

TRITON CONTROLS - FLOAT SWITCHES

LR02 - NON MERCURY LEVEL REGULATORS

Float Switches are inexpensive and efficient liquid level detectors, simple to install, designed for trouble free operation over a long life. The LR02 is a non-mercury version of the highly successful LR01 / SC37 series. The mercury tilt switch as used in the LR01 has been replaced by a micro-switch and rolling ball arrangement, which eliminates all heavy metals.

Construction

The unit comprises three major components :

1. The three-cored cable, connected to the microswitch assembly inside the float chamber, is sheathed in *Hypalon*, chlorosulphonated polyethylene or CPE chlorinated polyethylene, synthetic rubber. This cable is supplied in three lengths, 5 metres, 10 metres and 20 metres $\pm 5\%$ of the length quoted. Although other lengths may be available on request.
2. An actuating weight fixed to the cable approximately 120 mm from the float chamber is also coated in *Hypalon*.
3. The float chamber houses the microswitch arrangement, totally sealed within closed cell polyurethane foam, with a single pole double throw action. Outer walls of the switch are moulded in *Hypalon*.

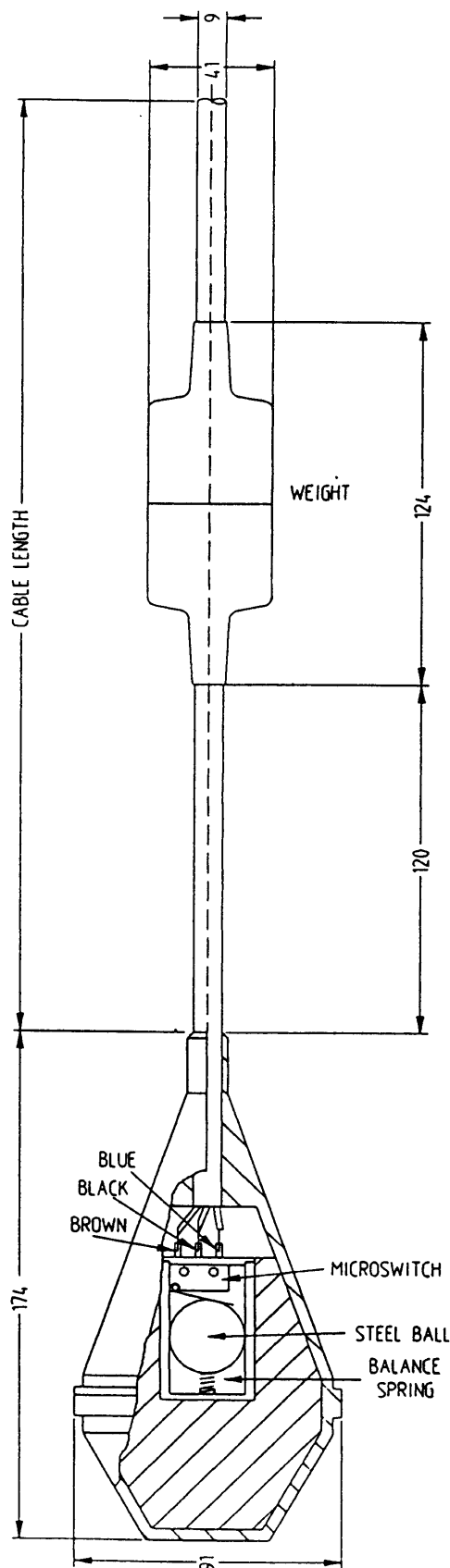
Hypalon Du Pont de Nemours, Wilmington, Delaware.

Mounting

There are no hard and fast rules applicable to mounting these units, however 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 microswitch and cuts out any chatter of the starters of associated pumps etc.

Alternative cable lengths and actuating weight position can be produced to order.

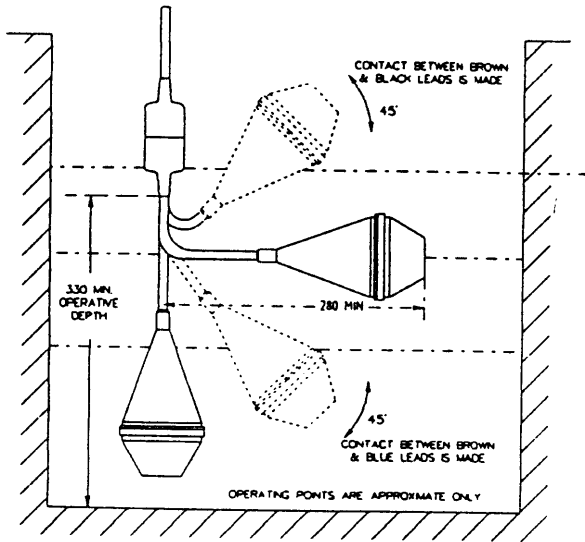


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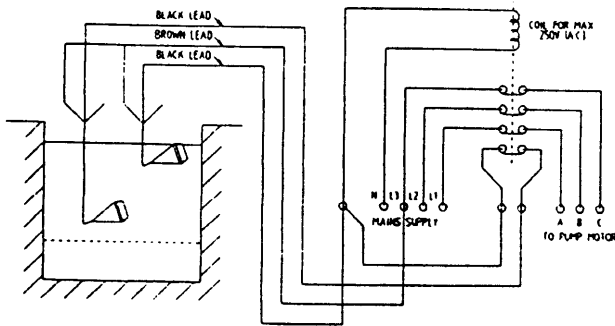
Method of Operation

The microswitch assembly inside the float, axially mounted in line with the weight, changes contacts according to the float's position, as in 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 also used to fill or empty the tank as required.

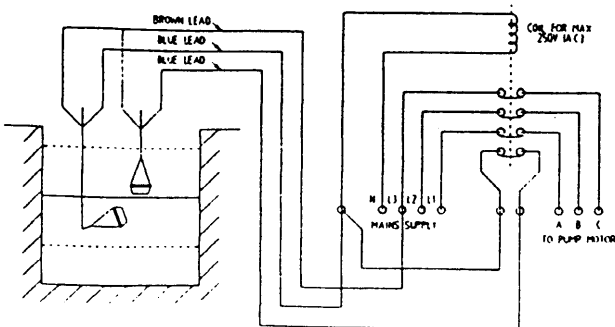
Dimensions in mm do not take any lateral swing of the cable into consideration.



Connection diagram for automatically emptying tank



Connection diagram for automatically refilling tank



Contact rating: 250 V 5 A (non-inductive)
10 Amp Available

Max. temperature 70 °C

Max. submerged depth 20 metres

Compressive Strength 482 KN/m² (70 lbf/in²)

Operational in specific gravities from 0.8 to 1.3

Hypalon Chemical Resistance

Against	Rating
Lubricants	Good to excellent
Mineral oil & petrol	Good
Vegetable & animal fats	Good
Water Absorption	Very Good
Oxidation	Excellent
Ozone	Good
Sunlight	Good
Heat	Excellent
Low Temperature	Very Good
Dilute Acids	Excellent
Concentrated Acids	Good

Full information on the fluid resistance of the LR02 float switch will be given on request.

When ordering please specify part numbers.

FARNELL ORDER CODE	MFRS TYPE No.	CABLE LENGTH
7063830	LR02-L05M	5M
7063842	LR02-L10M	10M
7063854	LR02-L20M	20M