PRODUCT DEEP-DIVE

Sage Central Battery.

One cabinet. Entire building. Open battery system, no proprietary parts.

Wall-mounted 24 VDC emergency power for an entire building's egress lighting — from one cabinet, monitored over the cloud, charged on standard lead-calcium batteries you can buy from any commercial supplier. Two cabinet tiers (Keystone, Volta) cover everything from small footprints to 1000 W high-density loads. UL 924 listed. NFPA 101 by design.

2 CABINET TIERS	90 min EMERGENCY DURATION
Up to 8 EMERGENCY CIRCUITS PER CABINET	UL 924 LISTING

WHAT IT IS

The cabinet that powers every emergency-mode fixture in the building.

A Sage Central Battery cabinet is a wall-mounted, low-voltage emergency power source. Two 12 V lead-calcium batteries in series produce 24 VDC; a computer-controlled charger keeps them at float voltage continuously. The cabinet feeds emergency fixtures over standard Class 2 low-voltage wiring — up to eight isolated 24 V branch circuits per cabinet (36 with the high-circuit option on Keystone).

When utility AC fails on any monitored branch — sensed by the Local Circuit Monitor (Olympus) — the cabinet transitions emergency-capable fixtures to DC within milliseconds. NFPA 7.9.2.3 single-circuit egress failure is satisfied at the device level; no generator needed to clear NEC's 10-second dark window.

The system is **deliberately open**. Batteries are standard, off-the-shelf lead-calcium — available from any commercial battery supplier. No proprietary chemistry. No service-contract gates. Faults report via email and Sage Live™. Status is queryable from anywhere over the internet.

INSIDE THE CABINET

Four moving pieces. Everything else is wire.

POWER SOURCE

Two 12 V batteries in series

Standard lead-calcium chemistry sourced from any commercial supplier. Replaceable in minutes — no ladders, no lifts, no special tools, no proprietary parts. The single biggest lifecycle-cost lever.

CHARGER

Computer-controlled, float-voltage maintained

Keeps the batteries at float continuously. Optional fast charger (Volta) recycles from full discharge in under 12 hours so a triggered cabinet is back online by morning.

DIAGNOSTICS + TRANSFER

LCD + email + self-test

Battery voltage, charge current, load condition, fault description, panel temperature, date stamp — all on the front LCD. Faults push via email. Self-test runs unattended on the NFPA monthly + annual cadence and logs itself.

OUTPUT STAGE

Up to 8 isolated 24 V branch circuits

Eight emergency circuits per cabinet, physically and electrically isolated to satisfy NEC 700.17 branch-circuit independence. Each circuit feeds Sage Relays + Sage CB Fixtures over Class 2 MC daisy-chain. Keystone's 36-circuit option scales further.

TWO CABINET TIERS

Keystone for the standard. Volta for the dense.

Both cabinets share Sage's DNA — 24 VDC output, computer-controlled charging, eight isolated branch circuits, self-test diagnostics, Sage Live™ readiness. The differences land at the edges of the load envelope and on the optional integration features.

SPEC	KEYSTONE (KEY)	VOLTA (VOL)
CAPACITY RANGE	Sized for standard commercial loads	100 W – 1000 W
OUTPUT	24 VDC to emergency fixtures	24 VDC to emergency fixtures
EMERGENCY CIRCUITS PER CABINET	Up to 8 · 36-circuit option available	Up to 8
INPUT	Universal 120 / 277 VAC · max 5 W idle consumption	120 VAC standard · optional 277, 347, or 480 VAC
ENCLOSURE	NEMA Type 1 steel · surface or recess mount	NEMA Type 1 steel · surface or recess mount
DIAGNOSTICS	Automatic self-test · email fault alerts · LCD display	LCD diagnostics + installed printer (optional)
NETWORKING	Optional addressable-fixture network · Sage Live™ cloud	Optional BMS integration · Sage Live™ cloud
CHARGING	Computer-controlled · maintenance-grade	Computer-controlled · optional fast charger (full recharge <12 hrs)
GENERATOR INTEGRATION	Optional generator input — emergency operation with no startup delay	Optional generator input — clears NEC 10-sec dark window

Sage engineering picks the cabinet from the project's emergency load schedule — same workflow as the Sage Relay BOM. Send the schedule; the cabinet, the LCM count, the relay quantities, and the wiring diagram land in the submittal package.

THE ARCHITECTURAL EDGE

Most central-battery and inverter systems lock owners into proprietary battery chemistries, proprietary modules, and factory-authorized

Open battery system. No proprietary anything.

service contracts. Five-year replacement cycles arrive bundled with vendor-only parts, vendor-only technicians, and vendor-only test cycles.

Sage was designed against that. Both Keystone and Volta run on **standard lead-calcium batteries** from any commercial supplier. When a battery reaches end of life, the building team or any licensed electrician swaps it in minutes — no special tools, no factory dispatch, no downtime window. The same applies to the charger, the diagnostics board, the LCD, and the branch-circuit hardware: everything Sage uses is industry-standard or designed for open service.

The economic picture: a building with 294 integral battery packs at 5-year replacement cycles, each requiring a factory-authorized service visit, runs ~$200,000 in lifecycle cost over a decade. Seven Sage cabinets feeding the same fixtures, on standard batteries serviced by the building team, runs a fraction of that. **Full numbers in the battery-pack comparison ↗**

DIAGNOSTICS + SAGE LIVE™

The cabinet that tests itself, logs itself, and tells you when something's wrong.

Every Sage cabinet runs the NFPA monthly + annual self-test cycle unattended. Battery voltage, charge current, load condition, fault description, and panel temperature all stamp into a date-logged audit trail. The LCD displays the current state on-site; email pushes faults the moment they occur; Sage Live™ surfaces the full fleet status remotely.

ON-SITE

LCD + email + printer option

Front-panel LCD gives the FM team everything they need without opening the door. Email pushes faults in real time. Volta's optional installed printer satisfies inspectors who still want a paper log.

REMOTE · SAGE LIVE™

Full fleet visibility over the cloud

Status, test history, and faults across every Sage cabinet in your portfolio — one dashboard, no on-site visits. Sage Live™ runs on every cabinet by default; full-scope deep dive shipping separately.

NEC 700.3(F)

Service the cabinet without breaking coverage.

NEC 700.3(F) requires an alternate emergency source during maintenance of the primary emergency system. With integral battery packs, that means floor-by-floor temporary coverage every five-year replacement cycle — a logistical and budget nightmare across a portfolio.

Sage uses a low-cost portable battery cart that plugs in to the cabinet's service connection and maintains 90-min coverage for the building during the scheduled service window. One cart per cabinet; one service window for the whole building's emergency lighting. Code box checked.

THE SYSTEM AT A GLANCE

Cabinet · Olympus · Relay · Fixture.

The cabinet is the power source. The Local Circuit Monitor (Olympus) senses utility failure on each branch and signals the cabinet on a 12 V loop within milliseconds. The Sage Relay sits inside each emergency-capable fixture, receives the DC feed, and energizes the LED at the programmed emergency wattage. The fixture itself can be a Sage CB Fixture, a Sage Luminaire with factory-installed relay, or any third-party LED fixture fitted with an SR-series relay in the field.

One system, four components, every emergency-mode fixture in the building covered.