

## Warranty, Service & Repair

To register your product with the manufacturer, fill out the enclosed warranty card and return it immediately to:

Flowline Inc.  
10500 Humbolt Street  
Los Alamitos, CA 90720.

If for some reason your product must be returned for factory service, contact Flowline Inc. to receive a Material Return Authorization number (MRA) first, providing the following information:

1. Part Number, Serial Number
2. Name and telephone number of someone who can answer technical questions related to the product and its application.
3. Return Shipping Address
4. Brief Description of the Symptom
5. Brief Description of the Application

Once you have received a Material Return Authorization number, ship the product prepaid in its original packing to:

Flowline Factory Service  
MRA \_\_\_\_\_  
10500 Humbolt Street  
Los Alamitos, CA 90720

To avoid delays in processing your repair, write the MRA on the shipping label. Please include the information about the malfunction with your product. This information enables our service technicians to process your repair order as quickly as possible.

# FLOWLINE®

## Compact Junction Box LC05 / LC06 Series Owner's Manual



Version 5.0A

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Manual # LC900003

5/99

## 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 for a period which is equal to the shorter of one year from the date of purchase of such products or two years from the date of manufacture of such products.

This warranty covers only those components of the products which are non-moving and not subject to normal wear. Moreover, products which are modified or altered, and electrical cables which are cut to length during installation are not covered by this warranty.

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 thereof) which Flowline's examination proves to its satisfaction to be defective. FLOWLINE SHALL HAVE NO OBLIGATION FOR CONSEQUENTIAL DAMAGES TO PERSONAL OR REAL PROPERTY, OR FOR INJURY TO ANY PERSON.

This warranty does not apply to products which have been subject to electrical or chemical damage due to improper use, accident, negligence, abuse or misuse. Abuse shall be assumed when indicated by electrical damage to relays, reed switches or other components. The warranty does not apply to products which are damaged during shipment back to Flowline's factory or designated service center or are returned without the original casing on the products. Moreover, this warranty becomes immediately null and void if anyone other than service personnel authorized by Flowline attempts to repair the defective products.

Products which are thought to be defective must be shipped prepaid and insured to Flowline's factory or a designated service center (the identity and address of which will be provided upon request) within 30 days of the discovery of the defect. Such defective products must be accompanied by proof of the date of purchase.

Flowline further reserves the right to unilaterally waive this warranty and to dispose of any product returned to Flowline where:

- a. There is evidence of a potentially hazardous material present with product.
- b. The product has remained unclaimed at Flowline for longer than 30 days after dutifully requesting disposition of the product.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. This warranty and the obligations and liabilities of Flowline under it are exclusive and instead of, and the original purchaser hereby waives, all other remedies, warranties, guarantees or liabilities, express or implied. EXCLUDED FROM THIS WARRANTY IS THE IMPLIED WARRANTY OF FITNESS OF THE PRODUCTS FOR A PARTICULAR PURPOSE OR USE AND THE IMPLIED WARRANTY OF MERCHANTABILITY OF THE PRODUCTS.

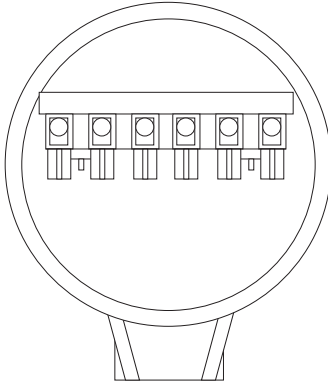
This warranty may not be extended, altered or varied except by a written instrument signed by a duly-authorized officer of Flowline, Inc.

# SPECIFICATIONS

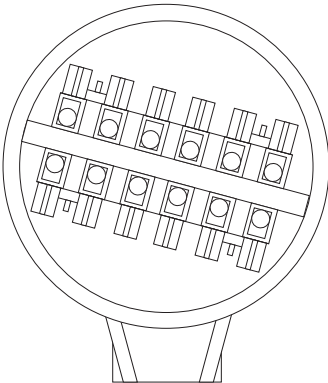
## Step One

Sensor Input:	LC05: 1-6 sensors LC06: 1-3 sensors
Terminal strip:	LC05: 12 pole socket LC06: 6 pole socket
Max. current capacity:	26 amp
Max. voltage:	380 V.
Wire Gauge:	22-14 AWG Cu (copper)
Enclosure rating:	NEMA 4X (IP65)
Enclosure material:	Polypropylene, (U.L. 94 VO)
Enclosure rotation:	300° swivel base
Temperature range:	F: -40° to 158° C: -40° to 70°
Conduit connection:	1/2" NPT

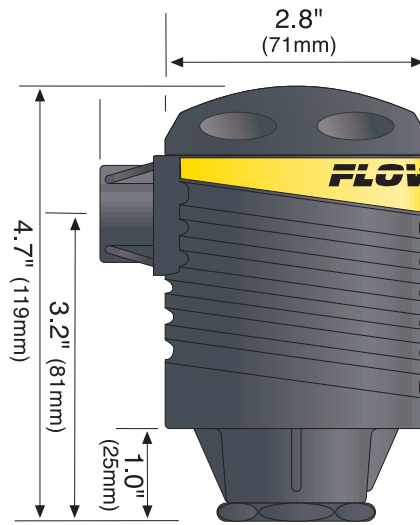
**LC06 Terminal Strip**



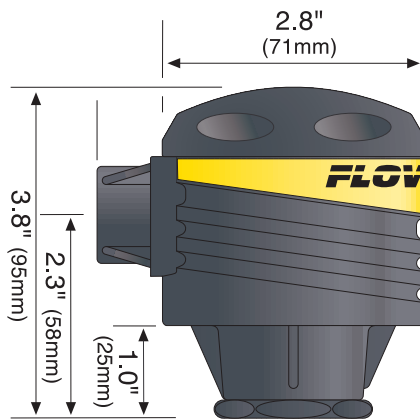
**LC06 Terminal Strip**



**LC05 Dimensions**



**LC06 Dimensions**



## SAFETY PRECAUTIONS

### Step Two

#### **About this Manual:**

PLEASE READ THE ENTIRE MANUAL PRIOR TO INSTALLING OR USING THIS PRODUCT. This manual includes information on the Compact Junction Boxes from Flowline: LC05-1001, LC05-1051, LC06-1001 and LC06-1051. Please refer to the part number located on the sensor label to verify the exact model which you have purchased. Many aspects of installation and use are similar between the models.

#### **User's Responsibility for Safety:**

Flowline manufactures several models of controller, with different mounting and switching configurations. It is the user's responsibility to determine if a compact junction box is appropriate for the application, install it properly, perform tests of the installed system, and maintain all components.

#### **Electrical Shock Hazard:**

When the cap of the housing is removed, it may be possible to contact components that carry high voltage, causing serious injury or death. All power to the circuits in the terminal strip should be turned OFF prior to working on the installation. If it is necessary to make adjustments during powered operation, use extreme caution and use only insulated tools. Making adjustments to powered systems is not recommended. Wiring should be performed by qualified personnel in accordance with all applicable national, state, and local electrical codes.

#### **Install In a Dry Location:**

While the compact junction box is liquid-resistant when installed properly, it is not designed to be immersed. It should be mounted in such a way that it does not normally come into contact with fluid. Its housing is made out of PP (polypropylene). Refer to an industry reference such as the Compass Corrosion Guide to ensure that compounds that may splash onto the housing will not damage it. Such damage is not covered by the warranty.

#### **Application**


The LC05-1001 junction box is commonly used for the local termination of multiple level switches installed on Smart Trak. The LC06-1001 junction box is commonly used for the local termination of a single level or flow switch. Combine these junction boxes with any switch or fitting assembly to complete your compact switch.


## INTRODUCTION


### Step Three


#### **Make a Fail-Safe System:**


Design a fail-safe system that accommodates the possibility of relay or power failure. If power is cut off to the controller, it will de-energize the relay. Make sure that the de-energized state of the relay is the safe state in your process. For example, if controller power is lost, a pump filling a tank will turn off if it is connected to the Normally Open side of the relay.

 All power to the system must be off before installing the housing.

 **IMPORTANT:** Do not strip more than .25" of insulation from any wire that will be connected to the terminal strip. Longer un-insulated wire may contact the terminal strip panel, causing a short circuit leading to system failure.

 All wiring between a controller and sensors should be in conduit. The power entrance of the terminal strip housing is a standard 1/2" NPT female fitting that will attach to standard electrical conduit, either plastic or metal, as specified by local codes. Keep in mind that the housing may have to be unscrewed from the sensor for periodic cleaning of the sensor. For this reason the use of flexible conduit, providing enough slack for easy access, is recommended.

 Use caution when installing the conduit. Excessive tightening may break the fitting. Such damage is not covered by the warranty.

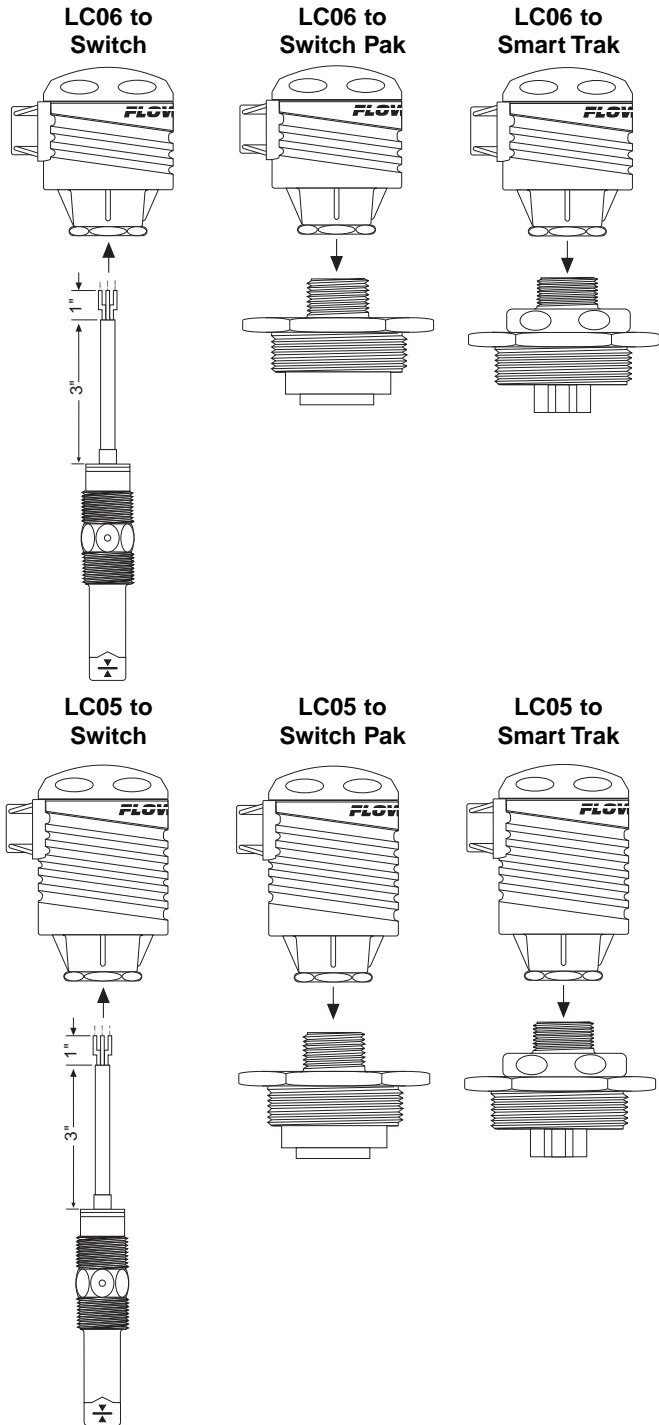
 In some cases, additional user-provided components may need to be attached to the terminals. If so, make sure that both wires or components entering the terminal are secure after the screws are tightened.

# INSTALLATION

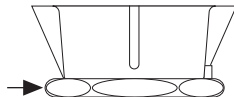
## Step Four

### 3/4" NPT Mounting Thread

Installation of the compact relay controller takes advantage of the 3/4" NPT thread located on its base. This makes the controller fully compatible with any of Flowline's level switches or Smart Trak™ or Switch Pak™ mounting systems.



Always tighten the controller from the wrench flat located on the swivel base. Never tighten from the body of the controller.



## Step Five