LS CAPACITIVE LEVEL SWITCH

Installation & Setting-up Instructions

The level switch comprises a sealed plastic tube containing the sensing circuitry attached to a polypropylene termination head a 1¼" B.S.P. stainless steel union is provided to mount the unit. High temperature, adjustable and extended probes are available.

The terminating head carries the switching relay, light emitting diode (LED) indicator, sensitivity potentiometer and terminals.

Both power supply and volt free contact connections are made to the terminal blocks in the terminating head.

The plastic tube is produced in polypropylene (Blue) for application up to 80^0C, (LS1) and Ryton 4 (Brown) for higher temperatures up to 200^0C (LS8). Ryton 4 can also be used for use in aggressive solutions.

Power Supply: - The level switch can be powered from 15 to 30 volts DC or 12 volts AC supply.

Operation: - With the plastic tube uncovered by fluid, provided the sensitivity potentiometer has been correctly set, the switching relay will be de-energised, the relay contacts 'C' to 'NO' will be open and the LED extinguished.

With the tip of the plastic tube immersed in fluid, provided the sensitivity potentiometer has been correctly set, the switching relay will be energised, the relay contacts 'C' to 'NO' will be open and the LED extinguished.

Setting the Sensitivity: - With the tip of the plastic tube uncovered (in air), rotate the potentiometer in the terminating head fully clockwise to 'MIN' The switching relay should be de-energised and the L.E.D. fully illuminated.

Immerse the tip of the plastic tube in the liquid whose presence is to be sensed.

Rotate the potentiometer clockwise until the switching relay is energised and L.E.D. fully extinguished.

The level has sensed the liquid presence.

Rotate the potentiometer clockwise one further division as marked on the circuit board. This will increase the sensitivity slightly to prevent 'hunting' and allow for slight variations in liquid density etc.

The sensitivity is now set for this particular liquid and density.

Changes in liquid type or density may require the sensitivity to be reset.

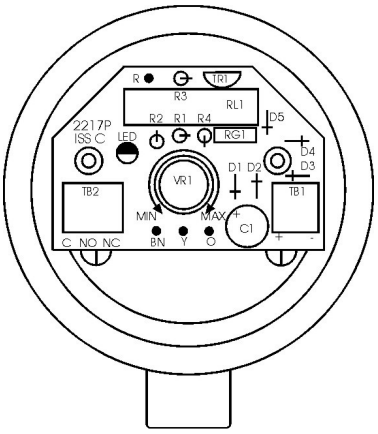
Note: - The L.E.D. may start to illuminate during adjustment and before the relay switch point is reached. Switching does not take place until there is an instant change to full brilliance. Similarly, switching in the reverse direction occurs only when the L.E.D. becomes fully extinguished.

Level Switch Types

LS1	Standard model for mounting in the sides of the vessel.
LS1/E	Extended models with standard insertion lengths of 305 (12"). 457mm (18"), 610mm (24"), and 760mm (30"). special order, up to maximum of 2500mm.
LS1/ADJ	Insertion length adjustable between 178mm (7"), 305mm (12"), 610mm (24").
LS8	High temperature model for use up to 200^{0}C.

Specifications

Power Supply	15VDC to 30V or 12VAC reverse polarity protected	
Indicator Lamp	Light emitting diode (L.E.D.)	
Relay	Coil	12VDC
	Contacts	1 set change over
	Contact Rating	5 amps, 250VAC
Operational Temperature	LS1 Standard	-17^{0}C to +18^{0}C
	LS8 Ryton 4 tube	-17^{0}C to +200^{0}C
	Terminating Head	-17^{0}C to +80^{0}C
Environmental Protection	Terminating Head	IP66
	Probe	IP68 when screwed into vessel.



Top View
Termination
Head

Guarantee

All Hawker products are covered by 12 months guarantee against failure of components or faulty workmanship.
The period of guarantee commences 7 days after date of despatch or by special agreement, from date of commissioning.
Equipment returned for services under guarantee will be repaired by Hawker Electronics Limited free of labour and component charges, but subject to the following conditions: -

1. Equipment shall not have been tampered with in any way or subjected to misuse.
2. The guarantee does not cover pilot bulbs.
3. Postage and packing charges are applicable.

Warning

Before switching on the mains supply to instrument & or control circuit ensure that: -

1. Supply voltage corresponds to instrument voltage
2. Control wiring is correct.
   failure to observe these precaution may result in damage to printed circuit boards, so invalidated our terms of agreement. Before disconnecting mains leads or control wiring at the terminal block ensure that:-
3. Mains supply to the controller is switched off
4. Mains supply to the equipment being controlled is switched off.

E.M.C. (Electromagnetic Compatibility)
Due to the nature of the Magicap probe sensing circuit, it is possible that electromagnetic radiation applied o the probe tip can affect the switching of the probe. This effect is negated when the probe is mounted in an earthed vessel, or the source of radiation is not immediately adjacent to the probe (e.g. a mobile phone has no effect when more than 1metre from the probe tip) No operational problems of an E.M.C. nature have been

The crossed-out bin symbol placed on the product, reminds you of the need to dispose of the product correctly at the end of its live
This product has been designed and complies with the relevant standards as listed in its certificate of conformity. The installer/user must ensure system compliance
Because of continuing development we reserve the right to change the specifications without notice

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