

HiBlade



48 V HYBRID SOLID STATE / QUASAR BMS

6,750 Wh in 29 kg.

Then it checks every cell, every day,
and tells you weeks before a fault. High
density cells, and a BMS that looks
ahead.



MARINE POWER WITH QUASAR INSIDE

More energy. Fewer surprises.

High density blades

42 thin hybrid solid state cells stand on edge like blades. Heat leaves up the tabs into a billet aluminium heat sink.

Far less fuel for a fire

Most of the liquid electrolyte is replaced by solid material, so there is much less to burn.

Warns weeks ahead

The Quasar BMS tests every cell group each day and compares it with the day the battery was built.

235

Wh/kg
at pack level

150 A

Continuous,
250 A for 2 s

1,500

Cycles to
80 percent

4 to 8

Weeks early
warning, typical

135 Ah at 50 V nominal, 100 A charge, IP67 marine enclosure, 400 × 300 × 188 mm. Early warning windows are typical estimates against each cell's factory baseline, with field validation under way.

A battery that tells you weeks before it fails.

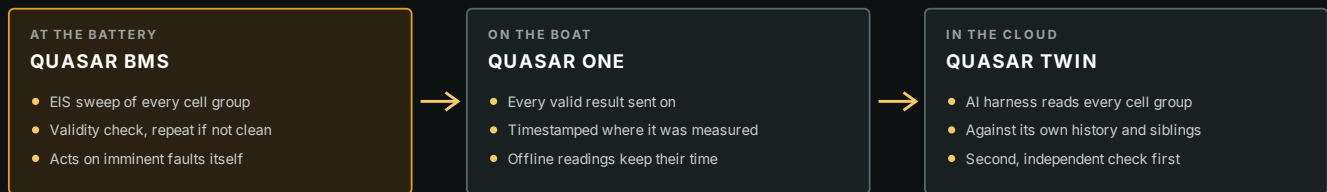
Most lithium safety systems wait for something to go wrong, then react. HiBlade works the other way round. It looks for the small changes inside each cell that come weeks before a fault, and acts on them while there is still time.

ONE DAILY SWEEP, FOUR MEASUREMENTS PER CELL GROUP



High frequency

Low frequency



Protection lives in the battery and works with no network. Quasar ONE adds the whole-bank view.

The method is electrochemical impedance spectroscopy (EIS). Laboratories have used it for decades. HiBlade runs it on board, on every cell group, every day.

Built into every pack.

Daily cell test	A small, harmless signal from 0.1 Hz to 1 kHz, measured to 10 $\mu\Omega$ on an automotive-grade NXP chipset.
Birth certificate	Every weld and joint is tested at the factory. The result is signed and sealed, and every later reading is judged against it.
15 fault types	Plating, soft shorts, weak welds, dryout, lost compression and more, from one daily measurement.
Banks that share	Up to 128 in parallel. The pack doing too much is limited, and the weakest pack charges first.
Charger lock-out	A wrong or mis-wired charger is found and refused within a tenth of a second.
Longer life	A gentler charge window by default that narrows with age, resting at 75 percent on shore power.
Fits your boat	BMS CAN, plug and play with Victron. NMEA 2000 port.
Warranty	3 years, extended to 5 years with a continuous Quasar subscription.

When it finds something.

ADVISORY	Logged and trended. Owner and dealer can see it.
CAUTION	Charge trimmed. Named cell, named cause, weeks left.
WARNING	Charge and discharge gently reduced. Dealer notified.
PROTECT	The pack limits itself, without waiting for anyone.

The record stays with the battery. No subscription is needed to read it. Add a Quasar ONE and the bank appears in the Quasar Twin, each pack green, amber or red.

8 patents filed on Quasar BMS and HiBlade battery. HiBlade, Heartbeat and Quasar are trademarks of Safiery.

25 Quasar BMS functions in every pack

Daily EIS on every cell group, graduated escalation, low-current measurement to 6 mA, matched-condition measurement across the bank, Heartbeat pressure-informed charging, charge taper verification, charger over-voltage lock-out, alternator soft-off, low charge dwell alert, inter-pack CAN for up to 128 packs, impedance-informed load sharing, staircase charging on poor solar days, cell-group discharge isolation, joining packs at any charge, native Victron CAN interface, auxiliary supply with MOSFET control, automatic Quasar Twin set-up, Nyquist display, life-of-battery record on the pack, fleet AI scanning with a second check, longevity window that adjusts with age, shore power rest at 75 percent, passive spectral listening, bus-side impedance of connected equipment, assessment on board or in the cloud.



Let's size your bank.

Bring your loads, your charge sources and the space you have.

sales@safiery.com +61 7 2102 2553



OFFICIAL BATTERY