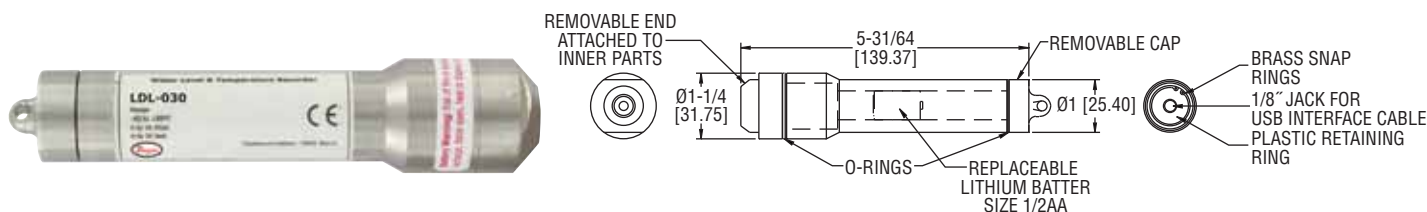




# Model LDL-030 Unvented Water Level Data Logger

## Specifications - Installation and Operating Instructions



The Model LDL-030 Unvented Water Level Data Logger is a compact and portable device. It measures water level up to 30 ft (9.14 m) and has an internal temperature sensor that accurately records temperatures between -40 to 176°F (-40 to 80°C). The battery-powered data logger can store over 16,000 measurements per channel. The easy to use DL700 software allows the LDL-030 to be easily started and stopped from a PC or delayed to start up to six months in advance. The software also allows for user selectable sampling rates.

### NOTICE

Before the logger is submerged, screw on the cap tightly to make sure that the logger is properly sealed.

### SOFTWARE INSTALLATION

1. Insert installation CD and click Install Dwyer 2.00.



2. Follow onscreen instructions.
3. Next, click Install USB Interface Drivers on the CD Contents screen.
4. Click Install.

### SPECIFICATIONS

**Range:** Temperature: -40 to 176°F (-40 to 80°C); Water Level: 0 to 30 ft (0 to 9.14 m).

**Memory Size:** 16,383 readings per channel.

**Accuracy:**  $\pm 0.9^\circ\text{F}$  ( $\pm 0.5^\circ\text{C}$ ) (temperature),  $\pm 0.3\%$ FSR @ 77°F (25°C) (level).

**Resolution:** Temperature: 0.2°F (0.1°C); Water Level: 0.05 in (0.127 cm).

**Sampling Method:** Stop on memory full.

**Sampling Rate:** Selectable from 2 sec to 12 hrs.

**Computer Requirements:** Windows® 95, Windows® 98, Windows® 2000, Windows® ME, Windows NT®, and Windows® XP operating systems, one free USB port.

**Power Requirements:** User replaceable, 3.6V lithium battery.

**Battery Life:** 1 year (approx).

**Interface:** USB port (interface cable required).

**Material:** 303 stainless steel.

**Weight:** 8 oz (227 g).

**Agency Approvals:** CE.

### NOTICE

A message may appear stating that the software has not passed Windows® Logo Testing. This software has been tested and works properly. Click Continue Anyway if this window appears.

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### CONNECT THE LOGGER

1. Remove the Warning sticker from the USB Data Logger Interface converter to uncover the female end of the jack.
2. Insert one end of the jack into the USB Data Logger Interface converter and the other end into the serial port in the data logger.
3. The serial port is located under the cap that has the key ring hole. Unscrew the cap and connect the cable.
4. Connect the DL700 USB cord to the PC and connect the other end to the USB Data Logger Interface converter.

### START THE LOGGER

1. To start the logger, from the Communication menu select Auto Configure Port.
2. From the Device menu select Start Device and choose the desired Reading Rate.
3. Click the Start button.

#### NOTICE

Starting the device erases all data currently stored in the logger.

4. The logger will stop recording when the device is full or when Stop Device is selected from the Device menu.

### DOWNLOAD DATA

1. To download data, connect the logger to the PC.
2. Select Read Device Data from the Device menu.
3. Data is then presented graphically.

\*For more detailed information on using the DL700 software, please consult the Software Manual.

### INITIAL WATER LEVEL RECORDING

Since the logger is not atmospheric pressure compensated, an initial reading will need to be taken before it is submerged. That value should then be subtracted from all other readings so that an accurate water level measurement can be obtained.

Tie a secure line to the key ring hole before submerging.

### BATTERIES

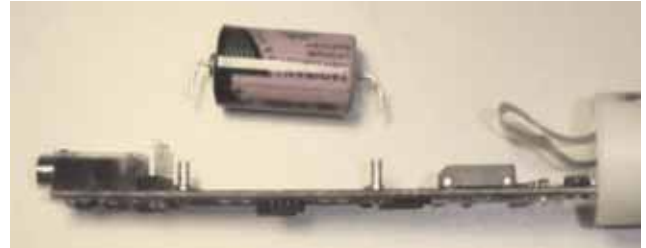
Typical battery life is 1 year. Fast logging will considerably shorten the battery life. To preserve battery life, it is recommended to use the longest practical sampling rate, and when the logger is not in use, select Stop Device from the Device menu.

### BATTERY REPLACEMENT INSTRUCTIONS

1. Remove the end cap with the key ring hole in it, revealing the serial port.
2. Remove the snap-ring with snap-ring pliers.

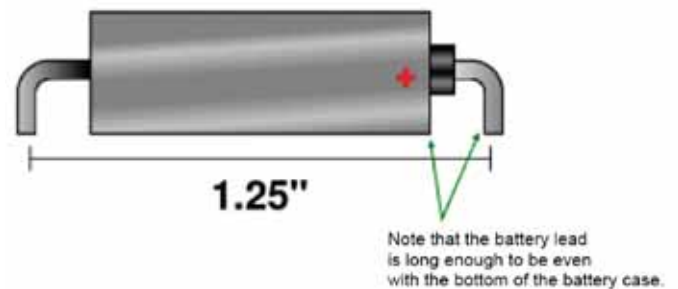


3. Once the snap-ring has been removed, press gently on the white disk to force one end up for easy removal.
4. Use a 1 inch wrench, or a non-slip grip to remove the other end cap.
5. Gently slide the circuit board from the metal case.
6. Set the circuit board down and make note of the orientation of the battery's positive (+) terminal. The "+" indication is also on the circuit board.
7. Remove the old battery and install the new battery noting the orientation of the positive (+) terminal.



#### NOTICE

Depending on where you purchased the battery, the leads may not be bent correctly or at all. Follow the diagram below for bending the battery leads properly.



8. Repeat steps 5 through 1 in reverse order to complete installation.

### MAINTENANCE

Upon final installation of the Model LDL-030 Data Logger, no routine maintenance is required. The Model LDL-030 is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a Return Goods Authorization number before shipping.