

Strobe Alert Plus®

Visual & Audible Alarm



LC09 Series Manual



Flowline offers three different light configurations in its Strobe Alert Plus line. The first option is a factory ordered Red Light and Horn combination. The second option is a Red, Yellow and Green Light with Horn combination where each color can turn on independently. The third option is a selectable color Light and Horn combination where the user selects one of 5 colors (red, green, yellow, blue or white) in the field by connecting the appropriate wire. The light on the Strobe Alert Plus can be wired to flash (not available on LC09-2054) or stay steady on and the horn is rated at 85 dB. The light and horn can be controlled independently of each other via separate relays on the DataView LI55 series meter; and since the meter's relays can be reset in a variety of ways, there are several ways the Light / Horn can operate.

NEW FEATURES

- Simple configuration with WebCal[®] software.
- IP 65 Rated
- 85 dB Horn
- Operates from -5 to 40°C (23 to 104°F)
- Powered by 24 VDC

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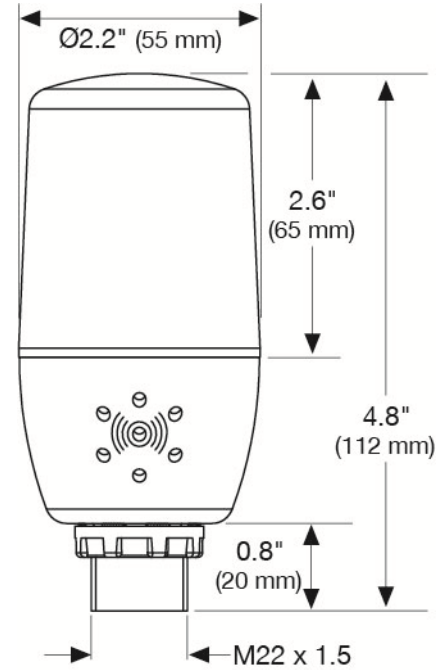
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DIMENSIONS:



SPECIFICATIONS:

- Light Colors:** LC09-2014: Red
LC09-2034: 1 layer each of red, yellow, green.
LC09-2054: User selectable: red, green, yellow, blue, or white
- Light Action:** Can be wired to flash (not available on LC09-2054) or stay steady on
- Horn:** 85 dB
- Rating:** IP 65
- Independence:** Light and horn can be controlled via separate relays
- Power Requirement:** 900mW or 40mA at 24V
- Consumption:** **LC09-2014 & LC09-2054**

Color	Red	Green	Yellow	Blue	White	Horn
Downgraded by	17 mA	15 mA	23 mA	15 mA	42 mA	20 mA

LC09-2034

Color	Red	Green	Yellow	Horn
Downgraded by	34 mA	29 mA	33 mA	38 mA

- Power Supply:** The DataView's internal transmitter power supply is downgraded from 200 mA when it powers the Light / Horn. To determine the total downgrade, add the currents for the light(s) being used and the horn if used. If more power is needed, then consider the LC95-2001 power supply.
 - Example: LC09-2014: 17 mA (Red Light) + 20 mA (Horn) = 37 mA total current downgrade from the 200 mA supply. Left over current = 163 mA
 - Example: LC09-2034: Downgraded by each color that is turned on and the horn. 33 mA (Yellow Light) + 38 mA (Horn) = 71 mA total current downgrade from the 200 mA supply. Left over current = 139 mA
- Reset / Silence Button:** NEMA 4X; may be wired to F4 terminal on DataView LI55 series. F3 front panel button can also be used to reset relays.
- Mounting Conn.:** M22
- Hole Sizes:** LC09-20_4: 0.875" (22 mm) – Light / Horn
LC09-0000: 0.630" (16mm) – Reset Button
- Cable Length:** 3.28 feet (1 meter)
- Operating Temp. Range:** -5 to 40°C (23 to 104°F)

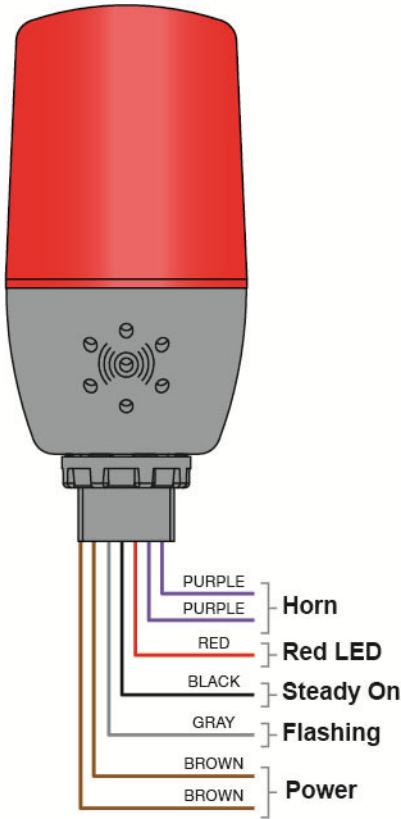
INCLUDED COMPONENTS:

- Strobe Alert Plus: LC09-20_4 with 3.28' (1m) of cable
- M22 Locking ring
- 9 pre-printed labels (RESET, BATCH, ACK, TARE, SILENCE, STOP, START, PAUSE, START/STOP)

- ⚠ **About this Manual:** PLEASE READ THE ENTIRE MANUAL PRIOR TO INSTALLING OR USING THIS PRODUCT. This manual includes information on the Strobe Alert Plus series visual and audible alarm from FLOWLINE, LC09 series. Please refer to the part number located on the switch label to verify the exact model configuration, which you have purchased.
- ⚠ **User's Responsibility for Safety:** Flowline manufactures a broad range of level sensing technologies. While each of these sensors is designed to operate in a wide variety of applications, it is the user's responsibility to select a sensor model that is appropriate for the application, install it properly, perform tests of the installed system, and maintain all components. The failure to do so could result in property damage or serious injury.
- ⚠ **Proper Installation and Handling:** Only professional staff should install and/or repair this product. Install the level indicator with the included locking nut and never over tighten the indicator within the installation. Always check for leaks prior to system start-up.
- ⚠ **Wiring and Electrical:** A supply voltage of 24 VDC is used to power the Strobe Alert Plus. Electrical wiring of the transmitter should be performed in accordance with all applicable national, state, and local codes.
- ⚠ **Material Compatibility:** The enclosure is made of Polycarbonate (PC) with the Cable made of Polyurethane. Make sure that the model, which you have selected, is chemically compatible with the application media.
- ⚠ **Enclosure:** While the level indicator housing is liquid-resistant the Strobe Alert Plus is not designed to be operational when immersed. It should be mounted in such a way that the enclosure and alarm do not come into contact with the application media under normal operational conditions.
- ⚠ **Make a Fail-Safe System:** Design a fail-safe system that accommodates the possibility of power failure. FLOWLINE recommends the use of redundant backup systems and alarms in addition to the primary system.
- ⚠ **Flammable, Explosive or Hazardous Applications:** *Strobe Alert Plus should not be used within classified hazardous environments.*
- ⚠ **Safety**
 - ⚠ Installation should be done by properly trained staff
 - ⚠ Supply voltage should never exceed a maximum of 24 VDC
 - ⚠ Make sure the sensor is chemically compatible with your application
 - ⚠ Design a fail-safe system that accommodates the possibility of sensor and/or power failure
 - ⚠ This sensor should not be used in classified hazardous environments

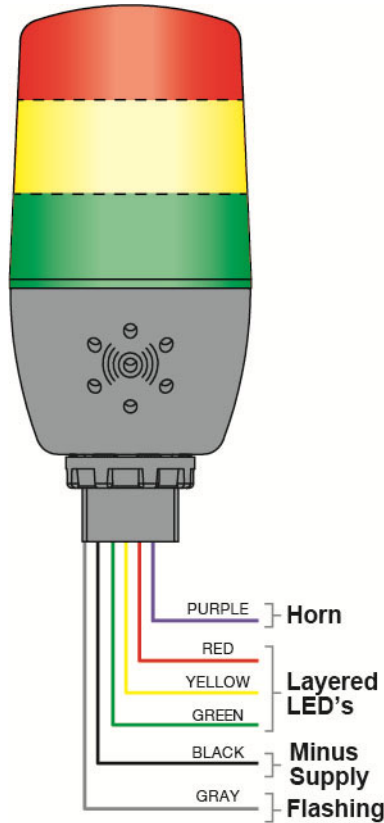
Strobe Alert Plus does not require any configuration. Each version of the LC09 has a unique wire color code. Make sure to always observe the model number to determine the wiring.

LC09-2014



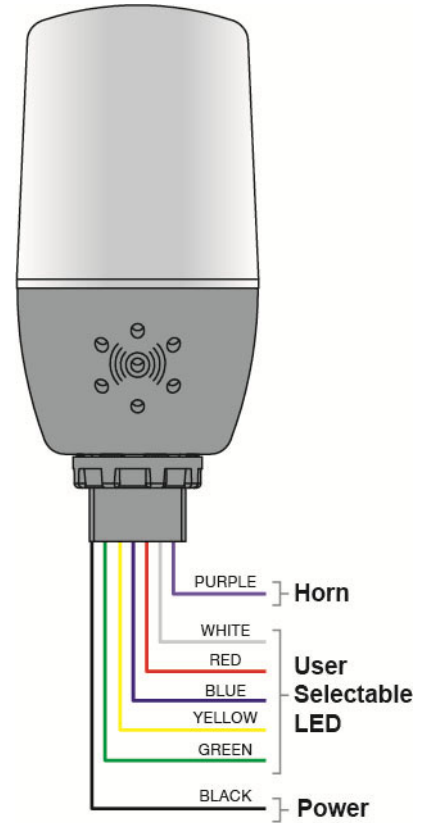
Connections shown for a red light model. The red wire is the color of the light. Connect the red and black wires for a Steady On light and red and gray wires for Flashing light.

LC09-2034



Connect the LED color to the plus supply and the black wire to the minus supply to turn the LED on. Be aware of limitations for applications requiring different color lights for different alarm conditions.

LC09-2054



Connect the LED color to the plus supply for a Steady On light and LED color and gray wires to the plus supply for Flashing light. The black wire should be connected to the minus supply.

Note: The LC09 series will get its power from a 24 VDC power supply. Flowline DataView™ LI55 series has a 200mA built-in power supply. You can share this power supply to power both the level transmitter for the LI55 as well as the Strobe Alert Plus.

RESET BUTTON

When wiring a LC09 series Strobe Alert Plus to a controller, a Reset Button can be used to silence the Audible Alarm. The optional Reset Button can be any moment switch that is Normally Open (NO), i.e. Flowline's LC09-0000 Reset Button. **Note:** The controller must have a Digital Input to interface with the Reset Button. Flowline's DataView™ (LI55-2_1 or LI55-4_1 series) or DataLoop (LI23-12_1 and LI24-12_1 series) have the Digital Input built-in as well as either 2 or 4 relays available for switching the LC09 Strobe Alert Plus.



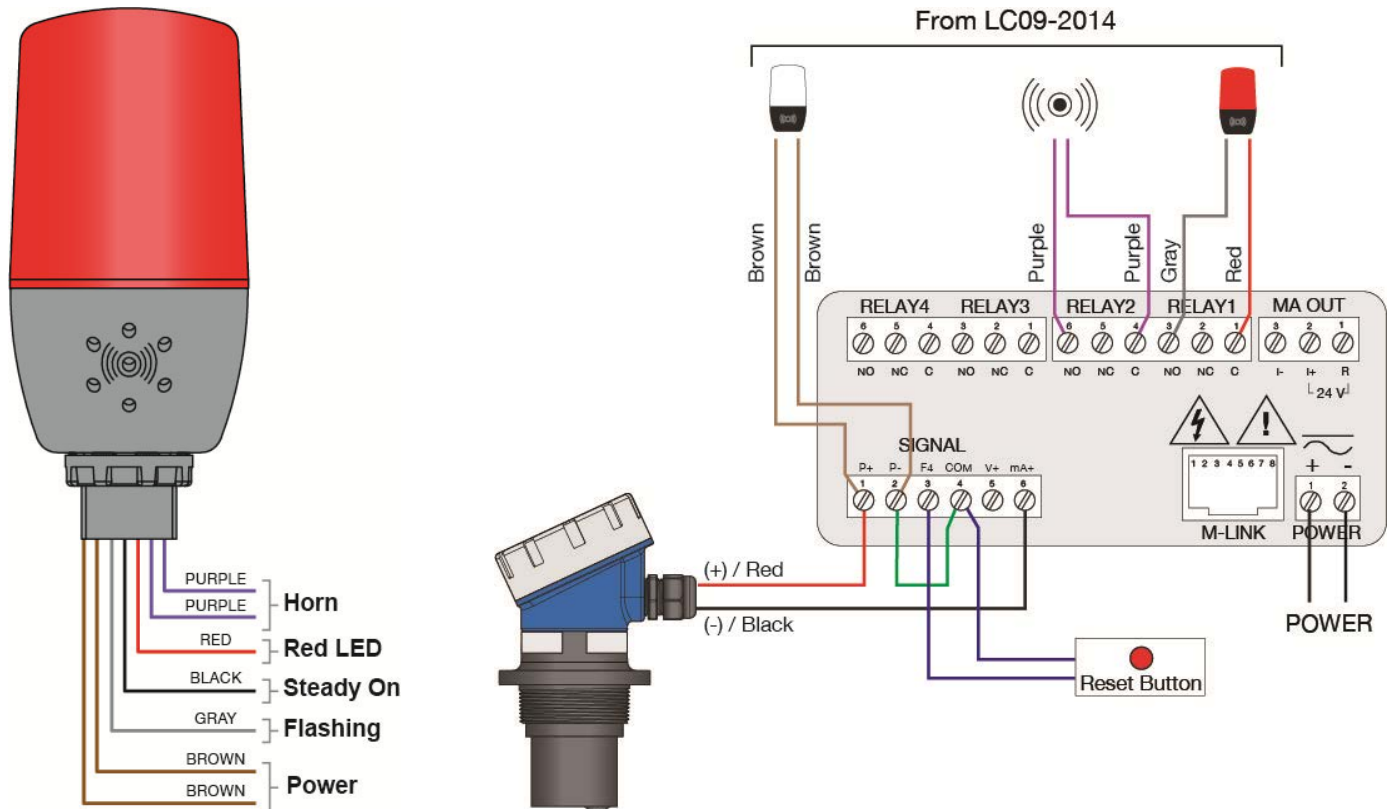
LC09-0000 Shown

BASIC WIRING FOR THE LC09-2014 (RED):

The LC09-2014 is powered through both Brown wires. Polarity does not matter with the Brown wires. If 24 VDC is not provided to the Brown wires, the Strobe Alert Plus will not function.

Both Purple wires are used for Audible Alarm. Wire both wires to a dry contact. When contact closes, Audible Alarm will trigger.

Use either the Red and Black wires for a steady Visual Alarm or the Red and Gray wires for a flashing Visual Alarm. Wire either to a dry contact. When the contact closes, the Visual Alarm will trigger.



WIRING LC09-2014 (RED) TO A DATAVIEW™ LI55 SERIES:

Using the DataView™ LI55 series with at least two relays (LI55-_2_1 or LI55-_4_1), you will not need additional power for the Strobe Alert Plus.

- Wire both Brown wires to P+ and P-. Polarity does not matter. You can share P+ and P- with the transmitter used in your application along with the Strobe Alert Plus.
- Wire both Purple wires to a relay, typically to C and NO. When the relay energizes, the Audible Alarm will sound.
- To another relay, typically to C and NO, wire Red and Black for a steady Visual Alarm or wire Red and Gray for a flashing Visual Alarm.
- Use a NO Moment Switch (i.e. LC09-0000) as an optional Reset Button. Wire Reset Button to F4 and COM for an optional relay reset.

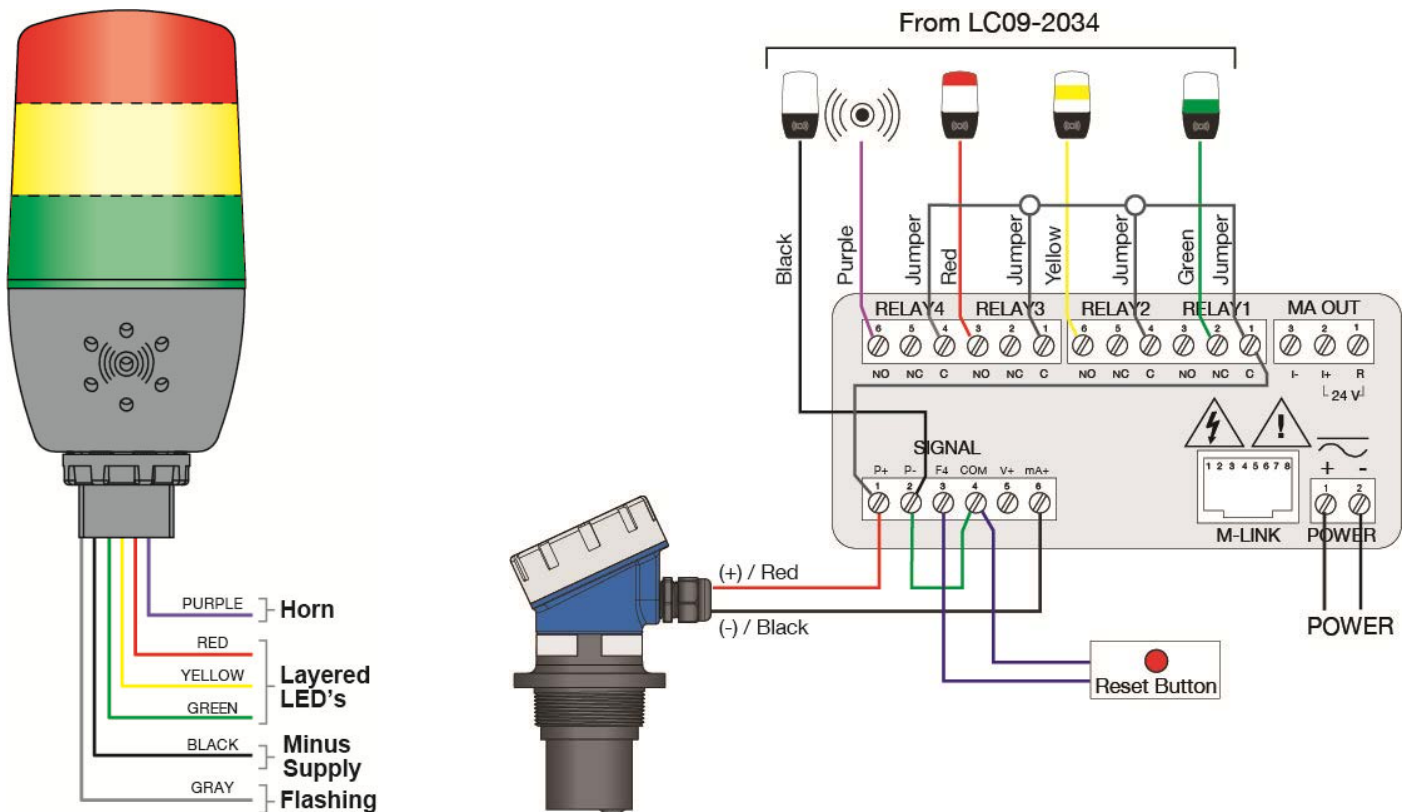
Using two separate relays enables the Audible Alarm to be silenced while the Visual Alarm indicates the Alarm is still active.

BASIC WIRING FOR THE LC09-2034 (RED, YELLOW & GREEN):

The LC09-2034 is powered by applying 24 VDC (+) to any of the Red, Yellow, Green or Purple wires and 24 VDC (-) to either Black or Gray wires. If 24 VDC is not provided to the Red, Yellow, Green or Purple wires, the Strobe Alert Plus will not function.

Purple wire (wired to a dry contact) is used for Audible Alarm. When contact closes, Audible Alarm will trigger.

Use any combination of Red, Yellow or Green wires for a Visual Alarm. Wire any to a dry contact. When the contact closes, the Visual Alarm will trigger. For section of a steady or flashing Visual Alarm, choose the Black wire to VDC (-) for a steady alarm or choose the Gray wire to VDC (-) for a flashing Alarm.



WIRING LC09-2034 (RED, YELLOW & GREEN) TO A DATAVIEW™ LI55 SERIES:

Using the DataView™ LI55 series with at least two relays (LI55-_2_1 or LI55-_4_1), you will not need additional power for the Strobe Alert Plus.

- Wire either Black or Gray to P-. Choose Black to P- for a steady Visual Alarm or Gray to P- for a flashing Visual Alarm. Wire all the relay commons (C) to P+. You can share P+ and P- with the transmitter used in your application along with the Strobe Alert Plus.
- Wire Purple wire to a relay, typically NO. When the relay energizes, the Audible Alarm will sound.
- To another relay(s), typically NO, wire Red, Yellow and/or Green wires.
- Use a NO Moment Switch (i.e. LC09-0000) as an optional Reset Button. Wire Reset Button to F4 and COM for an optional relay reset.

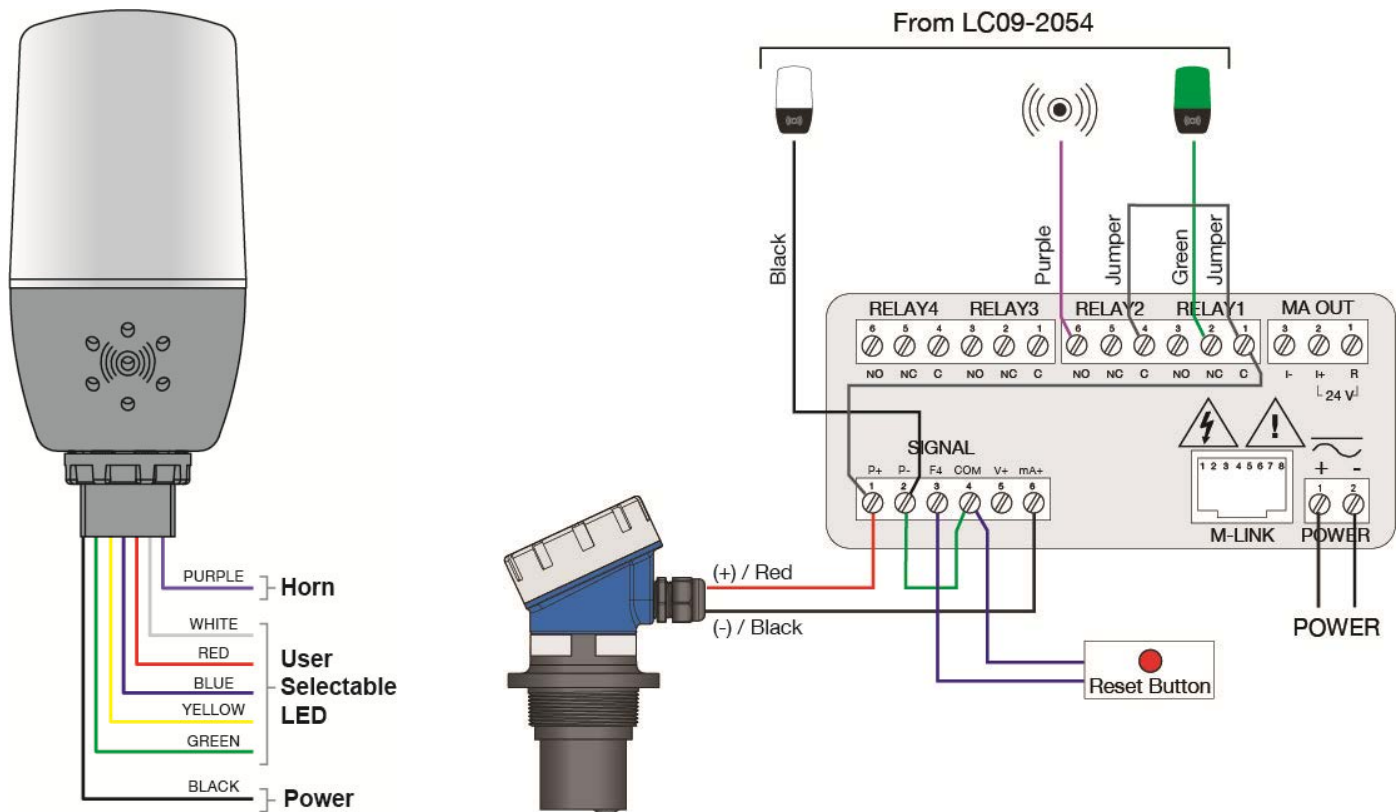
Using a separate relay for the Audible Alarm allows the alarm to be silenced while the Visual Alarms indicates the Alarm is still active.

BASIC WIRING FOR THE LC09-2054 (RED, YELLOW, GREEN, WHITE OR BLUE):

The LC09-2054 is powered by applying 24 VDC (+) to any of the Red, Yellow, Green, White, Blue or Purple wires and 24 VDC (-) to the Black wire. If 24 VDC is not provided to the Red, Yellow, Green, White, Blue or Purple wires, the Strobe Alert Plus will not function.

Purple wire (wired to a dry contact) is used for Audible Alarm. When contact closes, Audible Alarm will trigger.

Select either Red, Yellow, Green, White or Blue wire for a Visual Alarm. Wire any to a dry contact. When the contact closes, the Visual Alarm will trigger. Visual alarm is a steady light. You can field select only one color at a time with the LC09-2054.



WIRING LC09-2034 (RED, YELLOW & GREEN) TO A DATAVIEW™ LI55 SERIES:

Using the DataView™ LI55 series with at least two relays (LI55-_2_1 or LI55-_4_1), you will not need additional power for the Strobe Alert Plus.

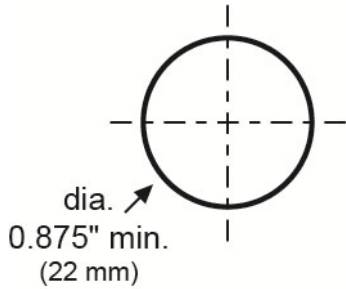
- Wire Black to P-. Wire all the relay commons (C) to P+. You can share P+ and P- with the transmitter used in your application along with the Strobe Alert Plus.
- Wire Purple wire to a relay, typically NO. When the relay energizes, the Audible Alarm will sound.
- To another relay(s), typically NO, wire Red, Yellow, Green, White or Blue wire. You may only field select one color at a time with the LC09-2054.
- Use a NO Moment Switch (i.e. LC09-0000) as an optional Reset Button. Wire Reset Button to F4 and COM for an optional relay reset.

Using a separate relay for the Audible Alarm allows the alarm to be silenced while the Visual Alarms indicates the Alarm is still active.

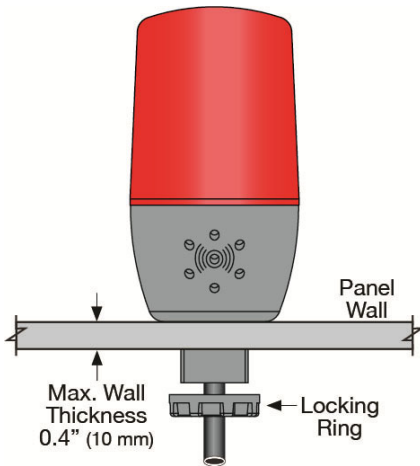
Strobe Alert Plus is designed for enclosure mount installations, typically on top of the enclosure containing your display/controller.

PANEL MOUNT STROBE ALERT PLUS:

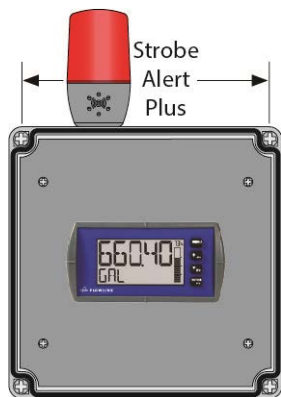
Strobe Alert Plus requires a 0.875" (22mm) hole for mounting.



1. Drill (1) 0.875" (22 mm) diameter hole in the panel for the cable and nipple.
2. Run the indicator cable through the top hole and locking nut (on the inside of the panel).
3. Tighten the locking nut down over the nipple and route the cable for termination.

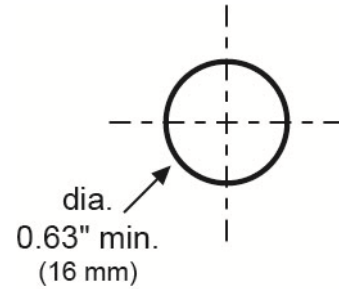


Strobe Alert Plus can be mounted along the top surface of the panel or in any area where can be seen easily.



PANEL MOUNT RESET BUTTON:

The optional Reset Button (LC09-0000) requires a 0.630" (16mm) hole for mounting.



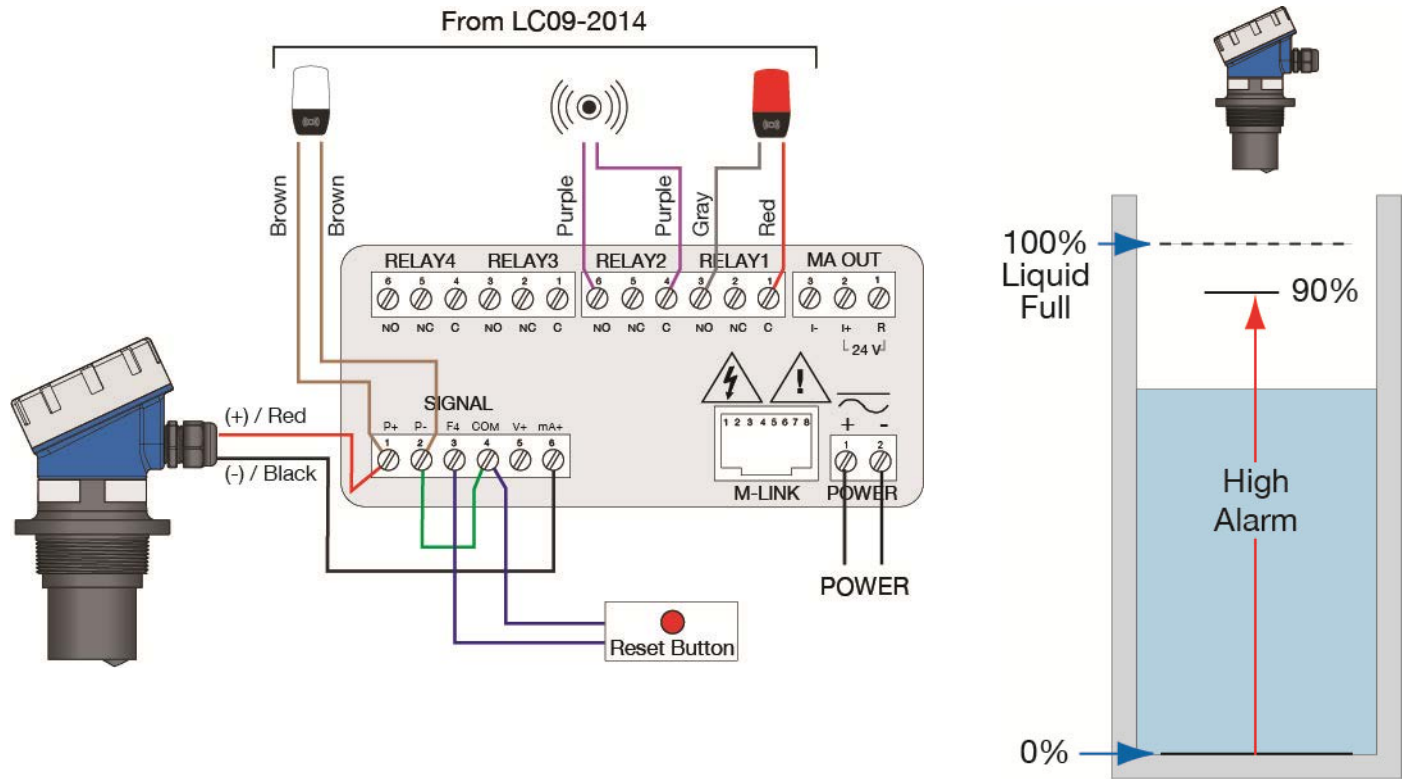
1. Drill (1) 0.630" (16 mm) diameter hole in the panel for the cable and nipple.
2. Run the indicator cable through the hole and locking nut (on the inside of the panel).
3. Tighten the locking nut down over the nipple and route the cable for termination.



The Reset Button can be mounted along the sides or bottom of the panel. Be sure to place the Reset Button in a location where physical access is easy.



A typical way to use the Strobe Alert Plus is to program the DataView LI55 series so the horn can be silenced via the Reset Button at any time and the light to reset automatically after the alarm clears:



EXAMPLE (LC09-2014):

This example will have a Flashing Visual Alarm and Audible Alarm trigger at 90% with a Relay Reset at 85%.

- When the level reaches 90%, both Visual and Audible Alarms will activate.
- Both relays will reset when the level falls below the reset level of 85%.
- Pressing the reset button will silence the Audible Alarm. The relay is still energized and will not de-energize until the level falls below 85%. The Visual Alarm will still be active.

Wiring

- Connect both Brown wires to P+ and P- on LI55.
- Relay 1 (Visual Alarm) – Connect Red to R1 (C) Gray to R1 (NO) for a flashing alarm. For steady alarm, wire Black to R1 (NO) instead of Gray.
- Relay 2 (Audible Alarm) - Connect both Purple wires to R2 (C) and R2 (NO). Polarity does not matter.
- Connect optional Reset Button to F4 and COM on LI55. Reset Button can be any NO moment switch or the LC09-0000 Reset Button.

Relay	Device Connected	Reset Mode
1	Flashing Light ⁽¹⁾	Auto reset
2	Horn	Silence w/ Reset Button
3	User Device	As use desires
4	User Device	As use desires

⁽¹⁾ Light can be wired as flashing or steady on.

⁽²⁾ In Automatic + Manual (**A-m An**) mode, the Audible Alarm will silence when the Reset Button is pressed and the relay will only de-energize when the level falls below the reset level.

Setting Up the DataView™ LI55 Series

Scale the DataView™ LI55 series so that Empty = 0% and Full = 100%. Program Relay 1 with SET1 = 90% and RST1 = 85% and Relay 2 with SET2 = 90% and RST2 = 85%.

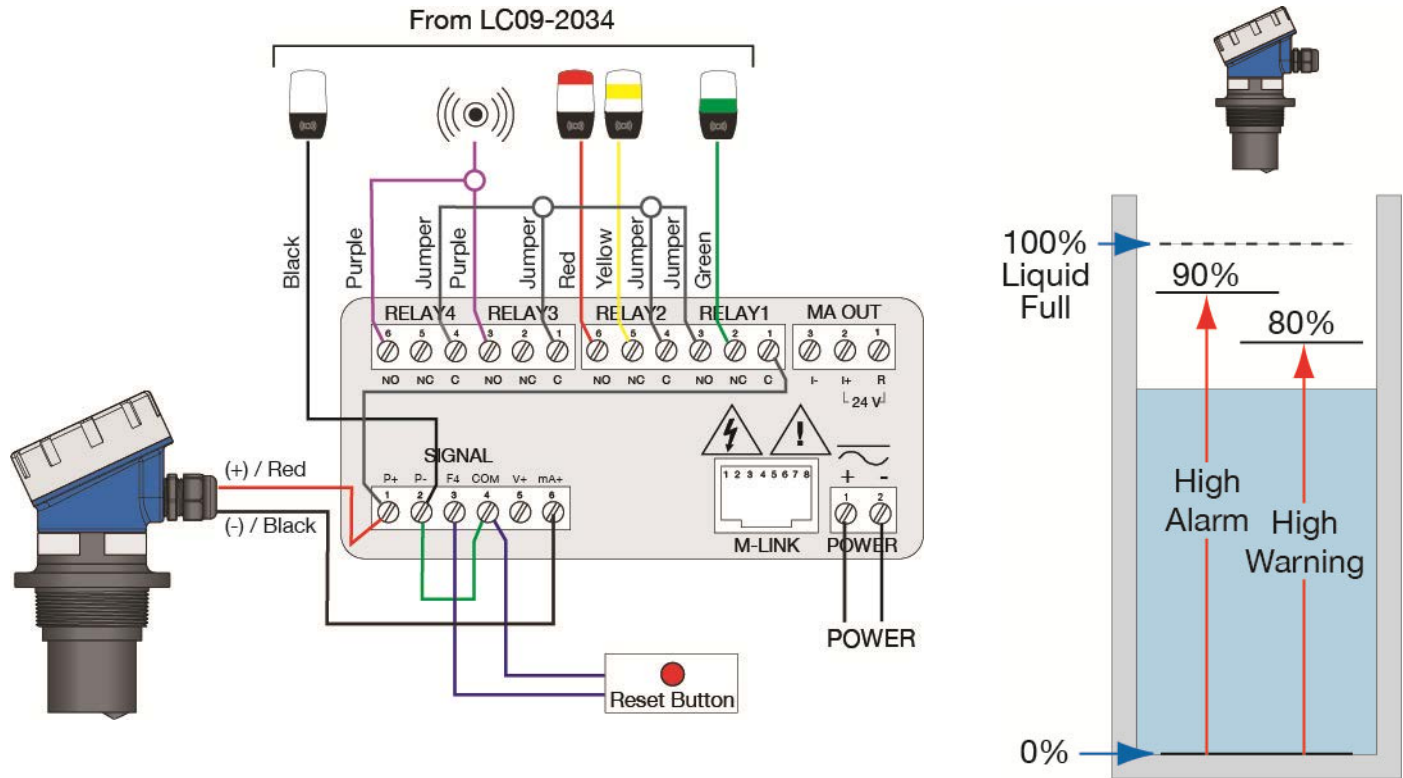
Both relays will energize at 90% and de-energize at 85%. In order for the Relay 2 (Audible Alarm) to be silenced from the Reset Button (F4), you will need to change the Relay ACTION for Relay 2 to Automatic + Manual⁽²⁾ (**A-m An**). To do so, you must first access the FULL Menu of the LI55.

- Press and Hold the MENU button for 5 seconds (**SEtuP** will appear on the display).
- Press ENTER once (**InPut** will appear on the display).
- Press UP repeatedly until **rELAY** appears.
- Press ENTER once (**rLY 1** appears on the display)
- Press UP once (**rLY 2** appears on the display)
- Press ENTER once (**Act 1** appears on the display)
- Press ENTER once (**Auto** appears on the display)
- Press UP repeatedly until A-m An appears (A-m An represents Automatic + Manual Reset⁽²⁾).
- Press ENTER to Save
- Press MENU to escape back to the Main Display.

Now Relay 2 will turn silence the Audible Alarm when the Reset Button is pressed. Relay 2 is still energized and will only de-energize when the level drops below 85%.

⁽²⁾ In Automatic + Manual (**A-m An**) mode, the Audible Alarm will silence when the Reset Button is pressed and the relay will only de-energize when the level falls below the reset level.

Another common application is for a Green light to indicate everything is OK, a Yellow light indicates a High level Warning while a Red light indicates a High Level Alarm. The Audible Alarm will trigger at both the High Level Warning and High Level Alarm and can be silenced with a Reset Button.



EXAMPLE (LC09-2034):

This example will have a Steady Visual Alarm. The High Warning will be at 80% and the High Alarm will be at 90%. The High Warning will reset at 78% and the High Alarm will reset at 88%. The Audible Alarm will trigger at both the High Warning at 80% and the High Alarm at 90%.

- When the level is below 78%, the Green Light will indicate all is OK.
- When the level reaches 80%, the Green will turn off and the Yellow will activate indicating a high warning level has been reached. If the level falls below 78%, then Yellow will turn off and Green will turn on. The Audible Alarm will activate at this level. Pressing the Reset Button will de-energize the relay and silence the alarm.
- When the level reached 90%, the Yellow will turn off and the Red will activate indicating a High Alarm has been reached. If the level falls below 88%, then Red will turn off and Yellow will turn on. The Audible Alarm will activate at this level. Pressing the Reset Button will de-energize the relay and silence the alarm.

Wiring

- Connect Black to P- on the LI55 for a Steady Visual Alarm⁽¹⁾. For a Flashing Visual Alarm⁽¹⁾, connect Gray to P-.
- Connect a jumper wire from P+ on the LI55 to Relay 1 (C). Connect another Jumper from Relay 1 (NO) to Relay 2 (C), Relay 3 (C) and Relay 4 (C).
- Relay 1 – Connect Green wire to R1 (NC).
- Relay 2 – Connect Yellow wire to R2 (NC) and connect Red wire to R2 (NO).
- Relay 3 – Connect Purple wire to R3 (NO).
- Relay 4 – Connect Purple Wire to R4 (NO).
- Connect Reset Button⁽²⁾ to F4 and COM on LI55.

Relay	Purpose	Light
1	All OK	Green Light
2	High Warning	Yellow Light
2	High Alarm	Red Light
3	High Warning	Audible Alarm
4	High Alarm	Audible Alarm

⁽¹⁾ Light can be wired as flashing or steady on.

⁽²⁾ Reset Button can be any NO moment switch or the LC09-0000 Reset Button.

⁽³⁾ In LATCH (**LAtch**) mode, the relay will only de-energize and the Audible Alarm will only silence when the Reset Button is pressed.

Setting Up the DataView™ LI55 Series

Scale the DataView™ LI55 series so that Empty = 0% and Full = 100%. Program Relay 1 with SET1 = 80% and RST1 = 78%, Relay 2 with SET2 = 90% and RST2 = 88%, Relay 3 with SET3 = 80% and RST3 = 78% and Relay 4 with SET4 = 90% and RST4 = 88%.

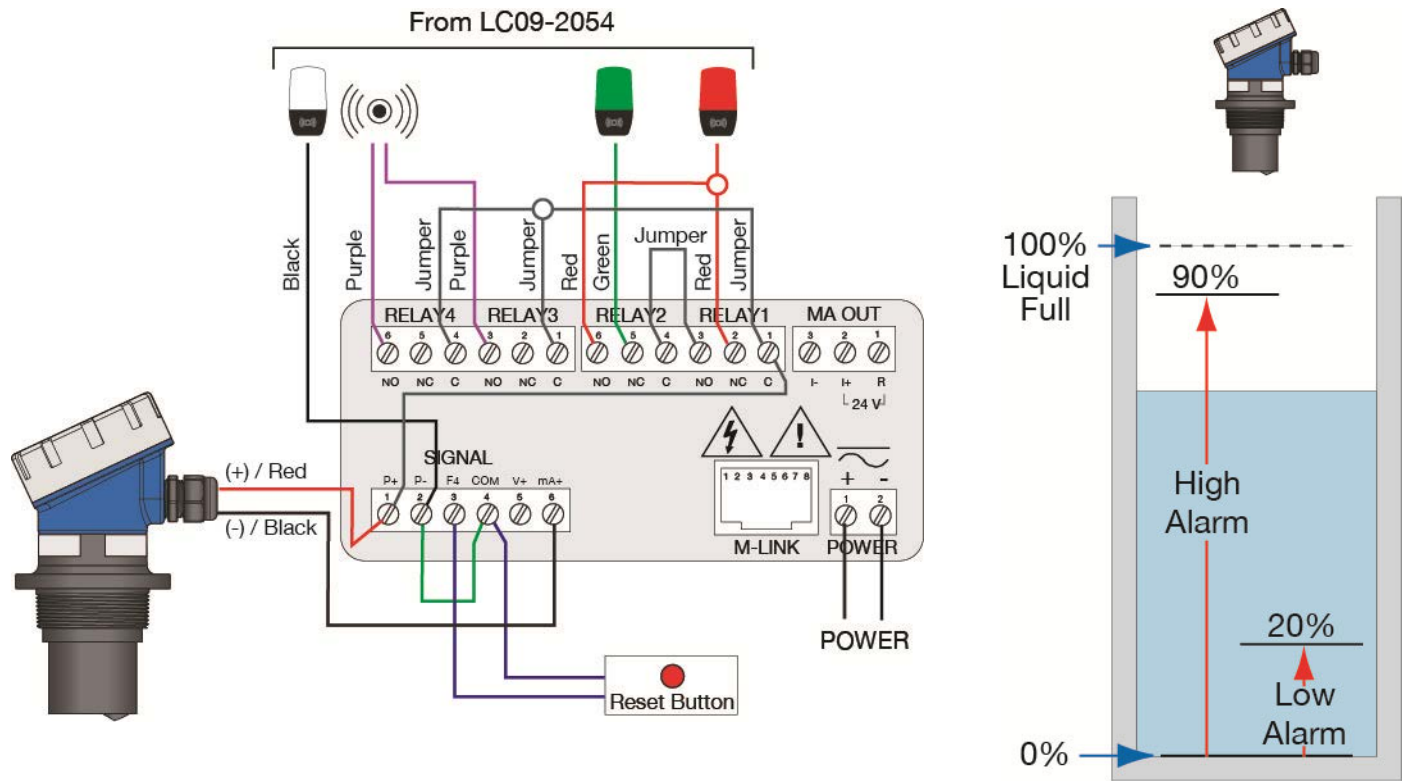
Relay 1 will energize at 80% and de-energize at 78%. Relay 2 will energize at 90% and de-energize at 88%. Relay 3 will energize at 80% & Relay 4 will energize at 90%. Both relays will de-energize by Pressing Reset Button (F4).

In order for the Relay 3 and Relay 4 to be silenced from the Reset Button (F4), you will need to change the Relay ACTION for both relays to **LAtch**⁽³⁾. To do so, you must first access the FULL Menu of the LI55.

- Press and Hold the MENU button for 5 seconds (**SEtuP** will appear on the display).
- Press ENTER once (**InPut** will appear on the display).
- Press UP repeatedly until **rELAY** appears.
- Press ENTER once (**rLY 1** appears on the display)
- Press UP twice (**rLY 3** appears on the display)
- Press ENTER once (**Act 3** appears on the display)
- Press ENTER once (**Auto** appears on the display)
- Press UP repeatedly until **LAtch**⁽³⁾ appears (**LAtch** represents a manual reset of the relay).
- Press ENTER to Save
- Press UP until **rSt 3** appears.
- Press ENTER twice until **rLY 4** appears.
- Press ENTER once (**Act 4** appears on the display)
- Press ENTER once (**Auto** appears on the display)
- Press UP repeatedly until **LAtch**⁽³⁾ appears (**LAtch** represents a manual reset of the relay).
- Press MENU to escape back to the Main Display.

Now Relay 3 & Relay 4 will turn off the Audible Alarm and de-energize relay when the Reset Button is pressed.

The LC09-2054 shows one of five possible colors at a time. A typical application might be for the Green Light to indicate everything is OK and the Red to indicate a High or low level alarm.



EXAMPLE (LC09-2054):

This example will have a Steady Visual Alarm. The High Alarm will be at 90% and the Low Alarm will be at 20%. The High Alarm will reset at 85% and the Low Alarm will reset at 25%. The Audible Alarm will trigger at either the High Alarm (90%) or the Low Alarm (10%).

- If the level is between 20% and 90%, the Green Light will indicate all is OK.
- When the level reaches 90%, the Green will turn off and the Red will activate indicating an alarm level has been reached. If the level falls below 85%, then Red will turn off and Green will turn on. The Audible Alarm will activate at this level. Pressing the Reset Button will de-energize the relay and silence the alarm.
- When the level falls below 20%, the Green will turn off and the Red will activate indicating an alarm level has been reached. If the rises above 25%, then Red will turn off and Green will turn on. The Audible Alarm will activate at this level. Pressing the Reset Button will de-energize the relay and silence the alarm.
- When the Red light activates, there is either a High Alarm or Low Alarm state. A physical inspection of the application will be needed to determine which alarm condition is occurring.

Wiring

- Connect Black to P- on the LI55.
- Connect a jumper wire from P+ on the LI55 to Relay 1 (C). Connect another Jumper from Relay 1 (C) to Relay 3 (C) and Relay 4 (C). Connect a third Jumper from Relay 1 (NO) to Relay 2 (C).
- Relay 1 – Connect Red wire to R1 (NC).
- Relay 2 – Connect Green wire to R2 (NC) and connect Red wire to R2 (NO).
- Relay 3 – Connect Purple wire to R3 (NO).
- Relay 4 – Connect Purple Wire to R4 (NO).
- Connect Reset Button⁽¹⁾ to F4 and COM on LI55.

Relay	Purpose	Light
1	Low Alarm	Red Light
2	All OK	Green Light
2	High Alarm	Red Light
3	Low Alarm	Audible Alarm
4	High Alarm	Audible Alarm

⁽¹⁾ Reset Button can be any NO moment switch or the LC09-0000 Reset Button.

⁽²⁾ In LATCH (**LAtch**) mode, the relay will only de-energize and the Audible Alarm will only silence when the Reset Button is pressed.

Setting Up the DataView™ LI55 Series

Scale the DataView™ LI55 series so that Empty = 0% and Full = 100%. Program Relay 1 with SET1 = 90% and RST1 = 85%, Relay 2 with SET2 = 20% and RST2 = 25%, Relay 3 with SET3 = 90% and RST3 = 85% and Relay 4 with SET4 = 20% and RST4 = 25%.

Relay 1 will energize at 90% and de-energize at 85%. Relay 2 will energize at 20% and de-energize at 25%. Relay 3 will energize at 90% & Relay 4 will energize at 20%. Both relays will de-energize by Pressing Reset Button (F4).

In order for the Relay 3 and Relay 4 to be silenced from the Reset Button (F4), you will need to change the Relay ACTION for both relays to **LAtch**⁽²⁾. To do so, you must first access the FULL Menu of the LI55.

- Press and Hold the MENU button for 5 seconds (**SEtuP** will appear on the display).
- Press ENTER once (**InPut** will appear on the display).
- Press UP repeatedly until **rELAY** appears.
- Press ENTER once (**rLY 1** appears on the display)
- Press UP twice (**rLY 3** appears on the display)
- Press ENTER once (**Act 3** appears on the display)
- Press ENTER once (**Auto** appears on the display)
- Press UP repeatedly until **LAtch**⁽²⁾ appears (**LAtch** represents a manual reset of the relay).
- Press ENTER to Save
- Press UP until **rSt 3** appears.
- Press ENTER twice until **rLY 4** appears.
- Press ENTER once (**Act 4** appears on the display)
- Press ENTER once (**Auto** appears on the display)
- Press UP repeatedly until **LAtch**⁽²⁾ appears (**LAtch** represents a manual reset of the relay).
- Press MENU to escape back to the Main Display.

Now Relay 3 & Relay 4 will turn off the Audible Alarm and de-energize relay when the Reset Button is pressed.

WARRANTY

Flowline warrants to the original purchaser of its products that such products will be free from defects in material and workmanship under normal use and service in accordance with instructions furnished by Flowline for a period of two years from the date of manufacture of such products. Flowline's obligation under this warranty is solely and exclusively limited to the repair or replacement, at Flowline's option, of the products or components, which Flowline's examination determines to its satisfaction to be defective in material or workmanship within the warranty period. Flowline must be notified pursuant to the instructions below of any claim under this warranty within thirty (30) days of any claimed lack of conformity of the product. Any product repaired under this warranty will be warranted only for the remainder of the original warranty period. Any product provided as a replacement under this warranty will be warranted for the full two years from the date of manufacture.

RETURNS

Products cannot be returned to Flowline without Flowline's prior authorization. To return a product that is thought to be defective, go to flowline.com, and submit a customer return (MRA) request form and follow the instructions therein. All warranty and non-warranty product returns to Flowline must be shipped prepaid and insured. Flowline will not be responsible for any products lost or damaged in shipment.

LIMITATIONS

This warranty does not apply to products which: 1) are beyond the warranty period or are products for which the original purchaser does not follow the warranty procedures outlined above; 2) have been subjected to electrical, mechanical or chemical damage due to improper, accidental or negligent use; 3) have been modified or altered; 4) anyone other than service personnel authorized by Flowline have attempted to repair; 5) have been involved in accidents or natural disasters; or 6) are damaged during return shipment to Flowline. Flowline reserves the right to unilaterally waive this warranty and dispose of any product returned to Flowline where: 1) there is evidence of a potentially hazardous material present with the product; or 2) the product has remained unclaimed at Flowline for more than 30 days after Flowline has dutifully requested disposition. This warranty contains the sole express warranty made by Flowline in connection with its products. **ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY DISCLAIMED.** The remedies of repair or replacement as stated above are the exclusive remedies for the breach of this warranty. **IN NO EVENT SHALL FLOWLINE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND INCLUDING PERSONAL OR REAL PROPERTY OR FOR INJURY TO ANY PERSON. THIS WARRANTY CONSTITUTES THE FINAL, COMPLETE AND EXCLUSIVE STATEMENT OF WARRANTY TERMS AND NO PERSON IS AUTHORIZED TO MAKE ANY OTHER WARRANTIES OR REPRESENTATIONS ON BEHALF OF FLOWLINE.** This warranty will be interpreted pursuant to the laws of the State of California. If any portion of this warranty is held to be invalid or unenforceable for any reason, such finding will not invalidate any other provision of this warranty.

For complete product documentation, video training, and technical support, go to flowline.com.
For phone support, call 562-598-3015 from 8am to 5pm PST, Mon - Fri.
(Please make sure you have the Part and Serial number available.)