

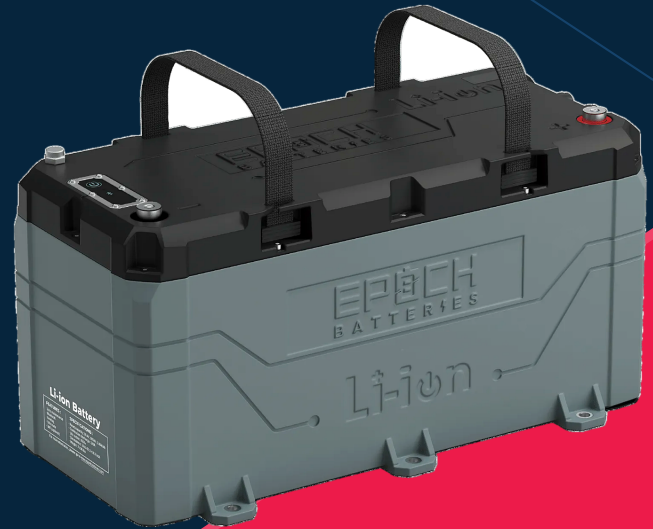
MARINE TROLLING MOTOR BATTERY

36V 100Ah

HEATED BLUETOOTH LiFePO4 BATTERY

— — MODEL B36100A-A

A 38.4 V, 100 Ah, 3.84 kWh lithium iron phosphate battery for 36 V trolling motors and deep-cycle systems. It combines internal heating for cold-weather charging, Bluetooth monitoring and an advanced battery management system in an IP67 enclosure, and comes with a 10-segment battery meter.



MASTER RATINGS

AT 25 °C UNLESS NOTED

38.4_V

NOMINAL VOLTAGE
Operating range 30.0–43.8 V

100 Ah

NOMINAL CAPACITY
12S · prismatic LiFePO4

3.84 kWh

STORED ENERGY
3,840 Wh nominal

120 A

CONTINUOUS DISCHARGE
Peak 200 A for ≤ 60 s

100 A

MAX CONTINUOUS CHARGE
50 A recommended

42.6–43.2_V

BULK / ABSORPTION
Float off preferred · max 43.8 V

–20–55 °C

CHARGE TEMPERATURE
With internal heating

4P

MAXIMUM BANK
Parallel only · no series · 400 Ah

NOTICE

Deep-cycle load application. The B36100A-A is not designed for engine cranking, outboard starting or golf carts. Size continuous loads, conductors and overcurrent protection to the 120 A continuous rating — the 200 A rating applies for up to 60 seconds only. Use a LiFePO4 charge profile with equalization and temperature compensation off. For alternator charging, a DC-to-DC charger is highly recommended. In cold weather, the internal heater warms the cells before charging begins.



11-year
Warranty



3,500+
Cycles



Bluetooth
iOS / Android app



Internal
Heating



Advanced
BMS protection



10-segment
Meter included



IP67
Waterproof



LiFePO4
Stable chemistry

01 PRODUCT OVERVIEW

DESIGN INTENT AND FEATURES

A 38.4 V, 100 Ah, 3.84 kWh lithium iron phosphate battery for 36 V trolling motors and deep-cycle systems. It combines internal heating for cold-weather charging, Bluetooth monitoring and an advanced battery management system in an IP67 enclosure, and comes with a 10-segment battery meter.

Designed for 36 V trolling motors and marine house-power, solar, off-grid and backup deep-cycle systems where the application requirements match the specifications in this data sheet. Verify tray fitment, terminal clearance, cable size, overcurrent protection, charger profile and load requirements before replacing a lead-acid or AGM battery.



LiFePO4 chemistry

Lithium iron phosphate cells for thermal stability, long cycle life and dependable deep-cycle operation.



100 Ah · 3.84 kWh

About 3.84 kWh of nominal stored energy at 38.4 V in one battery weighing about 75 lb.



Internal heating

Warms the cells before charging in freezing weather. The BMS adds low-temperature charge protection.



Bluetooth monitoring

The Epoch Li-Ion app shows state of charge, voltage, current, temperature and battery status on your phone.



IP67 enclosure

Dust-tight and protected against temporary immersion to 1 m for 30 minutes. Not for water jets or pressure washing.



Battery meter included

The 10-segment meter shows the remaining charge in 10% steps and sounds an alarm when the charge reaches 10%.



Advanced BMS

Protection against overcharge, over-discharge, over-current, short circuit and temperature extremes.



Native 36 V

One 38.4 V battery can replace a three-battery 12 V lead-acid trolling-motor bank, with far less weight.

Compatible applications

- 36 V trolling motor systems where voltage and current requirements match
- Bass boats, fishing boats, pontoons, skiffs, aluminum boats and bay boats
- Replacing a three-battery 12 V lead-acid trolling-motor bank
- Marine house power and electronics in compatible 36 V systems, with suitable conversion for 12 V devices
- Solar, off-grid, cabin and backup systems built around compatible 36 V charging and inverter equipment
- Parallel banks of up to four matched batteries for longer runtime

Compatible accessories

- Epoch 36V 15A LiFePO4 battery charger (CHG-36V15A)
- Programmable 36 V LiFePO4-compatible marine chargers

Confirm accessory compatibility with Epoch before ordering.

PRODUCT IDENTIFICATION

Model / SKU	B36100A-A
Battery type	Heated Bluetooth deep-cycle LiFePO4
System voltage class	36 V (38.4 V nominal)
Chemistry	LiFePO4 (lithium iron phosphate)
Cell type	Prismatic LiFePO4
Cell configuration	12S
Bluetooth	Yes — Epoch Li-Ion app (iOS and Android)
Internal heating	Yes — for cold-weather charging
Low-temperature charge protection	Yes
On/off control	Power button on the lid; blue LED when on
Battery meter	10-segment meter, included
Cycle life	3,500+ cycles
Warranty	11-year limited manufacturer warranty

02 ELECTRICAL SPECIFICATIONS

RATINGS AT 25 °C UNLESS NOTED

ELECTRICAL	
Nominal voltage	38.4 V
Nominal capacity	100 Ah
Stored energy (nominal)	3.84 kWh (3,840 Wh)
Operating voltage range	30.0–43.8 V
Maximum charge voltage	43.8 V

CURRENT RATINGS	
Max continuous discharge	120 A
Recommended discharge current	50 A (0.5C)
Peak discharge	200 A for up to 60 s
Max continuous charge	100 A
Peak charge	150 A for up to 10 s
Recommended charge current	50 A (0.5C)

BATTERY BANKS	
Series connection	Max 1 — do not connect in series
Parallel connection	Max 4 batteries, plug and play (up to 400 Ah)

TEMPERATURE AND ENVIRONMENT	
Charge temperature (with heating)	–20 °C to 55 °C (–4 °F to 131 °F)
Cell charge temperature	0 °C to 55 °C (32 °F to 131 °F)
Discharge temperature	–20 °C to 60 °C (–4 °F to 140 °F)
Storage temperature (recommended)	0 °C to 35 °C (32 °F to 95 °F); max 12 months
Reconnect temperature	50 °C (122 °F)
Enclosure rating	IP67 — dust-tight; temporary immersion to 1 m for 30 min

C-rate reference for this battery

RATING	CURRENT	C-RATE
Max continuous discharge	120 A	1.2C
Recommended discharge	50 A	0.5C
Max continuous charge	100 A	1C
Recommended charge	50 A	0.5C
Absorption end (tail current)	5 A	C/20

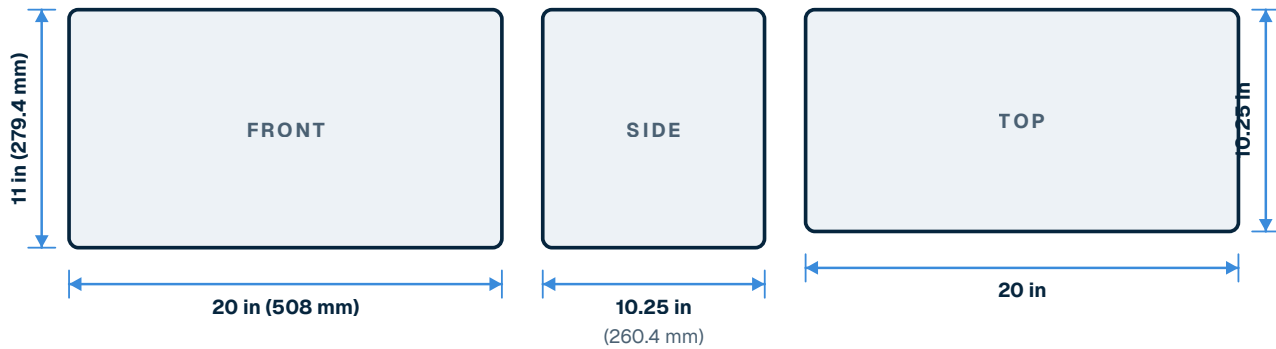
C-rate expresses current relative to capacity: 1C = 100 A for a 100 Ah battery. Peak discharge of 200 A is permitted for up to 60 seconds; continuous loads, busbars, switches, conductors and overcurrent protection must be sized to the continuous rating, the surge profile, voltage drop and applicable standards.

03 MECHANICAL AND INSTALLATION

DIMENSIONS, TERMINALS AND MOUNTING

MODEL-SPECIFIC DATA

Simplified case outline. All three views share one scale; drawing is not full size.



Overall case dimensions. Allow additional space for terminal hardware, cable bend radius, ventilation access and service removal.

MECHANICAL

Dimensions (L × W × H)	20 × 10.25 × 11 in (508 × 260.4 × 279.4 mm)
Weight	75 lb (34.0 kg)
Case material	ABS / PC blend, UL94-V0 flame rating
Terminal type	M8 female

Installation requirements

- Secure the battery with a tray, strap, bracket or enclosure suited to the application; it must not slide, tip or strike nearby equipment. Choose mounting hardware rated for the battery's weight of 75 lb (34.0 kg).
- Install upright unless Epoch documentation for this model allows another orientation.
- Tighten the M8 terminal hardware firmly, without over-tightening. Contact Epoch support for the terminal torque for this model.
- Place the main fuse or DC-rated breaker as close as practical to the battery positive terminal.
- Leave clearance above the terminals for cable bend radius, terminal boots and inspection.
- IP67 is dust-tight and protected against temporary immersion up to 1 m for 30 minutes, but not against water jets, pressure washing or long-term submersion.

04 CHARGING AND THERMAL MANAGEMENT

LIFEPO4 PROFILE AND INTERNAL HEATING

RECOMMENDED CHARGING SETTINGS

Bulk / absorption voltage	42.6–43.2 V
Absorption end	Charge current $\leq C/20$ (5 A) or 15 min, whichever comes first
Float voltage	Disabled (preferred) or 40.0–40.8 V
Re-bulk voltage	39.6 V
Maximum continuous charge current	100 A
Peak charge current	150 A for up to 10 s
Recommended charge current	50 A (0.5C)
Temperature compensation	0 mV/°C (off)
Equalization	Disabled
BMS high-voltage cutoff	43.8 V
SOC recalibration voltage	43.8 V

Charging sources

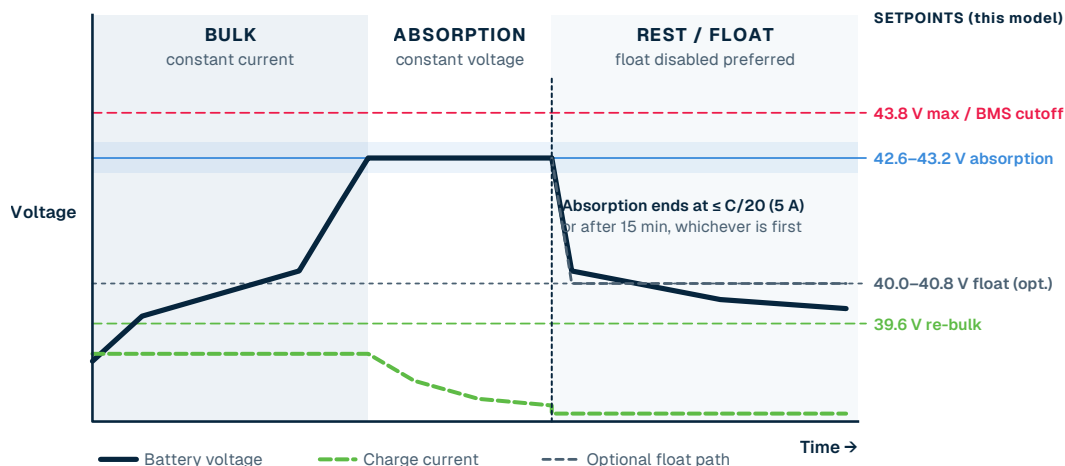
- **AC chargers and inverter chargers:** LiFePO4 profile or the settings shown; no lead-acid, AGM or gel profiles.
- **Solar controllers:** settings shown; confirm array open-circuit voltage suits the controller and bank.
- **Alternators:** DC-to-DC charger programmed for LiFePO4 highly recommended.
- **Multiple sources:** combined current ≤ 100 A continuous and within wiring limits.
- No equalization, desulfation or repair modes; temperature compensation 0 mV/°C.

Cold-weather charging sequence

- 1 • **Charger connected** A LiFePO4 charge profile within Epoch voltage and current limits is applied.
- 2 • **BMS checks temperature** The BMS monitors cell temperature and blocks charging outside the allowed range.
- 3 • **Cells are warmed** The internal heater warms the cells before charging begins.
- 4 • **Charging proceeds** Normal charging resumes within the allowed temperature range and BMS limits.

Little or no charge current during warm-up can be normal. The -20°C rating applies with heating; cold cells cannot accept unrestricted current.

CONCEPTUAL DIAGRAM



05 BMS PROTECTION AND PERFORMANCE

PROTECTION FUNCTIONS, DISCHARGE LIMITS, RUNTIME

BMS PROTECTION FUNCTIONS

Overcharge	Disconnects or limits operation to protect the cells
Over-discharge	Disconnects or limits operation to protect the cells
Over-current	Protects against sustained loads above ratings
Short circuit	Rapid BMS cutoff
High temperature	Disconnects outside the operating range
Low temperature	Low-temperature charge protection; heater warms the cells before charging

What the BMS does — and does not do

The battery management system monitors cell voltage, current and temperature and switches charging or discharging off to protect the cells. It does not replace external overcurrent protection for the wiring. After a protection event, record the app data, remove the cause and allow protection to reset when conditions return to normal.

Runtime planning

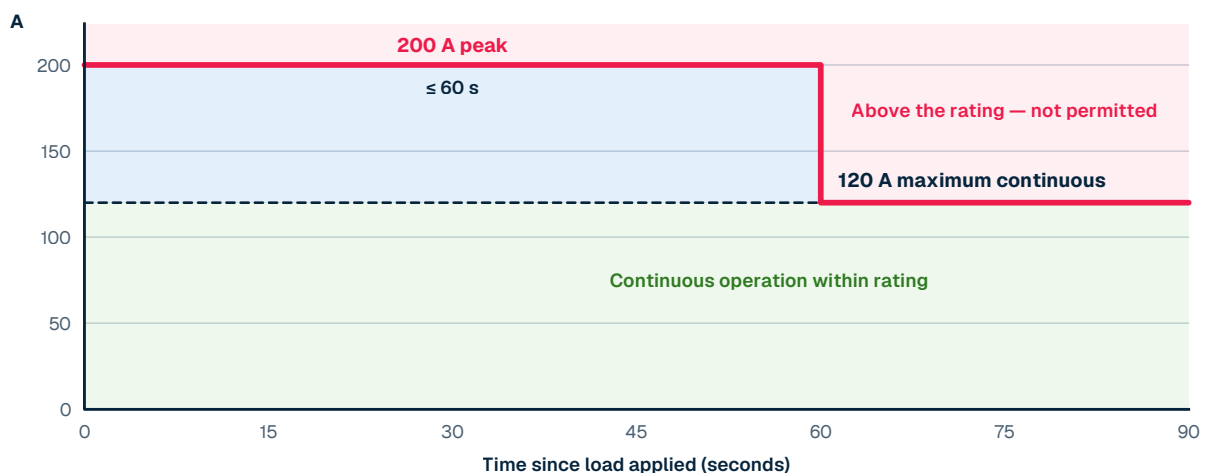
Planning basis: 80% of nominal energy $\approx 3,072$ Wh (80 Ah) per battery — a conservative assumption, not a rating.

$$\text{Runtime (h)} \approx \text{usable Wh} \div \text{load (W)}$$

LOAD	CALCULATION	RUNTIME
100 W	$3,072 \text{ Wh} \div 100 \text{ W}$	$\approx 30.7 \text{ h}$
250 W	$3,072 \text{ Wh} \div 250 \text{ W}$	$\approx 12.3 \text{ h}$
500 W	$3,072 \text{ Wh} \div 500 \text{ W}$	$\approx 6.1 \text{ h}$
10 A DC load	$80 \text{ Ah} \div 10 \text{ A}$	$\approx 8.0 \text{ h}$

For a parallel bank, multiply usable energy by the number of batteries. Inverter efficiency and idle draw, cabling, temperature, battery age, BMS limits and duty cycle change real-world results.

MODEL-SPECIFIC DATA

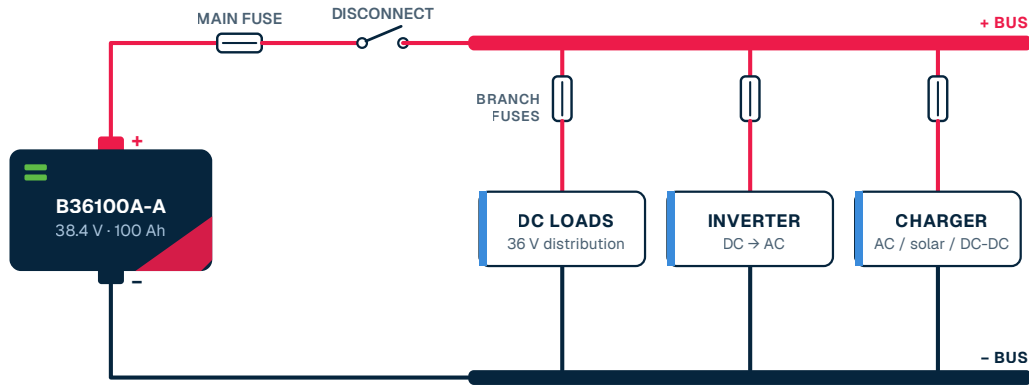


Allowable discharge current over time for one B36100A-A. The 200 A rating is a short-duration peak only: do not size continuous loads, busbars, switches, conductors or overcurrent protection around it. Use the continuous load current, surge profile, voltage drop and applicable standards.

06 SYSTEM CONFIGURATION

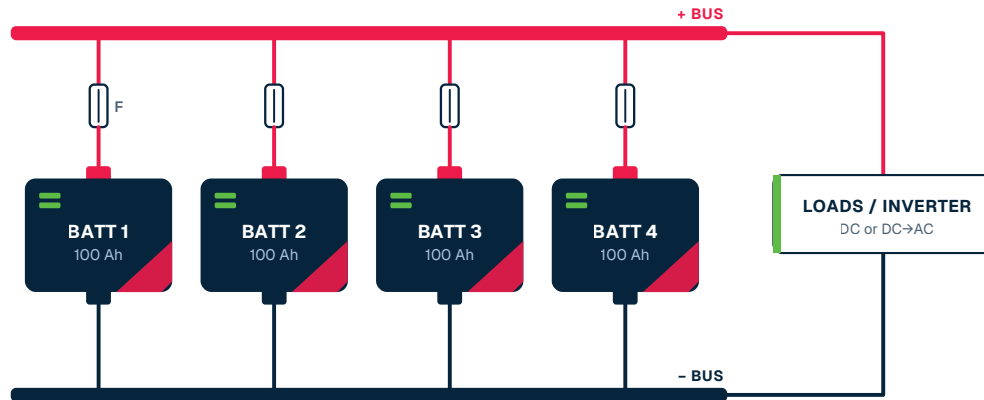
SINGLE BATTERY AND PARALLEL BANKS

CONCEPTUAL DIAGRAM



Single-battery 36 V system: main fuse close to the battery positive terminal, service disconnect, and fused branch circuits from busbars. Terminal positions are simplified — both terminals are on the battery lid.

CONCEPTUAL DIAGRAM



Parallel bank, up to 4 batteries (36 V class, up to 400 Ah). Fuse each battery branch and keep branch cables equal in length and gauge to common busbars.

Bank rules

- Parallel only — maximum 4 in parallel (400 Ah). Do not connect in series.
- Use only matched B36100A-A batteries of similar age, condition and firmware.
- Charge each battery fully and bring all to the same state of charge before connecting.
- Equal cable lengths and gauges; common busbars; fuse each battery or string as the design requires.
- Switch batteries off before connecting; never hot-connect. Pre-charge large inverters where required.
- Never mix with lead-acid batteries or with other models, capacities, ages or chemistries.

07 SAFETY, STORAGE AND COMPLIANCE

CRITICAL WARNINGS AND DOCUMENTATION

⚠ DANGER

Short-circuit hazard. Never connect the terminals together or allow tools or jewelry to bridge them. A short circuit can release extremely high current and cause arcing, burns or fire.

⚠ WARNING

The internal BMS does not replace a correctly rated external fuse or DC circuit breaker. Do not bypass the BMS, force-charge a protected battery or defeat a low-temperature lockout.

⚠ WARNING

Stop use if the battery is swollen, leaking, smoking, unusually hot or damaged. Do not use water directly on a damaged or burning lithium battery unless directed by emergency responders. Follow the Safety Data Sheet (SDS).

Commissioning checks

- ☐ Label shows model B36100A-A; charger programmed for LiFePO4.
- ☐ Polarity and voltage confirmed with a multimeter.
- ☐ Main fuse or breaker sized for the wire, load and system voltage.
- ☐ Terminal hardware tight; covers installed.
- ☐ First charge completed; app shows no active faults.
- ☐ Battery registered within 90 days of purchase.

Storage and handling

- Store clean and dry, 0 °C to 35 °C (32 °F to 95 °F) where practical. Charge the battery before long-term storage, then switch it off with the power button.
- Disconnect loads and chargers; check SOC at least every 3 months and recharge as needed.
- Warranty excludes storage above 60 °C (140 °F) or below -40 °C (-40 °F) and batteries left uncharged for more than three months.
- Ship damaged or returned batteries only under an RMA, in compliance with lithium battery shipping regulations.

COMPLIANCE AND LISTINGS

Cell-level certifications	UL 1642; IEC 62619:2022
Product	CE; RoHS
Transport	UN 38.3; Class 9 lithium battery shipping classification
Enclosure	IP67 per IEC 60529

UL 1642 and IEC 62619 certifications apply at the cell level (the cells used in this battery), not to the complete battery assembly.

REVISION DATE CHANGE

V01	Undated	Previous data sheet (B36100A).
V02	2026-10-03	New document set for B36100A-A; specifications reconciled with the product page and previous data sheet. Recommended charge and discharge current 50 A (0.5C). Power button, 10-segment battery meter and box contents added.

Related documents: B36100A-A User Manual (Letter and 5 × 7 print editions), B36100A-A Product Spec Sheet, Safety Data Sheet (SDS) and 11-year limited warranty terms.

📞 1-888-501-1846

Monday–Friday, 9 AM–4 PM Eastern

✉ support@epochbatteries.com

epochbatteries.com/support

📍 3075 Chastain Meadows Pkwy, Marietta, GA 30066, USA

954 Ponce de Leon Ave, Suite 401, San Juan, PR 00907, USA

Specifications are subject to change without notice. Always confirm the ratings on the battery label and use the latest documentation at epochbatteries.com/resources.