LED SAFETY LIGHT SYSTEMS

LOADING DOCK LIGHT KIT - CORNERS

LDLK-C

INSTALLATION MANUAL

www.gateopenersafety.com | (888)-378-1043 | sales@gateopenersafety.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.

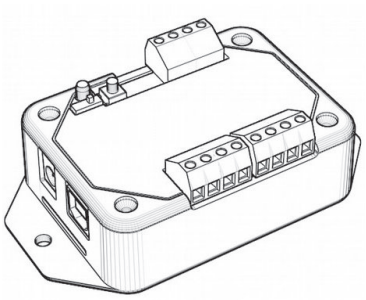
USE CAUTION WHEN WIRING: ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY QUALIFIED & EXPERIENCED INSTALLERS SHOULD ATTEMPT TO WIRE THIS SYSTEM.

- 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
- Any misuse, alteration, or modification of BrinkAlert branded products beyond what is described in the available product literature will void all warranties.

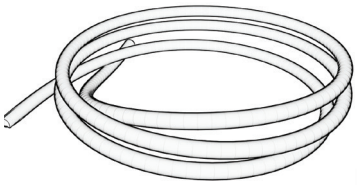
KIT COMPONENTS

- (2) Translucent ABS Corner LED Retainers (Left/Right)
- (2) Wall Mount Bracket with PVC Extension
- (1) 20ft LED Harness Cable **[HARNESS20-G]**
- (1) 30ft LED Harness Cable **[HARNESS30-G]**
  Additional lengths available from 10-100ft
- (1) Dock LED Controller **[CONTROL-LDLK]**
- (1) 110V to 24VDC Power Supply **[PS24VIN]**
- (1) 10ft Signal Cable (4-wire 22AWG)
- (1) AC Signal Converter
- (1) Installation Manual

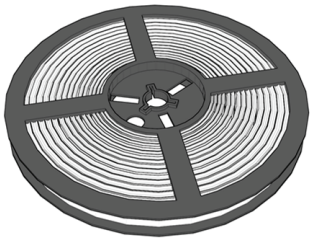
LDLK LED CONTROLLER

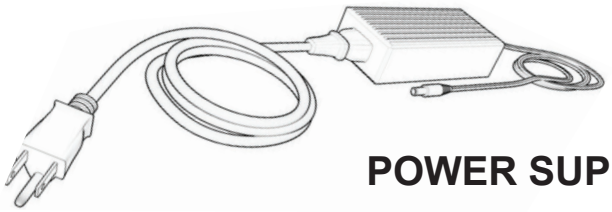


SIGNAL CABLE

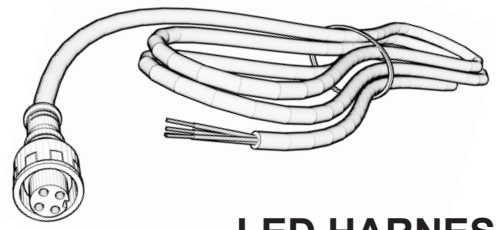


LED STRIP





POWER SUPPLY



LED HARNESS CABLE

RECOMMENDED TOOLS & SUPPLIES (not included)

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

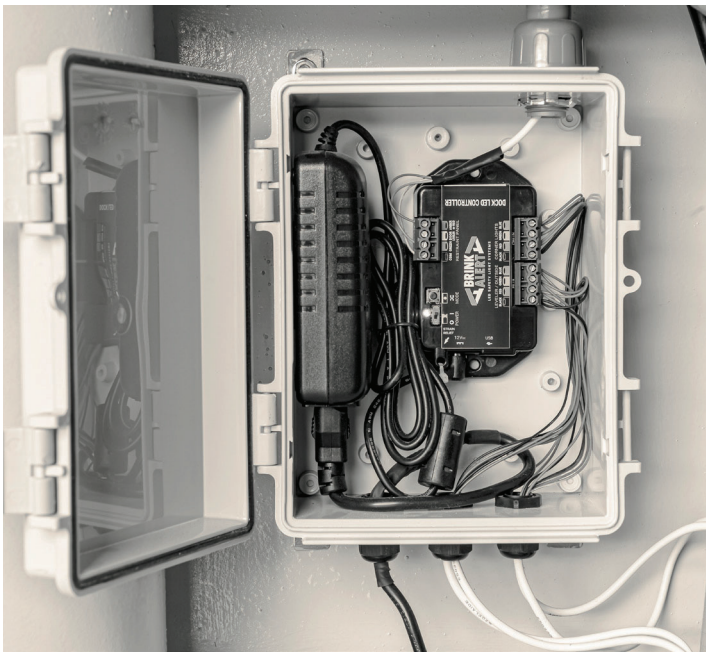
INSTALLATION OVERVIEW

1. TURN OFF ALL POWER TO TRUCK RESTRAINT, DOCK LEVELER and DOOR OPERATOR

WARNING: Serious injury could occur if all operator power is not disconnected prior to installation.

2. INSTALL NEMA BOX NEAR POWER SOURCE

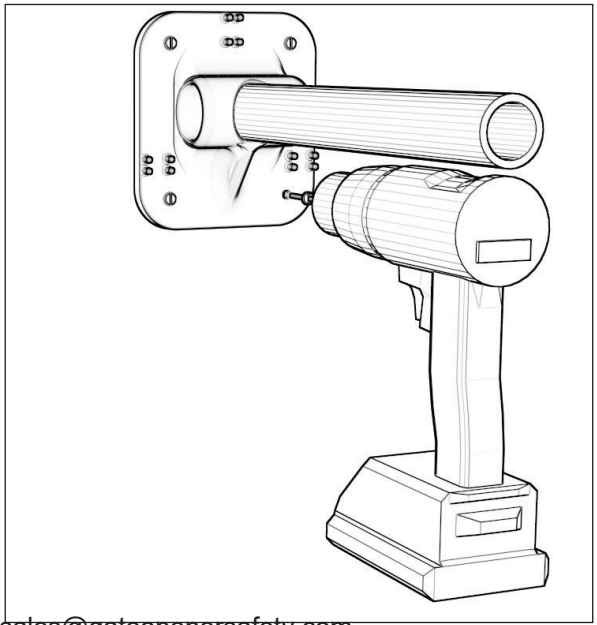
Mount NEMA box close to a 110V power source. Ensure the LED Harness Cables can reach it. Decide whether to mount the box vertically or horizontally. If horizontal, you may want the hinge on bottom so the door hangs down when open for convenient access.



3. INSTALL WALL MOUNT BRACKETS & EXTENSION

Determine the location of the brackets and safely mount onto the wall tightly using tapcons or your preferred method. Ensure no forklifts or trucks will hit the Corner LED Retainers.

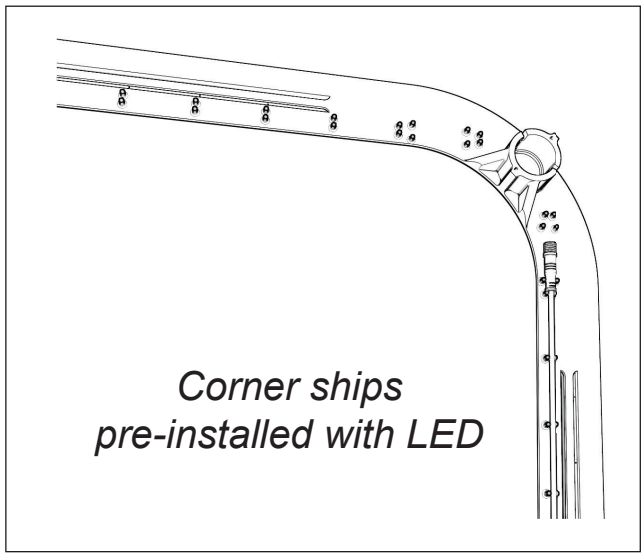
The PVC Extension pipe will have an opening that can be twisted to either bracket opening for the next step.

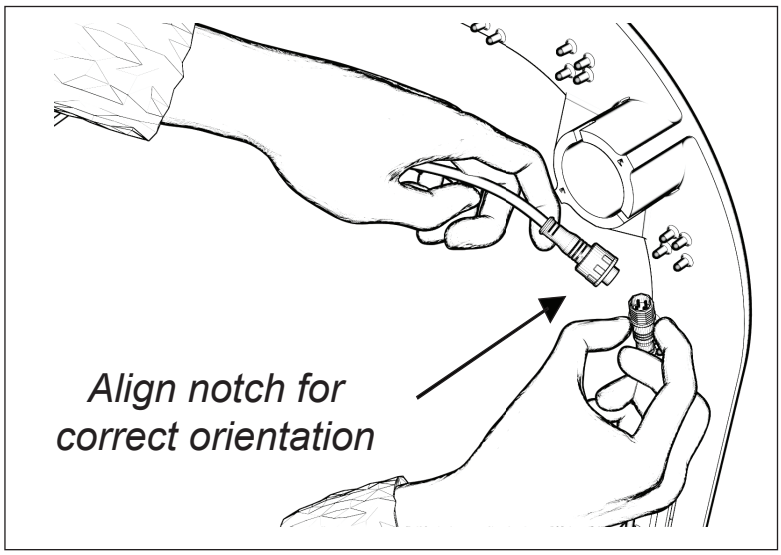


4. CONNECT LED HARNESS CABLE TO CORNER

Plug one end of the LED Harness Cable into the cable found on the backside of the Corner LED Retainer. Connect using the arrow alignment notches. There is dielectric grease inside the connector that ensures longevity of your connection points and creates a proper seal.

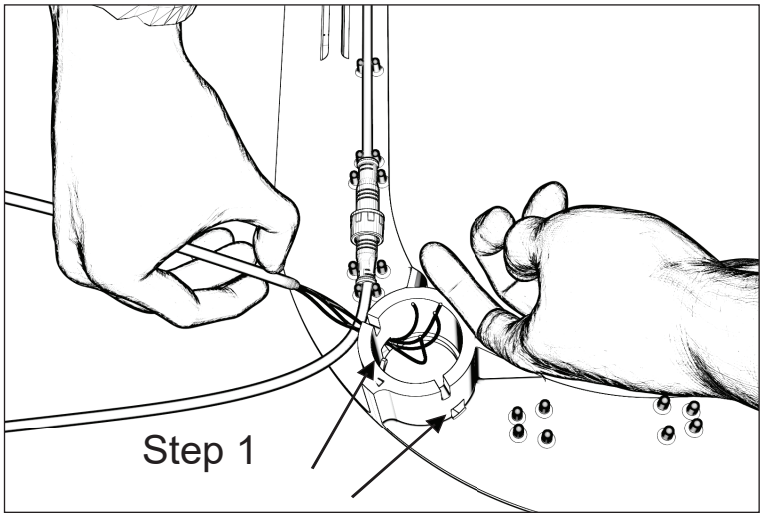
Use the 20ft LED Harness Cable for the corner light closest to the NEMA box and 30ft harness for the furthest away corner light.

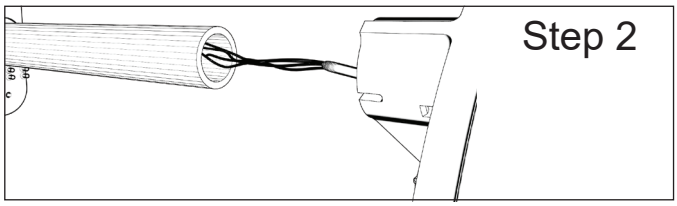


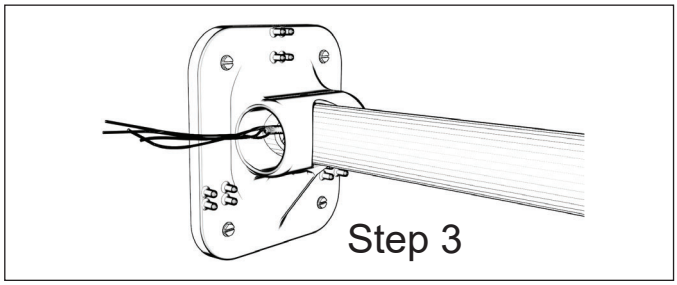


5. ROUTE LED HARNESS CABLES INTO BRACKET

Once the two connectors are tightly secured, route the harness cable through the hole on the Corner LED Retainer. Then pass the harness cable into the PVC Extension and out toward the bracket.

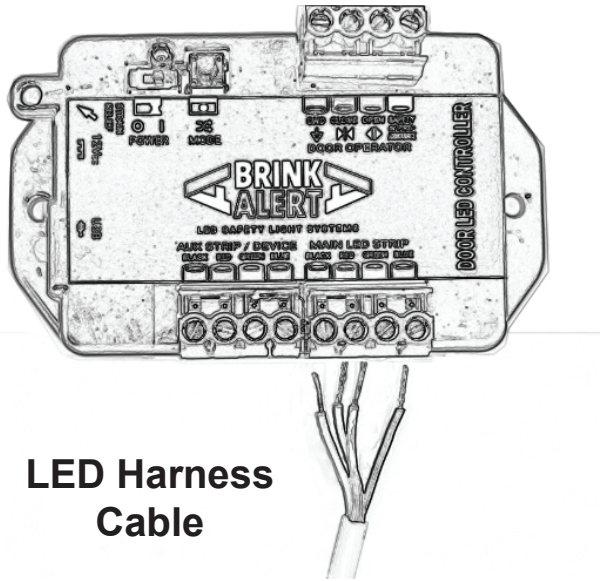






6. CONNECT LED HARNESS CABLE TO LED CONTROLLER

Route the LED Harness Cables into the NEMA Box through one strain-relief fitting. Connect both harness cables to the LED Controller's "CORNER LIGHTS" header as shown. Match the colors on the wire to the color described on the cover corresponding to each header port. Screw headers and wires should always face outwards from center.

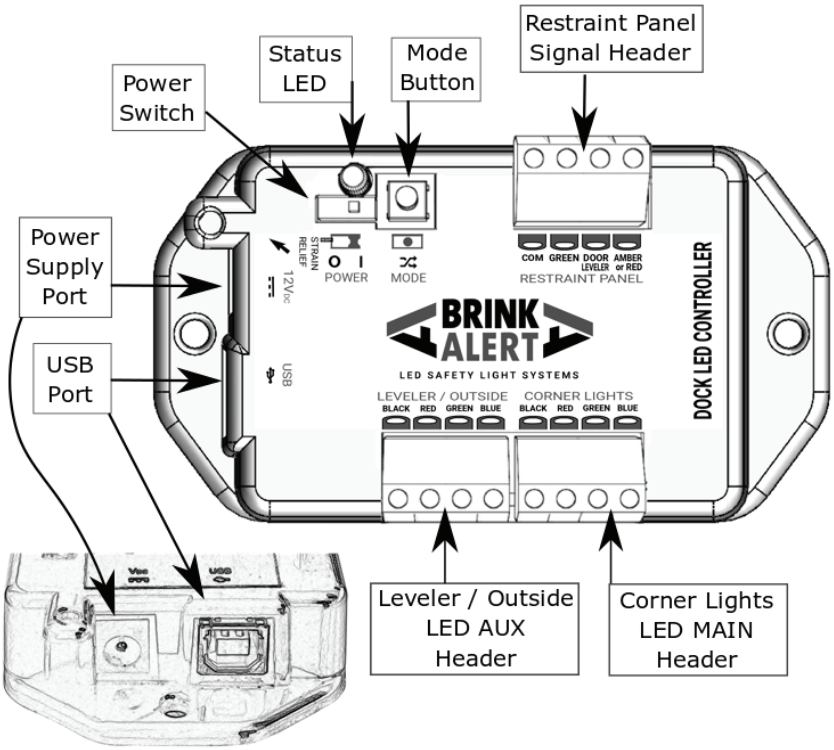


LED Harness Cable

7. CONNECT TO TRUCK RESTRAINT CONTROL BOX

Route the Signal Cable from the truck restraint's control box into the NEMA Box. Connect the Signal Cable to the 3-pin or 4-pin press-on headers of the LED Controller AC Signal Converter's header.

Connect the Signal Cable to your truck restraint's signal lights on the Restraint Control Box's door or front panel. Follow specific wiring schematic for your make & model of truck restraint. Wiring schematics can be found on our website or call support at 786-339-9840 for further assistance.



8. POWER-UP & TEST THE CONFIGURATION

a. Plug the 24V power supply into a live 110VAC outlet.
b. Ensure 24VDC cable is connected to the LED Controller.
c. Ensure Truck Restraint is in fully open (unlocked) position. Ensure Door is closed (Limit Switch disengaged).
d. Restore power to Truck Restraint and Dock Leveler.
e. Power-up the LED Controller using its power switch.
f. LEDs should turn on immediately. If not, turn power off and check all connections.

CONGRATULATIONS!

You have completed the installation.

Run into an issue? No worries, we have you covered.

Appendix A will help you determine each led behavior.

Appendix B will help you install the Configuration Tool program. See LED Controller Programming insert after software installation.

Appendix C will help guide you through some common issues.

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: LED BEHAVIORS

The LED Controller comes programmed for a standard truck restraint + fully-open door limit switch / deployed dock-leveler scenario.

Door & Leveler Lip	Truck Restraint	Light Colors	Description
Either not fully Open	Stored	Red	Door is not receiving trucks at this time. LOW DANGER
Door Fully Open, Lip Extended	Engaged	Green	It is safe to load or unload the truck at this time.
Either Not fully Open	Engaged	Flashing Red	Warning: Restraint is engaged while door is not fully opened or leveler lip not extended. Perhaps door-creep or leveler not ready. HIGH DANGER
Door Fully Open, Lip Extended	Failed State / Restraint Override	Flashing Amber	Warning: Restraint Override is enabled. Perhaps truck does not have restraint bar, or truck restraint was engaged too soon. MEDIUM DANGER
Either not fully Open	Failed State / Restraint Override	Flashing Red	Warning: Restraint-fail AND door-creep or leveler problem. HIGH DANGER

APPENDIX B: INSTALL THE CONFIGURATION TOOL

INSTALL PROGRAM

1. Visit www.BrinkAlert.com/downloads and click on the LED Controller Configuration Software to download.
2. You may need to stop any antivirus programs that are running.
3. Open (run) downloaded file with Administrative rights to install it.

CONNECT CONTROLLER TO PC

1. Detach power from LED Controller.
2. Use a Type-B (printer) USB cable (not included) to connect the LED Controller to the PC.
3. The PC should immediately recognize that the device was connected, although it will not install any supporting driver software.
4. Use the Configuration Tool to program the LED Controller.
5. Detach the USB Cable from the LED Controller.
6. Test LED Controller on your loading dock.

NOTE: If device is NOT RECOGNIZED, you will need to manually connect the driver file to the device using the following steps:

1. Open Device Manager in Windows
   a. Right-click “Computer”, then choose “Manage”
   b. Or, click “Start Button”, then “Administrative Tools”, then “Computer Management”, then “Device Manager”
2. Find “LED Driver” with an alert mark on it, probably in “Unknown Devices” group
3. Right-click that item, then choose “Update Driver Software”
4. Click “Browse…click “Browse” again if necessary, to search your computer C: drive
5. Open “Program Files (x86)”
6. Find folder “BrinkAlert.com”, then “Configurator”, then “Driver” Click the “Driver” folder, then click “OK” button
7. Click the “Next” button and “Close”.

APPENDIX C: 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.
- Use a multimeter to determine what type of signals exist for fully-open and fully-closed. Use the Wiring Guide insert to determine which profile you should be using.
- Check if the LED Controller is properly grounded to the same Common in use by the Operator.
- Potential programming issue with LED Controller.

If an A/C system, ensure Common is attached to the Operator's chassis and is truly grounded.

REMINDER: If installing on an A/C system, the LED Controller must use an A/C Signal Converter Board.

LED CONTROLLER OPTIONS

Feature	Jumper Connections	Description
Disable Mode Button	Main Green → Close	Once the button is disabled.
Extend noise cleaning to 1.1 seconds	Main Blue → Open	Affects all inputs. Used on truck restraint lights that flash very slowly.
Invert noise cleaning	Black → Aux	Affects all inputs. May be required on inverted flashing light signals.

LED CONTROLLER BEHAVIOR OPTIONS

Feature	Jumper Connections	Description
Enable outside LED strip	Aux Red → Close	Enables the outside light behavior on the LED Aux port.
Do not flash outside	Main Blue → Aux	Flashing red will be sold red instead on the LED AUX port.
Enable auto turn-off of red steady light	Main Green → Open Main Red → Close	Push and hold down button for length of time desired to stay on before turning off. If the controller is turned off before timer configuration, the default time is 5 seconds.
Toggle between Amber flashing & Red/Green flashing	Main Red → Aux	When on Red / Green flashing, any situation where amber flashing is configured, it will alternate between red and green instead.
Disable transition effect	Main Blue → Close	Affects MAIN and AUX ports

LED CONTROLLER INPUT LOGIC

Feature	Jumper Connections	Description
Enable logic mode	Black → Open & Aux	Only required if you had been previously selecting colors.
Toggle signal logic on any input	GND → Open/ Close/Aux	Any combination of Open, Close and Aux allowed
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 AC signal converter basic	Black → Open	This is a shortcut that disables the AC7 converter. Useful if direct DC voltages or the AC signal converter basic is require