

BINTECH

ALARM INDICATOR UNIT BI-4000H-IS-x-0-B-ATEX

Installation and Commissioning Note

This note describes the installation and commissioning of the Bintech Alarm Indicator Unit BI-4000H-IS- x-0-B-ATEX



Bintech
5 / 58 Mahoneys Road
Thomastown
Victoria 3074
AUSTRALIA
Tel. 61 3 9467 7300
sales@bintech.com.au

© Copyright 2012

Supplier & Manufacturer of high quality process control instrumentation


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.

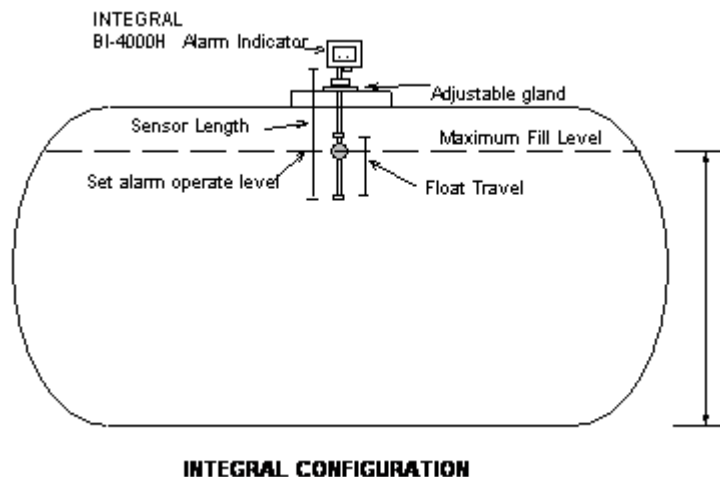
The intended use of the BI4000H-IS is for industrial applications in hazardous atmospheres of up to zone 1: gas, vapors, and mists.

The apparatus is designated a Bintech High Level Alarm Model BI-4000H-IS-x-0-B. Where x can be either "A" for Attached switched contacts or "R" for remote switched contacts or "B" for box only.

Intrinsically Safe rating  **II2G Ex ia IIB T4 Gb**
Copy of certificate is available from www.bintech.com.au

2. INSTALLATION – TYPICAL

2.1 Single Unit



Note: Due to the potential electrostatic risk of the plastic membrane and the light metal enclosure the apparatus must NOT be, located in a Zone 0.

Supplier & Manufacturer of high quality process control instrumentation

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	Non-latching
Switch 2	J2 + / c	Alarm 2	Non-latching
Switch 3	J3 + / c	Alarm 1	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.

Supplier & Manufacturer of high quality process control instrumentation

Benkol Pty Ltd t/as Bintech Systems ABN 74 123 478 431
5 / 58 Mahoneys Road, Thomastown Vic, 3074

T: 61 3 9467 7300

T: 1300 363 163 E: sales@bintech.com.au

W: www.bintech.com.au

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. Level switch Activation (On for minimum of 1 sec)

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 pressed. Unit then goes into standby.

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

Performs full function as if level switch operated and released.

Supplier & Manufacturer of high quality process control instrumentation

Benkol Pty Ltd t/as Bintech Systems ABN 74 123 478 431
5 / 58 Mahoneys Road, Thomastown Vic, 3074

T: 61 3 9467 7300

T: 1300 363 163 E: sales@bintech.com.au

W: www.bintech.com.au

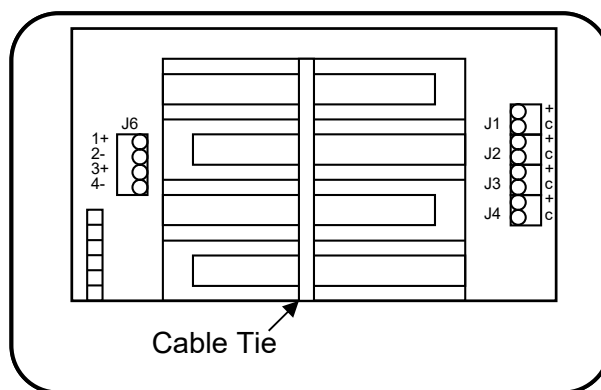
3. MAINTENANCE & FAULT FINDING

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.

Please consider the environment when disposing of the batteries.

There are no toxic materials contained within this product.



INTERNAL VIEW OF THE BI-4000H INDICATOR

Supplier & Manufacturer of high quality process control instrumentation

Benkol Pty Ltd t/as Bintech Systems ABN 74 123 478 431
5 / 58 Mahoneys Road, Thomastown Vic, 3074
T: 1300 363 163 E: sales@bintech.com.au

W: www.bintech.com.au

T: 61 3 9467 7300

4. 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:	Only replace with: DURACELL AAA LR03 MN2400 or ENERGIZER AAA LR03 AM2 (Life 1 year estimated, 2 timeout operations per day)
Electrical Inputs:	Normally open switches x 3
Safety Parameters:	Refer to hazardous area certification TUV 12 ATEX 7262 X
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:	EN 60079-0:2018, EN 60079-11:2012, Ⓔ _x II2G Ex ia IIB T4 Gb & AS1940 for overfill indication, Ⓢ

Supplier & Manufacturer of high quality process control instrumentation

Benkol Pty Ltd t/as Bintech Systems ABN 74 123 478 431
5 / 58 Mahoneys Road, Thomastown Vic, 3074
T: 1300 363 163 E: sales@bintech.com.au

T: 61 3 9467 7300

W: www.bintech.com.au

Intrinsically safe parameters

J1, J2, J3 (Combined)	
U0=	6,6 V
I0=	124 mA
P0=	170 mW
C0=	400 μ F
L0=	0 mH
Ci=	25 μ F
Li=	4,4 μ H

Bintech Systems
5 / 58 Mahoneys Road
Thomastown Victoria 3074
AUSTRALIA

No part of this document may be copied without the express consent of the author.

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

Supplier & Manufacturer of high quality process control instrumentation



more than level best

Bintech Systems

Declaration of Conformity

- (1) **Equipment or Protected System intended for use in potentially explosive atmospheres**
- (2) **Document Number:** **BIN01 ATEX7262X**
- (3) **Equipment:** **BI4000 Overfill Alarm**
- (4) **Manufacturer:** **Benkol Pty Ltd trading as Bintech Systems**
- (5) **Address:** **5 / 58 Mahoneys Road
Thomastown, VIC 3074
Australia**
- (6) Benkol Pty Ltd certifies that the listed equipment complies with ATEX directive 2014/34/EU and is according to **EN IEC 60079-0:2018 and EN 60079-11:2012**.
- (7) This equipment has certificate number TUV 12 ATEX 7262 X, with examination and test results recorded in the confidential report 557/Ex262.00/12
- (8) The sign "X" indicates that the equipment is subject to special conditions for safe use specified in the above certificate.
- (9) The marking of the equipment includes the following:

  II2G Ex ia IIB T4 Gb
Year of construction

07.08.2020

Paul Jenkins
Engineering Manager



Supplier & Manufacturer of high quality process control instrumentation

Benkol Pty Ltd t/as Bintech Systems ABN 74 123 478 431

5 / 58 Mahoneys Road, Thomastown Vic, 3074

T: 61 3 9467 7300

T: 1300 363 163

E: sales@bintech.com.au

W: www.bintech.com.au