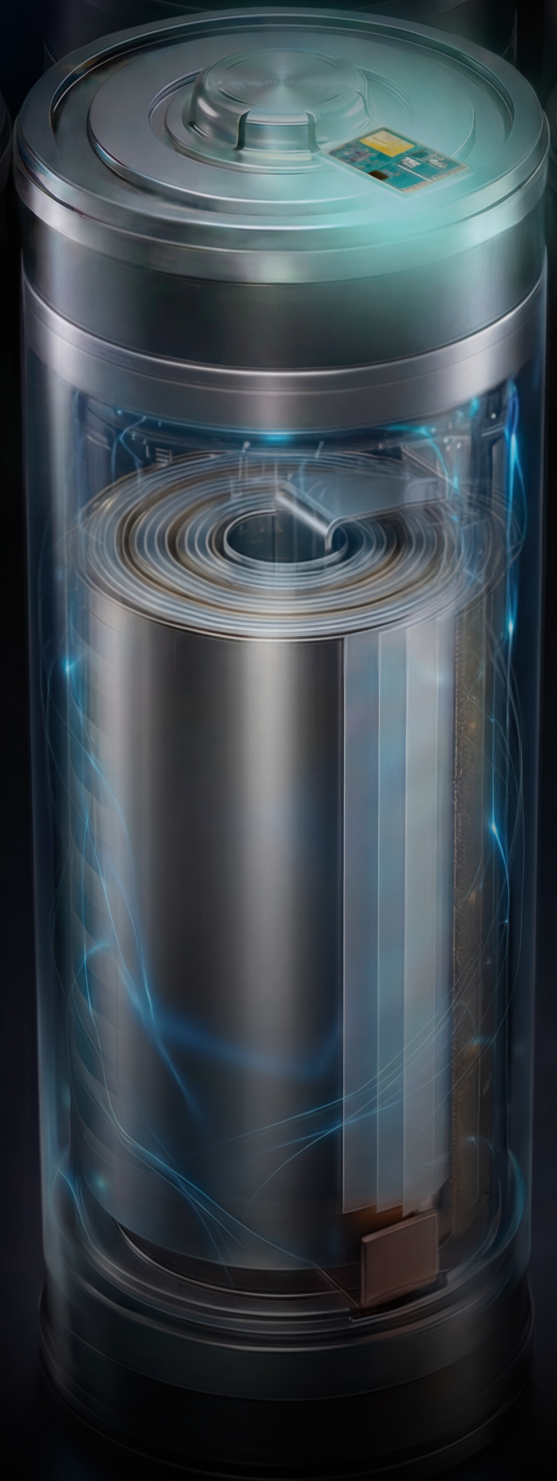


PREDYCE®

# No Blind Spots Predict Anything

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Your All-in-One Cell Management  
Solution for Lithium-Ion Batteries





# Your Battery Management, Cell by Cell: Redefined by **PREDYCE®**

As battery applications demand ever greater energy capacity, safety becomes critical. PREDYCE® redefines battery management by enabling cell-level control without extra harness.

## **INTELLIGENCE IN EVERY CELL**

Developed by Pellenc Energy, PREDYCE® is a miniature chip that brings Battery Management System functions directly to the cell level.

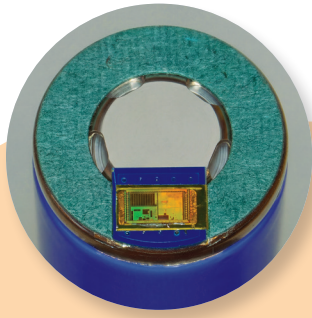
Available as a bare die or in a QFN package, it integrates easily with any cell format, adapting to different shapes, sizes and chemistries.

## **WITH PREDYCE®, EACH CELL BECOMES A SMART DEVICE**

It measures voltage and temperature with high precision, performs adaptive balancing, and stores key operational data within its embedded memory allowing cell-level diagnostics such as SOC, SOH and RUL.

## **NO EXTRA COMPONENTS REQUIRED**





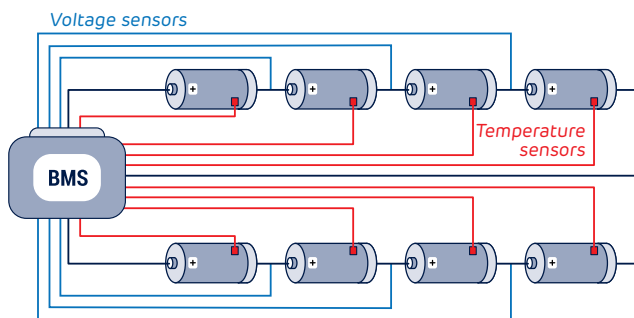
# HOW IT WORKS

PREDYCE® operates on a controller-device architecture in which the Battery Management System exchanges data directly with each cell.

While traditional solutions endure highly complex harness integration, PREDYCE® communicates through the existing power connections alone.

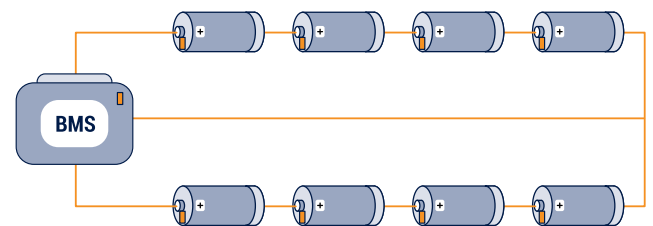
This opens a new era of battery management, with simple string architecture integration and cell-level data gathering.

## TRADITIONAL APPROACH



*Extra harness, complex integration and limited voltage scalability*

## PREDYCE® SOLUTION



*No extra harness, easy integration and scalability*

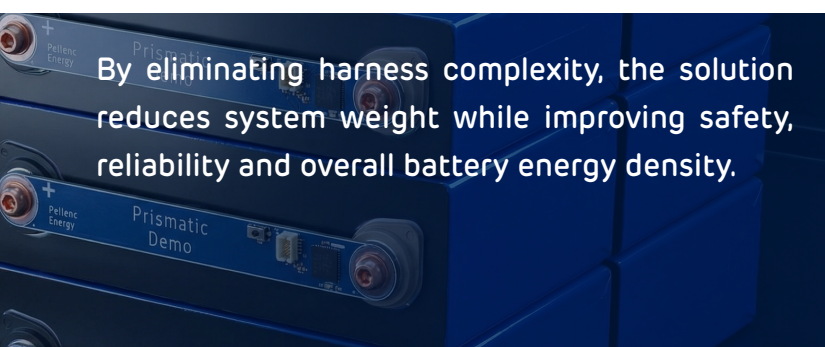
PREDYCE® also integrates into conventional series-parallel packs without layout modification, easily scaling from a 12-cell pack to a 400 V EV battery.

## STRING ARCHITECTURE UNLOCKS THE FULL POTENTIAL OF PREDYCE®

By eliminating harness complexity, the solution reduces system weight while improving safety, reliability and overall battery energy density.

## KEY FEATURES

- FULL CELL-LEVEL DEPLOYMENT
- LOW-POWER COMMUNICATION PROTOCOL
- OV/UV REDUNDANT PROTECTION
- EMBEDDED BLACK BOX AND CELL PASSPORT
- BETTER SOC, SOH AND RUL ESTIMATION





MONITOR TODAY  
PREDICT TOMORROW

# APPLICATIONS



## ELECTRIC MOBILITY

Direct compatibility with high-voltage battery systems, with no extra harness — enabling safer EVs and simpler battery packs.



## UNMANNED AERIAL SYSTEMS (DRONES)

Cell-level visibility enables early fault detection and thermal runaway anticipation, offering predictive maintenance and reducing downtime.



## ENERGY STORAGE SYSTEMS (ESS)

The embedded black box records lifecycle data, enabling better SOH and RUL estimation. Combined with the cell passport, it ensures full traceability for second-life applications and recycling.



## POWER TOOLS

Individual temperature sensing enables tighter margins and adaptive balancing, enhancing reliability whilst optimising performance.

**PREDYCE**<sup>®</sup>  
BY  **PELLENC**  
energy

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