



TRITON CONTROLS - FLOAT SWITCHES

LR03-ATEX **ATEX APPROVED ZONE 2 ONLY** LEVEL REGULATORS

Float switches are inexpensive and efficient liquid level detectors. They are simple to install, and designed for trouble free operation over a long life. The **LR03-ATEX** is a variant of the LR-03 series polypropylene float switch moulded to a synthetic rubber 3 core cable and may be used in **ATEX Zone 2 only** with inflammable gases. Actuation is via a roller ball and micro-switch arrangement within the switch thereby eliminating all heavy metals from this type.

Construction

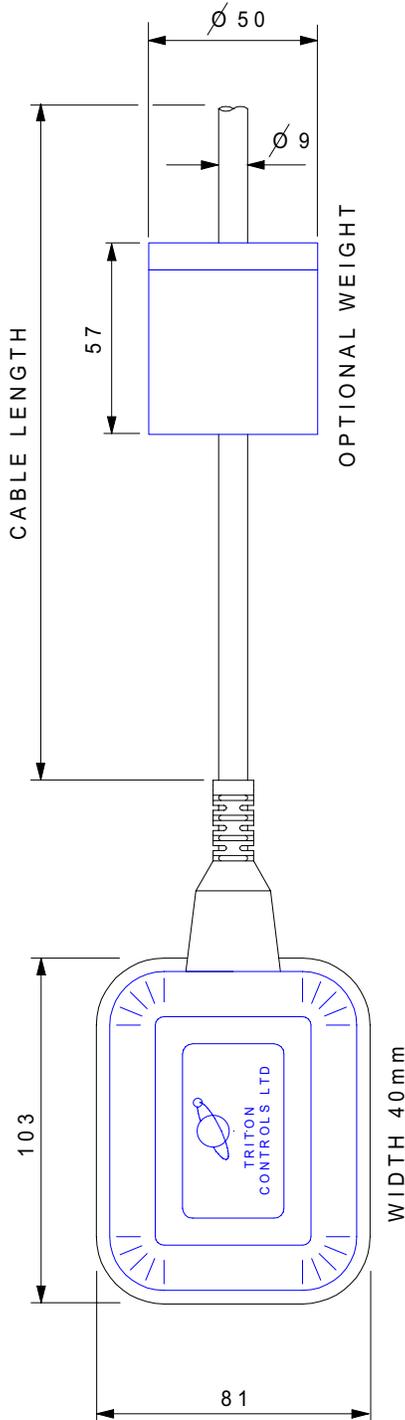
The unit comprises three major components:

1. The float chamber houses the micro-switch arrangement, totally sealed within a polypropylene casing, with a single pole double throw action.
2. The three-cored cable, connected to the micro-switch assembly inside the float chamber, is sheathed in CPE (chlorinated polyethylene) synthetic rubber. This cable is supplied in three standard lengths, 5 metres, 10 metres and 20 metres $\pm 5\%$ of the length quoted.
3. The optional stabilizing weight may be fixed at any point on the cable using the rubber "O" ring supplied. The weight is sealed within a moulded polypropylene housing. In order to provide total positional security in lubricants and similar liquids, a nylon cable-tie is provided for attachment to the cable beneath the weight

Mounting

Whilst no hard and fast rules apply to the mounting of these units, the lead should be supported in an enclosed vessel, and in an open vessel it is advantageous to clip the lead to the side, especially if excessive turbulence is experienced.

To obviate the effects of rapid switching conditions that would result if such turbulence is experienced, it is advantageous to use a maintaining circuit which both safeguards the micro-switch and cuts out any chatter in the starters of associated pumps etc.



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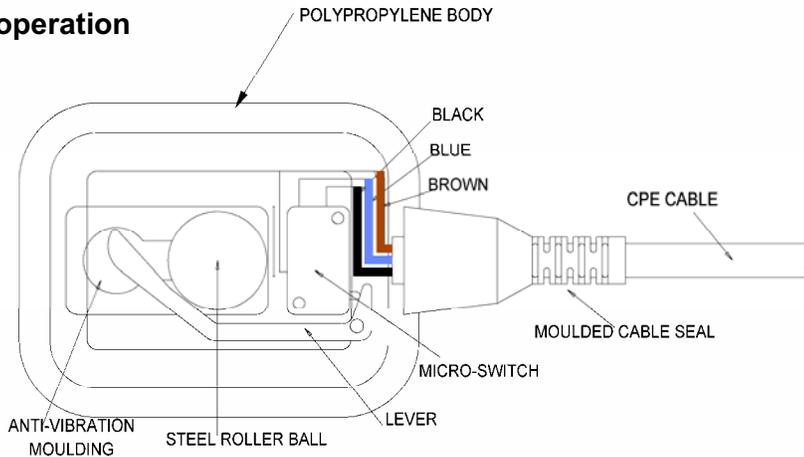
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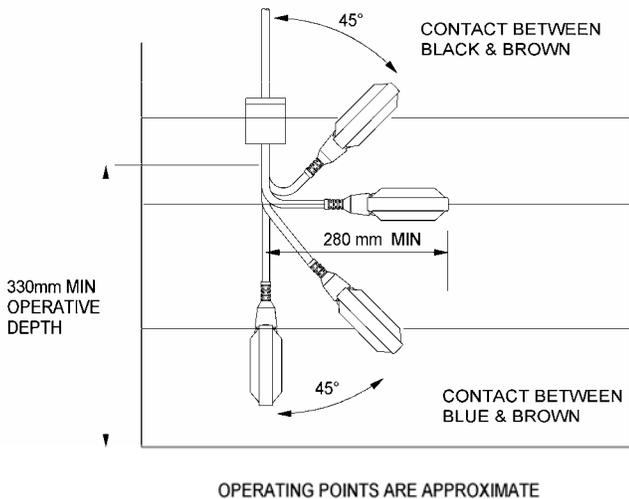


LR03-ATEX FLOAT SWITCH

Method of operation



The micro-switch assembly inside the float, axially mounted in line with the weight, changes contacts according to the float's position, as the diagram below. Therefore, as the liquid level drops or rises slowly, a pump or flow control suitably connected, can be switched in or out to maintain an average level of the liquid. By connecting only one side of the switch, the unit can be used to empty or fill the tank, as required.



Float Switch series LR03-ATEX is subject to the limitations contained within the Product Approval:



II 3G, Ex nC II T6

Ambient temperature 0 to +55°C

Type LR-03 ATEX (Certificate SIRA 07ATEX4102X) May be used in Zone 2 only with flammable vapours and flammable gases with apparatus groups IIC, IIB, or IIA and with temperature classes T1, T2, T3, T4, T5 or T6. The equipment is certified for the temperature range of 0°C to +55°C and should not be used outside this range.

Specification

Max input parameters: $U_i = 30V$,
 $I_i = 100mA$

Max Temperature 55°C
Max submerged depth 20Metres
Compressive strength 482 KN/m²
Operation in specific gravities from 0.9 to 1.3

A comprehensive list of chemical resistances for the LR03-ATEX float switch is available on request

LR03-Weight 275g

When ordering please specify part numbers:

Type	Part No.	Weight (Approx)
5M cable	LR03-ATEX-L05M	1.3Kg
10M cable	LR03-ATEX-L10M	1.8Kg
20M cable	LR03-ATEX-L20M	2.8Kg

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