KEY

Panel Installation & AC Input Wiring

Installation Instructions

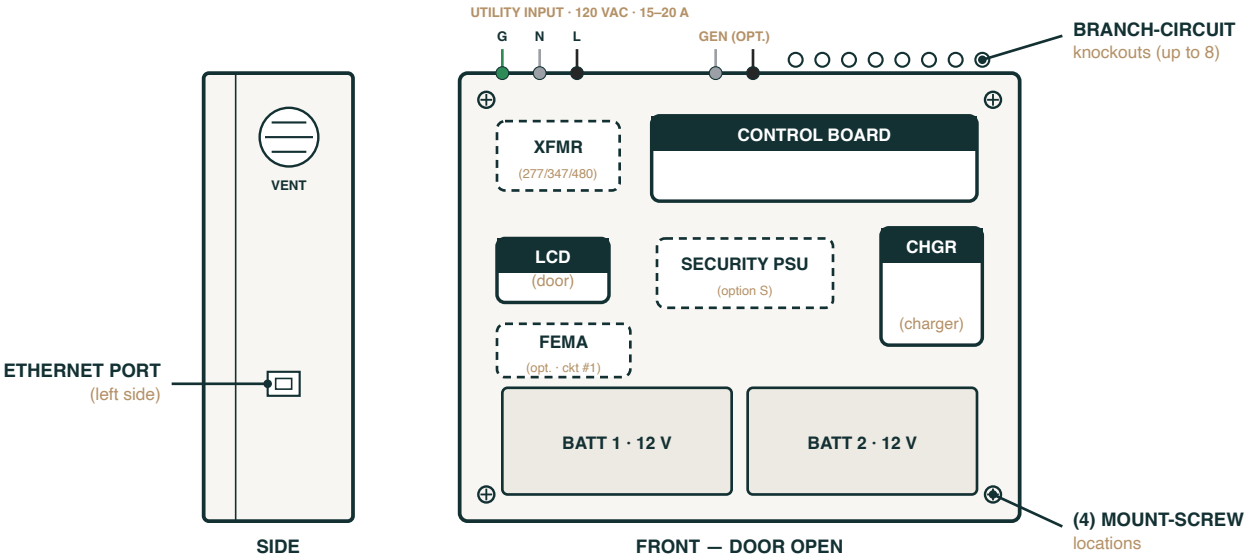
For use with Sage central-battery emergency lighting

NOTE: This device is a storage-battery system for emergency lighting per NEC Section 700.9, and includes Feeder Circuit Equipment. Para (D)(2) requires installation in spaces fully protected by an approved automatic fire-suppression system (sprinkler, CO_2, or equivalent) or having a 1-hour fire-resistance rating.

IMPORTANT SAFEGUARDS — READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. Disconnect AC power before servicing.
2. Refer to the wiring diagram for proper connections.
3. All servicing should be performed by qualified personnel.
4. Consult your local building code for approved wiring and installation.
5. Do not use outdoors.
6. Do not use this equipment for other than its intended use.
7. Do not let power cords touch hot surfaces.
8. Mount and secure the unit at a location and height that avoids ready access and tampering by unauthorized persons.
9. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

PANEL LAYOUT — COMPONENT LOCATIONS



Dashed components are factory-installed options — present only when ordered. Branch-circuit wiring detail: Page 3.

A) PANEL INSTALLATION & AC INPUT WIRING

Refer to the project circuit layout and circuit load schedule, if available.

1. Note the size and weight of the panel. Measure the mount-screw locations and install four screw anchors at the required locations on a suitable vertical surface (anchors rated for the complete panel weight). Mount the panel assembly in position, allowing door access to the internal batteries.
2. Make cutouts for the required emergency branch-circuit connectors in the top surface of the enclosure, above the three-conductor terminals provided. Up to eight three-conductor circuits are available.
3. Secure the enclosure in position. Install AC wiring from the utility and generator-standby services as shown, and connect to the labeled wiring connections or transformer terminals using standard wire nuts. Input AC wiring shall be rated for the maximum VA loading of both utility and security lighting.
4. Connect the earth GROUND circuit to the screw terminal provided in the base of the enclosure.

SAVE THESE INSTRUCTIONS

KEY
Battery Installation

Installation Instructions
Model KEY

B) BATTERY INSTALLATION

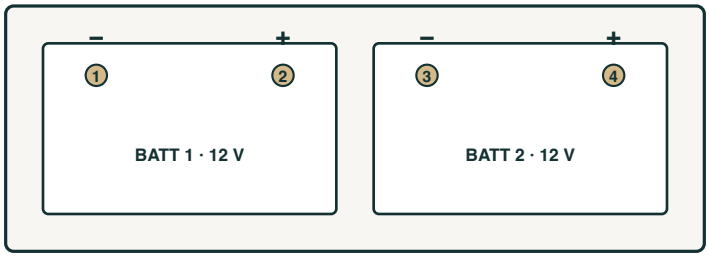
1. CAUTION — only qualified service personnel (e.g. a licensed electrician) should perform the battery and DC wiring. Always use insulated tools.
2. Full voltage and current are always present at the battery terminals. Do not touch uninsulated terminals or short them with a metal object.
3. Place the batteries in the base of the enclosure in the positions shown for the model. Connect each numbered harness (1–4) to match positive and negative terminals — do not reverse-polarize. With AC supply OFF, the system enters emergency mode once all terminals are connected (LCD activates with a blank display; emergency output live at 24 VDC).
4. If batteries are fully discharged under load and AC remains off, disconnect a battery terminal until AC supply is on — control-board microchips draw a small continuous current that can deep-discharge the batteries over time, especially in above-normal ambient temperatures.

BATTERY SPECIFICATIONS

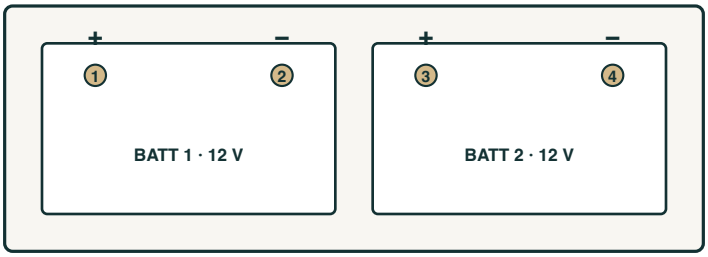
Model	Battery	Capacity	Battery L × W × D (in)	Terminal	Battery P/N
KEY-500	2 × 12 V	50 Ah	7.7 × 6.5 × 6.9	M8 nut/bolt	UB12500
KEY-1000	2 × 12 V	100 Ah	12.9 × 6.8 × 8.6	M10 nut/bolt	UB121000

TOP VIEW IN ENCLOSURE

KEY-500



KEY-1000



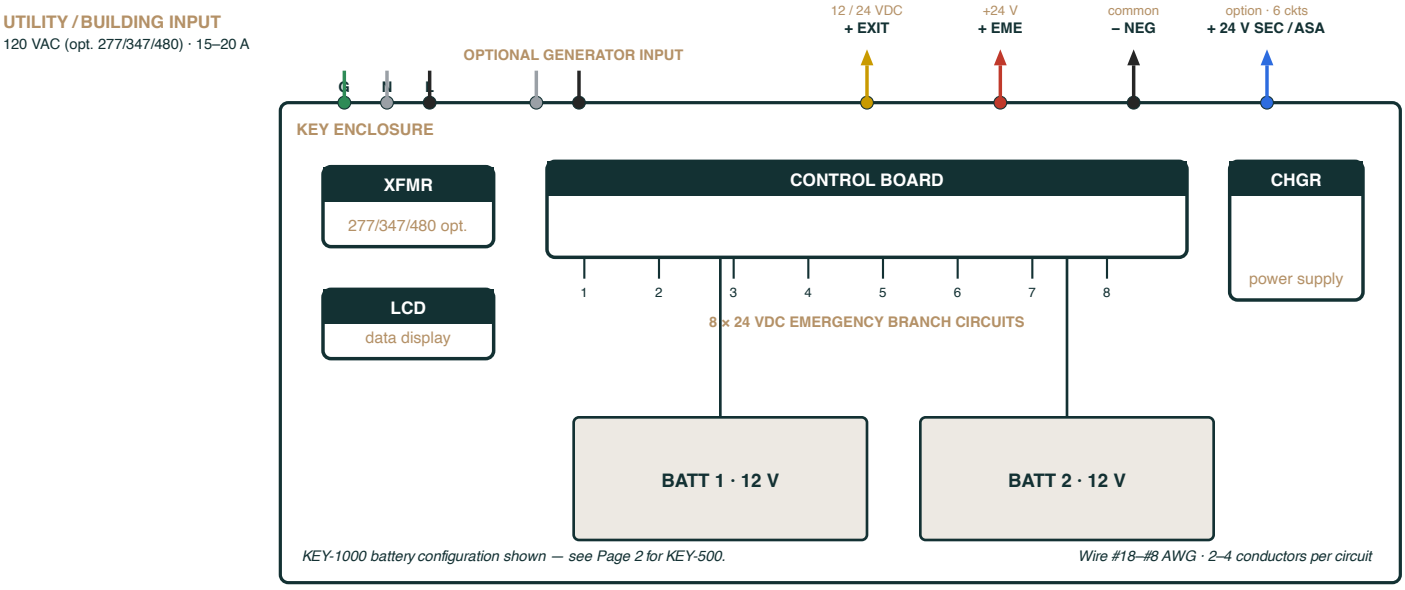
Battery arrangement and harness polarity differ by model — match each numbered harness (1–4) to the terminals shown for your model. Do not reverse-polarize.

KEY

Batteries, Branch Circuits & System Test

Installation Instructions
Model KEY

BATTERIES & BRANCH CIRCUITS



KEY-1000 battery configuration shown — see Page 2 for KEY-500.

Wire #18–#8 AWG · 2–4 conductors per circuit

BRANCH-CIRCUIT WIRING

DC output: 8 branch circuits available, 2–4 conductors per circuit, #18–#8 AWG. Up to 6 security / ASA circuits (option).
Maximum 40 exit signs per central battery.
Branch wiring: exits-only 2-wire · EM-only 2-wire · exits + EM 3-wire · + security 4-wire. Wiring colors: exit signs Yellow & Black; emergency Red / Black / Blue (if security); CDO Black / Yellow / Red.

C) INITIAL SYSTEM TEST

1. Turn building AC supply ON. After a 1–2 minute boot, the LCD shows the system serial number. Voltage between COMMON NEGATIVE and EXIT / CDO output should read 12 VDC ±1 V. Startup LEDs: AC steady green · Charge flashing green · Fault off.
2. A flashing Charge LED indicates the batteries are charging; full charge takes 10–12 hours, after which the LED holds steady green. Monthly and annual tests do not activate until the system confirms full charge.
3. Building AC OFF (emergency): with a meter set to 12–24 VDC, measure between COMMON NEGATIVE and EMERGENCY (Red) — should read 24 VDC ±2 V; COMMON NEGATIVE to EXIT / CDO output should also read 24 VDC ±2 V.