

Relay

Integrate the fixtures you already spec.

RLY

Emergency Lighting Control · six relays

IMPORTANT SAFEGUARDS — READ AND FOLLOW ALL SAFETY INSTRUCTIONS



When using electrical equipment, basic safety precautions should always be followed, including the following:

1. CAUTION: This unit has more than one power-supply connection point. To reduce the risk of electric shock, disconnect both the branch circuit-breakers or fuses and the emergency power supplies before servicing.
2. CAUTION: This equipment provides more than one power-supply output source. To reduce the risk of electric shock, disconnect both normal and emergency sources within this unit before servicing any equipment connected to this unit.
3. CAUTION: Sealed unit. Components are not replaceable. Replace the entire unit when necessary.
4. CAUTION: Installation and servicing should be performed by qualified personnel only. De-energize before opening.
5. Do not use outdoors.
6. Do not mount near gas or electric heaters.
7. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
8. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
9. Do not use this equipment for other than its intended use.
10. Install in accordance with the National Electrical Code and local regulations.
11. Approved for field or factory installation.
12. Lighting-fixture manufacturers, electricians, and end-users need to ensure product compatibility before final installation.

LIMITATIONS

1. The output voltage and current of the Sage Relay, as marked on the data label, must not exceed the maximum output voltage and current of the normal driver, as marked on the data label.
2. Use with the Sage Central Battery System. The Sage Central Battery System incorporates a UL 508 listed transfer switch.
3. Sage Relay output to the LED array may not be connected by soldering directly to a circuit board. All connections from the Sage Relay to the normal driver and the LED array should be made using standard wire nuts or terminal blocks.

RATINGS

	Emergency	Normal
Input	24 VDC · 900 mA	120 / 277 VAC · 6 A
Output	24–54 VDC · 100–400 mA, 20 W	N/A

Sage Relay has Class 2 output ratings.

Ratings shown are representative of the Standard relays; the high-bay relays (4, 6) carry higher output — see the Suggested Spec for per-relay ratings.

WIRING COLOR KEY

INPUT

- RED +24 V
- GRN -24 V
- RED/WHITE (+) Normal driver

OUTPUT

- YEL LED +
- BLU LED -

AC LINE SWITCH

- Line In BLK
- Line Out BLK

EMERGENCY LIGHT OUTPUT

To verify compliance with the minimum light output required by federal, state, and local codes for emergency illumination of the path of egress, emergency light output may be calculated as follows: (1) Refer to the luminaire specification data and locate the efficacy of the fixture (delivered lumens per watt). (2) If not available on the data sheet, look up the rated efficacy on the DesignLights Consortium Qualified Products List (www.designlights.org). (3) Note the Sage Relay power rating on the data label, then: Emergency lumen output = Sage Relay Power Rating × Luminaire Efficacy (Lm). (4) Download available IES photometric files for the luminaire and use the calculated emergency lumen output to determine minimum illuminance at the specified mounting height. (5) The NFPA minimum standard is 1 fc average and 0.1 fc minimum at any point on the path of egress. Verifying minimum lighting for a single luminaire does not imply the complete installation will meet all required codes — that responsibility remains with the specifying engineer or designer.

GENERAL — EMERGENCY INPUT & COMMISSIONING

This guide is organized by mount method: in-fixture for Relays 1, 2, 5, and 6, and external J-box for Relay 3. For every relay, the Relay is powered by the 24 VDC emergency supply from the Sage Central Battery Cabinet: connect the central-battery 24 VDC POSITIVE and NEGATIVE emergency branch-circuit wiring to the relay's POSITIVE INPUT (Red) and NEGATIVE (Green) — observe correct polarity. Install the relay within the fixture driver enclosure or other Fire & Electrical Enclosure as detailed per mount method. Building AC supply and emergency DC supply from the central battery must be routed through separate cable openings (K.O.). After wiring, activate AC normal branch-circuit power to confirm LED lamp operation, then activate the central battery and check emergency-power operation (AC power may remain on).

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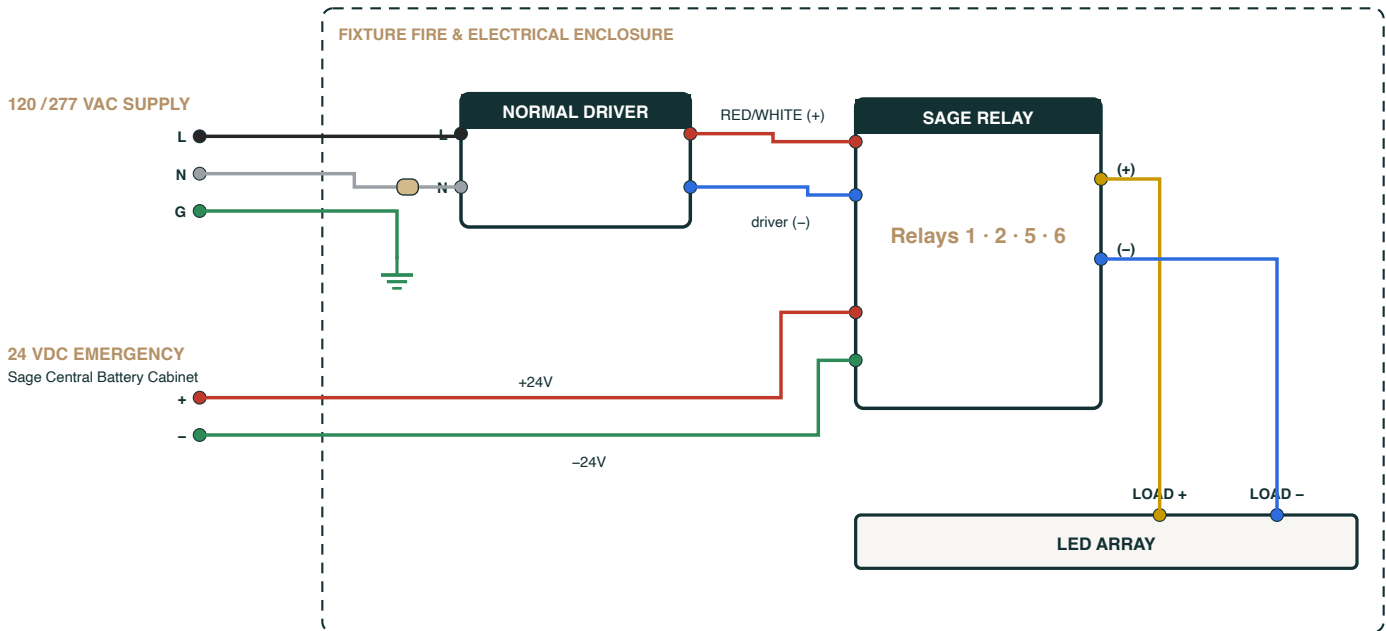
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IN-FIXTURE MOUNT · Relays 1, 2, 5, 6

For the in-fixture relays — Relays 1, 2, 5, and 6 — the Relay mounts inside the host fixture. The wiring is identical for all four; the relay is Sage Design-selected to the host fixture by load, voltage, and form factor.

WIRING DIAGRAM



Conductor colors per the Wiring Color Key (Page 1).

WIRING PROCEDURE

1. Open the luminaire driver compartment to enable access to all input/output wiring.
2. Mount the Sage Relay package within the fixture driver enclosure or other Fire & Electrical Enclosure that is part of the fixture assembly. (If supplied, comply with the relay location and mounting instructions for specific fixture types.) Complete all wiring connections shown in the diagram and secure the wiring inside the driver compartment.
3. Output has a POSITIVE (Yellow) and NEGATIVE (Blue) wire. Using push-in wire nuts, connect the relay output to LED LOAD POSITIVE and LED LOAD NEGATIVE. DO NOT CROSS-POLARIZE LED WIRING.
4. Connect the output (+) of the normal driver to the relay RED/WHITE-stripe wire.
5. Connect the 24 V emergency supply from the central battery cabinet POSITIVE and NEGATIVE branch-circuit wiring to relay POSITIVE INPUT (Red) and NEGATIVE (Green).
6. Using standard wire nuts or approved push-in connectors, connect Normal Driver AC LINE and NEUTRAL input. Connect GROUND to the appropriate fixture terminal.
7. Replace the compartment cover and close the fixture. Activate AC normal branch-circuit power to confirm LED lamp operation. Activate the central battery cabinet and check emergency-power operation (AC power may remain on). NOTE: Building AC supply and emergency DC supply from the central battery cabinet must be routed through separate cable openings (K.O.).

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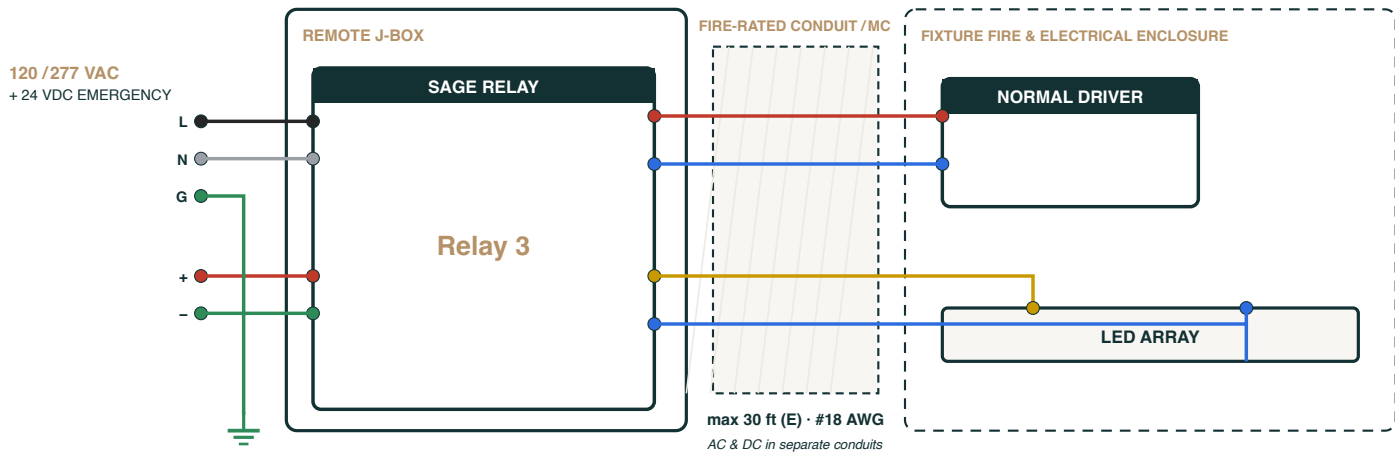
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EXTERNAL J-BOX MOUNT · Relay 3

For Relay 3 — used where an in-fixture mount will not fit — the Relay is installed in an external junction box and routed to the host luminaire. Route AC and DC from the J-box to the luminaire through min. 1-hour fire-rated conduit or flexible metal-case (MC) enclosure. Single driver shown; see the fixture-mount diagram for multiple-driver options.

WIRING DIAGRAM



Conductor colors per the Wiring Color Key (Page 1).

WIRING PROCEDURE

1. Locate a junction box of suitable size for the required wiring and the relay unit. NOTE: Using #18 AWG for the low-voltage output to the luminaire (Blue and Yellow connections), the maximum distance from the relay to the luminaire should not exceed 30 ft (dimension E).
2. Connect the emergency supply from the central battery cabinet 24 VDC POSITIVE and NEGATIVE emergency branch-circuit wiring to relay POSITIVE INPUT (Red) and NEGATIVE (Green), and the 120/277 VAC building-supply LINE and GROUND inputs to the relay in the J-box as shown.
3. Route AC wiring and DC wiring from the J-box to the luminaire through separate conduit or MC flexible cables, to separate connectors on the luminaire housing.
4. Using standard wire nuts or approved push-in connectors, connect Normal Driver AC LINE and NEUTRAL input and connect GROUND to the appropriate fixture terminal.
5. Connect relay POSITIVE OUTPUT (Yellow) and NEGATIVE OUTPUT (Blue) to LED LOAD POSITIVE and NEGATIVE. DO NOT CROSS-POLARIZE LED WIRING.
6. Connect the output (+) of the normal driver to the relay RED/WHITE-stripe wire.
7. Activate AC normal branch-circuit power to confirm LED lamp operation. Activate the central battery cabinet and check emergency-power operation (AC power may remain on).

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RELAY 4 · HIGH-BAY

Relay 4 · High-Bay Installation

IN PREPARATION

Installation instructions for Relay 4 (high-bay) are being finalized against the manufacturer's high-bay source documentation and will be issued in a forthcoming revision. For the in-fixture relays (1, 2, 5, 6) and the external J-box relay (3), follow the procedures in this guide.

Pending high-bay source documentation — to be issued in a forthcoming revision.

This page is a placeholder. No high-bay installation procedure is published in this draft.

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