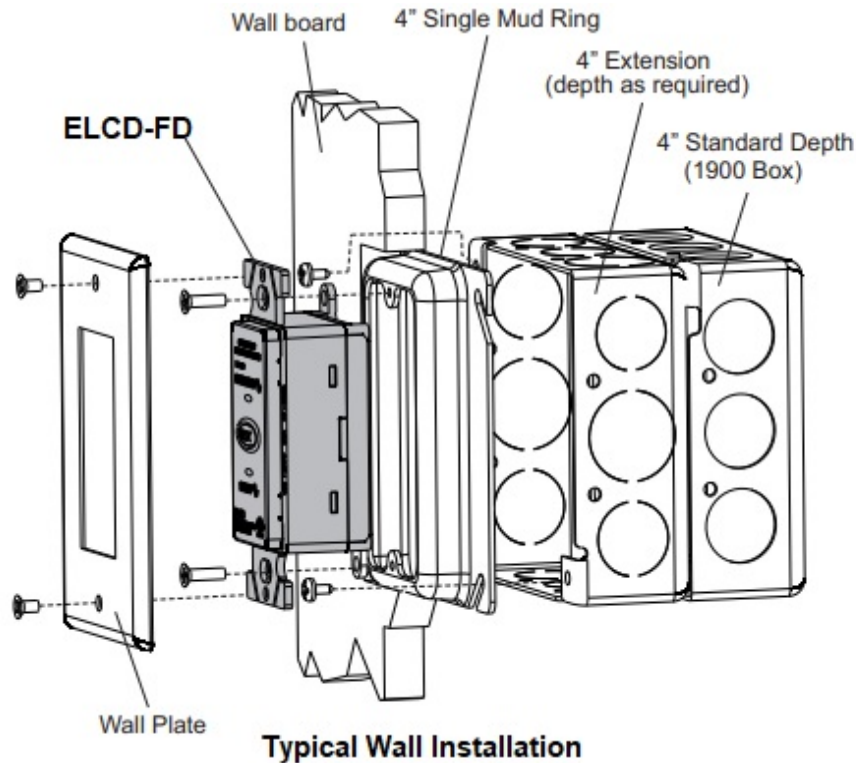
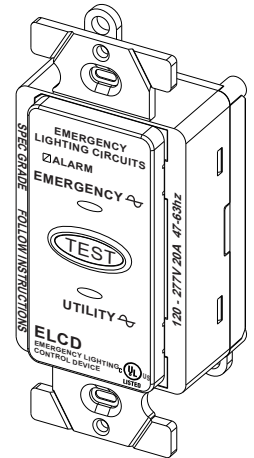


## ELCD/ ELCD-F/ ELCD-FD Typical Wiring Diagrams Emergency Lighting Wiring Diagrams when using a Central Inverter



The ELCD-FD can be installed in the Ceiling.

This Document provides fully compliant 2017 NFPA 70, NEC Article 700 wiring diagrams using a Central Emergency Lighting Inverter and UL924 approved Emergency Lighting Control Device (ELCD). Diagrams show Single zone application with normal lights and emergency lights, 0-10V interface, fire alarm interface and switched power interface.

**IMPORTANT – The ELCD does not transfer two nonsynchronous power sources. Emergency Power is continuously fed from the lighting inverter and provides the source of power for emergency fixtures under all modes of operation. Utility Power is only a sense line which causes a relay closure between the Emergency Power's Input/Output.**

### ELCD Inputs/Outputs:

**Emergency Power:** Emergency Power should always be present. Illustrations show a Central Inverter's Normally On output as the Emergency Power source. EMERGENCY LED Indicator will illuminate when present.

**Utility Power** should always be present. Loss of Utility Power will cause all models of the ELCD's internal power relay to connect the Emergency Power's Input to Output which will illuminate the Emergency Lights. UTILITY LED Indicator will illuminate when present.

Use of Switched Power allows all models of the ELCD to turn connected Emergency Lights on and off provided Utility Power is present.

Used in 0-10V dimming applications, the ELCD-FD dimming relay will open during an emergency condition causing the connected dimmers/drivers to go to full brightness.

**Fire Alarm:**

ELCD-F and ELCD-FD will go to emergency mode when 12-24V AC or DC is present.

### Operating Modes:

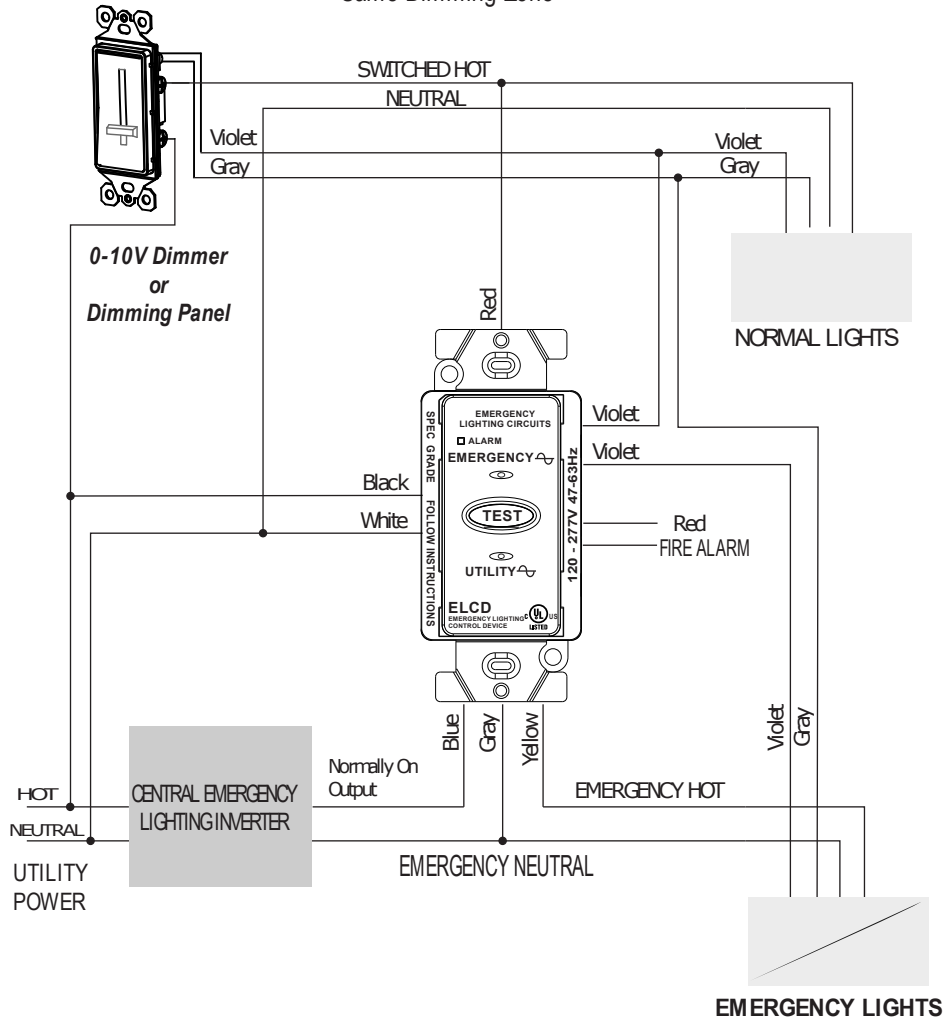
**Normal Mode:** Both Emergency Power and Utility Power are present. All models of the ELCD main relay is off (OPEN). 0-10V relay is closed to allow dimming control.

**Switched Mode:** Both Emergency Power and Utility Power are present. All models of the ELCD main relay can be turned on and off when Switched Power is on and off respectively. ELCD-FD Dimming relay is closed to allow dimming control.

**Emergency Mode:** Utility Power is not present or Test Button is depressed or Fire Alarm 12-24V is applied. All models of the ELCD main relay are on (CLOSED), ELCD-FD dimming relay is open so connected dimmers / drivers are at full brightness.

### CENTRAL INVERTER WITH ELCD-FD

Single Zone Dimmed Using 0-10V Dimmer or Dimming Panel  
Shows Emergency and Non-Emergency Lights on Same Dimming Zone

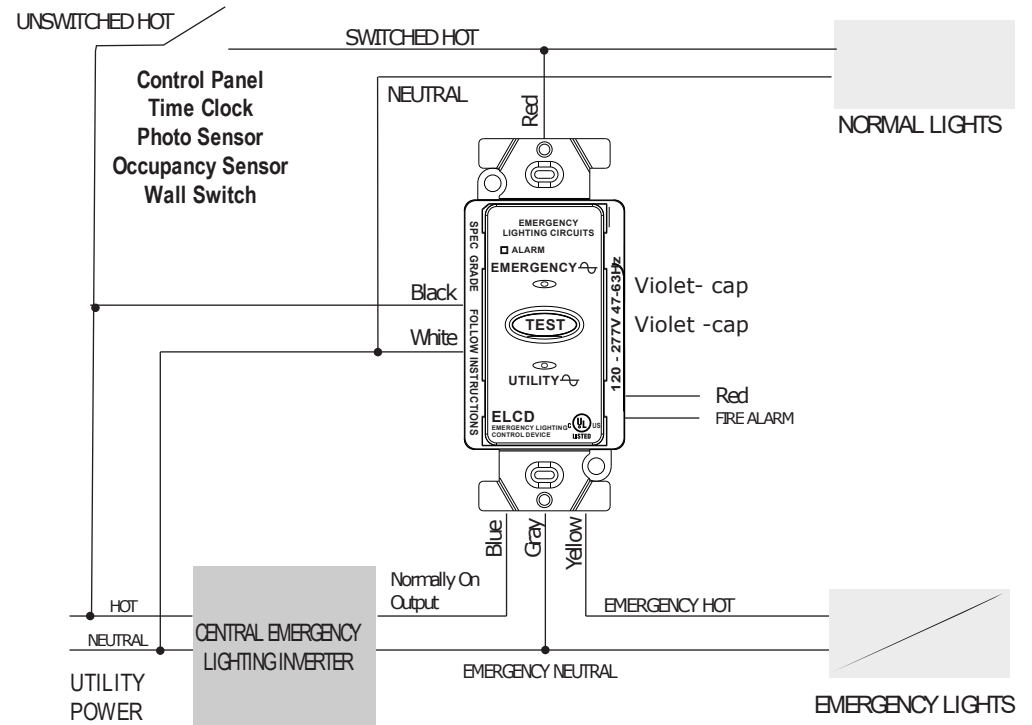


#### Operation:

During Normal Mode, Emergency Lights and Normal Lights can be dimmed with 0-10V dimmer or dimmer panel. Switched (Red) wire allows Normal Lights and Emergency Lights to be turned on/off.  
During Emergency Mode, ELCD-FD opens the 0-10V (Violet) connection between Emergency Lights and Dimmer which brings them to full brightness. Upon loss of Utility Power (Black), the ELCD-FD connects the Inverter's Normally On output to the Emergency Lights regardless of the Switched (Red) state.

### CENTRAL INVERTER WITH ELCD-DF Non- 0-10 Dimming - Cap unused leads

Single Zone Switched Using Lighting Control Panel, Time Clock, Photo Sensor, etc  
Shows Emergency and Non-Emergency Lights on Same Switching Zone



#### Operation:

During Normal Mode, Emergency lights and Normal lights can be turned On/Off with the Red (Switched) signal as long as Utility Power is present. Black (Utility) is the sense signal for the ELCD's internal power relay. Red and Black leads are signal wires only and do not carry load current. Load current for the Emergency Lights is carried on Blue (Emergency Input) and Yellow (Emergency Output).  
During Emergency Mode (loss of Utility Power), the ELCD will automatically connect the Inverter's Normally On output power to the Emergency Lights regardless what state the Switched signal is in.

Operation: Fire Alarm input can be 12-24V AC or DC.