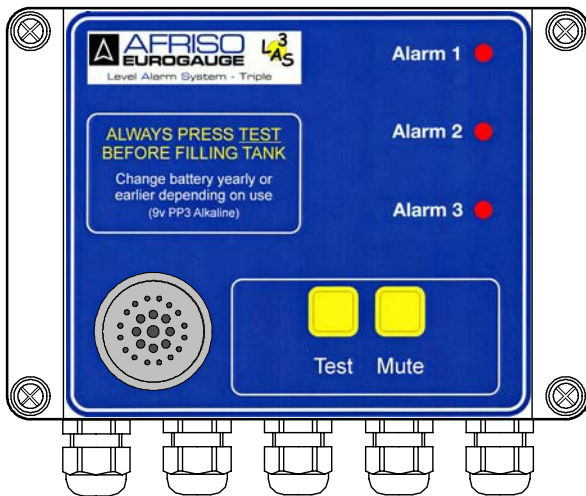


# LAS 3 Tank Level Alarm



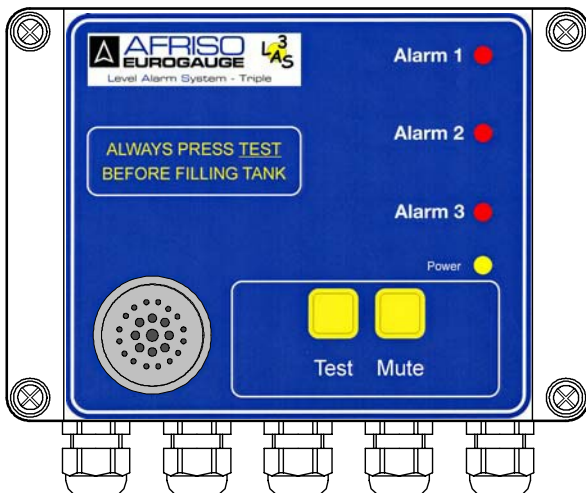
## About this User Guide

This guide is part of the device installation.

Read this guide before using the device.

Keep this guide during the entire service life of the device and always have it readily available for reference.

Always hand this guide over to future owners or users of the device.



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Declaration of origin

- + Read guide before use!
- + Observe all safety information!
- + Keep guide for future use!

**If In Doubt ASK !**

**+44(0)1293 658360**  
**tech@afriso-eurogauge.co.uk**



## WARNING TERMS

The type and source of danger associated with this device is shown here.

Precautions to take in order to avoid the danger are shown here.  
There are three different levels of warning:



<b>DANGER</b>	Imminent danger! Failure to observe the information will result in death or serious injuries.
<b>WARNING</b>	Possible imminent danger! Failure to observe the information may result in death or serious injuries.
<b>CAUTION</b>	Dangerous situation! Failure to observe the information may result in minor or serious injuries and damage to property or device not working as expected.

## General Installation and Wiring requirements

The device must be installed in accordance with the details given later in this guide.

All wiring must be in suitable cable for the application conditions and must comply with the relevant regulations of the electrical supply authority concerned, together with any other statutory requirements which may affect the complete installation.

It is recommended that cable with polyethylene or PVC insulation with a conductor size of at least 1.0mm<sup>2</sup> is used.

### CAUTION

**ATEX installations may only be carried out by qualified and trained personnel in accordance with ATEX specific requirements.**



**MICC cable (Pyro) must never be used under any circumstances**

Signal cables should be run separately from any cables carrying mains voltages.

If signal cables are to be run through areas of high electrical interference it is recommended that screened cable is used with the screens being terminated only to the device earth terminal or as specified.

Specific terminal connection information may be found on identification label(s) on the device unless otherwise advised..

Refer to separately supplied installation guides for information regarding external components of the system such as level sensors, sounders and beacons etc.

### CAUTION



Electrical systems may be impacted and the device switching contact (if fitted) may be destroyed by voltage peaks when inductive loads are switched off.

Use commercially available standard RC combinations such as 0.1µF/100Ω for inductive load switching.

## Troubleshooting

Repairs and fault finding may only be performed by Afriso Eurogauge personnel or qualified personnel under Afriso Eurogauge instruction.

Refer to separately supplied installation guides for information regarding fault finding and repairs on external components.

## Safety

### Intended use

The level switch device may only be used for continuous level monitoring in metal containers and tanks for the storage of the following media, provided such media can be detected with a Float Switch.

Liquids

Any use other than the application explicitly permitted in this guide or authorised by Afriso Eurogauge is not permitted.

### Predictable incorrect application

The device must never be used in the following cases:

Hazardous area (ATEX)

If the device is operated in hazardous areas, sparks may cause deflagrations, fires or explosions.

### Safe handling

This product represents state-of-the-art technology and is made according to the pertinent safety regulations. Each device is subjected to a function and safety test prior to shipping.

Operate the device only when it is in perfect condition. Always observe the operating instructions, all pertinent local and national directives and guidelines as well as the applicable safety regulations and directives concerning the prevention of accidents.

### WARNING

#### Severe burns or death caused by mains voltage (110/230 VAC, 50/60Hz) in the device



Do not expose the control unit to water.

Interrupt the mains voltage supply before opening the device or before performing maintenance and cleaning work and make sure it cannot be switched on by accident.

Do not tamper with or modify the device in any way whatsoever.

### Transport and storage

#### CAUTION Damage to the device due to improper transport.



Do not throw or drop the device.

Protect from wetness, humidity, dirt and dust.

#### CAUTION Damage to the device due to improper storage.



Protect from wetness, humidity, dirt and dust.

Store the device in a clean and dry environment.

Only store the device within the permissible temperature range.

### **Staff Qualification**

The device may only be mounted, commissioned, operated, maintained, shut down and disposed of by trained staff. Electrical work may only be performed by trained electricians and in compliance with all applicable local and national directives.

### **Modifications to the device**

Changes or modifications made to the device by unauthorised persons may lead to malfunctions and are prohibited for safety reasons unless specifically instructed by the manufacturer.

### **Use of spare parts and accessories**

Use of unsuitable spare parts and accessories may cause damage to the device. Use only genuine manufacturer spare parts and accessories.

### **Liability information**

The manufacturer shall not be liable in any form whatsoever for direct or consequential damage resulting from failure to observe the technical instructions, guidelines and recommendations given in this guide or ancillary documents.

The manufacturer or sales agent shall not be liable for costs or damages incurred by the user or by third parties in the usage or application of this panel, in particular in case of improper use of the device, misuse or malfunction of the connection, malfunction of the device or of connected devices.

The manufacturer or sales agent shall not be liable for damage whatsoever resulting from any use other than the use explicitly permitted in this guide or ancillary documents.

The manufacturer shall not be liable for misprints.

### **Disposal and Recycling**

Switch off the supply voltage and disconnect from device.

Disconnect all other terminals and remove wiring from device.

Dismount the device.

To protect the environment, this device must **not** be disposed together with normal household waste

Dispose of the device according to local directives and guidelines.

This device consists of materials that can be recycled.

Electronic inserts can be easily separated and the device consists of recyclable materials.

Where it is not possible to dispose of the device locally in accordance with environmental regulations please contact us for return or disposal instructions.

### **Warranty**

The manufacturer's warranty for this device is 24 months after the date of purchase.

This warranty shall be good in all countries this device is sold by the manufacturer or its authorised dealers or agents.

Refer to separately supplied installation guides for information regarding warranty on external components.

### **Copyright**

The manufacturer retains the copyright to this device. This guide or any separately supplied installation guide may not be reprinted, translated, copied in part or in whole without prior written consent.

We reserve the right to make technical modifications with reference to the specifications in this guide without notice.

### **Customer Satisfaction**

Customer satisfaction is our prime objective.

Please get in touch with us if you have any questions, suggestions or problems concerning the device or external components.

### **Contact**

Afriso Eurogauge Ltd  
Unit 4, Satellite Business Village  
Fleming Way, Crawley  
West Sussex. RH10 9NE

Tel: +44(0) 1293 658360 Fax: +44(0)1293 528270

email: [sales@afriso-eurogauge.co.uk](mailto:sales@afriso-eurogauge.co.uk)

Web: [www.eurogauge.co.uk](http://www.eurogauge.co.uk)

## 1. Application

The LAS3 Alarm provides three audible and visual liquid level alarms. The LAS31Z1 is powered from a 85 to 265Vac or 24Vdc supply and the LAS33Z1 from a 9V replaceable battery.

Simple float switches are used to provide the alarm signals.

## 2. Operation

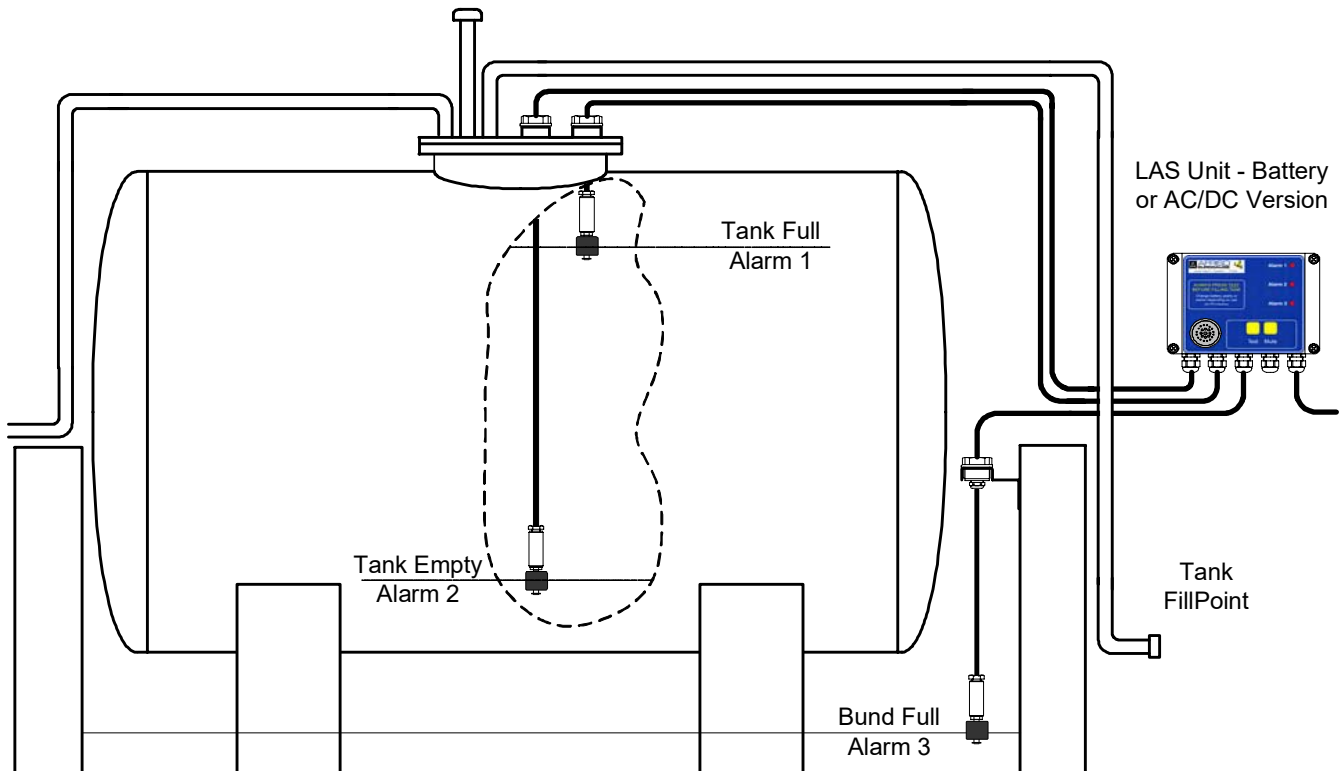
The LAS31Z1 provides a continuous display of alarm conditions while the LAS33Z1 is powered on by an alarm signal or whenever the Test button is pressed.

Once the LAS33Z1 has been powered on by an alarm signal the corresponding alarm lamp lights and the sounder operates.

If the alarm is not acknowledged by pressing the Mute button the unit will sleep after 5 minutes and will wake every hour operating the sounder for 5 seconds and the alarm lamp for 10 seconds. This continues until the alarm condition is cleared or until the battery is exhausted (around 240hrs with a new battery).

Acknowledging the alarm immediately turns the sounder off and the alarm lamp off after 30 seconds and puts the LAS33Z1 into sleep mode. When there are no alarms present the LAS33Z1 is switched off.

On pressing the Test button all alarm lamps light and the sounder operates, releasing the Test button turns the alarms off. Any existing alarms will be displayed for 30 seconds before turning off.



LAS3 Typical Installation



**3. Installation**

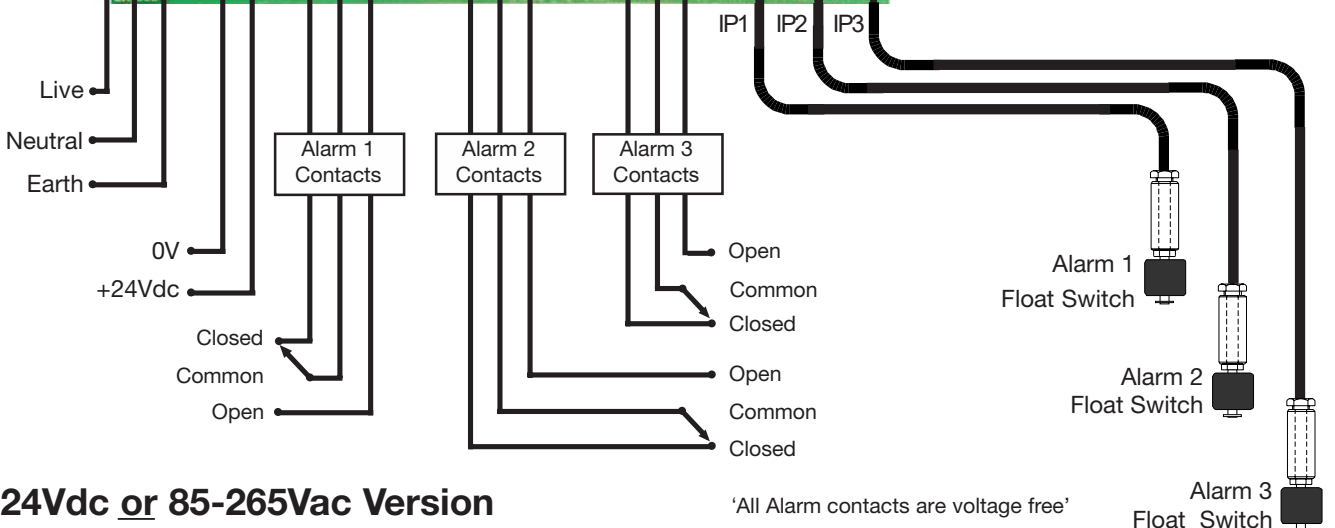
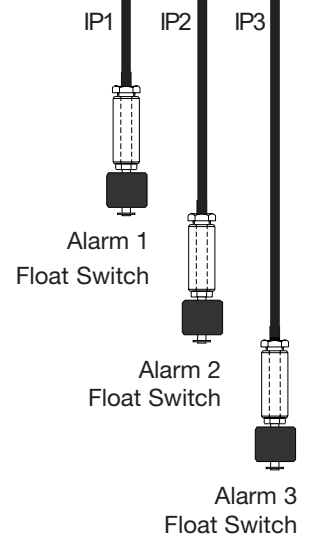
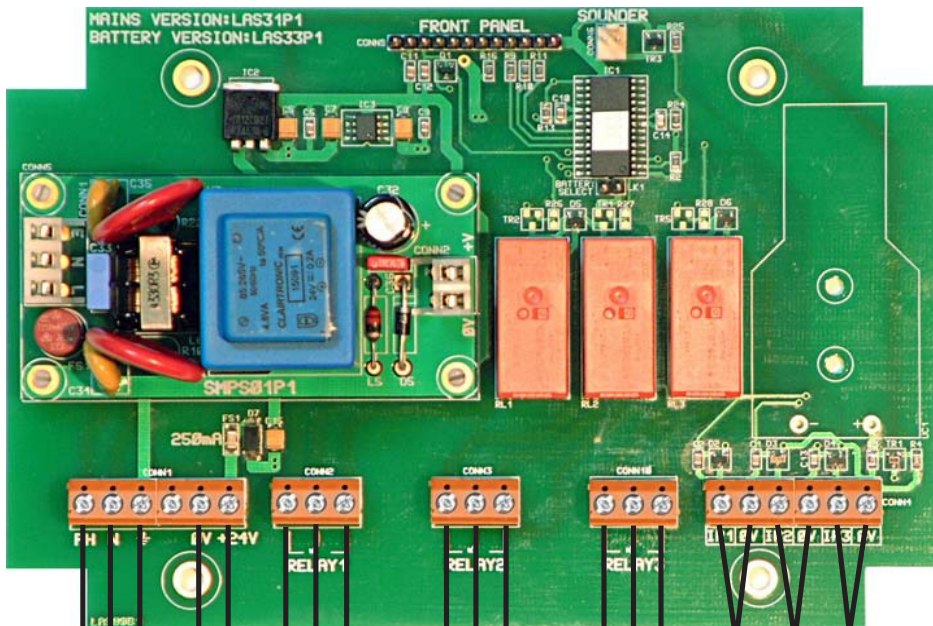
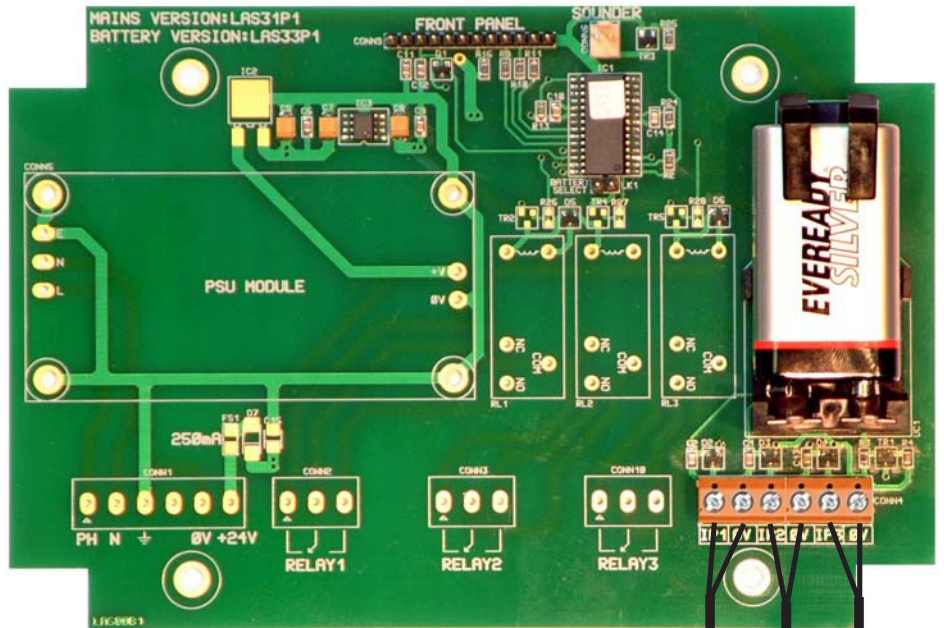
The alarm unit is designed for four-screw wall mounting on a 160mm x 110mm pitch.

It is recommended that the unit is not mounted in a location where it is exposed to direct sunlight.

All wiring must be in suitable cable for the site conditions.

The installation must comply with the relevant regulations of the electrical supply authority concerned together with any other statutory requirements which may affect the complete installation.

**Battery Version**



**24Vdc or 85-265Vac Version**

'All Alarm contacts are voltage free'

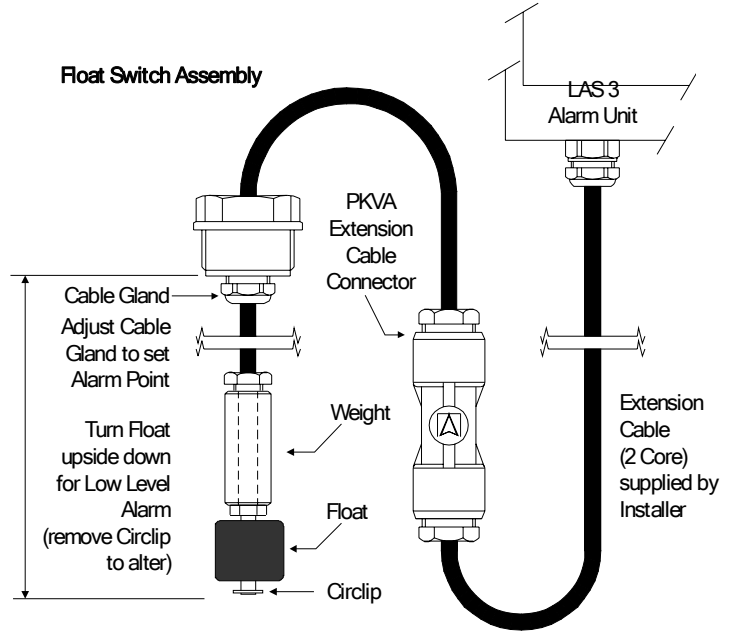


**Float Switch Installation**

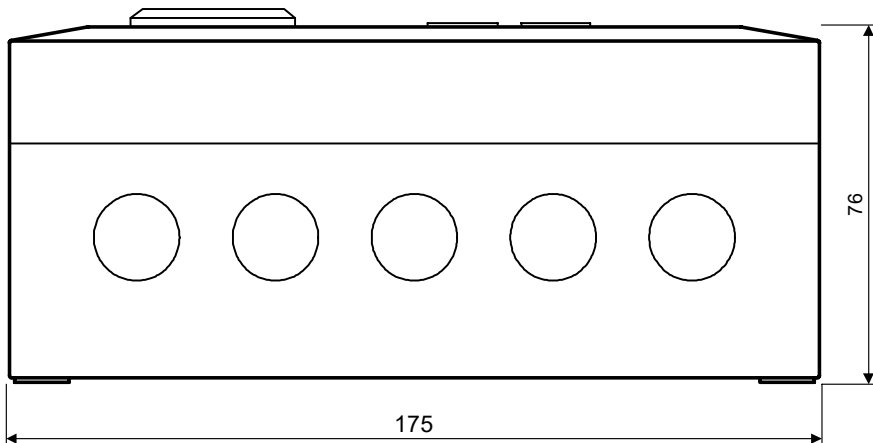
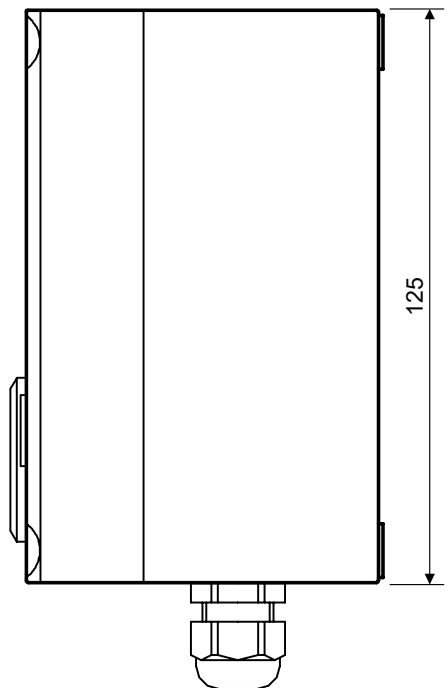
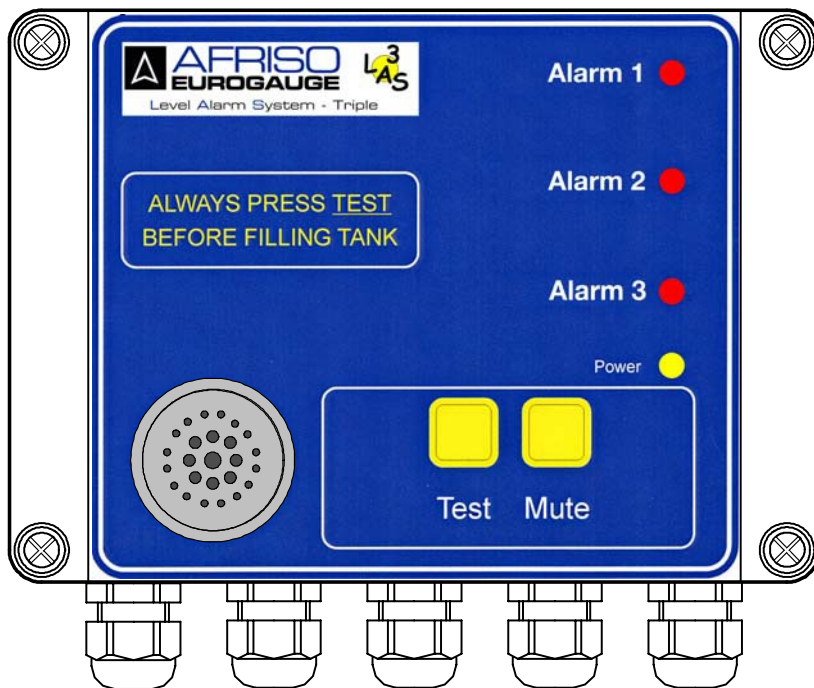
Pass the float switch lead through the tank/cable gland assembly to give the desired alarm switchpoint and tighten the cable gland.

Fit the float switch assembly through the 1" BSP tank gland in the tank.

Should the float switch lead require extension, fit a PVKA extension cable connector to the float switch lead and run the length of additional cable from the PKVA connector to the TA3 unit.



**Dimensions**



Fixing centres:- 160 x 110mm

## Specification

### LAS31Z1 - AC/DC Version

**Supply:**

85 to 265Vac; 50/60Hz; 4VA, +24Vdc

**Indicators:**

Alarm 1 - Red

Alarm 2 - Red

Alarm 3 - Red

Power - Amber

**Controls:**

Test Button simulates alarm conditions

Mute Button mutes alarm sounder

**Relays:** SPCO 250V; 3A non-inductive load. de-energises upon alarm – remains de-energised until alarm clears

**Sounder:** Internal piezo-electric sounder (90db @ 0.6metre)

**Sensor:**

Float switch x 3, 5m cable with 1" BSP tank connector

**Housing:** Polycarbonate ABS enclosure

**Dimensions:** 176mm x 125mm x 76mm

**Protection:** IP65

**Temperature:** -15°C to 50°C :

**Cable Entry:** 5 Pg11 glands for 6-8mm diameter cable

**Weight:** 0.60kg

### LAS33Z1 - Battery Version

**Battery:**

+9V PP3 Alkaline 6 LR 61, 6 AM 6, MN 1604

**Indicators:**

Alarm 1 - Red

Alarm 2 - Red

Alarm 3 - Red

**Controls:**

Test Button simulates alarm conditions

Mute Button mutes alarm sounder

**Sounder:** Internal piezo-electric sounder (90db @ 0.6metre)

**Sensor:**

Float switch x 3, 5m cable with 1" BSP tank connector

**Housing:** Polycarbonate ABS enclosure

**Dimensions:** 176mm x 125mm x 76mm

**Protection:** IP65

**Temperature:** -15°C to 50°C :

**Cable Entry:** 5 Pg11 glands for 6-8mm cable

**Weight:** 0.60kg

**WARNING: NOT FOR ATEX HAZARDOUS AREA USE**

A Flameproof version (EEX D) is available to order, please contact Afriso Eurogauge Ltd for further details.

Note: We reserve the right to amend these specifications without prior notice.





### Declaration of Conformity

#### LAS Series Level Alarm System

This is to certify that the above named product(s) fully complies with the Electromagnetic Compatibility Directive 2014/30/EU and the Low Voltage Directive 2014/35/EU of the European Union and with the requirements of the normative sections of the following harmonised European Standards.

- EN61000-6-3: Electromagnetic Compatibility - Generic Emission Standard. Residential, Commercial and Light Industry.
- EN61000-6-1: Electromagnetic Compatibility - Generic Immunity Standard. Residential, Commercial and Light Industry.
- EN 61010-1: Safety requirements for electrical equipment for measurement, control and laboratory use.

Signed :



**D. C Ward**

Position: Technical Manager  
Date: 14/09/2016

This declaration applies to the following part number(s):  
**LAS31Z1:** LAS 3 85-265Vac/24Vdc version.  
**LAS33Z1:** LAS 3 9V Battery Version.

## Declaration of Product Origin

### LAS 3 Series Level Alarm System

We confirm that the following product designs originate and have been wholly manufactured within the United Kingdom of Great Britain and Northern Ireland by:

Afriso Eurogauge Ltd.  
Unit 4, Satellite Business Village,  
Fleming Way, Crawley,  
West Sussex.  
RH10 9NE. United Kingdom.  
Tel: +44 (0)1293 658360  
Fax: +44 (0)1293 528270  
[sales@afriso-eurogauge.co.uk](mailto:sales@afriso-eurogauge.co.uk)  
[www.eurogauge.co.uk](http://www.eurogauge.co.uk)

Signed:



D C Ward

Position: Technical Manager

Date: 21/02/2007

**Measuring, control and monitoring devices**  
for building, industry and environmental protection.



AFRISO EUROGAUGE Ltd  
Unit 4  
The Satellite Business Village  
Fleming Way  
Crawley  
West Sussex  
RH10 9NE

Tel: +44 (0) 1293 658360  
Fax: +44 (0) 1293 528270

[www.eurogauge.co.uk](http://www.eurogauge.co.uk)  
[sales@afriso-eurogauge.co.uk](mailto:sales@afriso-eurogauge.co.uk)

