MODULAR LITHIUM BATTERY SYSTEM

L6

40 · 50 · 100 Ah

Lithium iron phosphate modules that slide in like drawers, each with its own DC/DC converter and BMS, in cabinets of up to 20 modules: from one module to 15 cabinets, for the AEC IST6 modular UPS and lithium-ready AEC UPS.



L6 LITHIUM CABINETS SIDE BY SIDE

LFP
lithium iron phosphate cells

Hot-swap
modules replaced online in minutes

15
cabinets in one system

46–69 kWh
per cabinet, with 40, 50 or 100 Ah modules

Key features
L6 lithium battery system

Lithium battery cabinets of 10 or 20 hot-swappable 50 Ah modules, a combiner for large systems and a three-layer battery management system, for the AEC IST6 modular UPS and lithium-ready AEC UPS.



The L6 cabinet, door open: up to 20 modules of 50 Ah, one pulled out.

KEY DATA

Cabinets	L6-CAB-10x50LI · L6-CAB-20x50LI · L6-CAB-EMPTY
Modules	10 or 20 × 50 Ah LiFePO4, 2.88 kWh each
Energy · power	about 29 kWh, 100 kW · 58 kWh, 200 kW
DC output	240, ±240 or 480 V DC
DC input (charge)	265, ±265 or 530 V DC
System	up to 15 cabinets; combiner for up to 8
Size W × D × H	600 × 850 × 2000 mm
Weight	615 kg · 985 ± 20 kg
Life	15 years; 5,000 cycles at 50 % depth of discharge
Tests	modules UN38.3 tested
On request	40 Ah modules (20 per cabinet, 46 kWh) and 100 Ah modules (12 per cabinet, 69 kWh)

MAIN FEATURES

Hot-swap modules
A 50 Ah module is replaced in about 5 minutes, with the load on.

Three-layer BMS
A BMS in every module, every cabinet and the system.

Isolated DC/DC
One converter per module, fire protection module by module.

Mixed-age modules
New modules beside old ones; current shared within 3 %.

1 to 15 cabinets
A master and up to 14 slaves; a combiner joins up to 8.

10-inch touch screen
On the master: system, cabinets, modules and cells.

ORDERING CODES

L6-CAB-10x50LI · L6-CAB-20x50LI · L6-CAB-EMPTY · L6-MOD-50LI · L6-COMBINER · 40 Ah · 100 Ah: on request

240 / ±240 / 480 V
DC output, three systems

≧ 95 %
SOC accuracy

≦ 3 %
current unbalance

6–1200 kVA
AEC UPS range

L6 · THREE MODULE TYPES

Models and range
L6 lithium battery system

The same 600 mm cabinet takes 20 modules of 40 or 50 Ah for high power and short backup, or 12 modules of 100 Ah for long backup: the module is chosen by the backup time.

Module	40 Ah · 6C	50 Ah · 4C	100 Ah · 1C
Ordering codes	on request	L6-MOD-50LI L6-CAB-10x50LI · L6-CAB-20x50LI	on request
Cell discharge rate	6C	4C	1C
Module energy	2.3 kWh	2.88 kWh	5.76 kWh
DC/DC output per module	10 kW	10 kW	5 kW
Module size W × D × H	223 × 665 × 152 mm	223 × 665 × 152 mm	440 × 665 × 132 mm
Modules per cabinet	20	10 or 20	12
Energy per cabinet	46 kWh	about 29 kWh · 58 kWh	69 kWh
Rated power per cabinet	200 kW	100 kW · 200 kW	60 kW
Typical backup	10 / 20 min	15 / 30 min	1 / 2 / 4 h



20 × 40 / 50 AH

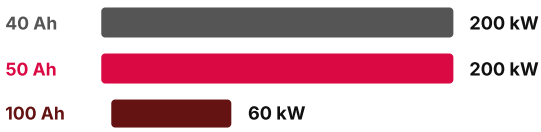


12 × 100 AH

ENERGY PER CABINET



RATED POWER PER CABINET



Full cabinets: 20 × 40 Ah, 20 × 50 Ah, 12 × 100 Ah. The 50 Ah cabinet also comes with 10 modules: about 29 kWh, 100 kW.

WHICH MODULE?

40 Ah, 6C cells: high power, short backup.
50 Ah, 4C cells: more energy, short backup.
100 Ah, 1C cells: long backup, hours.

1. **Battery breakers**
   distribution switches of the cabinet
2. **Cabinet BMS and communication module**
   monitors every module; ports to the UPS and the other cabinets
3. **Touch screen**
   master cabinet; lamps on each slave
4. **Battery modules**
   40 / 50 Ah in two columns, 100 Ah in one column

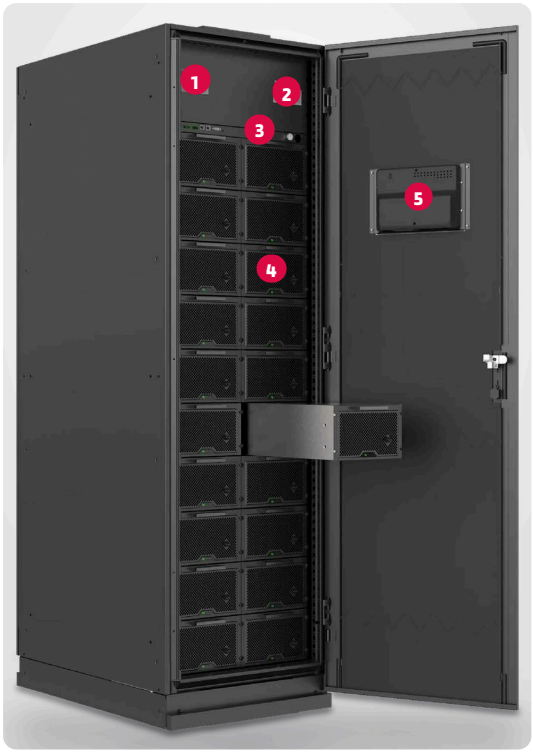
50 Ah data from the AEC L6 50 Ah datasheet; 40 and 100 Ah data from the AEC L6 presentation and user manual. Typical backup: AEC sizing tables at initial capacity (Backup times, p. 175).

Cabinet layout
L6 lithium battery system

The master cabinet with its touch screen beside a slave cabinet with its AEC panel, 600 mm wide and 2000 mm high; behind the door, the two battery breakers, the communication module and the modules.



FRONT
MASTER + SLAVE



INSIDE
DOOR OPEN,
ONE MODULE
PULLED OUT

FRONT

1. **10-inch touch screen** on the master: system, cabinets, modules and cells
2. **AEC panel with lamps** on every slave: run, alarm and fault lamps
3. **AEC logo** on the top frame of every cabinet
4. **Door handle with lock** the modules, breakers and BMS behind the door
5. **Perforated front door** air in at the front; out at the rear, or the top
6. **Slave cabinet** up to 14 beside the master, bolted side by side
7. **Base** anchored to the floor with expansion bolts

INSIDE

1. **Battery breaker 1** first DC switch of the cabinet
2. **Battery breaker 2** second switch; each serves a group of modules
3. **Communication module** the cabinet BMS: ports to the UPS, the network and the other cabinets
4. **Battery modules** up to 20 × 40 / 50 Ah in two columns, or 12 × 100 Ah; blank panels on empty slots
5. **Touch screen or lamp panel** in the door: touch screen on the master, lamps on each slave

Indicators, slave cabinet

Lamp	Colour	When lit
Run	blue	system running normally
Alarm	yellow	a module in alarm or protection
Fault	red	system fault

Cooling

Front air inlet with rear air outlet, or front inlet and top outlet with the top cover plate removed. Fan speed is controlled for long fan life and low noise.

600 × 850
W × D, mm; 2000 mm high

985 ± 20 kg
cabinet with 20 × 50 Ah modules

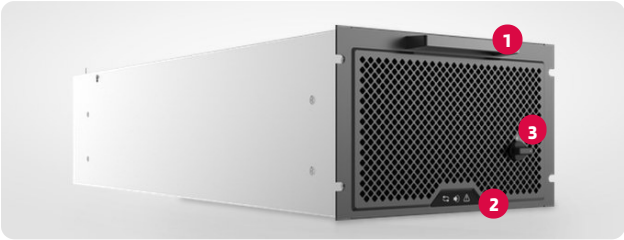
IP20
protection degree

< 65 dB
noise

Data from the AEC L6 user manual and datasheet.

Battery modules
L6 lithium battery system

Every module has its own battery management unit and a bidirectional DC/DC converter. With the knob locked it is held in the cabinet and delivers its power; a faulty module leaves the system by itself.



Front: handle, indicators and the locking knob



Rear: fans, the DC output connector and the rear handle

1. **Front handle**
2. **Indicators: run, alarm, fault**
3. **ON/OFF knob: locks the module in**
4. **Fans**
5. **Output connector**
6. **Rear handle**

The module

Code	L6-MOD-50LI, 50 Ah
Cells	18 × 3.2 V LiFePO4, 57.6 V
Energy	2.88 kWh; DC/DC output 10 kW
Size W × D × H	223 × 665 × 152 mm
Weight	37 ± 1 kg
Discharge rate	4C
Charge current	up to 40 A, 20 A by default
SOC · SOH	accuracy ≥ 95 % · ≥ 90 %

The locking knob



Knob open: the module is free and off. Knob closed: locked in, it delivers DC by itself after its self-test.

Hot swap, about 5 minutes

Unlock the knob, pull the module by its handles, push the new one in and lock it: after a self-test of about 10 s it joins the system, with the load supplied.

One converter, three modes

CHARGE

Mains normal, modules not full

The DC/DC steps the UPS charge voltage of 265, ±265 or 530 V down and charges at constant current, limited voltage.

SLEEP

Mains normal, modules full

No charge and no discharge until the voltage or the SOC falls below the setting: no float on the cells.

DISCHARGE

Mains failure

The DC/DC boosts the cells to 240, ±240 or 480 V and supplies the UPS, module by module.

Output voltage and UPS matching

- Output 240, ±240 or 480 V DC, to the battery voltage of the UPS.
- The UPS charge voltage must match the L6 input, or it will not charge.
- UPS load within 90 % of the L6 rating, the guideline; AEC sets each margin.
- Modules and cabinets share the current within 3 %.

LFP	4C	≥ 95 %	37 ± 1 kg
lithium iron phosphate	cell discharge rate	SOC accuracy	per module

Data from the AEC L6 50 Ah datasheet and user manual. 40 and 100 Ah modules: p. 170.

L6 · ON REQUEST

40 and 100 Ah modules
L6 lithium battery system

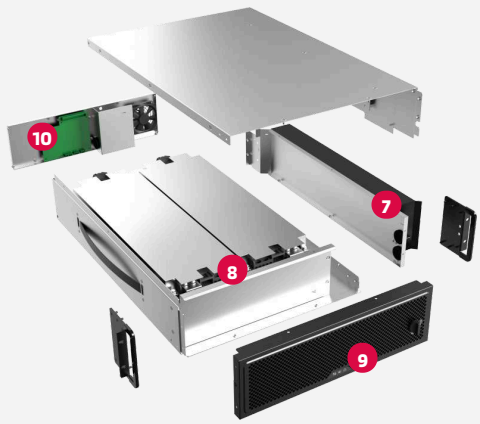
The 40 Ah module uses 6C cells for high power and short backup, in the 223 mm drawer of the 50 Ah. The 100 Ah module uses 1C cells for one to four hours: 440 mm wide, 5 kW through its own DC/DC, 12 in a cabinet.



100 AH · FRONT



REAR



INSIDE THE 100 AH MODULE

1. Front handle
2. Indicators: run, alarm, fault
3. In-place switch: locks the module and starts its output
4. Fan
5. Connector: power and signal
6. Side handle
7. DC/DC module: bidirectional, isolated, 5 kW
8. Battery cells: LFP, 3.2 V
9. Sealing plate: front
10. Sealing plate: rear

The 40 Ah module is built like the 50 Ah (p. 169): same size, same cabinet slots.

	40 Ah · 6C	100 Ah · 1C
Cells	LFP, 3.2 V · 18 in series	LFP, 3.2 V · 18 in series
Module voltage · energy	57.6 V · 2.3 kWh	57.6 V · 5.76 kWh
Cell discharge rate	6C	1C
DC/DC output	240 / ±240 / 480 V · 10 kW	240 / ±240 / 480 V · 5 kW
Current unbalance	≤ 3 %	≤ 3 %
Full cabinet	20 modules: 46 kWh · 10 min at rated power	12 modules: 69 kWh · 1 h at rated power
Size W × D × H	223 × 665 × 152 mm	440 × 665 × 132 mm
Weight · noise	36 ± 1 kg · 58 dB	52 ± 1 kg · 58 dB
Cabinet with full modules	965 ± 20 kg (M1: 955 ± 20 kg)	810 ± 24 kg

Module indicators

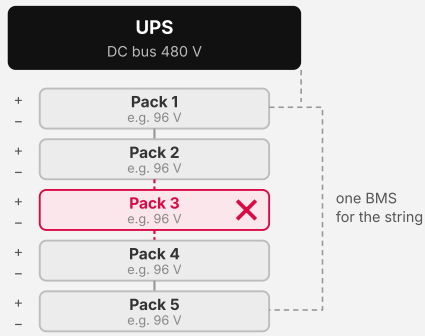
Lamp	Charge	Discharge	Sleep	Off	Module alarm	Communication fault	Module protection	Battery fault
Run (green)	steady	flashing	steady					
Alarm (yellow)			steady	steady	steady	flashing (3 s)		
Fault (red)							steady	flashing

From the AEC L6 presentation and user manual. Indicators: flashing once per second; (3 s): once every 3 seconds. M1: cabinet with one battery breaker. Backup times: p. 175.

DC/DC converter
L6 lithium battery system

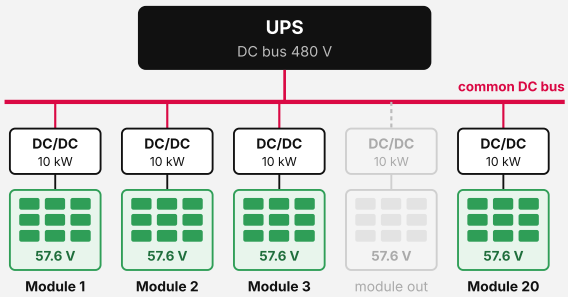
Two ways to build a lithium battery for a UPS: packs in series on one string, or AEC L6 modules in parallel, each with its own DC/DC converter. How each behaves on a fault, as the system grows and as it ages.

Conventional: packs in series
No DC/DC: the cells set the bus voltage



Pack voltages add up to the bus:
one open pack stops the whole string

AEC L6: modules in parallel
An isolated DC/DC in every module



Each module: 18 LiFePO4 cells, BMS, isolated DC/DC.
A faulty module leaves the system:
19 of 20 modules carry on, 190 of 200 kW

Side by side

	Packs in series	L6 modules in parallel
Bus voltage	the sum of the packs: set by the number of packs	set by the DC/DC: 240, ±240 or 480 V DC
One unit fails	the string opens: no backup from that string	the module leaves the system; the others carry on
Replacement	string off, packs matched to the others	hot swap, about 5 minutes, load supplied
Old and new together	the weakest pack limits the whole string	new modules beside old ones, current shared within 3 %
Growing the system	a whole new string of identical packs	one module (10 kW) or one cabinet at a time, up to 15
Charging	the UPS charger drives the string directly	each DC/DC charges its own module
A fault	can spread along the string	stays inside its module: isolated DC/DC, fire protection per module
Monitoring	one BMS for the string	three layers: module, cabinet, system; every cell

Three examples · illustrative

One unit fails
power available, 20 units

Series 0 %
L6 95 %

Series: the string opens. L6: 19 of 20 modules, 190 of 200 kW.

Add capacity
smallest step, one cabinet

Series 100 %
L6 5 %

Series: a full string. L6: one 10 kW module, 5 % of a 200 kW cabinet.

Mixed ages
share of each unit used

Series 80 %
L6 100 %

Series: the weakest pack (here 80 %) sets the string. L6: each module gives its own.

265 · ±265 · 530 V
charge input from the UPS

≥ 90 %
SOH estimate accuracy

5 min
module replacement, online

0
power cuts to replace or add a module

Examples for 50 Ah modules of 10 kW in a 20-module cabinet. Data from the AEC L6 user manual and datasheet.

IST6 + L6

IST6 + L6 system
L6 lithium battery system

Pair an AEC IST6 modular UPS with an L6 lithium system and both halves are modular: power modules and battery modules are redundant and hot-swappable, in two cabinets side by side.

IST6 · POWER

Power modules, N+X

Rectifier, inverter and DC/DC in every hot-swappable module; bypass module and two control cards back each other up.

ONE SYSTEM

Redundant twice

Lose a power module or a battery module: the load stays on the inverter and on the battery.



IST6 MODULAR UPS L6 LITHIUM, 20 MODULES

2 × hot-swap
power modules and battery modules, online

N + X
redundancy on the power and on the battery side

One supplier
UPS, battery, cabinets and service from AEC

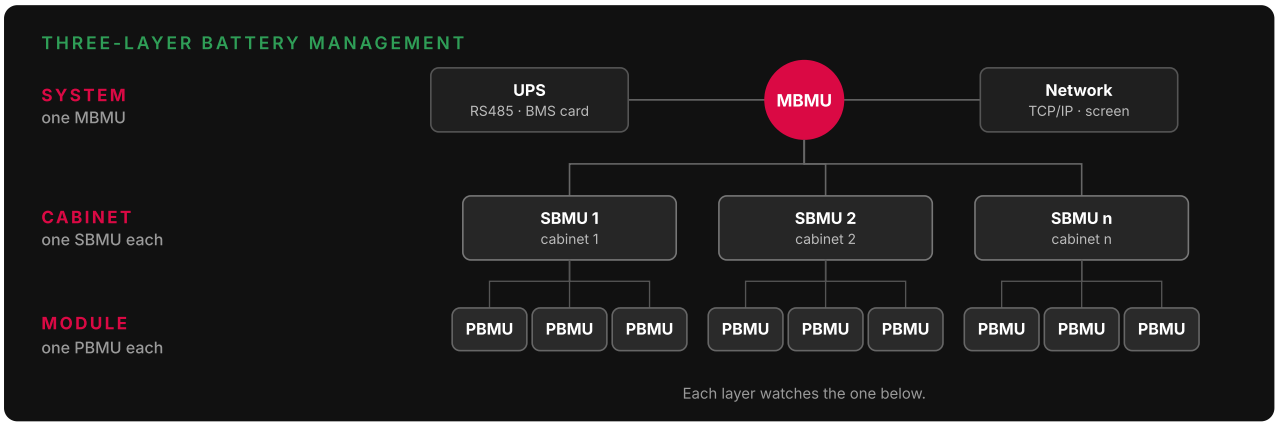
	Monolithic UPS + lead-acid string	IST6 + L6
Power conversion	one inverter: a fault stops the UPS or sends it to bypass	power modules in parallel, N+X: a faulty module leaves, the others carry the load
Service	UPS or battery work with the load at risk or on bypass	power and battery modules both swapped online, from the front
Installation	heavy blocks: floor area and floor load to check	cabinets side by side; modules slid in from the front
Battery life	about three sets in one UPS life, replaced about twice	15-year life · 5,000 cycles at 50 % depth of discharge
Battery service	whole string; checked at least twice a year	one module at a time, load supplied
A faulty unit	blocks in series: one fault affects the string	leaves the system, the others carry on
Monitoring	no health analysis, no early warning	every cell, module and cabinet; SOC and SOH

IST6 data from the IST6 user manuals, L6 data from the L6 user manual and datasheet. Lead-acid column: lead-acid limits, indicative, not a test. Battery cabinets and module quantities sized by AEC for each project.

L6 · SAFE AND SMART

Safety and management
L6 lithium battery system

Protection works at four levels, from the single cell to the whole system, watched by a three-layer BMS (module, cabinet and system): a fault is found early and stays where it started.



FOUR LEVELS OF PROTECTION · CELL → SYSTEM

LEVEL 1 **CELL** LFP 3.2 V	stable iron-phosphate chemistry	cell insulation detection	voltage and temperature of every cell
LEVEL 2 **MODULE** module BMS + DC/DC	isolated DC/DC: no link to the mains	low pack voltage, no output when off	module-level fire control
LEVEL 3 **CABINET** cabinet BMS	faulty module exits automatically	N+1 parallel redundancy	cabinet SOC, SOH and fault diagnosis
LEVEL 4 **SYSTEM** system BMS · touch screen	online insulation detection with pre-alarm	over-temperature, over-current, short circuit, over- / under-voltage, low SOC	EPO, alarms and records

Smart functions

Self-adaptive SOC
Discharge SOC balance between modules and cabinets: new modules beside old ones, current shared within 3 %.

Capacity test, no outage
Battery capacity tested with no risk of power failure.

Alarms and data
Alarm convergence and data recording locate a problem quickly; voltage and temperature of every cell, the faulty one located.

Cold start and self-start
Battery cold start; automatic restart when power returns.

TESTED
UN38.3

All eight UN38.3 tests, T.1–T.8, passed at the first cycle and after 25 cycles on the 50 Ah module (57.6 V, 2880 Wh), by an independent accredited laboratory.

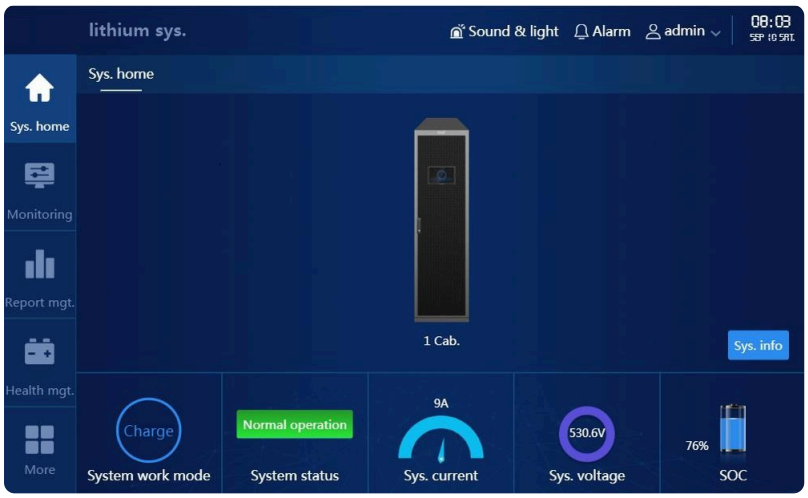
5,000 cycles
at 50 % depth of discharge; 15-year life, 50 Ah module

Functions from the L6 lithium battery system user manual; UN38.3 test report on the 50 Ah module.

L6 · SYSTEM TOUCH SCREEN

Touch screen display
L6 lithium battery system

The 10-inch touch screen of the master cabinet shows the system, each cabinet, each module and each cell, records charge and discharge and keeps the events.



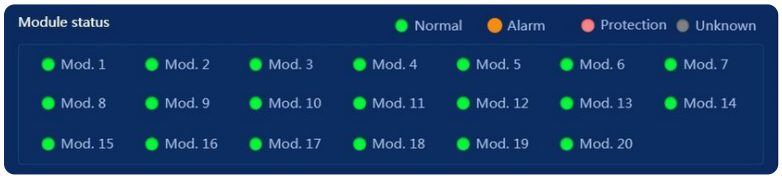
System home
Work mode, system status, current, voltage and SOC at a glance.

10"
touch screen on the master cabinet

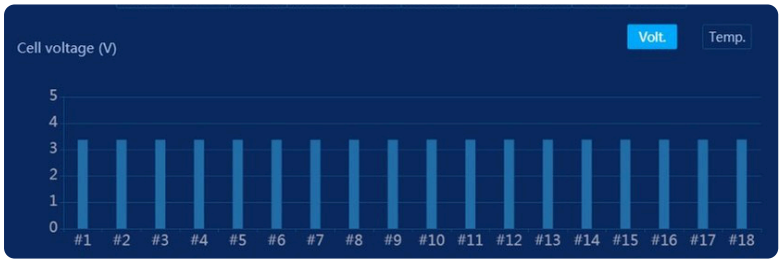
3
lamps on each slave: run, alarm, fault

3 layers
of BMS: module, cabinet, system

TCP/IP
and RS485 to the network and the UPS



Cabinet status
The state of the 20 modules of a cabinet: normal, alarm or protection; above it (not shown) communication, fire control, insulation and the two DC breakers.



Cell data
The voltage of the 18 cells of one module, bar by bar; the Volt. and Temp. tabs above the chart switch to their temperature.



Charge and discharge record
Cluster voltage, current and SOC over time, here a charge starting at 08:02; event, data and fault records on the same menu.

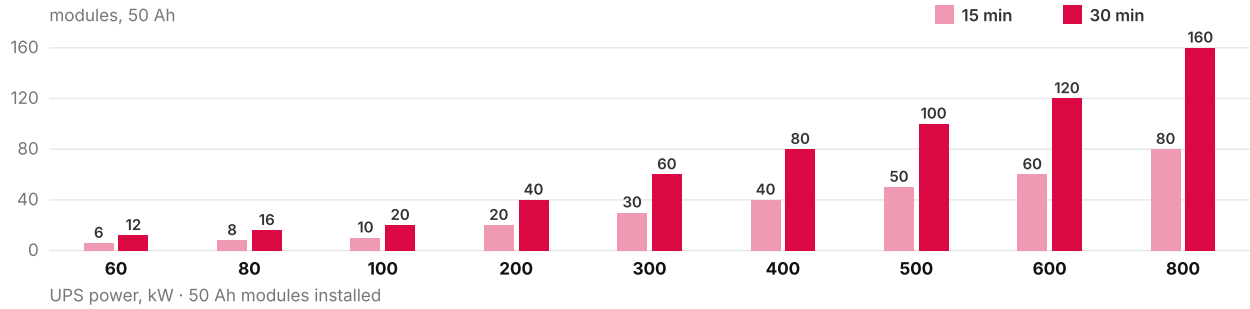
Also on the screen: health details, the health of every module of a cabinet · module status and data, the DC module state, port voltage and current · system information, rated energy, voltage, modules, highest and lowest cell · event, data and fault records.

Remote monitoring: RS485 to the AEC UPS, TCP/IP to a network management server for the control room. Slave cabinets report to the master over LAN. Screen button: press to switch on or off, long press to restart.

L6 · BATTERY RUNTIME

Backup times
L6 lithium battery system

Cabinets and modules for each UPS power, at the start of life: 50 Ah modules for 15 or 30 minutes, 40 Ah for 10 or 20 minutes, 100 Ah for one to four hours.



L6-MOD-50LI · 50 AH

15 and 30 minutes

UPS kW	15 min	30 min
≤ 60	1 · 6	1 · 12
≤ 80	1 · 8	1 · 16
≤ 100	1 · 10	1 · 20
≤ 200	1 · 20	2 · 40
≤ 300	2 · 30	3 · 60
≤ 400	2 · 40	4 · 80
≤ 500	3 · 50	5 · 100
≤ 600	3 · 60	6 · 120
≤ 800	4 · 80	8 · 160

40 AH · ON REQUEST

10 and 20 minutes

UPS kW	10 min	20 min
≤ 60	1 · 6	1 · 12
≤ 80	1 · 8	1 · 16
≤ 100	1 · 10	1 · 20
≤ 200	1 · 20	2 · 40
≤ 300	2 · 30	3 · 60
≤ 400	2 · 40	4 · 80
≤ 500	3 · 50	5 · 100
≤ 600	3 · 60	6 · 120
≤ 800	4 · 80	8 · 160

100 AH · ON REQUEST

1, 2 and 4 hours

UPS kW	1 h	2 h	4 h
≤ 6	1 · 2	1 · 3	1 · 5
≤ 10	1 · 2	1 · 4	1 · 8
≤ 15	1 · 3	1 · 6	1 · 12
≤ 20	1 · 4	1 · 8	2 · 16
≤ 40	1 · 8	2 · 16	–

× 0.9
plan a 10 % margin: actual backup = theoretical × 0.9

1 module
steps of one module for a precise sizing

20 · 12
modules per cabinet: 40 / 50 Ah · 100 Ah

10 · 5 kW
DC/DC output per module: 40 / 50 Ah · 100 Ah

READING THE TABLE

600 kW, 50 Ah modules

Three full cabinets of 20 modules hold 600 kW for 15 minutes; for 30 minutes the table doubles them: 6 cabinets and 120 modules.

AEC SIZING

AEC engineers choose the module type, the number of modules and cabinets and the margin for each project.

125–135 %
discharge overload, 1 min

135–150 %
for 30 s; above 150 %: 500 ms

UPS power in kW; cabinets · modules, from AEC sizing tables at initial capacity (start of life). –: not possible. Each 40 / 50 Ah cabinet delivers up to 200 kW (20 modules × 10 kW), each 100 Ah cabinet 60 kW (12 × 5 kW). AEC sizes every system with its margin.

Parallel and communication
L6 lithium battery system

Up to 20 modules in one cabinet; above that, a master and slave cabinets in parallel, up to fifteen, with a combiner cabinet joining their outputs.



Master with the touch screen, three slaves with lamps and the combiner, side by side; slaves and combiner go left or right of the master.

Combiner cabinet

Code · model	L6-COMBINER · L6-C-4000
Cabinets	up to 8 L6 cabinets per combiner
Output	4000 A max; to the UPS from the top or the bottom
Size · weight	400 × 850 × 2000 mm · 140 kg
Busbars	+, N and –; cabinets on the sides, the UPS in the middle
Smaller	L6-C-2000, up to 4 cabinets, on request



Combiner L6-C-4000, 400 mm wide, closed door: the outputs of up to eight cabinets on its busbars.

NETWORK

Networking device

Eight ports, up to seven cabinets each; needed from two cabinets up.

OPTION

In-row rear frame

Extends the cabinet depth to line up with a modular UPS or IT racks.

OPTION

Blank panels

Close the empty module slots; fitted like a module.

Communication module

Port	Use
RS485	RJ45: communication with the UPS (Modbus)
LAN	RJ45: monitoring by a computer, cascade between cabinets
EPO	the external emergency switch, cascaded between the cabinets
CAN	reserved
AC IN · OUT	160–300 V AC auxiliary supply for the screen, BMS and fans; cascade to the next cabinet

Large systems

- One cabinet: up to 20 modules of 40 / 50 Ah, or 12 of 100 Ah.
- From two cabinets up: the networking device, eight ports, up to seven cabinets each.
- Above that: a master with the touch screen and up to 14 slaves with lamps.
- A combiner joins the outputs: L6-C-2000 for up to 4 cabinets, L6-C-4000 for up to 8.

15
cabinets in parallel

8
cabinets per combiner

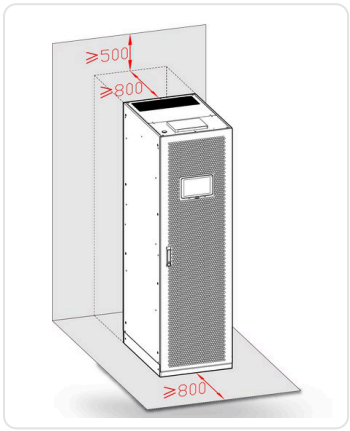
TCP/IP · RS485
communication

EPO
shared by the cabinets

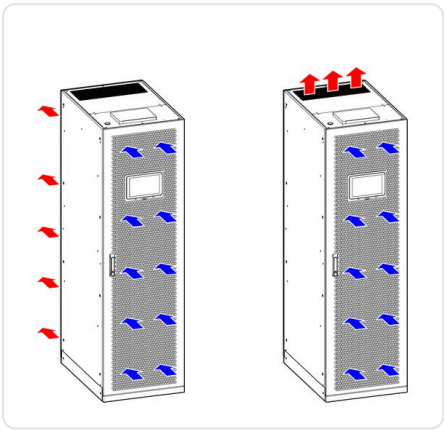
Data from the AEC L6 user manual and datasheet.

Installation and dimensions
L6 lithium battery system

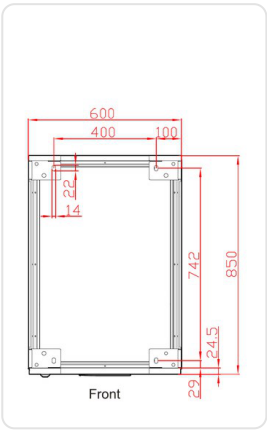
Clearances, airflow, floor fixing, site and storage conditions, and the size and weight of every cabinet and module; AEC engineers size the system and commission it with the UPS.



Clearances: front and rear ≥ 800 mm, top ≥ 500 mm; the same for cabinets in parallel.



Airflow: left, front inlet and rear outlet; right, top outlet with the top cover plate of holes removed.



Floor fixing (mm): 600 × 850 mm cabinet, 4 × Ø 14 mm holes.

Site

- Indoors, ventilated, away from water, heat, dust, corrosive or salty air and direct sun; never in the open air.
- 0–40 °C, best 20–30 °C: warmer shortens the life, colder the backup; 5–95 % RH non-condensing.
- Up to 4000 m, derated above 2000 m.
- Air in at the front, out at the rear, or out at the top with its top cover plate removed; vents kept clear.
- DC cables from the top; 160–300 V AC auxiliary supply for the BMS, screen and fans.

Floor and anchoring

- Concrete or other non-combustible floor; four Ø 14 mm holes, 400 mm across and 742 mm front to back.
- Expansion bolts standing 30–50 mm out of the floor, or a U-steel base; cabinets of one system bolted side by side.

Transport, storage and modules

- Cabinet in a honeycomb carton on a wooden pallet, modules in their own cartons; forklift from the side, kept upright.
- Modules shipped at 20–50 % SOC; storage −10–45 °C, best 0–35 °C, 200 mm off the floor.
- Idle modules charged every 1 to 6 months, by their SOC; 4 h at room temperature before start-up.
- Each module carried by several people; slid in from the bottom up, knob unlocked; a lifting platform above 1 m; blank panels on empty slots.

Start-up by AEC. Knobs locked, self-test about 10 s, voltage checked on the touch screen, breakers closed, then the UPS.

Sizes and weights

Code	What	W × D × H	Weight
L6-CAB-10x50LI	10 × 50 Ah, about 29 kWh	600 × 850 × 2000 mm	615 kg
L6-CAB-20x50LI	20 × 50 Ah, 58 kWh	600 × 850 × 2000 mm	985 ± 20 kg
40 Ah cabinet, on request	20 × 40 Ah, 46 kWh	600 × 850 × 2000 mm	965 ± 20 kg
100 Ah cabinet, on request	12 × 100 Ah, 69 kWh	600 × 850 × 2000 mm	810 ± 24 kg
L6-COMBINER	up to 8 cabinets, 4000 A	400 × 850 × 2000 mm	140 kg
L6-MOD-50LI	18 cells, 57.6 V, 2.88 kWh	223 × 665 × 152 mm	37 ± 1 kg
40 Ah module, on request	18 cells, 57.6 V, 2.3 kWh	223 × 665 × 152 mm	36 ± 1 kg
100 Ah module, on request	18 cells, 57.6 V, 5.76 kWh	440 × 665 × 132 mm	52 ± 1 kg

Cabinet weights with full modules. Data from the AEC L6 user manual and datasheet.

Technical data
L6 lithium battery system

Model	40 Ah on request	L6-CAB-10x50LI	L6-CAB-20x50LI	100 Ah on request
CABINET				
Modules	20 × 40 Ah	10 × 50 Ah	20 × 50 Ah	12 × 100 Ah
Energy	46 kWh	about 29 kWh	58 kWh	69 kWh
Rated discharge power	200 kW	100 kW	200 kW	60 kW
Output voltage · discharge	240, ±240 or 480 V DC (three output systems)			
Input voltage · charge	265, ±265 or 530 V DC			
Discharge overload	125–135 % 1 min · 135–150 % 30 s · > 150 % 500 ms			
Current unbalance	≤ 3 % between modules and cabinets			
Cabinets in parallel	up to 15; combiner L6-C-4000 for up to 8, L6-C-2000 for up to 4			
W × D × H	600 × 850 × 2000 mm			
Weight with modules	965 ± 20 kg M1: 955 ± 20 kg	615 kg	985 ± 20 kg M1: 975 ± 20 kg	810 ± 24 kg
MODULE				
Code	on request	L6-MOD-50LI		on request
Capacity · cell discharge rate	40 Ah · 6C	50 Ah · 4C		100 Ah · 1C
Cells	18 × 3.2 V LiFePO4 in series			
Rated voltage · energy	57.6 V · 2.3 kWh	57.6 V · 2.88 kWh		57.6 V · 5.76 kWh
DC/DC output per module	10 kW	10 kW		5 kW
Charge current	up to 40 A, 20 A by default			
SOC · SOH accuracy	≥ 95 % · ≥ 90 %			
Cycle life	5,000 cycles at 50 % depth of discharge; 15-year life (50 Ah)			
Size W × D × H	223 × 665 × 152 mm	223 × 665 × 152 mm		440 × 665 × 132 mm
Weight	36 ± 1 kg	37 ± 1 kg		52 ± 1 kg
FUNCTIONS				
Standard	cold start, self-start when the mains returns, EPO, SOC balance on discharge, module-level fire control, on-line insulation detection			
Protection	over-temperature, over-current, short circuit, over- and under-voltage, low SOC			
GENERAL				
Display	10-inch touch screen on the master cabinet; run, alarm and fault lamps on each slave			
Communication	TCP/IP, RS485 (Modbus to the UPS); CAN reserved			
Operating · storage	0–40 °C · –10–45 °C			
Humidity · altitude	5–95 % RH non-condensing · 4000 m, derated above 2000 m (IEC 62040-3)			
Noise · protection	< 65 dB · IP20 · battery-side overvoltage level 2			
Tests	modules UN38.3 tested, T.1–T.8 (50 Ah)			
INSTALLATION				
Clearances	front ≥ 800 mm, to open the door and pull the modules; rear ≥ 800 mm, for the air; top ≥ 500 mm			
Floor · placing	concrete or other non-combustible floor, expansion bolts; cabinets of one system bolted side by side			
Auxiliary supply · cables	160–300 V AC for the BMS, screen and fans; DC cables from the top			

50 Ah data from the AEC L6 50 Ah datasheet; 40 and 100 Ah module and cabinet data from the AEC L6 user manual. M1: cabinet with one battery breaker. Sizes and weights of every code: p. 177. Specifications are subject to change without notice.

Ordering codes
L6 lithium battery system

L6 cabinets come with 10 or 20 modules of 50 Ah, or empty to be filled in stages; modules and the combiner are sold on their own. Systems with 40 Ah or 100 Ah modules on request.



L6-CAB-20x50LI open: 20 modules of 50 Ah behind the door, one pulled out.

Code	Description
L6-CAB-10x50LI	L6 lithium cabinet with 10 × 50 Ah modules, BMS and touch screen or lamps, about 29 kWh
L6-CAB-20x50LI	L6 lithium cabinet with 20 × 50 Ah modules, 58 kWh
L6-CAB-EMPTY	L6 cabinet without modules, for up to 20 × 50 Ah
L6-MOD-50LI	LiFePO4 module 50 Ah, 2.88 kWh, with its DC/DC converter
L6-COMBINER	Combiner cabinet L6-C-4000, for up to 8 L6 cabinets

On request

Item	Description	Code
40 Ah cabinet	Cabinet for up to 20 × 40 Ah modules, master (touch screen) or slave (lamps), M or M1	on request
100 Ah cabinet	Cabinet for up to 12 × 100 Ah modules, master or slave	on request
Modules	40 Ah and 100 Ah lithium modules, hot-swappable	on request
Combiner L6-C-2000	Combiner cabinet for up to 4 cabinets	on request
Accessories	Networking device · blank panels · in-row rear frame	on request

How to size

- UPS power (kW) and the backup time you need.
- Module: 50 Ah for 15 or 30 minutes, 40 Ah for 10 or 20, 100 Ah for hours.
- Modules and cabinets from the Backup times tables (p. 175), with the 10 % margin.
- One cabinet up to 20 modules (12 of 100 Ah); a master and slaves above that, with a combiner.
- AEC confirms every system with its margin.

IST6 + L6

One supplier, one system

AEC configures the system for each UPS: module type and quantity, cabinets, combiner and accessories, sized for the AEC IST6 modular UPS and the site (IST6 + L6, p. 172).

24/7
AEC technical assistance by phone and WhatsApp

<30 min
WhatsApp reply to technical and commercial questions

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UPS, battery, cabinets and service from AEC

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Codes and descriptions from the AEC L6 ordering information; 40 Ah, 100 Ah, the L6-C-2000 and the accessories on request. Specifications are subject to change without notice.