

FLOWLINE

We Do Your Level Best!



Model: DLI4-(XX)

EchoPod®

Manual

U.S. Patent #: 7,098,669

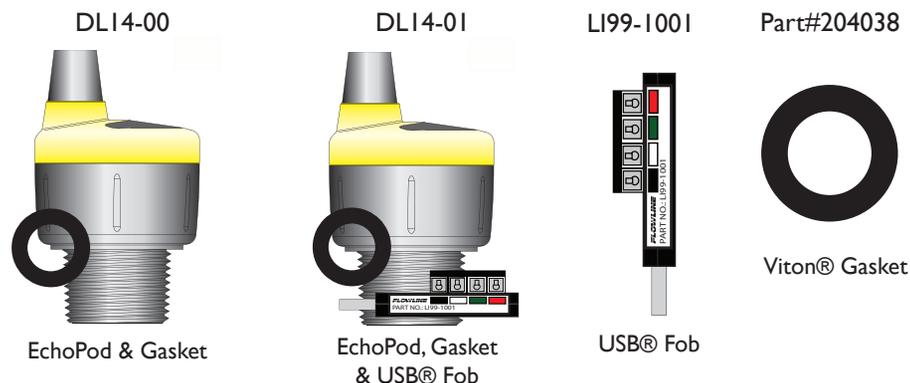
Flowline Online Sales
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We Do Your Level Best!

Thank you for purchasing Flowline's new innovative small tank solution. EchoPod is a general purpose sensor that combines switch, controller and transmitter capabilities for small tanks 49.2" (1.25 m) or less. Flowline would like to thank you for your business and continue to do your level best!

Components

EchoPod is offered in three different models. Depending on the model purchased, you may or may not have been shipped all the components shown below. You do however, need an EchoPod, USB® Fob and Viton® gasket to configure, install and operate EchoPod.



Configuration

EchoPod is configured through WebCal, a PC software program. WebCal is a free download from Flowline's website. You must download and install WebCal prior to plugging in the USB® Fob. Please go to <http://www.flowline.com/webcal> and select download.

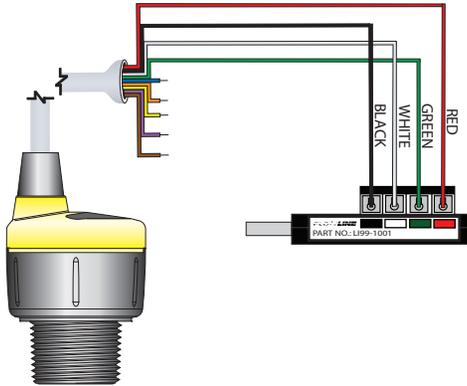
WebCal System Requirements

Windows® XP or 2000
10 mB hard drive space
256 mB RAM
1 USB® 2.0 port
Internet connection

USB® Fob Interface

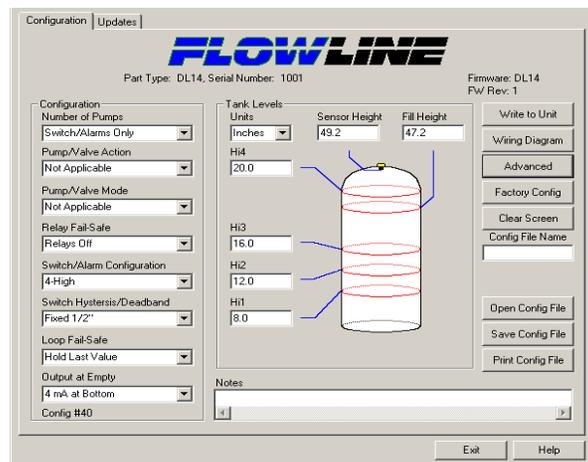
EchoPod communicates with WebCal through a USB® interface called a Fob. Before plugging your Fob into your computer's USB® port, be sure that you have installed WebCal on your computer.

Connect the red, green, white and black wires from EchoPod into the correct terminals on the Fob. Tighten the screws on the terminals and plug your Fob into the USB® port of your computer.

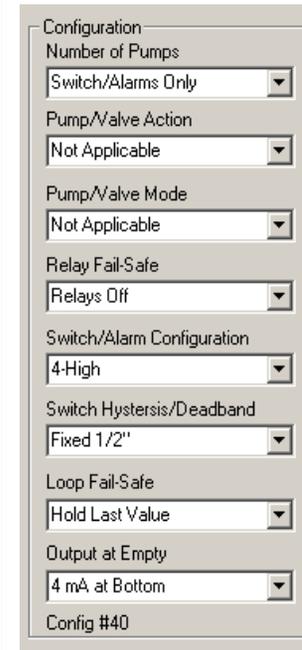


WebCal

With EchoPod connected to your computer, open the WebCal software. Follow steps 1-3 (pg. 4-5) to configure EchoPod. Click "Help" in the lower right hand corner and open the help menu of WebCal. If you need additional assistance using WebCal, please contact a Flowline Applications engineer.



WebCal Step 1: Configuration

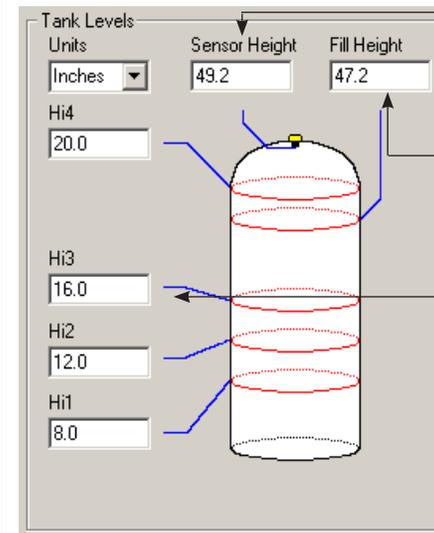


This section of WebCal is where you select the application's configuration settings. Start from the top and work to the bottom, choosing the selections that are applicable to your configuration. "Not Applicable" will automatically show when a selection doesn't apply to your configuration settings, and you may move on. All configuration settings must be selected or have "Not Applicable" before you can continue to step 2.

Right click on any menu that you may have questions on to open the help menu.

WebCal Step 2: Tank Levels

This section of WebCal is where you enter application measurement values. All values must be filled in before moving to step 3.



Sensor Height: Distance from the bottom of the tank to the bottom of the transducer.

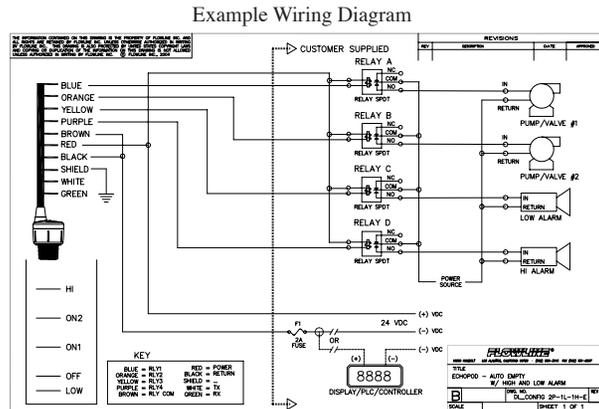
Fill Height: Distance from the bottom of the tank to the maximum liquid height.

Relay Set Points: Distance from the bottom of the tank to set-points.

Right click on any value you may have questions on to open the help menu.

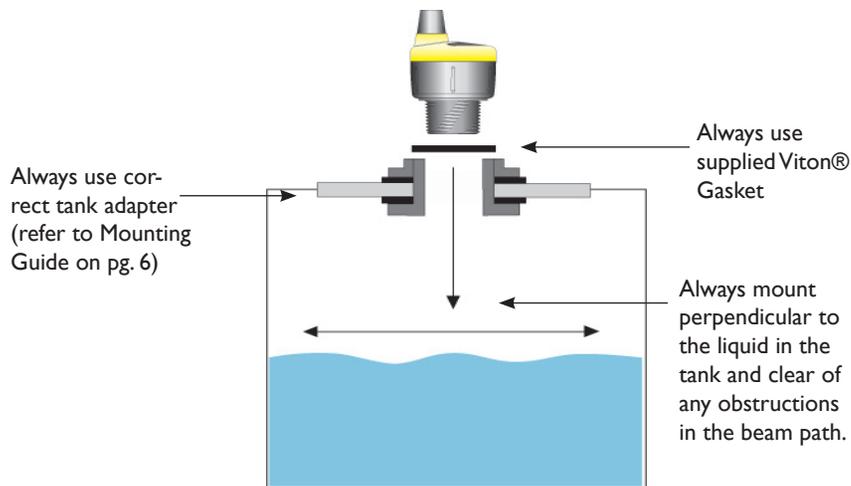
WebCal Step 3: Write to Unit

After you have entered configurations and tank values, click “Write to Unit” and send the configuration to EchoPod. Now use WebCal’s file management features to save your configuration by clicking “Save Config File” and print your wiring diagram by clicking “Wiring Diagram.”



Position and Mount

Positioning and mounting EchoPod is critical to the sensor performing correctly. EchoPod should always be mounted perpendicular to the liquid in the tank, clear of any obstructions in the beam path. Not doing so will result in poor performance. Refer to Flowline’s mounting guide on pg. 6 for further instruction, or www.flowline.com/echopod and select “Support.”



Wiring EchoPod

After you have finished positioning and mounting EchoPod, follow WebCal’s wiring diagram to wire EchoPod. Always use an external relay in-between EchoPod and any components. Flowline recommends using a licensed electrician to wire EchoPod and your application’s components.

Once EchoPod is mounted and wired, observe your application and double check your relay set points.

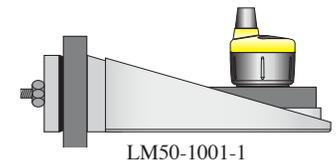
Mounting Guide

1. Do not mount at an angle
2. Liquid should never enter the 2” dead band
3. Mount at least 2” from the side wall
4. Do not mount where obstacles will intrude on 2” beam width
5. Do not mount in a vacuum
6. Never screw directly into tank, always use a *non-metallic* fitting
7. Always use a tank adapter with the minimal height possible

Tank Adapter: Select a tank adapter with minimum height to ensure that EchoPod’s transducer will not be substantially elevated inside the fitting. Flowline recommends using a Spears 2” x 1”, thread by thread, reducer bushing (series 839-249).

	Riser Specifications	
	Inner Dia.	Max. Height
2" (5 cm)	4" (10 cm)	
3" (7.6 cm)	6" (15 cm)	
4" (10 cm)	8" (20 cm)	
6" (15 cm)	12" (30 cm)	

Riser: Use the riser specifications guide and match your riser’s inner diameter with the height.



Flange: Select a flange with a thread that is above the plane of the flange. If your installation requires the use of a blind flange, tap a 2” thread and use a thread by thread reducer bushing (see tank adapter).

Side Mount Bracket: Use Flowline’s LM50-1001-1 side mount bracket. The LM50-1001-1 includes a 2” x 1” reducer bushing.

Stand Pipe: Use a stand pipe when surface foam or turbulence are present. Use a 2” diameter pipe or larger with a length that runs the distance of the span. Cut a 45° notch at the bottom and a 1/4” hole within 2” from bottom of the transducer face.

