



## Application

The ELT68C is a self contained, all-in-one, conductivity level switch especially designed for use with conducting liquids in dairies, breweries, ice cream plants, etc. and is capable of differentiating between dense layers of foam or fob and the actual liquid surface.

The adjustment range of the ELT68C renders the unit also capable of interface detection between beer/water, milk/water, caustic/water, etc.

In standard form the unit is supplied with a PTFE partly insulated high grade stainless steel rod electrode, 100mm in length, complete with associated hygienic welding gland.

A number of different probe configurations can be supplied to meet special conditions or requirements, such as interface detection in pipes.

## Operation

When a conductive liquid covers the stainless steel electrode rod, an ac circuit is completed through the liquid to the metal container wall and is used to initiate the operation of the output relay.

## Installation

### General

The unit is intended for field mounting and is simply screwed into the Eurogauge hygienic welding gland which is welded to the vessel at a level at which a switching signal is required.

### Wiring

All wiring should be in suitable cable for the application conditions. The installation must comply with the relevant site regulations and any other statutory requirements which may affect the complete installation.

Wire the unit in accordance with the wiring diagram using 3-core polyethylene or PVC insulated cable.

The container must be earthed or if of non-metallic construction, or internally lined, a separate earth electrode should be provided. Our application engineering department will be pleased to advise you, if required.

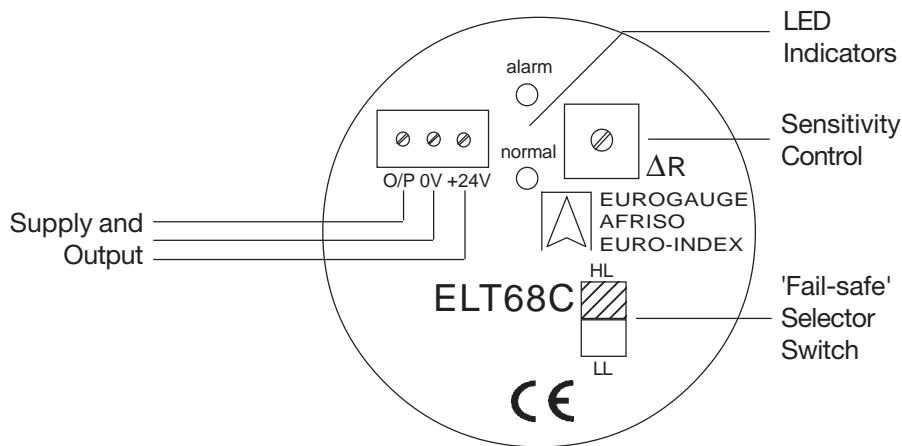
### Commissioning

Check that the instrument is wired up in accordance with the wiring diagram on page 2.  
Check that the supply voltage is 24V DC.





## Wiring Diagram and Controls



### 'Fail-safe'

The unit is fitted with a failsafe selector switch which has been works preset to High Level (HL) fail-safe.

This fail-safe feature ensures that the unit always provides a '0 Volt' when the alarm condition, as indicated by the red 'alarm' LED, is reached.

To change the 'fail-safe mode', slide the fail-safe switch to the LL position for low level probe application.

Switch on the supply and allow a few minutes for the instrument to stabilise.

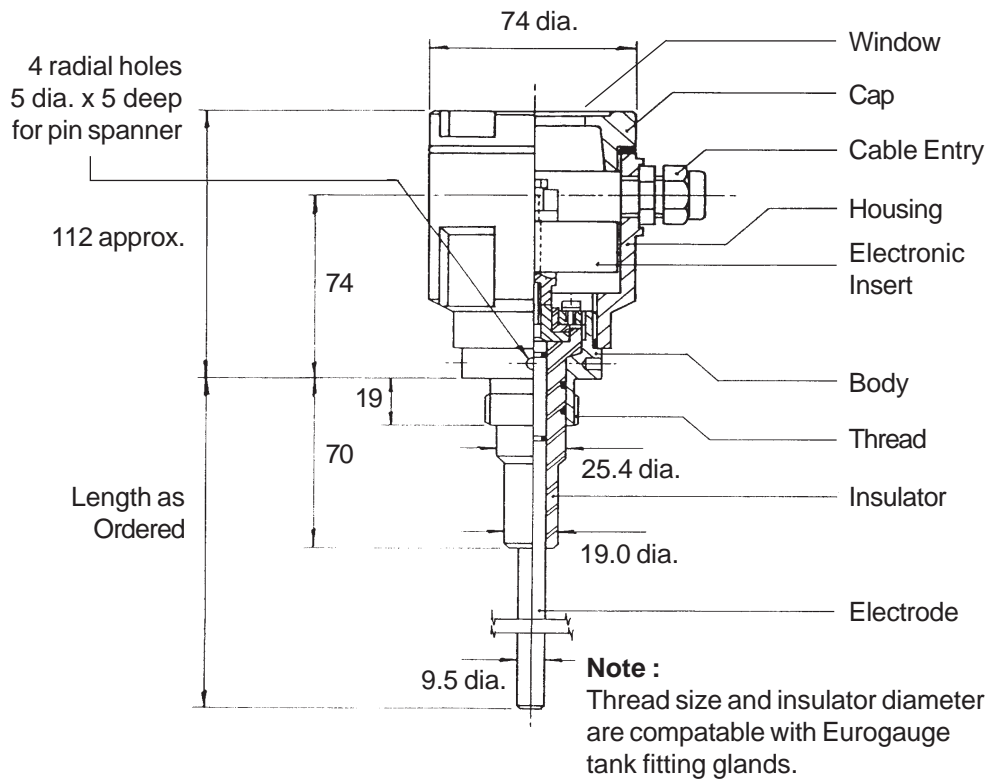
Using a small instrument screwdriver, slowly turn the sensitivity (DR) control fully clockwise to ensure that a switchpoint is obtained when liquid covers the probe.

The unit is now set at its maximum sensitivity and, with the probe covered with liquid, the sensitivity may be reduced by slowly turning the sensitivity control in an anti-clockwise direction **without** the unit changing from the 'alarm' condition.

The unit will now not detect any foam or fob condition on the liquid surface.



**Outline Drawing and Dimensions**



**Welding Gland - Sanitary Fitting**

Part Number : 6712 00 068W



**Important Note to Customer :**

After welding gland into vessel, internal threads must be inspected to ensure that they have remained clean and free from 'debris' (e.g. welding spatter etc.), and should be lightly smeared with silicone grease prior to assembly of any probe.



### Specification

Part Numbers	546801101 : unit supplied with welding gland. 546801102 : unit supplied without welding gland.
Supply	24Vdc - Tolerance 20 - 32 Volts dc : 2 Watts maximum.
Output	0 ... 24Vdc (56 ohm source resistance) maximum switching current 250mA (suitable for opto-isolators and reed relays).
Sensitivity	Variable from 30 ohm to 5kohm.
Controls and LEDS	Potentiometer (DR) for sensitivity adjustment. 'Fail-safe' selector switch for high level (HL) or low level (LL) application. Red 'alarm' LED on - relay de-energised - output low (0V). Green 'normal' LED on - relay energised - output high (+24V).
Process Connection	1" BSP stainless steel T316 S31 (into stainless steel welding gland).
Protection	IP66 (BS 5490/IEC529).
Temperature	-10°C ... 100°C.
Pressure	7 bar maximum.
Cable Entry	Pg11 gland.
Connections	Terminal 1 : signal output. Terminal 2 : 0V (earth). Terminal 3 : +24V supply.
Weight	Approximately 1kg (dependent on electrode length).

Note We reserve the right to alter the design or specification of this product without prior notice.



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### Declaration of Conformity

#### ELT68C Compact Conductivity Level Switch

This is to certify that the above named product fully complies with the Electromagnetic Compatibility Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC of the European Union and with the requirements of the normative sections of the following harmonised European Standards.

EN61000-3:	Electromagnetic Compatibility - Generic Emission Standard. Residential, Commercial and Light Industry.
EN61000-2:	Electromagnetic Compatibility - Generic Immunity Standard. Heavy Industry.
EN61010-1:	Safety requirements for electrical equipment for measurement, control and laboratory use.

Signed:

**(D C Ward)**

Position: Technical Services Manager,  
Date: 19th November 2007

This declaration applies to the following part number(s):  
546801101 : unit supplied with welding gland.  
546801102 : unit supplied without welding gland.