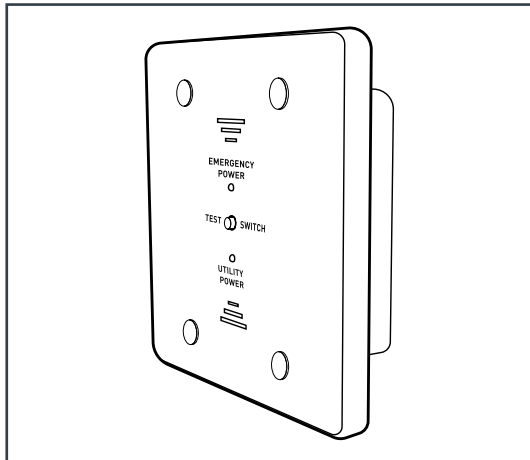


EMERGENCY LIGHTING CONTROL RELAY (120 OR 277) 6A (ELCR XXX-6A234)



OVERVIEW

The ELCR XXX-6A234 is a single zone, silent emergency transfer control with universal dimming capability. It can be used with 2 and 3-wire line voltage dimming systems, as well as 0–10V, DALI, and Lutron EcoSystem.

The ELCR allows emergency lighting to be dimmed with regular lighting during normal times. In the event of a utility power interruption, the ELCR automatically transfer designated emergency fixtures from the dimming control to the emergency power source and bring them to full brightness, regardless of whether the dimming system is in operation or turned off.

FEATURES

- Slim, attractive flush mount profile allows easy access to manual test switch and LEDs
- Separate Utility & Emergency Power Indicator LEDs for regular and emergency power allow verification of correct wiring connections
- Integral Test Switch provides convenient anytime testing
- Voltage Surge Protection insures reliable performance under adverse conditions
- Emergency Power Supervision: An ELCR uses internal supervision circuits to prevent emergency luminaires from illuminating during normal times if Emergency Hot or Neutral conductors have been interrupted. This gives warning that a problem exists with emergency supply, which would be unnoticed, especially when mounted above the ceiling tile
- Triple Interlock (electrical, mechanical, and time delay) maximizes safety and reliability of the ELCR, by eliminating arcing and the potential for phase to phase shorts between separate powers sources during transfer

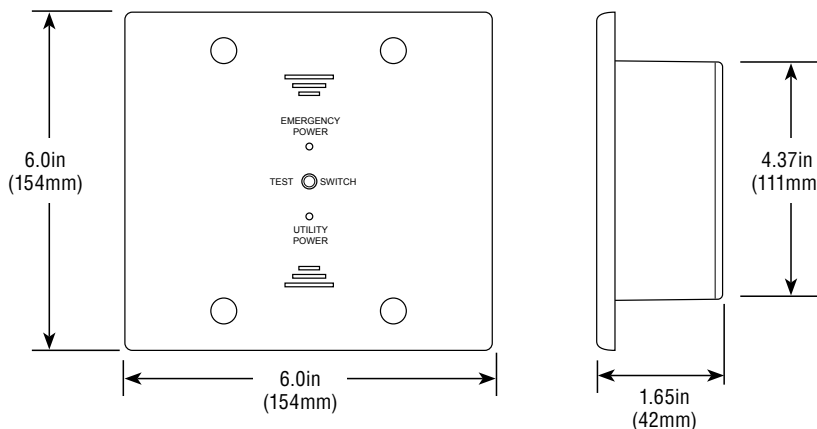
APPLICATIONS

- Auditoriums • Restaurants • Conference Rooms
- Theaters • Classrooms

SPECIFICATIONS

ELECTRICAL
<ul style="list-style-type: none"> • cULus UL924 Listed • 120V/277V Sensing Input • 120V/277V (20AMP) Load Rating • 20A (120V/277V) Ballast Load Rating • 1800W (120V) / 1500W (277V) Incandescent Load • Voltage Surge Protection
MECHANICAL
<ul style="list-style-type: none"> • 4.69" Back-up Box, no plaster ring required • UL94-0 + UL2043 Plenum Rating • Safe for installation above the suspended ceiling • Shipping Weight/Color: 16 oz. / White • Temperature: 32°F - 140°F (0°C - 60°C) • Limited Five-Year Warranty
MODEL: ELCR 120-6A234
120VAC Ballast 20AMP 120VAC Tungsten 1800 Watt General Use 20AMP
MODEL: ELCR 277-6A234
277VAC Ballast 20AMP General Use 20AMP

DIMENSIONS



ORDERING INFORMATION

PART NO.	CAT. NO.	DESCRIPTION
649128	ELCR 120-6A234	Emergency Lighting Control Relay 120 6A, Switched Load Override with 0–10V Dimming, Step Dimming, Line VOL
649129	ELCR 277-6A234	Emergency Lighting Control Relay 277 6A, Switched Load Override with 0–10V Dimming, Step Dimming, Line VOL



Project Name _____ Catalog # _____

1-800-436-7800 (Support, Option 8) www.lsi-industries.com

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METHOD OF OPERATION

ELCR single zone silent operating control is a versatile, cost effective unit, specifically designed for dimmable lights in public places where critical light levels of at least 1 foot candle must be maintained during a loss of normal utility power. The ELCR senses a loss or voltage drop and within 1.2 seconds transfers the load to an available emergency source. When the normal utility power is restored, the ELCR senses this and will transfer the load back to the normal utility power within 1.5 seconds. Momentary incorporated test switch simulates normal power failure and can be performed anytime. Any interruption of normal utility power will automatically transfer designated emergency lights to the full bright condition regardless of whether the dimming system is in operation or turned off.

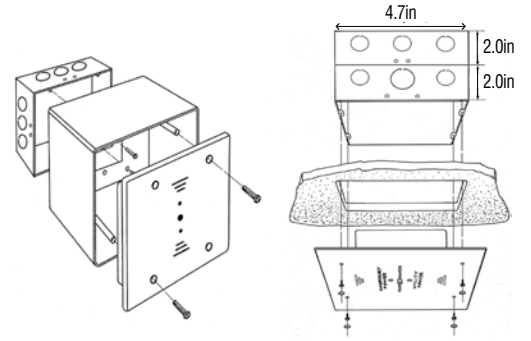
INSTALLATION

ELCR XXX-6A234 is designed to be installed as a wiring device in the area the dimmable lights are, or in a central location. A qualified electrician should review and understand installation instructions before installing or servicing the device in accordance with national/local codes and requirements.

CAUTION: This unit shall be wired with a conductor that has an insulation rating of at least 75°C. The unit shall not be installed in j-boxes with through branch wiring

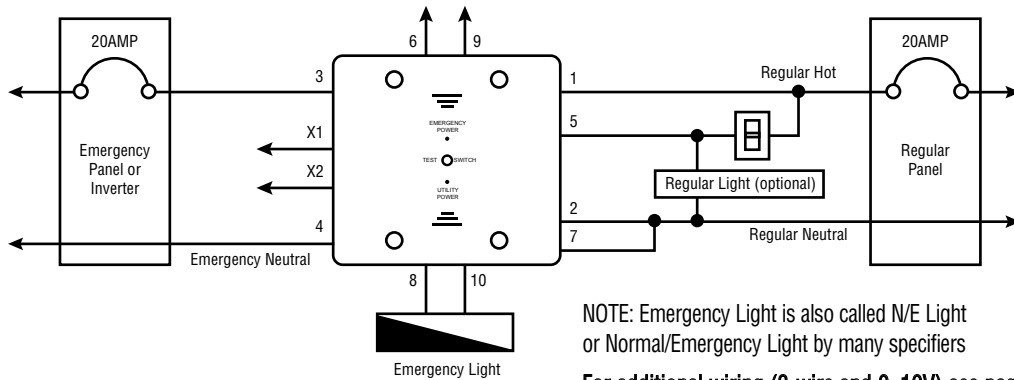
Check voltage and current requirements. Verify and lock out circuit breakers on both normal power and 24 hour night light/emergency generator circuit. Install a self-adhesive 2"x 3" caution label outside of ballast channel in each fixture/load controlled by an ELCR unit, cautioning that load is supplied from 2 different power sources, regular and emergency.

UNIVERSAL MOUNTING



Can be mounted surface, above suspended ceiling or flush

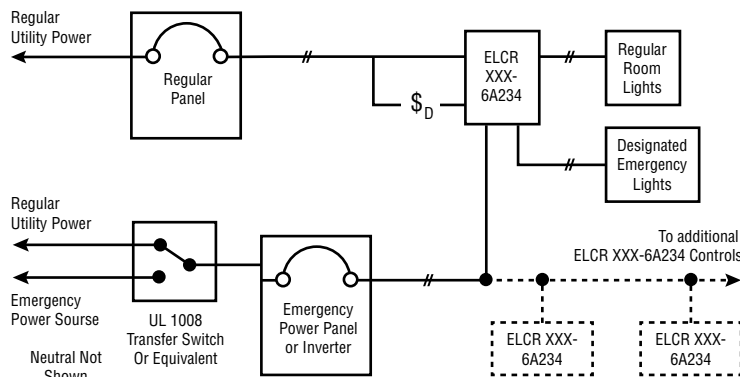
STANDARD 2-WIRE WIRING DIAGRAM



NOTE: Emergency Light is also called N/E Light or Normal/Emergency Light by many specifiers

For additional wiring (3-wire and 0-10V) see page 3 & 4

SINGLE LINE DRAWING



NOTE: Dimmer may be a stand-alone dimmer, multi-zone dimmer or central dimming panel. One ELCR XXX-6A234 is required per dimming zone with emergency lighting.



EMERGENCY LIGHTING CONTROL RELAY (120 OR 277) 6A (ELCR XXX-6A234)

THEORY OF OPERATION

When utility power on #1 and #2 is interrupted, emergency dimmed ballasts will then be automatically switched — after a time delay — to emergency power. After #1 and #2 power is interrupted, low voltage control signal (violet wire) is automatically interrupted and causes the designated emergency dimmed ballast loads to go to full brightness. This sequence of events will occur whether the system is turned on or off. The emergency load connected to #8 and #10 cannot exceed rating of ELCR XXX-6A234. The load connected to #5 and #7 is not controlled by the ELCR, therefore ELCR rating is not applicable.

INITIAL TESTING AFTER INSTALLING

1. Turn on regular power circuit breaker and if all wire connections are correct, utility power green LED will be illuminated.
2. Turn on 24/7 emergency circuit breaker. At this time, emergency circuit power is still derived from utility power. If all wire connections are correct and emergency power red LED will be illuminated.
3. Do not turn dimmer system on but only press the test switch on the ELCR. Designated emergency light fixtures should then come on full bright. These fixtures would also come on full bright if regular utility power circuit breaker is turned off. This is another testing method to use.
4. When regular utility breaker is on, operate the dimmer control and observe if all fixtures light up — including designated emergency fixtures — and if dimmer system lights respond normally when adjusted from low to high level.

FINAL TESTING

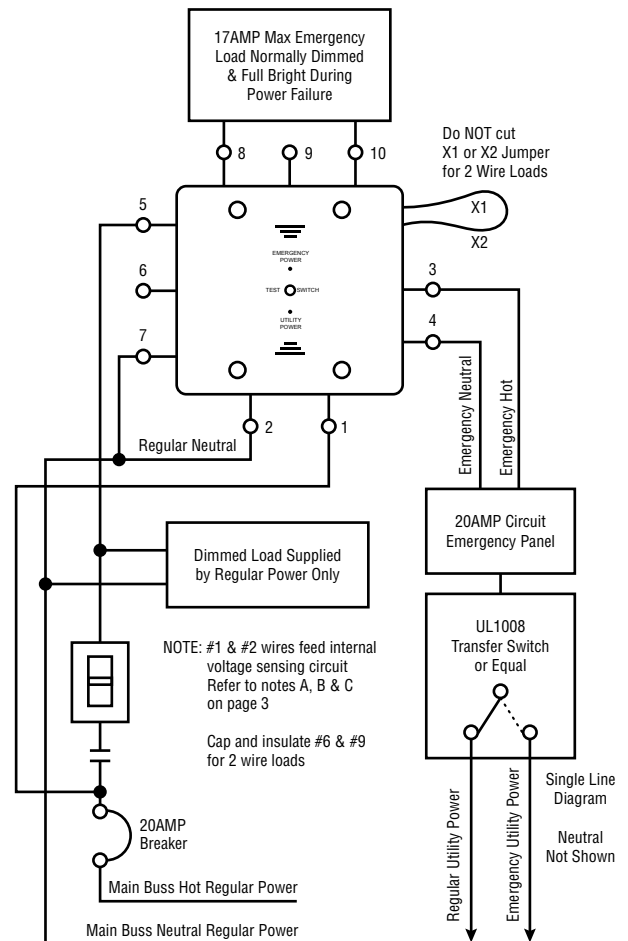
- A. Coordinate with occupants of the building a convenient time that the main circuit breaker can be turned off to test all emergency lights.
- B. When main circuit breaker is turned off, UL1008 transfer switch or equivalent will automatically change position and emergency circuits will now be powered from either a generator, inverter or UPS emergency source system.
- C. All designated emergency light fixtures will now be full bright regardless of whether the dimming system was turned on or off, and this is the intended function of the ELCR (while conforming to UL 924 standards).

NOTE A: #1 and #2 wires feed internal voltage sensing circuit inside the ELCR and are isolated

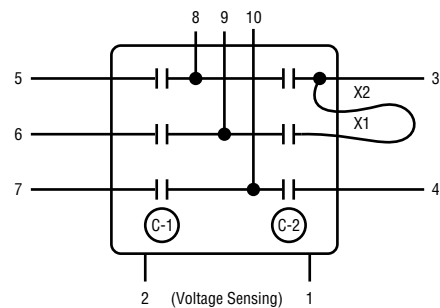
NOTE B: 20AMP emergency circuit can feed several ELCRs to supply the connected emergency load provided the total emergency load does not exceed a safe load

NOTE C: 20AMP circuit from panel can also be from a 20AMP breaker in dimmer cabinet

SILENT SINGLE ZONE AUTOMATIC EMERGENCY POWER TRANSFER CONTROL FOR 2-WIRE DIMMABLE LOADS

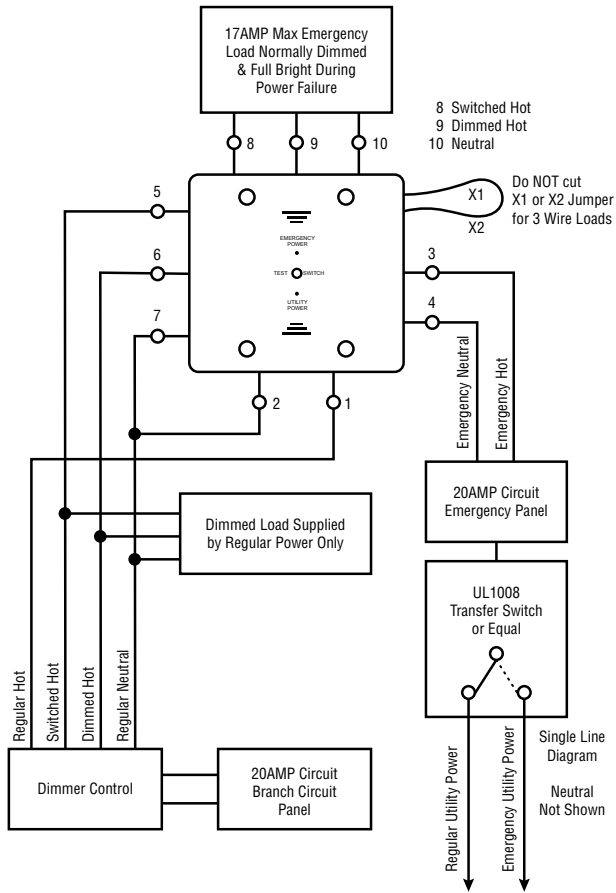


Internal Diagram

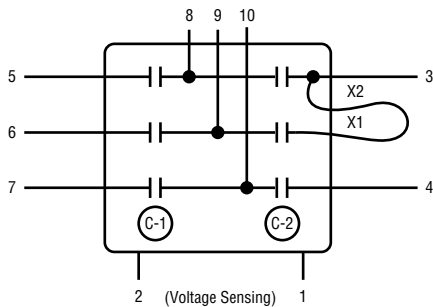


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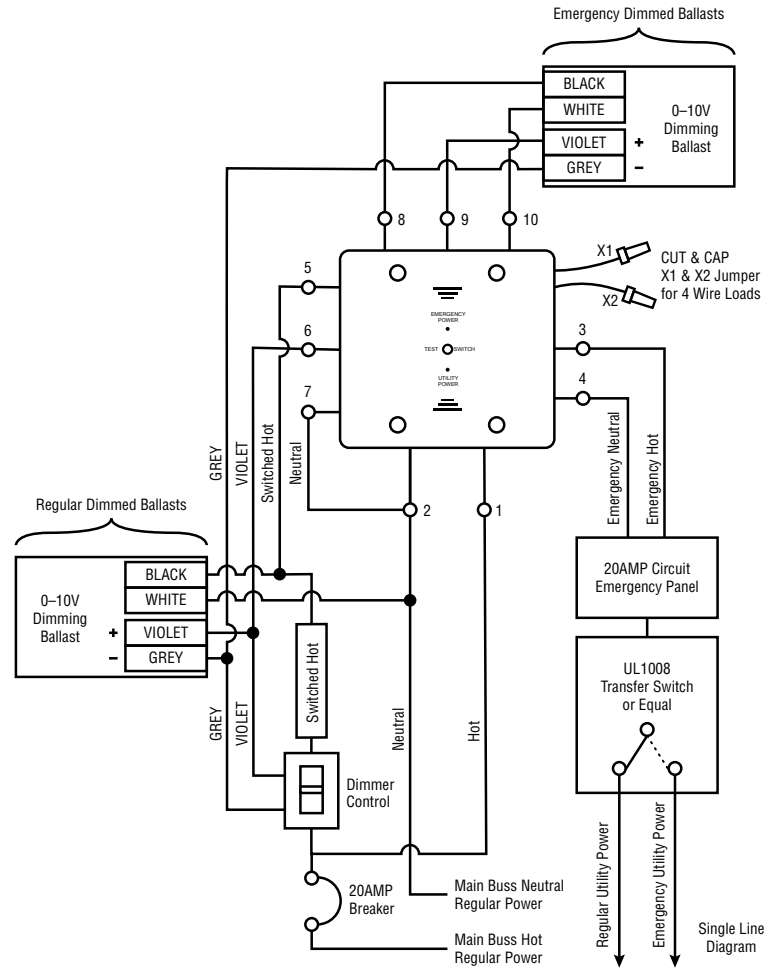
SILENT SINGLE ZONE AUTOMATIC EMERGENCY POWER TRANSFER CONTROL FOR 3-WIRE DIMMABLE LOADS



Internal Diagram



SILENT SINGLE ZONE AUTOMATIC EMERGENCY POWER TRANSFER CONTROL FOR 4-WIRE DIMMABLE LOADS (0-10V & DIGITAL BALLASTS)



Internal Diagram

