Automatic Liquid Level Float Switch

Features

- Reliable
- Easy to install
- Easy to adjust
- Simple wiring

Specification

Maximum switching voltage	250Vac
Current rating:	
Resistive	20A
Inductive	8A
Float operating range:	
Maximum	700mm
Minimum	50mm
Dimensions:	
Float	125mm x 63mm dia.
Housing	59mm x 56mm x 132mm
Cord length	920mm
Material:	
Housing & Float	Polypropylene
Weights	Brass
Cord	Nylon
Ambient temp. range	0 to +50°C
Media temperature	4 to 50°C
Protection	IP22
Country of origin	UK

Product Codes

LS-AFS
Automatic float switch

Technical Overview

The LS-AFS is designed for simple reliable water level control. The float switch can be used to control a pump for either tank filling or tank emptying (a high or low level cut-out). It is easily achieved by positioning the float stops on the cord.
The electrical connections are easily made inside the housing, via the terminal strip. Two M20 cable glands are provided for use with suitable conduit.

Operation

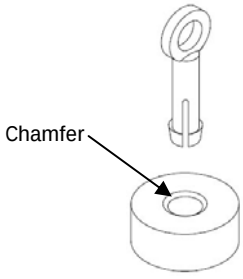
The contact is made using a micro switch, activated by the tipping motion of the arm with the rise and fall of the float. All parts are manufactured from UV protected polypropylene, and the weights are brass. Movement of the float is transmitted easily by adjusting the stops on the cord to ensure a positive make or break action.

Pre-Assembly Of Weights

The switch assembly includes three weights, the position of which relative to the switch assembly is important for correct functionality of the switch.

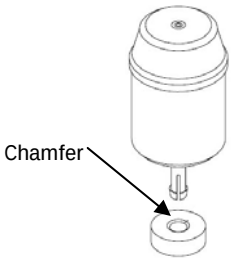
Counterbalance weight
This is the heaviest of the three (approx 112 g) and is pre-fitted at the factory as shown.

If ever there is a need to remove or replace this weight, it must be re-fitted with the chamfer upwards as shown.

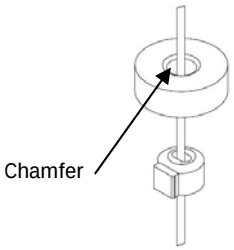


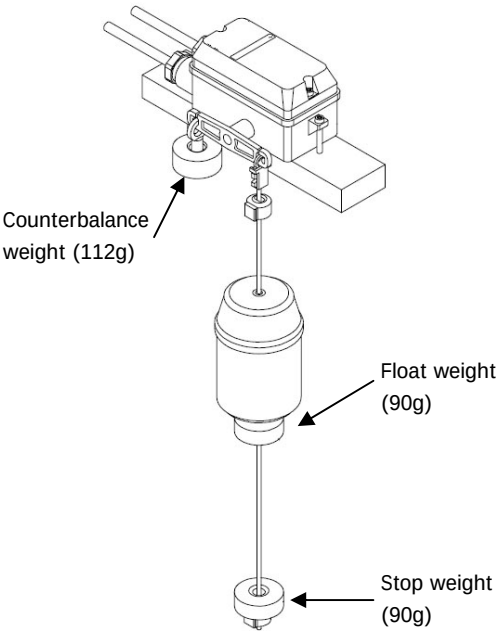
Pre-Assembly Of Weights (continued)

Float weight and stop weight
These two weights are the same size (approx 90 g), are supplied loose and are interchangeable.
The float weight must be assembled to the float with the chamfer upwards as shown.



The stop weight must also be assembled with the chamfer upwards as shown.





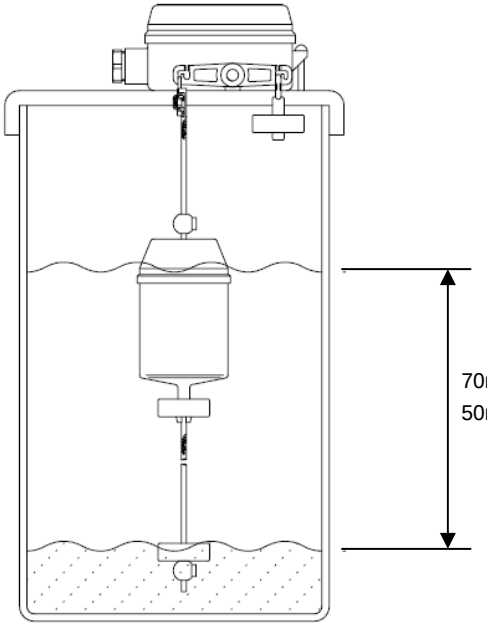
Installation

When used on a sump, make sure that it is kept clean. Aggressive mediums such as concrete dust and cinders may cause damage.

When installing the main float switch casing ensure the mounting holes (to suit M4 screws) are used. Do not drill the switch casing as water ingress may subsequently occur which will damage the switch.

Do not allow plastic parts to come into contact with oil or cellulose based paints, paint thinners or strippers, acid based descalents or aggressive cleaning agents.

The switch housing must be securely fixed in a horizontal position and should be protected from being sprayed with water. To permit free action of the switch, a sump should not be less than 20 cm diameter and at least 45 cm deep. This will permit a reasonable distance to be obtained between adjustment stops, which in turn will prevent constant stop / start conditions which could cause damage to motor. See sketch below for float operating range.



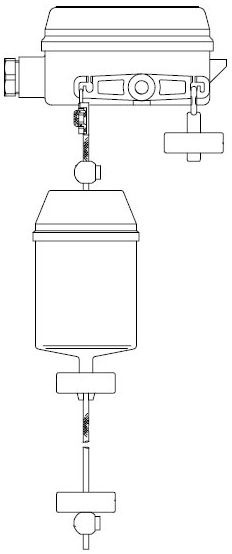
Install unit so that the cord, float and the counterbalance weight cannot foul or rub against anything. The top of the float is marked 'TOP'. It is important to fit it the right way up. The float must slide easily up and down the cord . Control the movement of the float by adjusting the upper and lower level stops. Ensure that when in the lower position the float and stop weight are clear of the bottom of

Installation (continued)

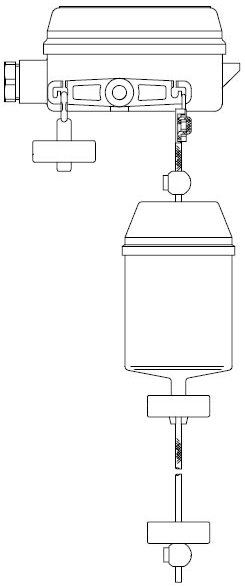
the sump or tank. The counterbalance operates the switch when the float lifts up the weighted cord. When the tank is emptied, the weighted cord plus float must overcome the counterbalance and operate the switch in the reverse direction.

Switch Setting

Sump emptying (low level)



Sump filling (high level)



To change the function of the switch, manoeuvre both the supporting clips to the position where easy exit is provided on the switch lever. Re-assemble is the reversal of this procedure.

Electrical Installation

1. The LS-AFS should only be installed by a competent, suitably trained technician, experienced in installation with hazardous voltages. (>50Vac & <1000Vac or >75Vdc & 1500Vdc).

2. Ensure that all power is disconnected before carrying out any work on the LS-AFS.

3. Maximum cable is 2.5mm², care must be taken not to over tighten terminals.

4. The switch and wiring must not be exposed to liquid.

5. Do not operate the LS-AFS without the terminal box lid correctly fitted.

Wiring Example