

BINTECH

ALARM INDICATOR UNIT BI-4000H-IS

Installation and Commissioning Note

April 2019

This note describes the installation and commissioning of the Bintech Alarm Indicator Unit BI-4000H-IS-x-y-B



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INSTALLATION OF THE BINTECH ALARM INDICATOR UNIT

1. INTRODUCTION

The Bintech Alarm Indicator Unit is battery powered and enables the monitoring of the fluid level of a remote tank. It may be set to provide a high level audible and visual alarm. It has the ability to monitor up to three individual tanks or floats. It is used in association with a magnetic float level switch fitted to the tank.

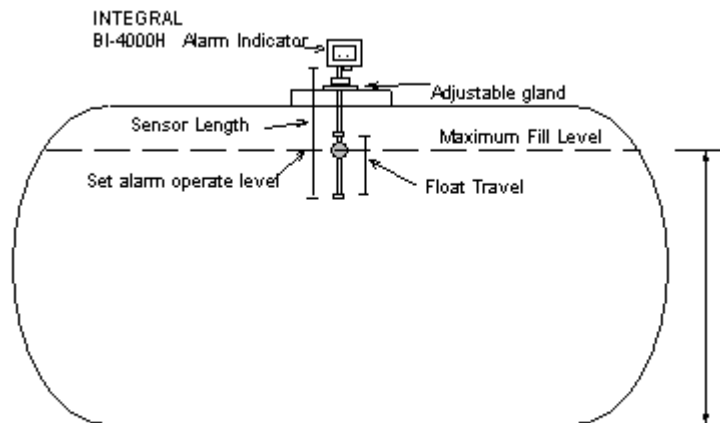
The intended use of the BI4000H-IS is for industrial applications in hazardous atmospheres of up to zone 1: gas, vapors, and mists.

The apparatus is designated a Bintech Level Alarm Model BI-4000H-IS-x-y-B. Where x can be either A for Attached switched contacts or R for remote switched contacts or B for box only. And y can be 0 for no radio transmitter or TX434 for a 434 MHz transmitter.

Intrinsically Safe rating Ex ia IIB T4
Copy of certificate is available from www.bintech.com.au

2. INSTALLATION – TYPICAL

2.1 Single Unit



INTEGRAL CONFIGURATION

2.2 Multiple Level Switches

The BI-4000H has the ability to monitor three (3) level switches providing separate alarms for each condition. For remote monitoring remove lid and run remote switch cable through gland provided. Terminate wires to appropriate terminals. Refer to section 2.3 and diagram in 3.0.

2.3 Connections

FLOAT	TERMINAL	INDICATOR	State
Switch 1	J1 + / c	Alarm 1	Latching
Switch 2	J2 + / c	Alarm2	Latching
Switch 3	J3 + / c	Alarm1	Latching

2.4 Testing

After unpacking, the unit should be tested before installation. Remove the elastic band holding the float in place. The float should then move freely between the limit collars on the guide tube. Typically the switch will operate with the float approximately 15 to 20 mm above the bottom collar. If the alarms do not operate check the internal battery - see section 3.

2.5 Fitting to the tank

Fill the tank to the required operating level. Maximum (for the high level alarm). Remove the access plug and screw in the level switch. Loosen the adjustable gland.

2.6 Setup

High level alarm. With the tank filled to the required level, slide the unit up to its maximum height and then slowly move it downwards until the alarms operate. Tighten the gland seal to lock the guide tube in position. The alarm level is now set.

2.7 Operation

A. Momentary level switch (On/Off) (minimum of 1 sec)

Continuous siren and flashing indicator for 120 seconds or until Cancel Alarm Key, unit then goes to standby.

B. Continuous level switch (On)

Continuous siren and flashing indicator for 120 seconds, unit then gives short burst of siren each 20 seconds, until 60 minute timeout or level switch goes off or Cancel Alarm Key. Unit then switches off.

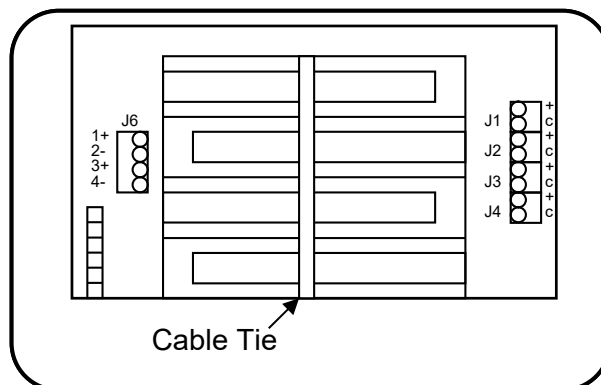
C. Test Alarm Key (Hold for minimum of 1 sec)

Performs full function as if level switch operated and released.

3. MAINTENANCE & FAULT FINDING


No maintenance is required except for periodic testing of the alarm and battery condition (before fill or monthly). If the Battery Good indicator doesn't light with Test Battery, then the unit should be removed and new batteries are fitted as shown below. Ensure that the batteries are fitted with the correct polarity and firmly mounted within their holder using a cable tie.

Battery replacement should be done in a NON-HAZARDOUS SAFE AREA only.



INTERNAL VIEW OF THE BI-4000H INDICATOR

3. SPECIFICATIONS

Enclosure:	Cast Alloy, IP65
Mounting:	Fixed to sensor (remote mount optional)
Orientation:	Vertical $\pm 30^\circ$
Environment:	External (hazardous area)
Alarms:	Warble Siren 95 dBA and flashing LED
Alarm Duration:	120 sec
Keys:	Cancel Alarm, Test Alarm, Test Battery
Battery:	AAA Only replace with DURACELL MN2400 (Life 1 year estimated, 2 timeout operations per day)
Electrical Inputs:	Normally open switches x 3
Safety Parameters:	Refer to hazardous area certification IECEX ITA 07.0014X
Process Connection:	1/2 inch BSP to 2 inch BSP (Other process connections as factory options)
Adjustment:	Tank level threshold set via sensor position
Accuracy:	Repeatability 1%
Operating Temperature:	-20°C to 60°C
Power Requirements:	6 VDC (refer battery)
Dimensions:	L x H x D, 115 x 90 x 55 mm
Weight:	2 kg with process connections
Compliance:	IEC Ex ia IIB T4 & AS1940 for overfill indication, 

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Bintech policy is one of continuous development and accordingly we reserve the right to change specifications without notice or obligation.

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