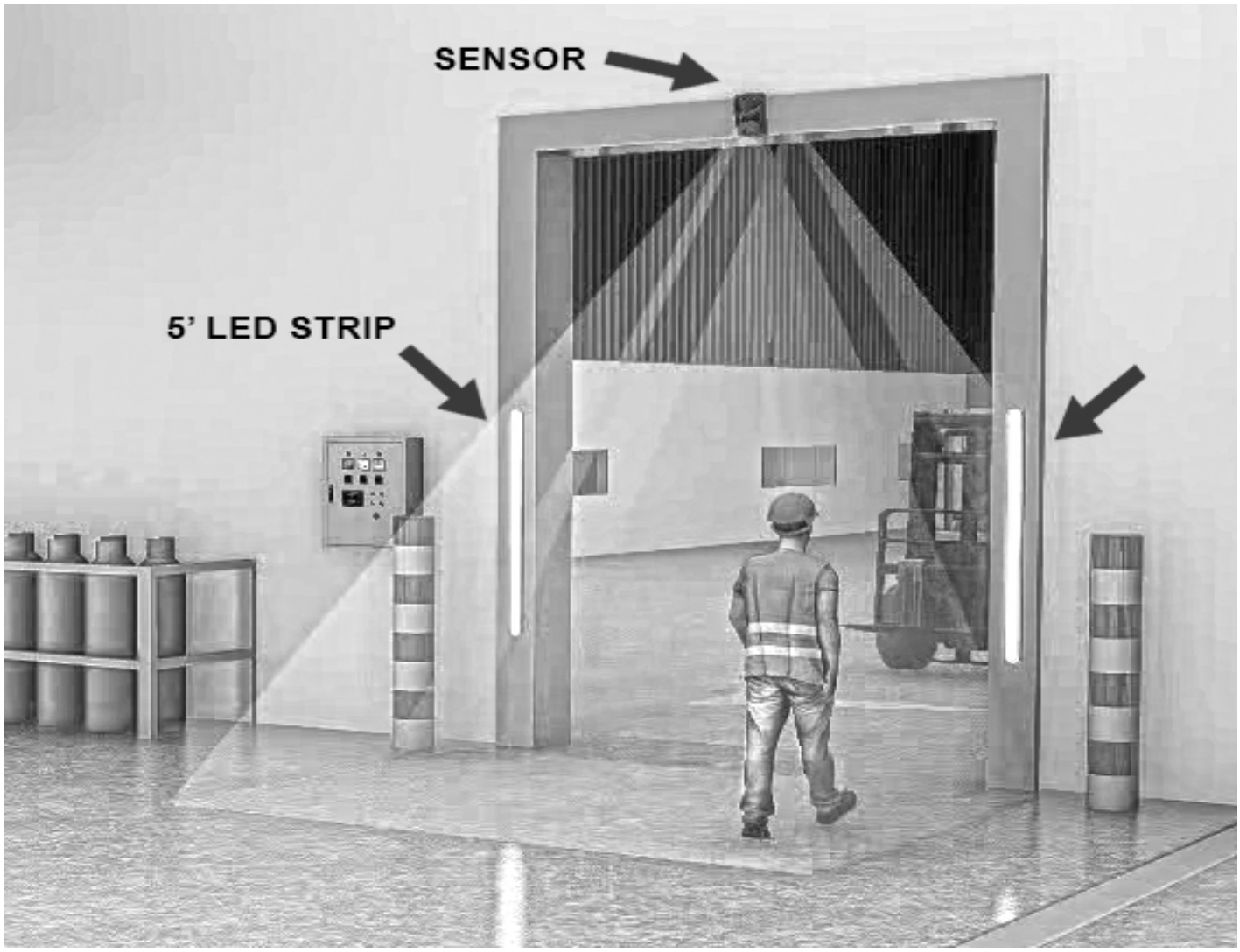
BRINK ALERT

LED SAFETY LIGHT SYSTEMS



APPROACH ALERT 2-WAY

INSTALLATION MANUAL

www.BrinkAlert.com

IMPORTANT SAFETY INFORMATION

For safe installation and trouble-free operation, YOU MUST:

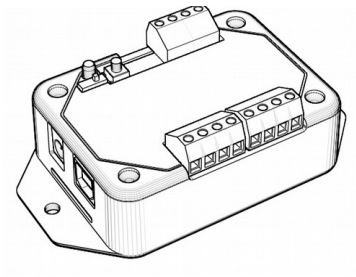
- Carefully read this instruction manual before beginning.
- Always use appropriate PPE during installation including safety glasses, gloves and hearing protection as needed.
- Follow each installation step exactly as shown.
- Observe all local, state, and national electrical codes.
- Pay close attention to all danger, warning, and caution notices given in this manual.
- Always use the parts supplied by the manufacturer or other prescribed parts unless directed otherwise.
  NOTE: Use of non-prescribed parts can cause serious accidents such as the unit to fall, electric shock, or fire.

USE CAUTION WHEN WIRING: ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY QUALIFIED & EXPERIENCED INSTALLERS SHOULD ATTEMPT TO WIRE THIS SYSTEM.

- Do not supply power to the unit until all wiring and connections are completed or reconnected and checked.
- Highly dangerous electrical voltages and moving parts are used in the operator. Carefully refer to the wiring diagram and these instructions when performing any wiring.
- Ground the unit following local electrical codes.
- Connect all wiring tightly. Loose connections can become disconnected due to vibrations from heavy door equipment.
- Install as directed. BrinkAlert LED Safety Light Systems and LED Controllers are intended for use as described herein and by the product literature available for download at www.BrinkAlert.com.
- Any misuse, alteration, or modification of BrinkAlert branded products beyond what is described in the available product literature will void all warranties.

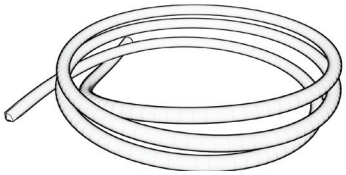
KIT COMPONENTS

- (4) LED Strips (5ft each)
- (4) 60ft LED Harness Cables **[HARNESS60]**
- (4) TRACKDUAL LED Retrainer Tracks
- (1) ApproachAlert LED Controller
- (1) 110V to 12VDC Power Supply **[PS12VIN]**
- (1) 10ft Signal Cable (4-wire 22AWG)
- (1) NEMA Box
- (1) Installation Manual

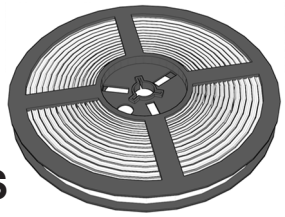


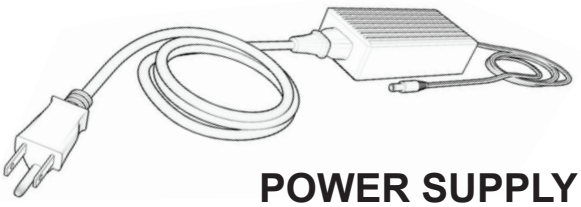
APPROACH ALERT LED CONTROLLER

SIGNAL CABLE

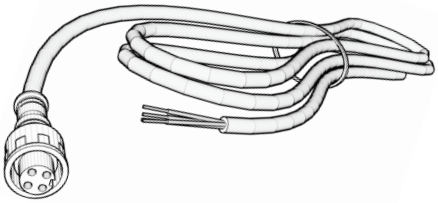


LED STRIPS

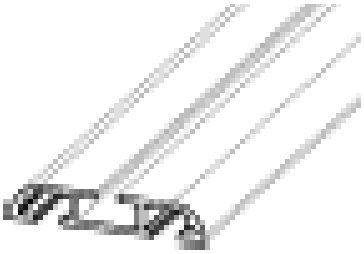




POWER SUPPLY



LED WIRING HARNESS



TRACKDUAL

RECOMMENDED TOOLS AND SUPPLIES (not included)

- Ladder or Lift
- Wire Stripper
- Multimeter
- Screwdrivers (various)
- Utility Knife
- Doubled-sided foam tape or velcro
- Cleaner or Degreaser
- Clean Rags
- Dielectric Grease
- Zip Ties
- Marker

STEP BY STEP INSTRUCTIONS

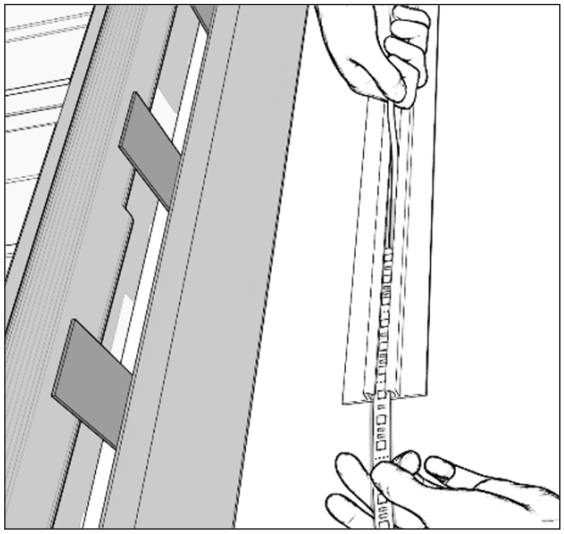
1. INSTALL LED RETAINER TRACKS

Install 4 LED Retainer Track directly on the walls using screws or 3 strips of double-sided foam tape per track. Mount retainers on left and right of both sides of the door.

2. INSTALL LED STRIPS

a. Insert cable end of LED strip into bottom end of lower retainer. Pull cable straight up along length of the track.

b. When fully-installed, crimp both ends of retainer track with pliers to ensure LED strip doesn't slide down in the track due to time or vibrations.

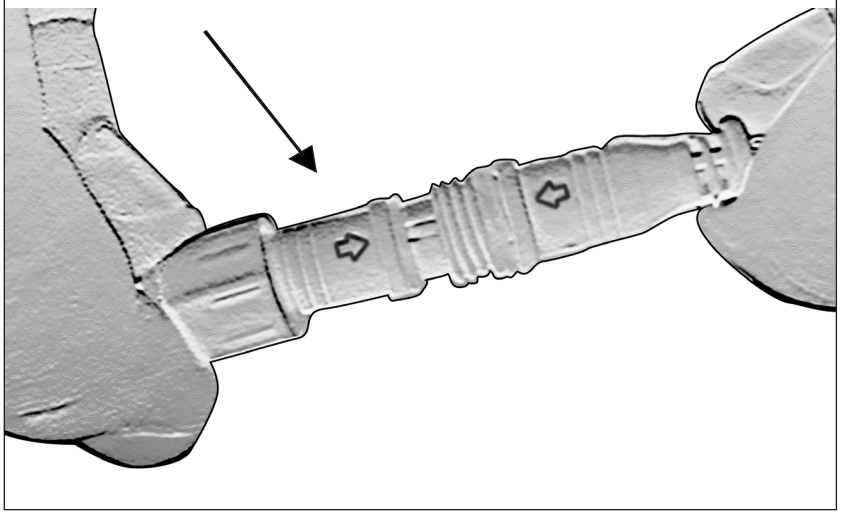


3. CONNECT LED STRIPS TO LED HARNESS CABLES

Plug one end of the connector into the other using the arrow alignment notch. Tighten nut onto the connector.

There is dielectric grease inside the connector that ensures longevity of your connection points and creates a proper seal.

Align notch for correct orientation



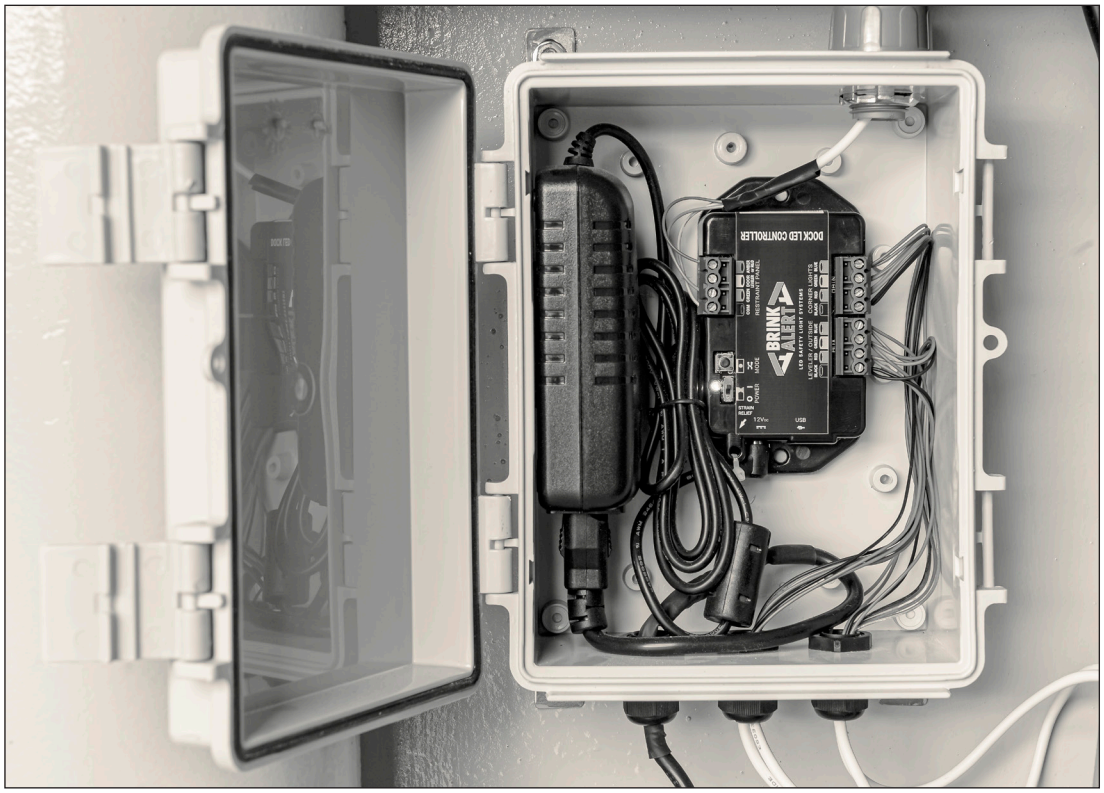
4. INSTALL NEMA BOX NEAR POWER SOURCE

Mount NEMA Box close to a 110V power supply. Ensure the LED Harness Cables can reach it.

5. RUN LED HARNESS CABLES TO NEMA BOX

RECOMMENDATION:
Identify the **"Near"** side as the same side where the LED Controller is mounted, and the **"Far"** side furthest away from the LED Controller.

a. Route the LED Harness Cables from 4 LED strips to the NEMA Box, ensuring clean cabling.
b. Mount 2 of the LED Harness Cables from the **"Near"** side to the **MAIN LED STRIP** header.
c. Mount 2 of the LED Harness Cables from the **"Far"** side to the **AUX STRIP** header.



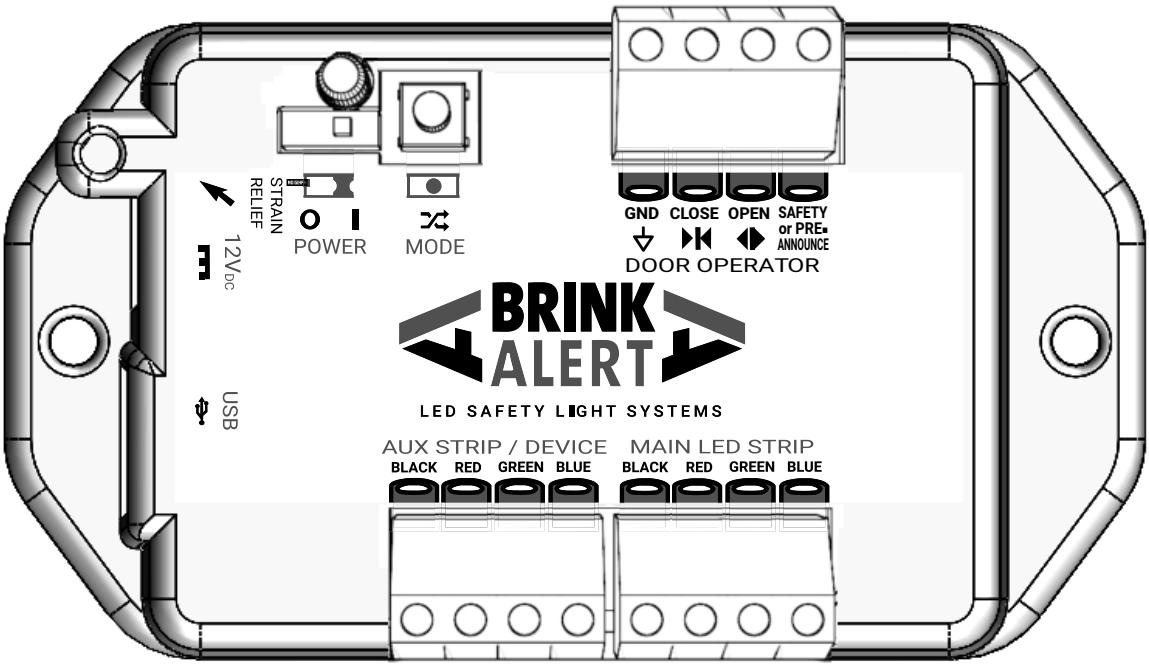
6. DOES DOORWAY HAVE POWERED DOOR OPERATOR?

If YES, Connect Signal Cable to Operator:

a. Turn off power to door operator
b. Run signal cable from NEMA Box to door operator.
c. In NEMA BOX:
   Connect black wire to LED Controller GND port (black).
d. In NEMA BOX:
   Connect yellow wire to LED Controller SAFETY port (white).
e. In Door Operator housing:
   Connect black wire to Operator Common
f. In Door Operator housing:
   Connect yellow wire to Operator Open Limit (spare N/O spade)

If NO, Program for No-Door Mode:

a. Power-up the LED Controller
b. Hold MODE button down for 3 seconds until status LED begins to flash.
c. LED Controller is now programmed for “No-Door” Mode.



7. INSTALL MOTION / PRESENCE DETECTORS

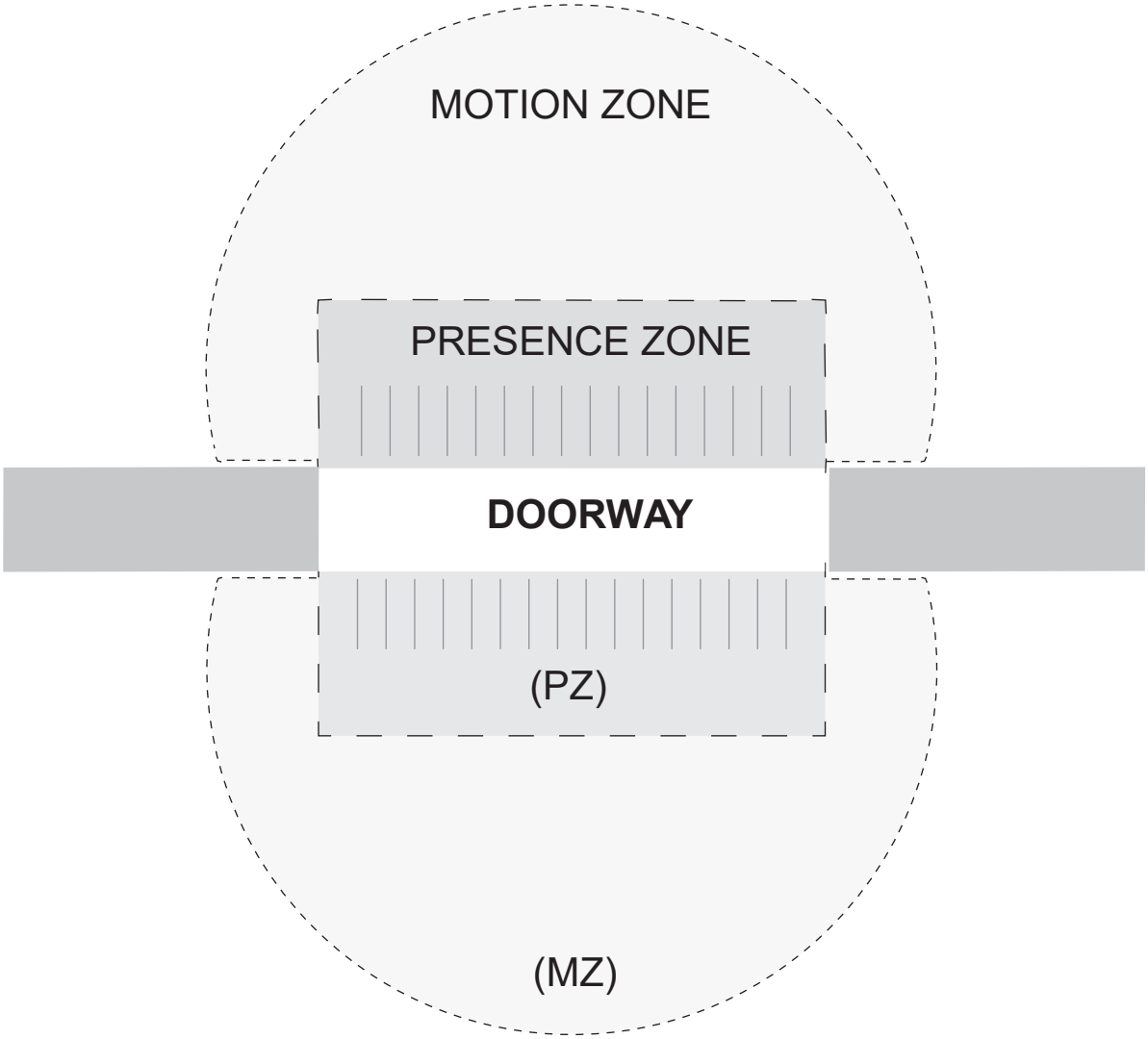
The motion and presence detectors need to be installed above both sides of the door.

a. **Presence Zone** should cover entire door entry and 3-4 feet from the wall.
   Objective: Trigger on non-moving objects left in the path of a vehicle that might get hit.
b. **Motion Zone** should cover 2-3 times greater area than Presence Zone.
   Objective: Trigger on the approach of a person or vehicle to a door.
c. Program presence and motion detection to ignore departing traffic.
d. Connect 1 wire of signal cable to N/O outputs of both presence and motion relays.
   i. “Near” Side: Use Green wire
   ii. “Far” Side: Use Red wire
e. Connect black wire of signal cable to sensor device relays’ Common / Ground outputs.

8. CONNECT SIGNAL CABLE TO LED CONTROLLER

The motion and presence detectors need to be installed above both sides of the door.

a. Route the 2 Signal Cables to the NEMA Box, ensuring clean cabling.
b. Connect All the Black wires to the Controller’s GND port.
c. Connect the Red Wire (from the “Far” sensor) to the Controller’s CLOSE port.
d. Connect the Green Wire (from the “Near” sensor) to the Controller’s OPEN port.



9. POWER-UP & TEST

a. Power-up the Door Operator with door closed.
b. Power-up the LED Controller.
   • LEDs should Flash-Amber for 2-seconds, then fades out.
c. Power-up the Motion/Presence Detectors.
d. Adjust the Motion and Presence Zones as needed to optimize the door's scenario.

Still need help? Call our Tech Support line at (786)339-9840.
There are many subtle configuration settings that can be tweaked to get your project working. We are eager to help you ensure that EVERY PROJECT IS A SUCCESS!

APPENDIX A: PROGRAMMING THE LED CONTROLLER

You can cycle between **primary modes** by holding the mode button down for about 3 seconds while the power is on. If there is custom programming on the controller, the Status LED will fade in and out.

Mode 1: Standard with Door

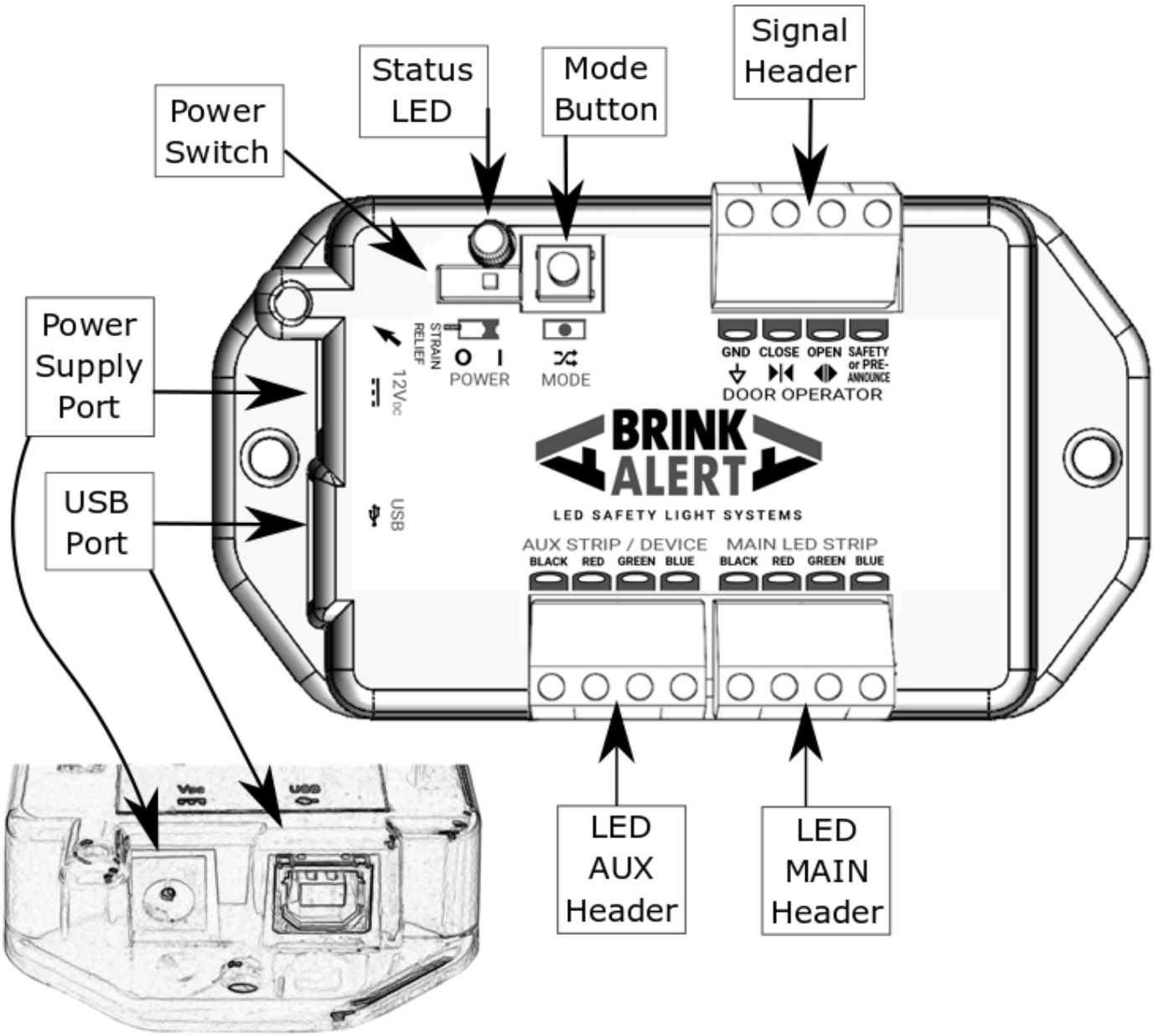
- Status LED = Steady

Mode 2: Standard without Door

- Status LED = Slow flashing (1 per second)

Mode 3: Standard with Door, White flashing if Squad-Card Effect

- Status LED = Fast flashing



APPENDIX B: LED COLOR SIGNALS

The LED Strips will either be a solid or flashing color as seen below:

LED Strip Color	Signal
Solid & Flashing-Green	Proceed through door.
Flashing-Red	**DO NOT** proceed through door. Someone is coming towards you.
Flashing-Amber	Caution: Someone just went through the door. Or the door just reached Fully-Open status.
Squad-Car Effect (or Flashing-White)	Caution: Someone is coming through the door towards you, but you are moving towards the door and could be hit. Back-up NOW.
Strobing-Blue	Softly strobes every 20 seconds to confirm the system is working.

APPENDIX C: LED COLOR ACTIONS

Viewer is watching these scenarios from the “Near” side:

LED Controller Powered-Up: (TIMER_POWER_UP)

- All LEDs Flash-Amber for 2 seconds.

Door Fully-Open at rest: (TIMER_HEARTBEAT)

- All LEDs OFF. Flash-Blue every 20 seconds (default).

Door Begins to Close: (TIMER_DOOR_CLOSING)

- LEDs Flash-Red for 10 seconds, then LEDs go OFF.

Visitor Detected:

- Near-side: Near-side Solid-Green, Far-side Flashing-Red.
- Far-side: Far-side Solid-Green, Near-side Flashing-Red.

Visitor Passes Through Door (From Near-side): (TIMER_EXIT)

- Near-side LEDs Flash-Amber, Far-side Flash-Red.
- LEDs go OFF after 5 seconds (default).

Visitor Passes Through Door (From Far-side):

- Far-side LEDs Flash-Amber, Near-side Flash-Red.
- LEDs go OFF after 5 seconds (default).

Visitor Dectected (Near-side), then a Far-side visitor is detected:

- Near-side Solid-Green.
- Far-side Flash-Red until Far-side visitor is detected.
- Then Far-side LEDs flash “Squad-Car Effect” to warn Far-side visitor they are in danger of being hit. They should back up to let other visitor pass through door.

Visitor Detected (Near-side), but stops to talk to friend and waits to enter the door:

- Near-side LEDs Solid-Green.
- Far-side LEDs Flash-Red.
- After 60 seconds (default), the Solid-Green LEDs begin Flashing-Green (TIMER_HURRY_UP).

APPENDIX D: TROUBLESHOOTING

Lights do not turn on

Possible Issue: Power Supply Problems

- Check LED Controller. Is its amber LED on?
- Is the 110V power adapter on? Check 110V power wiring at the operator's power source. Trace wire from LED Controller.
- Check Press-on Headers. Are the wires well-secured? Are they pressed in vertically all the way? Screws facing outwards? Match wire colors with the words on the LED Controller's cover.
- Ensure the external connector mating the LED Harness Cable to the LED Strip is fully connected. Check pins inside the connector.

Lights do not change colors or keep flashing red

Possible Issue: Signal Wire Problems

- Signal wiring is disconnected.
- If door operator exists, use a multimeter to determine what type of signals present for fully-open and fully-closed.
- If door operator exists, check if the LED Controller is properly grounded to the same Common in use by the Operator.
- Potential programming issue with LED Controller.

LED CONTROLLER OPTIONS

Feature	Jumper Connections	Description
Change threshold voltage from 2.5V to 8.5V	Main Red & Main Green → Close	Used in voltage-based signals to trigger based on the voltage of the incoming signal.
Disable Mode button	Black → Safety (White) & Close	If button disabled, holding it down does not reset the controller. Re-enabling the button can be done by entering programming mode without having any wires attached.
Flash White instead of Squad-Car Effect	Main Red → Open	Replaces Squad-Car Effect with flashing-White.

LED CONTROLLER INPUT LOGIC

Feature	Jumper Connections	Description
Enable logic mode	Black → Open & Safety	Only required if you had been previously selecting colors.
Toggle signal logic on <u>any</u> input	GND → Open / Close / Safety	Any combination of Open, Close and Safety allowed.
Toggle signal logic on <u>all</u> inputs	Black → Safety	A shortcut for GND → Open & Close & Safety.
Toggle dry-contact mode on selected inputs	Black → Close	To select an input, you must toggle it's signal logic at least once prior to using this command.
Enable AC4 Signal Converter	Main Blue → Open	This is a shortcut that disables the AC premium converter and dry contact mode. Useful if direct DC voltages or the AC signal converter basic is required.

LED CONTROLLER SHUT-OFF TIMERS

Feature	Jumper Connections	Description
Configure door close delay: (TIMER_DOOR_ CLOSING)	Main Red → Safety	Time (seconds) it takes for door to go from Fully-Open to Fully-Closed. Flash-Red during this timer. Default is 10 seconds.
Configure vehicle time-to-pass: (TIMER_EXIT)	Main Green → Safety	Delay (seconds) after door visitor leaves Near Side sensors and passes into Far Side. Gives him time to depart on Far Side before others are cleared to enter the door. Flash-Amber during this timer. Default is 5 seconds.
Configure door opened alert timeout: (TIMER_POWER_UP)	Main Blue → Safety	Time (seconds) the LEDs flash once the door reaches Fully-Open. Flash-Amber during this timer. Default is 2 seconds.
Configure green hurry-up delay: (TIMER_HURRY_UP)	Main Green → Open	Delay (seconds) before Solid-Green LEDs begin flashing to encourage door visitor to proceed or depart from the sensor zone. Maybe an object is triggering the presence detector and must be removed. Flash-Green after this timer expires. Default is 30 seconds.
Configure blue-strobe heartbeat timer: (TIMER_HEARTBEAT)	N/A	Delay (seconds) before LEDs flash-blue one time dimly to notify users that the system is functioning properly. Default is 20 seconds.

LED SAFETY LIGHT SYSTEMS

TECH SUPPORT HOURS
MONDAY-FRIDAY
9:00AM - 5:00PM EST

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LED Controller Patent # 11089662

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