Key data

Power range	100–600 kVA: 100 and 200 kVA cabinets; 600 kVA as three 200 kVA in parallel
Input · output	3 phases + PE, no neutral · 480 V L-L
Power factor	1 (kVA = kW)
Efficiency	SiC: 97.3 % published peak online · up to 99 % in ECO
Battery	lead-acid 360–600 V or L6 lithium 512 V
Display	7-inch touchscreen, five LEDs, light bar
Parallel	up to 3 cabinets in parallel, 600 kVA · BSC up to 3 buses
W × D × H	23.6 × 39.4 × 81.4 in
Weight	452–710 lb per cabinet
Standards · warranty	UL 1778 listed, FCC Part 15 Class A · 3 years UPS, 5 years L6



≥ 0.99
input power factor

≤ 1 %
output THD, resistive load

1 ms
bypass ↔ inverter, synchronized

≤ 3 %
current sharing between modules

Front View
INFINITE 100–600 kVA

The INFINITE cabinet from the front, closed and with the door open: the touchscreen, LEDs and light bar on the door; switches, control box, bypass module and power modules behind it.



DOOR CLOSED



DOOR OPEN

1 Touchscreen
7-inch, the single-line diagram live.

2 LEDs, keys, light bar
Five status LEDs, ON and OFF keys, the light bar.

3 Door handle
Lockable.

4 Air inlet
In at the lower front, out at the top.

5 Casters and feet
Moved on casters, fixed on feet.

6 Switches
Bypass, output and input.

7 SPD
Surge protection with its breaker, optional.

8 EPO and cold start
EPO key switch, battery cold-start button.

9 System control box
Two control cards, monitoring card, option slots; hot-swappable.

10 Bypass module
Static switch and filter, 200 kVA.

11 Power modules
100 kVA each: 2+1 here, 1+1 in the 100 kVA cabinet.

Display and Status Bar
INFINITE 100–600 kVA



1. **Color touchscreen**
   7 inches: live single-line diagram, measurements, settings and records.
2. **Five status LEDs**
   AC/DC, DC/AC, bypass, battery and load: green when working or normal, red when abnormal.
3. **ON keys**
   Press both together for 3 s to start the inverter.
4. **OFF keys**
   Press both together for 3 s to stop the inverter; with a good bypass the load passes to the bypass.
5. **Ambient light bar**
   The V-shaped light shows the state of the UPS in color, even with the screen backlight off.

Ambient light bar

Four states, each with its own light: the operator knows how the UPS is doing before reaching the screen.



Blue
Normal operation



Blue, flashing
Battery output



Yellow
Abnormal, the load still supplied

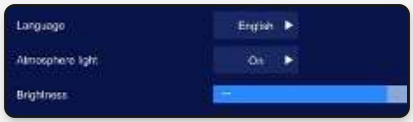


Red
Abnormal, the UPS not working

Status LEDs

LED	Green	Red
AC/DC	Rectifier normal	Rectifier abnormal
DC/AC	Inverter normal	Inverter abnormal
Bypass	Bypass output normal	Bypass abnormal
Battery	Battery output	Battery low voltage
Load	Output normal	Output overload

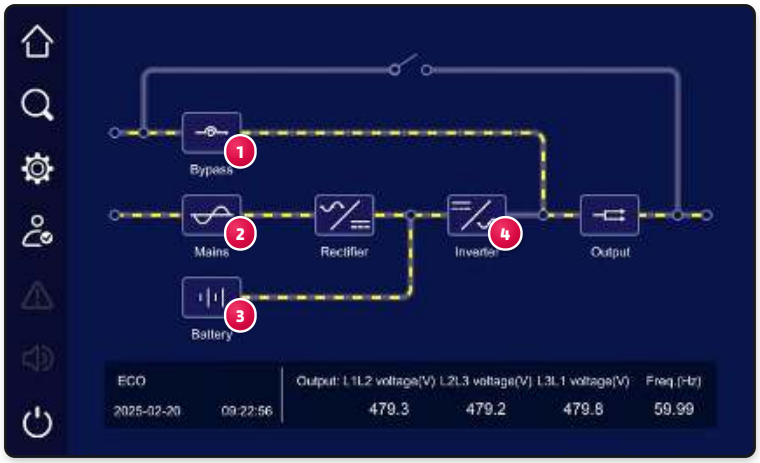
On the screen



Screen setting, basic functions

- Touch a block to read its measurements
- 10,000 records, exported to USB
- Backlight, language, time zone, NTP

Touchscreen Interface
INFINITE 100–600 kVA

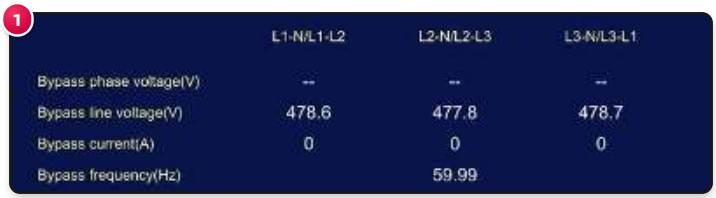


Live single-line diagram

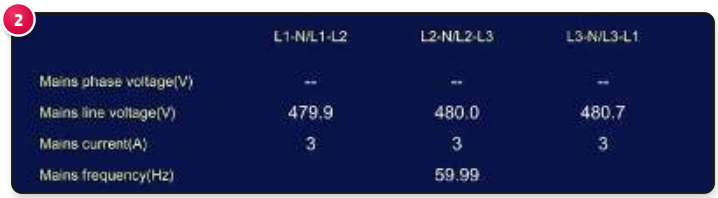
The home page draws the UPS at work: the yellow dots trace the path the power takes, a block flashes red when its part is abnormal, and the state bar shows the state, date and time, the output voltages and the frequency.

Touch a block to open its page: the four pages below are marked 1–4 on the diagram. The rectifier and inverter pages show every power module in turn.

Home page in ECO mode: the load on the bypass, rectifier and inverter on line. The four pages below are separate captures, taken in normal mode: the inverter carries the load, the bypass current reads 0.



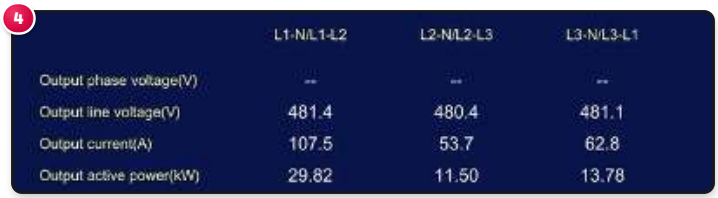
Bypass info · phase and line voltages, current, frequency



Mains info · phase and line voltages, current, frequency



Battery info · voltage, currents, remaining capacity and time



Inverter info · output voltages, current and active power

Menus



Information menu
Running info, history record, user log, smart record, device info, smart wave capture and running record



Settings menu
Cabinet, battery, battery test, output, smart mode, dry contacts, screen, password, communication, record manage and energy storage

7"
color touchscreen on the door

6
touch blocks: bypass, mains, rectifier, inverter, battery and output

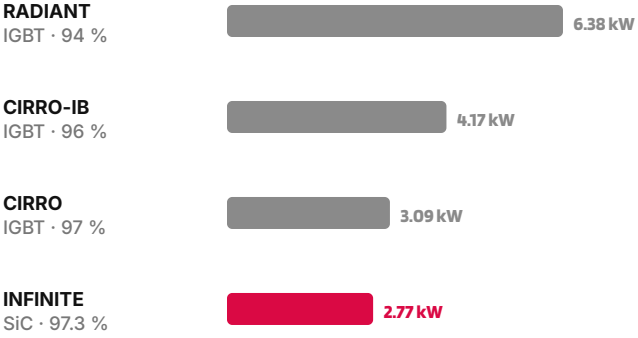
7 · 11
pages in the information and the settings menus

2–8
cabinets on one screen: the smart integrated display, over RS485

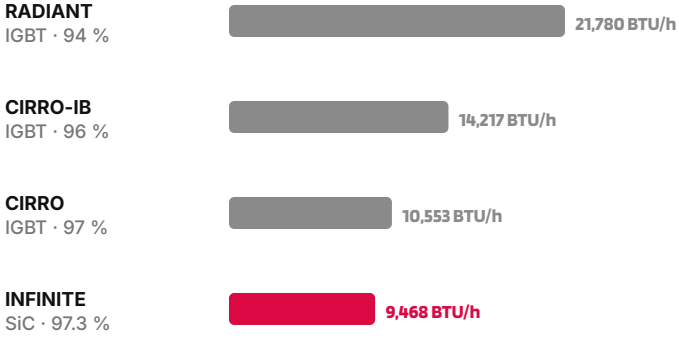
Silicon Carbide Technology
INFINITE 100–600 kVA

SiC semiconductors in the PFC stage of every 100 kVA module: 97.3 % published peak, at least 97.0 % at half load, 99 % in ECO. What that means against AEC's own IGBT ranges.

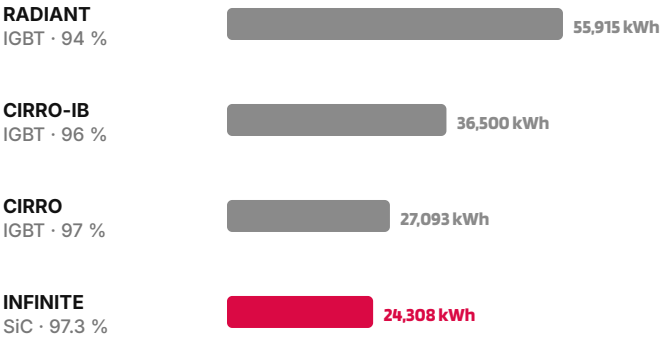
Losses per 100 kW of load



Heat to remove per 100 kW



Energy lost in a year, per 100 kW



Why silicon carbide

01 Silicon-carbide semiconductors switch faster and lose less energy at every switching than silicon, so the PFC stage of each module runs cooler.

02 Less heat in the module means less heat in the room: smaller cooling, smaller footprint for the same power.

03 Every 100 kVA module carries it, so a 600 kVA system saves as much per kW as a 100 kVA one.

−57 %
losses against the IGBT RADIANT, both at their published peak

31,607
kWh a year saved per 100 kW, at the published peaks

97.3 %
published peak online, with SiC

99 %
in ECO; Wise ECO also cleans the bypass current

Measured efficiency

Load, resistive	30 %	50 %	100 %
Online, mains	≥ 96.8 %	≥ 97.0 %	≥ 96.4 %
Battery mode	≥ 96.1 %	≥ 96.7 %	≥ 95.8 %
ECO	up to 99 %		

Resistive load. Heat: 18,425 BTU/h from a 200 kVA cabinet at full load, 6,824 BTU/h in ECO.

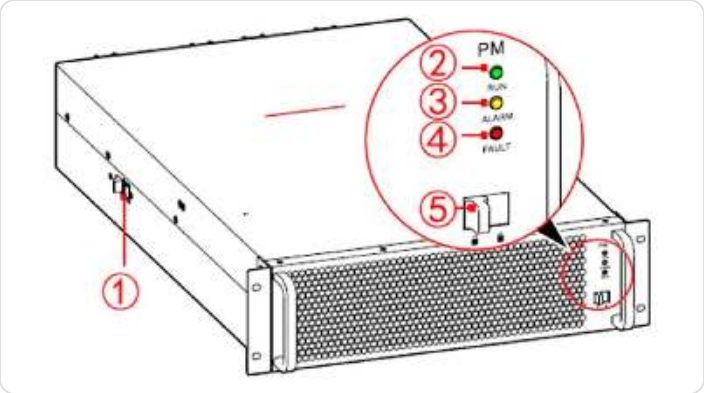
Low-load operation: sleep, fans, Wise ECO

- Sleep redundancy: spare modules rest in turn and wake when the load rises, so the others work nearer their best point.
- Fans follow the load; the air comes in at the front and leaves at the top.
- Wise ECO: the load on the bypass while the modules compensate its harmonics: higher power factor, lower THDi.

Power Module
INFINITE 100–600 kVA

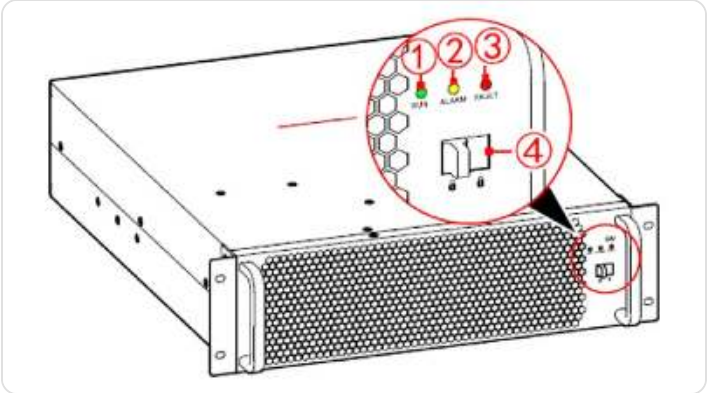
Each power module is a complete double-conversion UPS of 100 kVA: rectifier, inverter and DC/DC converter. A ready switch locks it in its slot; a failed module isolates itself and the others carry on.

100 kVA power module



1. **Positioning lock** · pressed to pull the module out
2. **RUN, green** · on: inverter; flashing: step-up or ready
3. **ALARM, yellow** · on: the module has an alarm
4. **FAULT, red** · on: the module is faulty
5. **Ready switch** · red: locked in service; green: free to remove

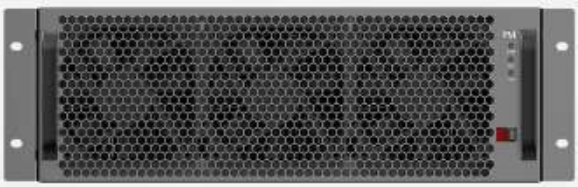
Bypass module, 100 or 200 kVA



1. **RUN, green** · on: bypass output; flashing: standby
2. **ALARM, yellow** · reserved
3. **FAULT, red** · on: the bypass module is faulty
4. **Ready switch** · red: locked in service; green: free to remove

The module

Rating	100 kVA = 100 kW
Size	17.3 × 29.5 × 5.1 in (440 × 750 × 130 mm), 3U
Weight	119 lb (54 kg)
Inside	rectifier, inverter, DC/DC converter
Per cabinet	1+1 (100 kVA), 2+1 (200 kVA)
Bypass module	17.3 × 22.6 × 5.1 in (440 × 575 × 130 mm), 34 lb (15.5 kg); static switch and filter



The module from the front: lamps and ready switch at the right.

Hot swap, with the load running

01 **Unlock**
Set the ready switch to unlocked (green): the module leaves the system, the others carry the load.

02 **Pull it out**
Press the positioning lock, remove the screws and pull it by the handles: 119 lb, three people or a lift truck; wait at least 20 minutes before opening it.

03 **Slide the new one in, lock**
Push it in until it meets the connector, fasten it and set the ready switch to locked (red).

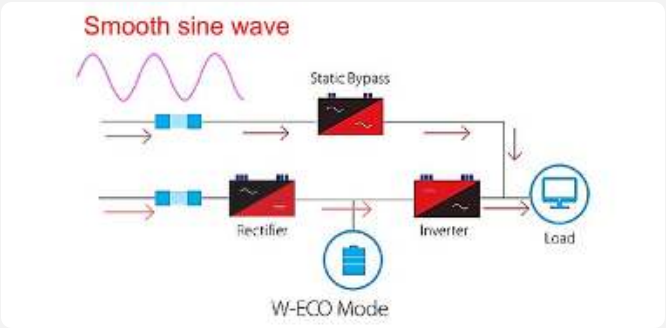
Also replaced with the load on: the bypass module, the two control cards (each backs up the other), the monitoring card and the SNMP, BMS and dry-contact cards.

Options in the control box

- **SNMP card**: network monitoring, BACnet
- **BMS card**: talks to the AEC L6 lithium cabinets
- **Dry-contact card**: more relay contacts for the building
- **Battery temperature kit**: the charge follows the battery temperature
- **SPD**, optional: surge protection with its own breaker

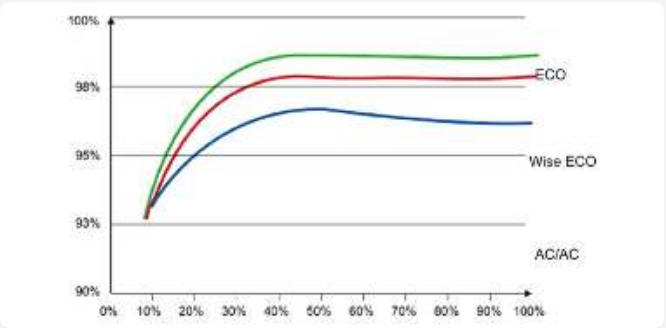
Smart Functions
INFINITE 100–600 kVA

Energy, battery and grid functions of every INFINITE.



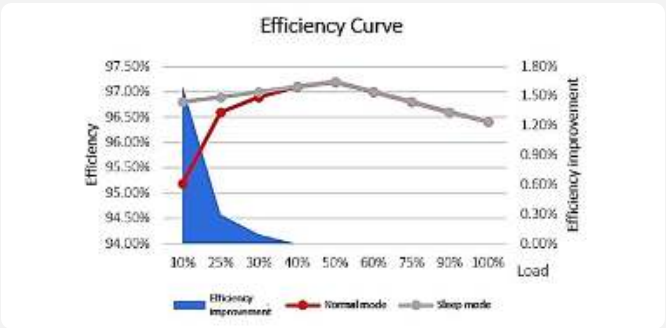
Wise ECO: ECO with a clean wave

The load runs on the static bypass while the inverter stays on line and compensates the harmonics of the bypass current: ECO efficiency, a higher power factor, a lower THDi.



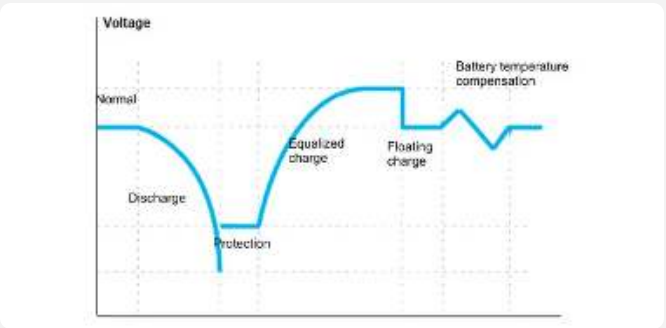
Efficiency in ECO, Wise ECO and online

Up to 99 % in ECO; 97.3 % published peak online with silicon carbide, at least 97.0 % at half load. The curves: ECO, Wise ECO and online (AC/AC) against the load.



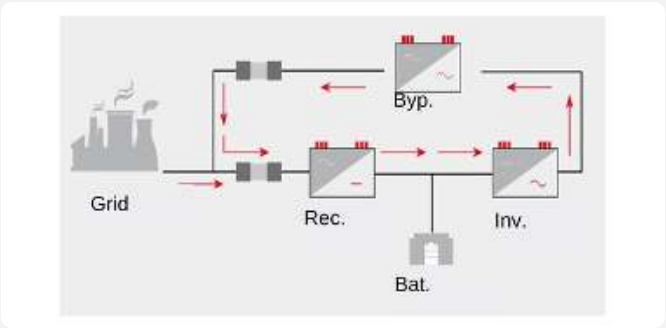
Intelligent sleep

At part load the spare modules sleep in turn and wake when the load reaches the awake rate: the modules on line work near the top of their curve, the sleeping ones age less.



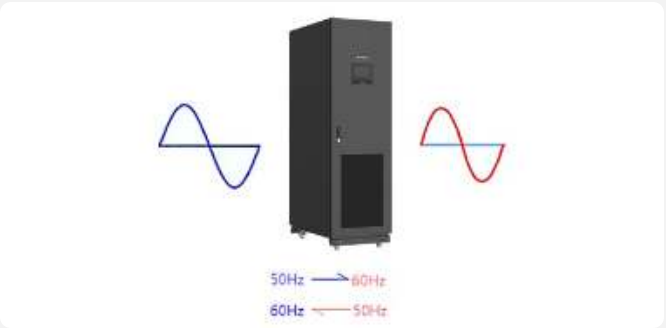
Smart charge

Discharge, protection, equalize, then float, with temperature compensation (temperature kit). Charge current 5 to 100 A per module, 20 A by default; float 2.27 V/cell.



Self-load test, no load bank

Grid-tied self-load: the output goes back to the grid through the bypass, so the UPS runs at the set load for the set time with no load bank and little energy used.

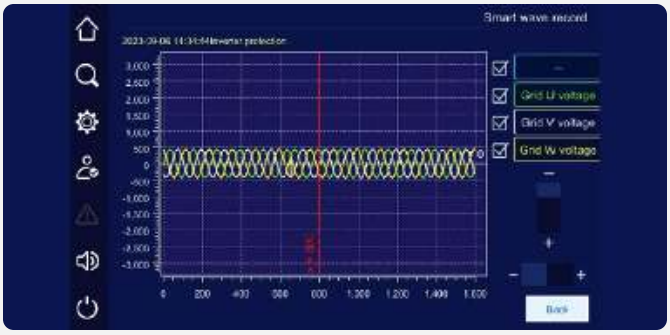


Frequency converter

The output at a set frequency, independent of the input frequency, for loads built for another grid; the battery alarms can be suppressed when no battery is fitted.

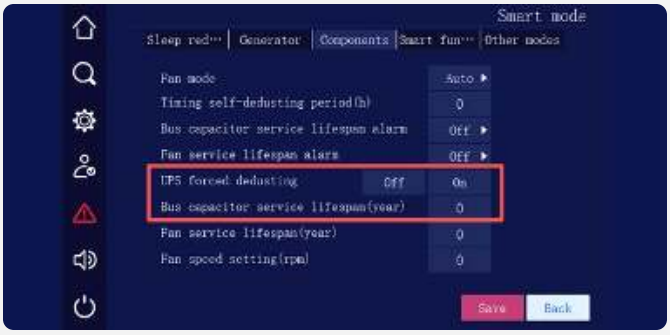
Service and Protection Functions
INFINITE 100–600 kVA

What looks after the UPS, the battery and the site, on real INFINITE screens.



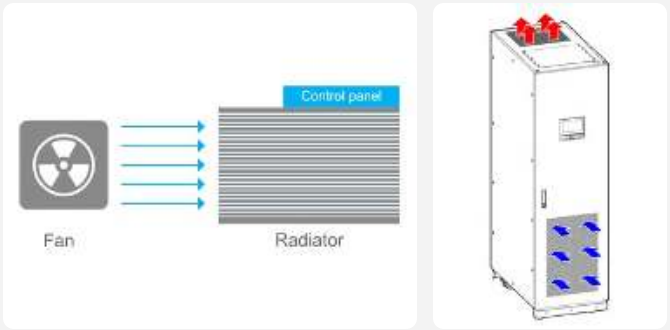
Smart wave capture

On a fault the UPS keeps the waveforms around it with the date and the event, here an inverter protection: the cause is found on site, and exported for the service report.



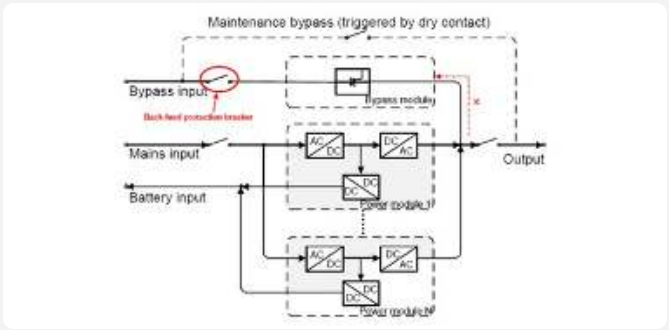
Components: fans, capacitors, dust

Fans and bus capacitors counted, with an alarm at the end of their service life; dedusting at full fan speed, timed or forced (framed on the screen).



Air path and fans

Fan speed follows the load and the temperature. Air in at the lower front, out at the top (right): about 970 CFM (100 kVA) or 1,380 CFM (200 kVA).



Bypass back-feed protection

If a bypass thyristor fails while the inverter runs, dry contact OUT.2 trips the bypass breaker: no voltage feeds back to the bypass input. On a mains failure the input relay opens.

Programmable dry contacts

4 inputs, each set to one of 13 functions (generator, maintenance bypass, battery breaker…); 3 outputs, each to one of 18 signals.

Generator mode

Starts the generator by itself or by hand, allows or derates battery charging, and lets the battery cover the load above the generator's rating.

Energy storage UPS

Between outages the battery shaves the peaks on a plan curve (up to 8 tariff periods) or on EMS commands, never below the safety SOC (1–99 %).

MORE SETTINGS FOR THE SITE

- ECO window ±5, ±10 or ±15 % in voltage (default ±15 %), ±2 or ±4 % in frequency
- Transfers: 0 ms mains ↔ battery; 1 ms to the bypass in sync, 2 ms out of sync (1–15 ms)
- Auto-start: back on line when the power returns after a battery shutdown
- Power walk-in and combined supply: back from the battery to the mains gradually, both sources at once
- Bypass window +10 or +15 % and −10 to −30 %; frequency ±2 to ±20 %
- ≤ 20 ms to the bypass on an impact or a short circuit; protection times set apart for a normal and an abnormal bypass
- Integrated display: one screen shows every UPS of a parallel system, over RS485
- Battery and preventive maintenance reminders at a set period, in months

Battery and Runtime
INFINITE 100–600 kVA

One INFINITE 200 kVA cabinet with one L6 **lithium** cabinet full of modules: 200 kW for 15 minutes, every module hot-swappable, the system modular from end to end.



INFINITE 200 kVA, OPEN



L6, OPEN, FULL

THE CONFIGURATION

INF-200+L6-CAB-20x50LI · 2,763 lb

1 × INFINITE 200 kVA

2 + 1 power modules of 100 kVA: two carry the load, one is the redundant spare

1 × L6, full

20 lithium modules of 50 Ah, LiFePO4, 2.88 kWh each

200 kW · 15 min

backup at full load

Hot-swappable

every power module and every battery module, changed with the load on

Fully modular

more modules, then more cabinets: systems up to 600 kVA

1. **Power module**
   100 kVA: rectifier, inverter, DC/DC.
2. **Power module**
   100 kVA, the second.
3. **Power module, +1**
   100 kVA, the redundant spare.
4. **Bypass module**
   Static switch, 200 kVA.
5. **System control box**
   Control cards and the BMS card for the L6.
6. **Battery breakers**
   Two, at the top of the L6.
7. **Communication module**
   The L6 BMS: to the UPS and the other cabinets.
8. **Battery modules**
   20 × 50 Ah in two columns of ten.

Systems with L6 lithium

Code	Rating	Full load	Weight
INF-100+L6-CAB-10x50LI	100 kVA	15 min	1,808 lb
INF-100+L6-CAB-20x50LI	100 kVA	30 min	2,624 lb
INF-200+L6-CAB-20x50LI	200 kVA	15 min	2,763 lb
INF-400+2xL6-CAB-20x50LI	400 kVA	15 min	5,526 lb
INF-600+3xL6-CAB-20x50LI	600 kVA	15 min	8,597 lb

Two kinds of module	L6 lithium module	INFINITE power module
What it holds	2.88 kWh, 18 LiFePO4 cells, BMS, DC/DC	100 kVA: rectifier, inverter, DC/DC
Weight	81.6 lb (37 kg)	119 lb (54 kg)
Per cabinet	10 or 20	1+1 or 2+1
Hot swap	yes, the system on	yes, the load on

Technical Specifications
INFINITE 100–600 kVA

Model	100 kVA cabinet	200 kVA cabinet
Ratings	100 kVA (INF-100)	200 kVA (INF-200); 400–600 kVA as 2–3 cabinets in parallel
Power modules	1 + 1 redundant slot	2 + 1 redundant slot
INPUT		
Connection · voltage	3 phases + PE, no neutral · 480 V L-L	
Voltage · frequency range	336–552 V · 39.8–70.2 Hz	
Power factor · current THD	≥ 0.99 · < 3 % at full load	
Rated current	137 A	274 A
Bypass window	+10 or +15 %, −10/−15/−20/−30 % (default +15/−20 %)	
OUTPUT		
Voltage · frequency	480 V L-L, trim ±5 V, accuracy ≤ 1 % · 60 Hz	
THD · power factor	≤ 1 % resistive, ≤ 3 % non-linear · settable 0.8–1.0	
Rated current	120 A	241 A
Inverter overload	≤ 105 % continuous · 110 % 60 min · 125 % 10 min · 150 % 1 min · > 150 % 300 ms	
Bypass overload	≤ 135 % continuous · 150 % 5 min · 200 % 1 s · 300 % 100 ms	
Transfer	0 ms mains ↔ battery · 1 ms synchronized · 2 ms not synchronized (1–15 ms)	
EFFICIENCY		
Online, 30 · 50 · 100 % load	≥ 96.8 · 97.0 · 96.4 %	
Battery mode	≥ 96.1 · 96.7 · 95.8 %	
ECO	up to 99 %	
BATTERY		
Lead-acid	480 V rated, 360–600 V, 30–50 blocks	
Lithium	512 V rated, 384–640 V; BMS card for AEC L6	
Charge current	5–100 A per module, 20 A by default	
SYSTEM		
Display · communication	7-inch touchscreen · Modbus RTU/TCP, RS232, SNMP (BACnet), BMS, 4 in / 3 out dry contacts	
Parallel	up to 3 cabinets in parallel · BSC up to 3 buses · systems to 600 kVA, three 200 kVA cabinets	
Environment	32–104 °F · 0–95 % RH · IP20 · to 6,562 ft	
Noise, full load	< 65 dB	< 68.5 dB
W × D × H	23.6 × 39.4 × 81.4 in · 600 × 1,000 × 2,068 mm	
Weight	452 lb · 571 lb with 1+1	591 lb · 710 lb with 2+1
Standards	UL 1778-2024 listed · FCC Part 15 Class A	
Warranty	3 years on the UPS · 5 years on L6 lithium	



THE CABINET

INFINITE 100–600 kVA

100 · 200 kVA
23.6 × 39.4 × 81.4 in

PROTECTIONS

- ✓ Output overload and short circuit
- ✓ Bypass backfeed: trips the bypass breaker
- ✓ Battery under-voltage: alarm, then shutdown
- ✓ Module and cabinet over-temperature
- ✓ Smoke input: shutdown after a delay
- ✓ EPO: key switch and remote NC contact

Ordering Information
INFINITE 100–600 kVA

Every INFINITE is ordered with one code: the system rating, the redundant module and the L6 **lithium** cabinets. Cabinets, modules and battery cabinets are also sold on their own.

INF-200 +1 +L6-CAB-20x50LI

- INF-200 — system, kVA
- +1 — redundant module
- +L6-CAB-20x50LI — L6 lithium cabinet

+1 adds the redundant module; without +L6 the battery is sized by project. 400 and 600 kVA are two and three 200 kVA cabinets in parallel; with three L6 cabinets (600 kVA) the weight includes the L6 combiner, 308.6 lb. Above 600 kVA: INFINITE 1.5MW.

EXAMPLES

INF-200+1
200 kVA, 2+1 modules, battery by project

INF-600+3xL6-CAB-20x50LI
600 kVA: three cabinets, three L6, 15 min

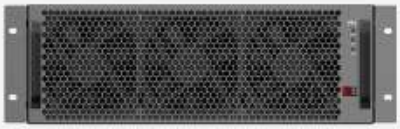
Code	Description
INF-100	INFINITE 100 kVA · 452.2 lb
INF-100+1	INFINITE 100 kVA + 1 redundant · 571.3 lb
INF-100+1+L6-CAB-20x50LI	INFINITE 100 kVA + 1 redundant · 1 × L6 (20 modules) · 30 min · 2,742.8 lb
INF-100+L6-CAB-10x50LI	INFINITE 100 kVA · 1 × L6 (10 modules) · 15 min · 1,808.0 lb
INF-100+L6-CAB-20x50LI	INFINITE 100 kVA · 1 × L6 (20 modules) · 30 min · 2,623.8 lb
INF-200	INFINITE 200 kVA · 591.3 lb
INF-200+1	INFINITE 200 kVA + 1 redundant · 710.4 lb
INF-200+1+L6-CAB-20x50LI	INFINITE 200 kVA + 1 redundant · 1 × L6 (20 modules) · 15 min · 2,881.9 lb
INF-200+L6-CAB-20x50LI	INFINITE 200 kVA · 1 × L6 (20 modules) · 15 min · 2,762.9 lb
INF-400	INFINITE 400 kVA · 1,182.5 lb
INF-400+2xL6-CAB-20x50LI	INFINITE 400 kVA · 2 × L6 (20 modules each) · 15 min · 5,525.7 lb

Code	Description
INF-600	INFINITE 600 kVA · 1,773.8 lb
INF-600+3xL6-CAB-20x50LI	INFINITE 600 kVA · 3 × L6 (20 modules each) · 15 min · 8,597.2 lb
INF-FRAME-100	INFINITE 100 kVA cabinet, no power modules: top entry, input, output and bypass switches
INF-FRAME-200	INFINITE 200 kVA cabinet, no power modules: top entry, input, output and bypass switches
INFINITE-PWR-100	Power module 100 kVA, hot-swappable
L6-CAB-10x50LI	L6 lithium cabinet, 10 × 50 Ah LiFePO4 modules
L6-CAB-20x50LI	L6 lithium cabinet, 20 × 50 Ah LiFePO4 modules
L6-COMBINER	L6 combiner cabinet, joins up to 8 L6 cabinets
SNMP-L	SNMP network card
DRYCNT	Dry-contact card



INFINITE cabinets side by side: 100 or 200 kVA each

+



INFINITE-PWR-100 module, 100 kVA

1+1 · 2+1

Modules per cabinet

100 kVA modules: one and a redundant one in the 100 kVA cabinet, two and one in the 200 kVA.