



PSM INSTRUMENTATION LTD

Single Hold Bulksafe

W.I.A.S Systems

Quick User Manual

Issue B date: 11/02/2009

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Doc Ref: Man 44

Introduction

This document provides basic guidance on the installation, configuration and operation of the series 4000 Bulksafe Single hold Water Ingress Alarm System.

Further detailed information is available in the installation and operation manual document reference Man 021 available on request or for download from our website.

Installation

Typical outline and connection details are provided by the drawings at the end of this guide. Where alternative mounting arrangements are used, additional drawings are available on request.

Configuration

PSM Single hold Bulksafe systems are supplied fully configured in accordance with Solas regulations with the possible exception of the alarm set points. With this exception, no other changes are necessary or advised.

****Note:Pre and main alarms are factory set at 12.5 & 50% of the transmitter range (2m)**

Below is an extract from the regulation which outlines the definition of a single hold cargo ship and also the required set points dependent upon hold depth

13.8.6 Water Level Detection and Alarm Systems for Single Hold Cargo Ships

- 1 Cargo ships other than bulk carriers defined in 31A.1.2(1), Part C, having a length (L_T) of less than 80 m and a single cargo hold below the freeboard deck or cargo holds below the freeboard deck which are not separated by at least one bulkhead made watertight up to that deck, are to be fitted in such space or spaces with water level detection and alarm systems in accordance with the following (1) to (3).
 - (1) The water level detection and alarm systems are to give an audible and visual alarm at the navigation bridge when the water level above the inner bottom in the cargo hold reaches a height of not less than 0.3 m, and another when such level reaches not more than 15% of the mean depth of the cargo hold.
 - (2) The systems are to be fitted at the aft end of the hold, or above its lowest part where the inner bottom is not parallel to the designed waterline. Where webs or partial watertight bulkheads are fitted above the inner bottom, the fitting of additional detectors may be required.

This extract is taken from the following:

**Draft amendment of the Rules and the Guidance
related to
Water level detectors on single hold cargo ships other than bulk carriers
(SOLAS Reg.II-1/23-2)**

PSM will not be held responsible for any later amendments—please check the latest requirement before proceeding.

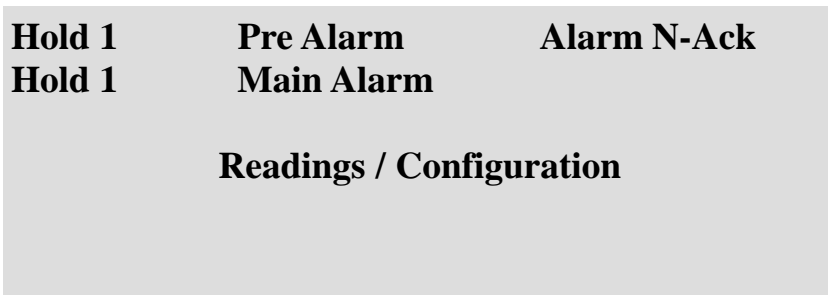
If changes to the set points are required it will be necessary to enter set—up mode.

Setup mode

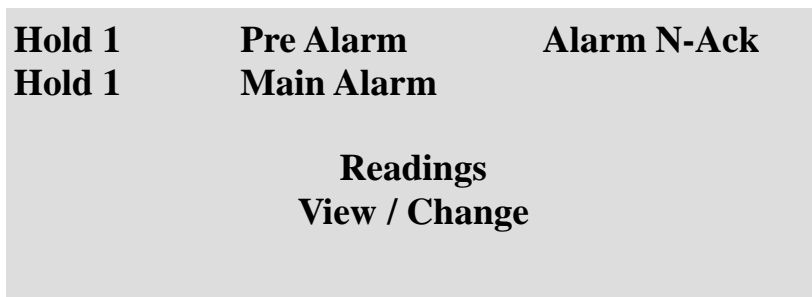
Note: while in setup mode no scanning is performed therefore please check that all inputs are in a safe condition before proceeding

For safety reasons if no key is pressed within 1 minute the unit will return to run mode

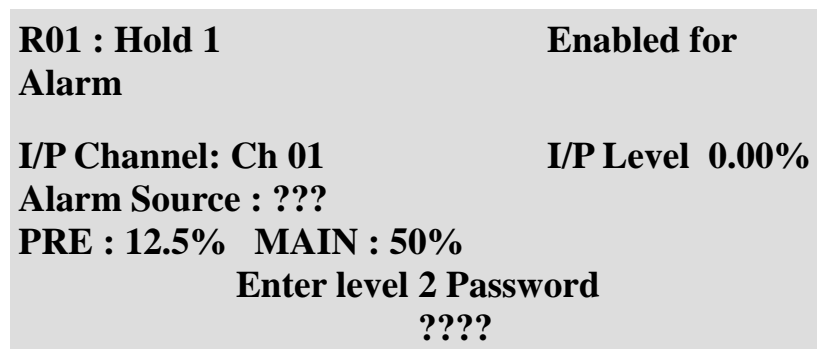
To enter setup mode press the enter key twice and a screen similar to the one below will be displayed



Using the left and right arrows highlight 'Readings' and hit 'ENTER' to select



Using the left and right arrows highlight 'Change' and hit 'ENTER' to select



The level 2 password is factory configured as '4321' key this in and press 'ENTER'

The **Any Messages** field will be empty when no alarm or fault conditions are present. When an alarm or fault occurs this field will provide further information on it's nature & status, i.e. "**Alarm N-ACK** " confirms that there is an active **Alarm** which has **Not** been **ACK**nnowledged, or "**Alarm ACK**" shows an active **Alarm** which has been **ACK**nnowledged by an operator.

In addition to the text display, 6 LED's around the LCD provide specific indication of the operational health or otherwise of the system.

Acknowledging alarms

Press 'ENTER' so 'HELD' is visible then using the up/down arrows highlight the required channel, press 'ENTER' and then 'O'button this will cancel the selected alarm only. Press 'ESC' to return to run mode.

Self Test

Press 'ENTER' so 'HELD' is visible then press '2'button. Highlight the required test and follow the on-screen instructions.

Input Test

PSM Series 260 sensors are used to monitor the holds and dry spaces. A separate manual details their installation & operation. For the Bulksafe system the Series 260 electronics module is fitted within a secondary enclosure suitable for remote mounting on deck or in the engine room as the application requires. This secondary enclosure also houses a test pump.

Using this pump both the PRE and MAIN alarm conditions may be tested. With the enclosure open lift the pump for operation. 2 or 3 pumps are sufficient to generate a PRE alarm condition and 5 or 6 will generate a MAIN alarm condition. It will be necessary for the test engineer to be in communication with the Bridge so that correct operation can be verified.

Once the test is completed the sensor will automatically resume monitoring mode and the enclosure may be closed.

DECLARATION

This system has been type tested as detailed in MSC .145(77) Performance standards for water level detectors on Bulk carriers.

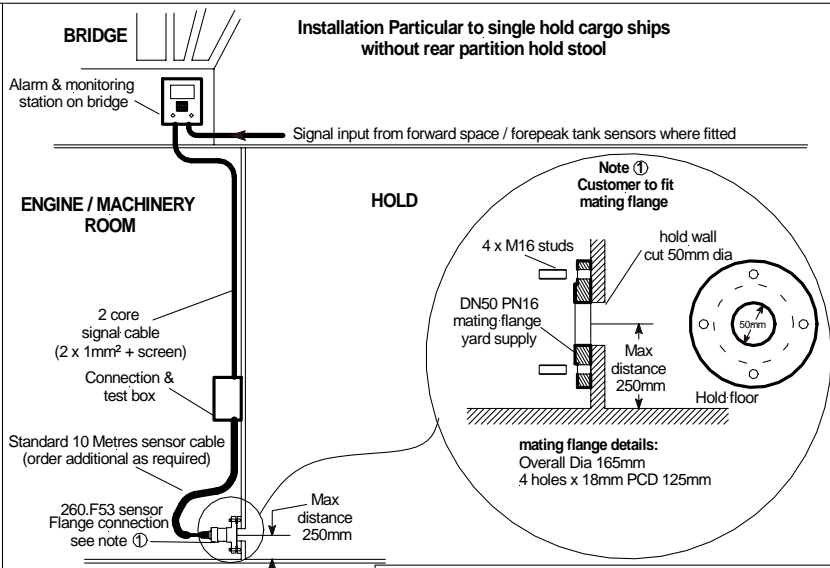
Reference Section 2.1.1 of the guidelines - installation and testing of water level detection systems for bulk carriers

The detectors were tested in - Iron ore

**Coal
Grain
Aggregate (sand)**

This qualifies the system for use on all types of cargoes.

SALES DRAWING ONLY
NOT TO BE USED FOR MANUFACTURE



**Installation Particular to single hold cargo ships
without rear partition hold stool**

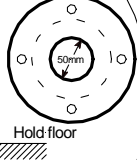
Note ①
Customer to fit
mating flange

4 x M16 studs

hold wall
cut 50mm dia

DN50 PN16
mating flange
yard supply

Max
distance
250mm



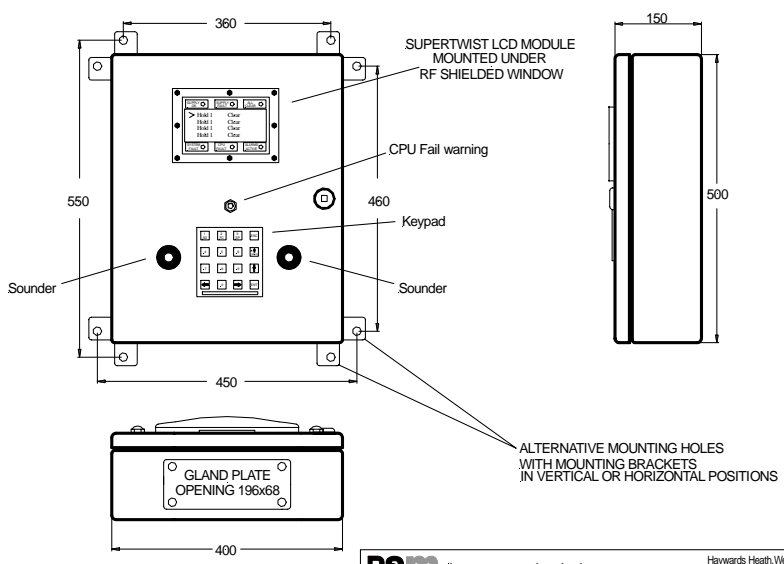
mating flange details:
Overall Dia 165mm
4 holes x 18mm PCD 125mm

PSM Instrumentation Ltd

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SCALE NTS	UNLESS OTHERWISE STATED DIMENSIONS ARE IN MILLIMETRES / INCHES	TITLE Bulksafe single hold installation	DRAWING NO S-001296-WIS-GA	A4 SHT 1 OF 1
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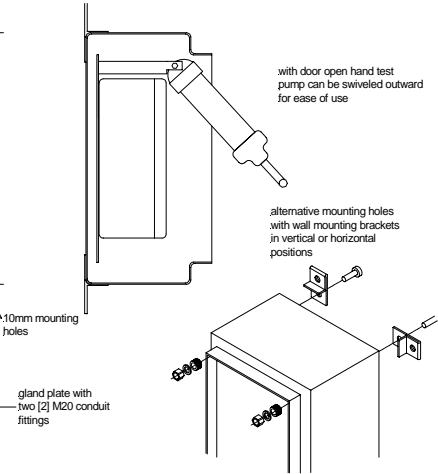
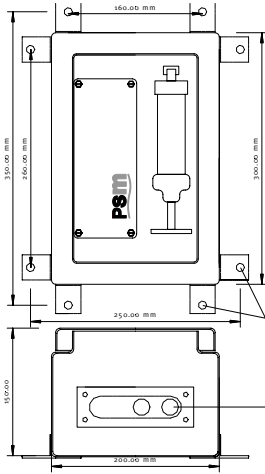


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SCALE NTS	UNLESS OTHERWISE STATED DIMENSIONS ARE IN MILLIMETRES / INCHES	TITLE Series 4000 main display	DRAWING NO S001193-4000-GO	A4 SHT 1 OF 1
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SCALE: NTS

UNLESS OTHERWISE STATED DIMENSIONS ARE IN MILLIMETRES

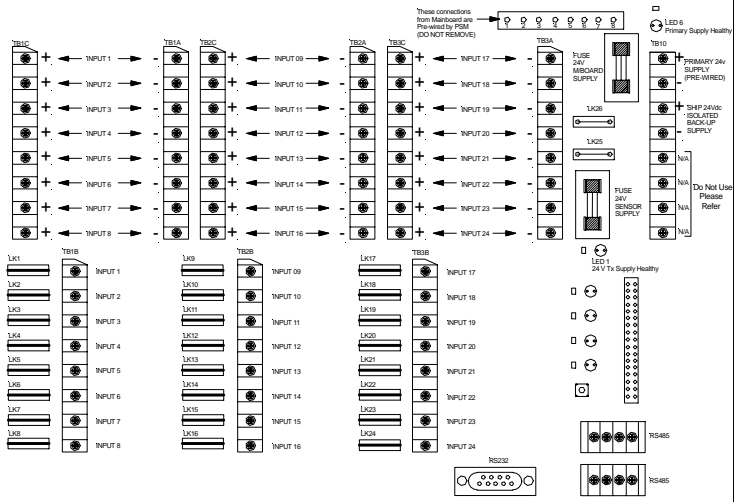
TITLE: **JWT 4050 WALL MOUNTING ENCLOSURE**

DRAWING NO: **SPR-088-057-DT**

A4 SHEET 1 OF 1

SCALE	A	B
DATE	DATE	DATE
DESIGN	DATE	DATE
CHECKED	DATE	DATE
APPROVED	DATE	DATE

INSTALLATION DIAGRAM



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TITLE: **WIRING DIAGRAM ALARM PANEL**

DRAWING NO: **IN-001-IWT-WD**

A4 SHEET 1 OF 1

SCALE	A	B
DATE	DATE	DATE
DESIGN	DATE	DATE
CHECKED	DATE	DATE
APPROVED	DATE	DATE

Guarantee

PSM guarantees its products to be free from defects in material and workmanship for a period of one year after the date of despatch or as otherwise agreed in writing. This warranty shall not apply if the product has been disassembled, tampered with, repaired, modified outside of the factory or subject to misuse, neglect or accident. Please refer to PSM terms and conditions of sale.

PSM WEEE Producer Registration No WEE/HC0106WW

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