

# INTRINSICALLY SAFE ALARM IS-AB

## 1. CONNECT BATTERY

The battery pack connects with the JST connector. Only battery model BT-IS may be used. Battery is Intrinsically Safe and may be changed in the hazardous area. Refer to control drawing IS-001.



BATTERY  
BT-IS

## 2. PROGRAM DESIRED MODE

The modes available are selected using the DIP switches as follows:

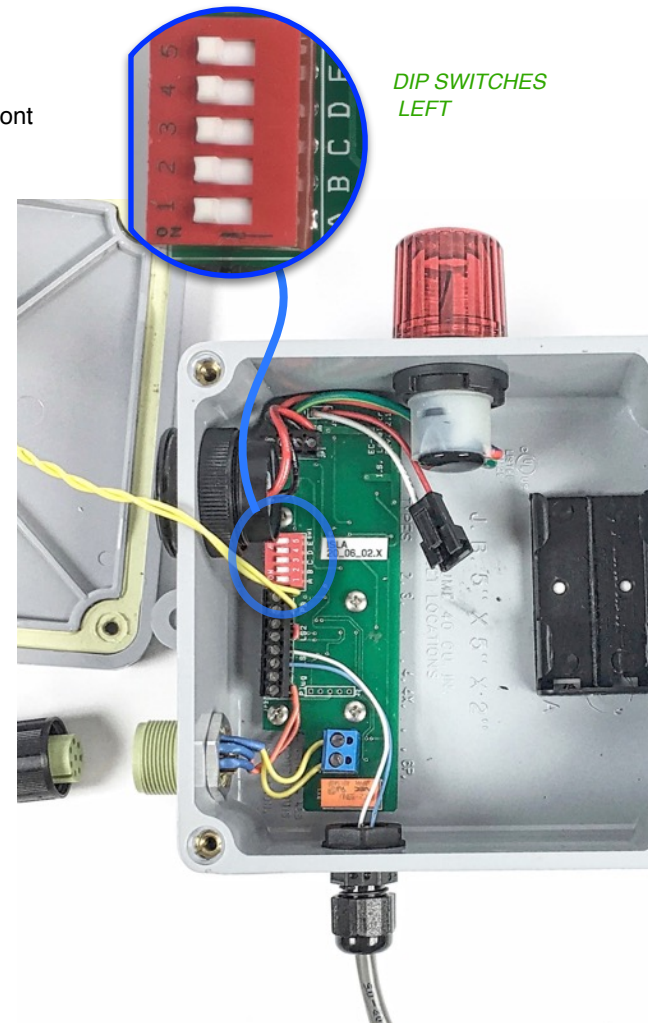
SWITCH	LEFT	RIGHT
E	Relay output delayed 15 mins.	Relay output is immediate.
D	RelayN.C	Relay N.O.
C	Auto reset of LED, buzzer and relay when level is corrected.	Manual reset: must push button after level is corrected to reset LED and relay.
B	PB shuts off buzzer, but LED & relay stay on until both level is corrected.	Pressing button shuts off buzzer and LED, and resets relay, regardless of level.
A	30 minute buzzer snooze alarm	No buzzer snooze alarm

## 3. OPERATION

- When there is a level alarm, the LED and buzzer will alternate. The front button silences the buzzer. In the mode with switch #2 "ON", the LED will continue to flash until level is corrected. If switch #1 is "ON" the buzzer will sound again after a 30 minute "snooze".
- If the alarm is not acknowledged for 60 minutes, the alarm output will be reduced to save battery power. After 60 minutes, all alarms will be reduced to only 5 sec. every 30 seconds. This allows the alarm to last for up to 600 hours (25 days) in this power-saving mode.

## 4. OTHER POINTS

- Operating temperature is -40°C to 60°C. (-40°F to 140°F). Rated for outdoor use.
- Very low temperatures will diminish the battery life. For example if operating at -40°, the battery will be reduced by half. See website for more detailed information.
- Low battery is indicated by an alarm with which has a rapid beeping pattern for 5 seconds every 30 seconds.
- If there is a second sensor connected,(on LS2) it will have a slower beeping/flushing pattern from the first sensor. (slow vs. fast pattern)



DIP SWITCHES  
LEFT

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## 5. RELAY OUTPUT

- If your model includes a relay output, follow notes in “Control Drawing “IS-001” so the remote device in the “safe” area does not introduce an unsafe voltage into the hazardous area.
- The remote device must be connected through an Intrinsically Safe barrier. .
- Connect the output cable to the IS-AB using the cable with screw-lock connector provided.

## 6. EXAMPLE INSTALLATION

- Install a level switch associated with the IS-AB on a tank or drum by screwing the mounting thread of the level probe into the tank or drum opening.



RELAY OUTPUT TO  
INTRINSICALLY  
SAFE BARRIER

LEVEL "PROBE"  
SCREWS INTO  
TANK OR DRUM

IS-AB ALARM

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## 7. HAZARDOUS LOCATION SAFETY INFORMATION

### MARKINGS

- The following label will appear on the product indicating all the relevant markings which are applicable.

### ENVIRONMENTAL CONDITIONS

- Outdoor, -40 to +60°C, 2000m elevation.

### APPLICABLE STANDARDS

- This product has been certified to the following standards:

CAN/CSA-C22.2 No. 0-10
CAN/CSA-C22.2 No. 60079-0:15
CAN/CSA-C22.2 No. 60079-11:14
ISANSI/ISA-60079-0 (12.00.01)-2013
ANSI/ISA 60079-11 (12.02.01)-2014
CAN/CSA C22.2 No. 61010-1-12
ANSI/UL 61010-1, 3 <sup>rd</sup> Edition
CAN/CSA-C22.2 No. 60529:16

### NOTES

- See the Control Drawing below.



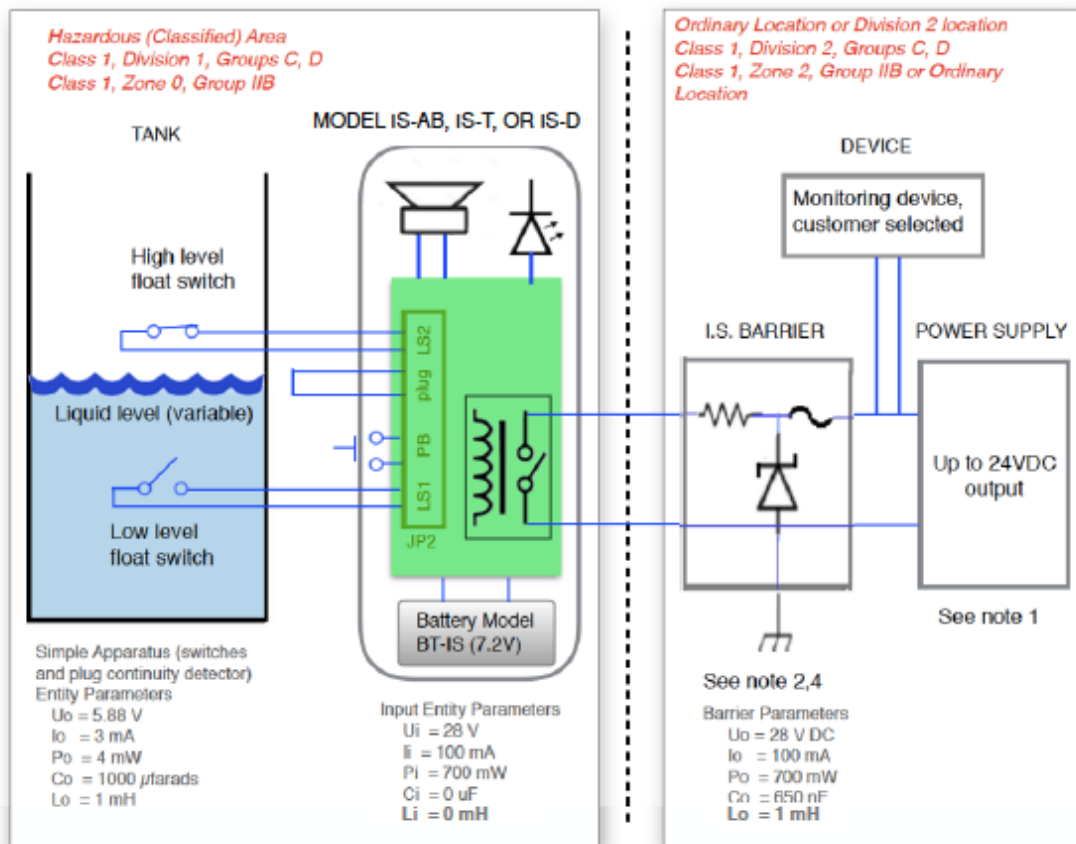
LABEL

# INTRINSICALLY SAFE ALARM IS-AB

## GIZMO ENGINEERING CONTROL DRAWING FOR MODEL IS-AB, IS-T, AND IS-D

### NOTES

1. Maximum safe area voltage is 250V.
2. The associated apparatus (barrier) must be connected to a suitable ground electrode per the National Electrical Code (NFPA 70) the Canadian Electrical Code, or other installation codes, as applicable by the authority having jurisdiction. (AHJ)
3. Tank float switches, push-button, and continuity wire in Division 1/Zone 0 are Simple Apparatus.
4. The resistance of the ground path must be less than 1  $\Omega$ .
5. Intrinsically safe circuits must be wired and separated in accordance with Article 504.20 of the National Electrical Code (ANIS/NFPA 70) or other local codes, as applicable.
6. The associated apparatus has not been evaluated for use in combination with another associated apparatus.
7. This drawing may not be altered without notice to the certification body.
8. Battery package is Intrinsically Safe and may be replaced in the Hazardous Location.
9. Only Intrinsically Safe battery package BT-IS must be used with models IS-AB, IS-T, or IS-D.
10. Float switches, Plug Continuity circuit and Push Button switch are all derived from the same circuit and operate at extremely low power, and separation per NEC 504.30 (B) is not required because combined energy from all 4 circuits is Intrinsically Safe. Intrinsically Safe circuits in connector JP2 must be separated from the the Barrier Protected Intrinsically Safe circuit of RY1 by at least 6 mm (0.25 inch)
11. Environmental Conditions: Outdoor, -40°C to +60°C, 2000m max.
12. The enclosure of IS-T and IS-D are made from aluminum. In rare cases ignition sources due to impact and friction sparks could occur. This shall be considered during installation. Use care not to cause impacts or scrapes with other metal objects during installation.
13. Under certain extreme circumstances, exposed plastics and unearthed metal parts of the enclosure of models IS-AB, IS-T, IS-D may store an ignition capable of an electrostatic charge. i.e. locate the equipment where a charge generating mechanism is unlikely to be present. Clean with only with a *damp* cloth.



TITLE: Control Drawing	FILE: Control Drawing IS-001
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