



Liquid Level Bin-Dicator® Installation & Operation Manual





Liquid Level Bin-Dicator®

Installation & Operation Manual

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SAFETY SYMBOLS



WARNING:

IDENTIFIES CONDITIONS OR PROCEDURES, WHICH IF NOT FOLLOWED, COULD RESULT IN SERIOUS INJURY. RISK OF ELECTRICAL SHOCK.



CAUTION:

IDENTIFIES CONDITIONS OR PROCEDURES, WHICH IF NOT FOLLOWED, COULD RESULT IN SERIOUS DAMAGE OR FAILURE OF THE EQUIPMENT.

Liquid Level Bin-Dicator®

I. HANDLING AND STORAGE

SAVE THESE INSTRUCTIONS

INSPECTION AND HANDLING

Do not dispose of the carton or packing materials.

Each package should be inspected upon receipt for damage that may have occurred due to mishandling during shipping. If the unit is received damaged, notify the carrier or the factory for instructions. Failure to do so may void your warranty. If you have any problems or questions, consult Customer Support at 1-800-778-9242.

DISPOSAL AND RECYCLING

This product can be recycled by specialized companies and must not be disposed of in a municipal collection site. If you do not have the means to dispose of properly, please contact for return and disposal instructions or options.

STORAGE

If the device is not scheduled for immediate installation following delivery, the following steps should be observed:

1. Following inspection, repackage the unit into its original packaging.
2. Select a clean dry site, free of vibration, shock and impact hazards.
3. If storage will be extended longer than 30 days, the unit must be stored at temperatures between 32° and 158° F (0° to 70° C) in non-condensing atmosphere with humidity less than 85%.



CAUTION: DO NOT STORE A NON-POWERED UNIT OUTDOORS FOR A PROLONGED PERIOD.

II. GENERAL SAFETY

AUTHORIZED PERSONNEL

All instructions described in the document must be performed by authorized and qualified service personnel only. Before installing the unit, please read these instructions and familiarize yourself with the requirements and functions of the device. The required personal protective equipment must always be worn when servicing this device.

USE

The device is solely intended for use as described in this manual. Reliable operation is ensured only if the instrument is used according to the specifications described in this document. For safety and warranty reasons, use of accessory equipment not recommended by the manufacturer or modification of this device is explicitly forbidden. All servicing of this equipment must be performed by qualified service personnel only. This device should be mounted in locations where it will not be subject to tampering by unauthorized personnel.

MISUSE

Improper use or installation of this device may cause the following:

- Personal injury or harm
- Application specific hazards such as vessel overfill
- Damage to the device or system

If any questions or problems arise during installation of this equipment, please contact Customer Support at 800-778-9242.

III. PRODUCT DESCRIPTION

FUNCTION

Non-Contact Liquid Level Bin-Dicator control is a low cost, floatless, pressure sensitive, diaphragm actuated switch that automates the filling and emptying of containers.

FEATURES

- Actuates overflow and low level alarms
- Indicates high and/or low liquid levels
- Optional side mounting

TECHNICAL SPECIFICATIONS

Housing and Cover	Polyester Coated Aluminum Casting
	Optional Explosion-Proof
Pressure Chamber	Polyester Coated Aluminum Casting 1" NPT
Diaphragm	Teflon® Faced Neoprene
Switch	Standard SPDT Snap Action Switch (Dry Contact) Rated: 15 amp resistive @ 125, 250 or 480 VAC, Pilot Duty 375 VA, 125 VAC or 750 VA, 250 VAC
Shipping Weight	7 lbs (3 kg)
Temperature Rating	32° to 158° F (0° to +70° C)
Pollution Degree	2
Installation Category	II
Altitude	6,562 ft (2000 m)

Note:

For high and low level float control, Bindicator offers Levelite float controllers. Visit www.levelitestore.com for more information.

APPROVALS

GT-1:

UL (US) - General Purpose

CSA - General Purpose

GTX-1:

UL (US) - Hazardous Location for Class 1,

Groups C and D; Class II, Groups E, F and G

CSA - Hazardous Location for Class I,

Groups C and D; Class II, Groups E, F and G Intrinsically Safe

IV. MECHANICAL INSTALLATION



CAUTIONS: WARNING: REMOVE POWER FROM THE UNIT BEFORE INSTALLING, REMOVING, OR MAKING ADJUSTMENTS.

GUIDELINES

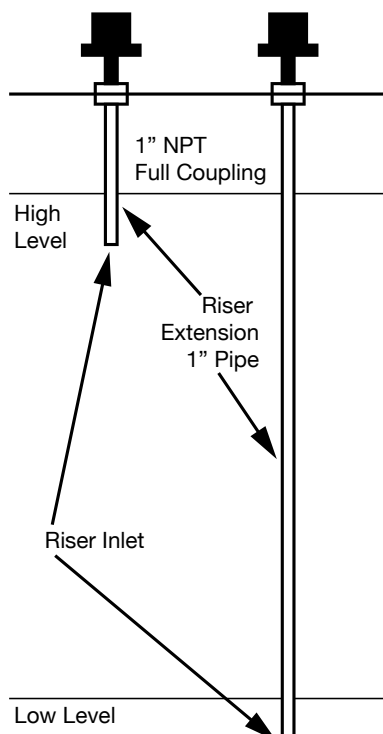
- In lieu of field testing prior to installation, the following may be used as a general guide based on tests with water temperature at 65° F (18° C).
- High Level Switch Actuation: Allow for level to rise 5 in (13 cm) above the riser inlet. Add 1 in (2.54 cm) to the High Level Switch Actuation point for each additional 10 ft (3 m) of vertical riser pipe.

NOTE: The above guide allows for differences between individual production units. When using a single unit for high-low operation, the level differential will be approximately 2 in (5.02 cm).

MOUNTING

1. Weld full coupling to tank.
2. Thread riser into lower position of full coupling.
3. Install unit by threading the unit into the upper half of full coupling. The unit must be mounted in the upright position.
4. Make sure all connections are air tight in order to ensure reliable operation.
5. Move on to Electrical section.

Figure 1. Typical Top of Tank Application



V. ELECTRICAL INSTALLATION



WARNING: VERY HIGH VOLTAGE IS PRESENT. REMOVE POWER FROM THE UNIT BEFORE INSTALLING, REMOVING, OR MAKING ADJUSTMENTS

GENERAL SAFETY

When using electrical equipment, you should always follow basic safety precautions, including the following:

- The installation and wiring of this product must comply with all national, federal, state, municipal, and local codes that apply.
- Properly ground the enclosure to an adequate earth ground.
- Do not modify any factory wiring. Connections should only be made to the terminals described in this section.
- All connections to the unit must use conductors with an insulation rating of 300V minimum, rated for 105C, a minimum flammability rating of VW-1, and be of appropriate gauge for the voltage and current required (see specifications).
- Do not allow moisture to enter the electronics enclosure. Conduit should slope downward from the unit housing. Install drip loops and seal conduit with silicone rubber product.



DISCONNECT REQUIREMENTS FOR PERMANENTLY INSTALLED EQUIPMENT

A dedicated disconnecting device (circuit breaker) must be provided for the proper installation of the unit. If independent circuits are used for power input and outputs, individual disconnects are required.

Disconnects must meet the following requirements:

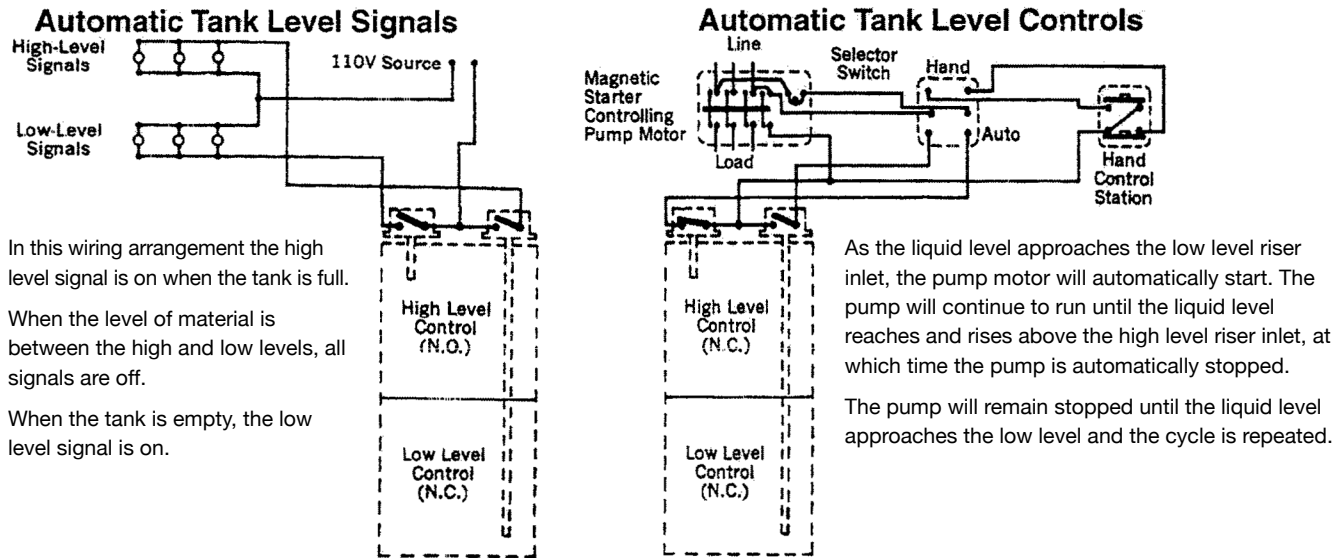
- Located in close proximity to the device
- Easily accessible to the operator
- Appropriately marked as the disconnect for the device and associated circuit
- Sized appropriately to the requirements of the protected circuit (See specifications)

PROTECTIVE EARTH GROUND

To eliminate shock hazards in the unlikely event of an internal insulation breakdown, the unit is provided with a “protective earth” () lead which must be connected to earth ground. In addition, the input power ground lead must be connected to the “protective earth” () terminal provided. Wire sizes must be selected such that it can safely carry the sum total of all circuits’ maximum amperage.

WIRING DIAGRAM

Figure 2. Typical Wiring Diagram



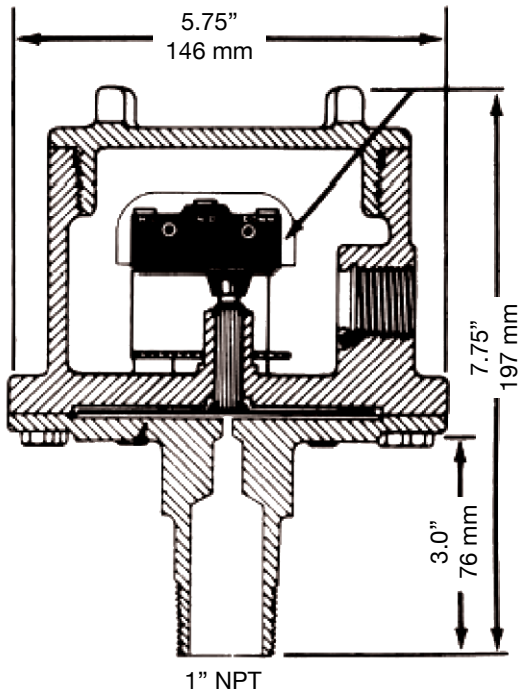
VI. MAINTENANCE

No scheduled preventative maintenance is required when unit is properly applied and installed correctly. There is no cleaning required for the unit before or during installation.

REPLACEMENT PARTS

PART NUMBER	DESCRIPTION
LAG110760	Micro Switch Assembly
LAG110800	Cam Assembly
LAG121700	Cover, Cast Aluminum
LAG121750	Switch Barrier
LAG121760	Push Rod, Stainless Steel with Lock Ring #9120
LAG121780	Diaphragm Back Plate, Aluminum
LAG121790	Teflon Over Neoprene Diaphragm
LAG121820	Brass Vent
LAG121830	Switch Bracket
LAG131150	Micro Switch, 180°F (82°C), BA-2RB-A4 Plunger

VII. DIMENSIONAL DRAWING





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MEASUREMENT

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