

USE CASE · PRODUCTION & END-OF-LINE VERIFICATION

Repeatable pass / fail on the line — with traceability your plant systems can use.

Scan, test, decide, record. Operators follow guided prompts, the sequence enforces every limit, and results land in the plant database and the sign-off report your quality team already uses.

Scan

barcode intake with mode detection

Limits

enforced by the sequence, not the operator

SQL

traceability and work-order lookup

Audit

who ran what, when, on which station

What you're up against

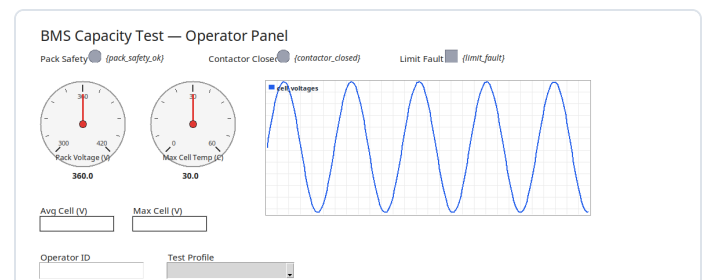
- Operators need a clear screen, not an engineering tool
- Every unit needs a serial, a work order, a result and a report — without manual entry
- Plant IT expects results in the existing database and the existing Excel sign-off format
- Updating a test on six stations means six visits with a USB stick

How the suite handles it

- Prompt Builder panels give operators badge / serial entry, instructions, live readouts and Start / Abort
- A barcode scan drives the sequence: look up the work order in MSSQL, pick the profile, run
- Limits decide pass / fail; the operator confirms, the sequence records
- Results and per-step logs write to the plant share and database; the Excel sign-off format is preserved
- Lab Manager distributes validated workbooks to every station, with user roles and an audit log

A typical sequence

End-of-line pack test		
1	Prompt	Operator badge · scan pack barcode (USB)
2	SQL	Lookup work order, part number → Test_Profile
3	Start CAN	Pack BMS · diagnostic session · read serial
4	Write Inst	Modbus I/O: BMS 24 V + ignition on
5	Subsequence	Precharge → contactor close · verify feedback
6	Subsequence	Isolation test (IMD) · limit group ISO
7	Subsequence	Balance-circuit check · per-module limits
8	If All	All limit groups pass → Result = PASS
9	Report	Excel sign-off to share · SQL row · next unit



Operator panel from Prompt Builder — badge, profile, live meters and Start / Abort, running inside EBE Test

Typical instruments and interfaces

USB barcode scanner

Modbus relay I/O & annunciator

Cyclers / supplies (SCPI)

BMS over CAN

HV current sensor (analog)

Plant share (SMB)

MSSQL database

“A sequencer nobody maintains cannot tell you what it is getting wrong.”

A silent contactor-close failure that a legacy stand recorded as a pass is the kind of defect per-step logs and live limits catch.