

## CONDUCTIVITY TYPE LIQUID LEVEL SWITCH - CLS

It is a simple, low cost, point level controller designed for detection of conductive liquids, having low densities, high viscosities, containing solid particles and interface between nonconductive and conductive liquids.

### CONSTRUCTION & OPERATION

It comprises of a probe, wired to a level controller. The probe holds one common "Mass Electrode" and one or multiple "Control Electrodes" depending upon the number of levels to be controlled. All the electrodes are suitably insulated to avoid electrical bridging. The lengths of "Control Electrodes" correspond to the height of preset level points to be controlled and the length of the "Mass Electrode" is kept slightly longer than the longest "Control Electrode". If tank is conductive, it can be used as a "Mass Electrode". Then number of control electrodes equals number of preset levels. Level controller houses sensing electronics consisting of power supply and signal conditioning circuit which provide a "Low AC Voltage" across mass and control electrodes. On liquid reaching preset level point electrical circuit gets completed generating a signal which is amplified to actuate a relay, whose potential free contacts are available for subsequent operations. On "Level Falling" the circuit breaks, cutting out the relay.

### SPECIFICATIONS

Enclosure	:	Cast Al, W. proof IP-66
Conduit connection	:	W. Proof-Brass 3/4" ET (S.C.) 3/4" ET / 1/2" NPT (D.C)
Process connection	:	40 / 50 / 80 NB, Flanged to BS (ASA or DIN Stds if required) Flange size to suit No. of Electrodes
Process conn. MOC	:	MS or SS304 or SS316
Probe type	:	Solid (up to 4 mtrs) Suspended (up to 10 mtrs)
Electrode MOC	:	SS304 or SS316
Electrode Insulation	:	PVC (70°C)
Mass Electrode	:	One
Control Electrodes	:	One to Four
Signal Voltage	:	6 VAC, 20 mA
Resistance	:	40K (max) between Mass & Control Electrode
Min. Conductivity	:	25 <sup>°</sup> s
Max. Temperature	:	70°C (with PVC insulation)
Max. Test Pressure	:	5Kg/cm <sup>2</sup> at amb. Temperature

#### OPTION :

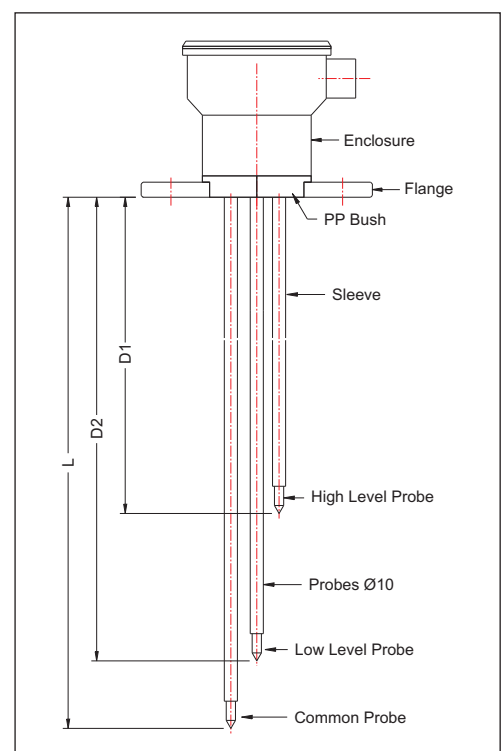
Auto/Manual mode thro' toggle switch can be provided in controller if required.

#### SALIENT FEATURE :

Auto Sensitive - Self adjusts to liquid Conductivities (> 25 $\mu$ S)



#### TYPICAL CONSTRUCTION OF CONDUCTIVITY LEVEL SWITCH



# ORDERING INFORMATION FOR CONDUCTIVITY TYPE LEVEL SWITCH

SPECIFY PART NO. → **CLS**

1	2	3	4
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**CLS**

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Example → **CLS**

1	1	1	2
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## 1 ENCLOSURE

1. Cast Al, W - proof IP - 66 x ¾" ET
2. Cast Al, Ex - proof GR. IIA & IIB
3. PP Enclosure
- O Others

## 2 PROCESS CONNECTION

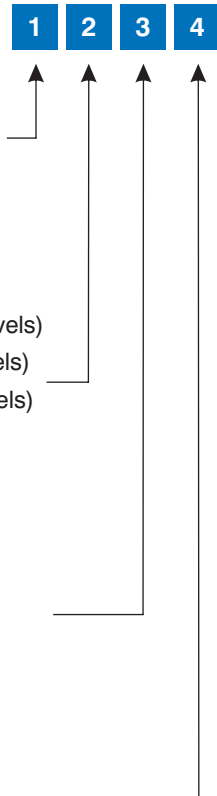
1. 40NB, BS-10 T'D' Flange (For 1&2 Levels)
2. 50NB, BS-10 T'D' Flanges (For 3 Levels)
3. 80NB, BS-10 T'D' Flanges (For 4 Levels)
- O Others

## 3 ELECTRODE MOC X INSULATION

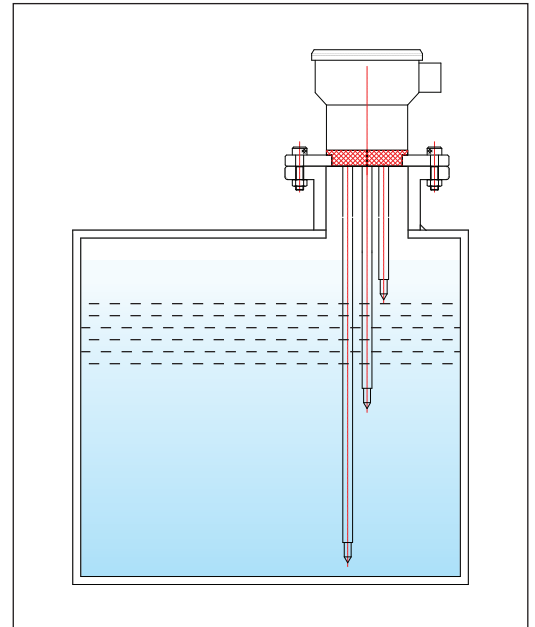
1. SS304 x PVC
2. SS316 x PVC
- O Others

## 4 NO. OF ELECTRODES

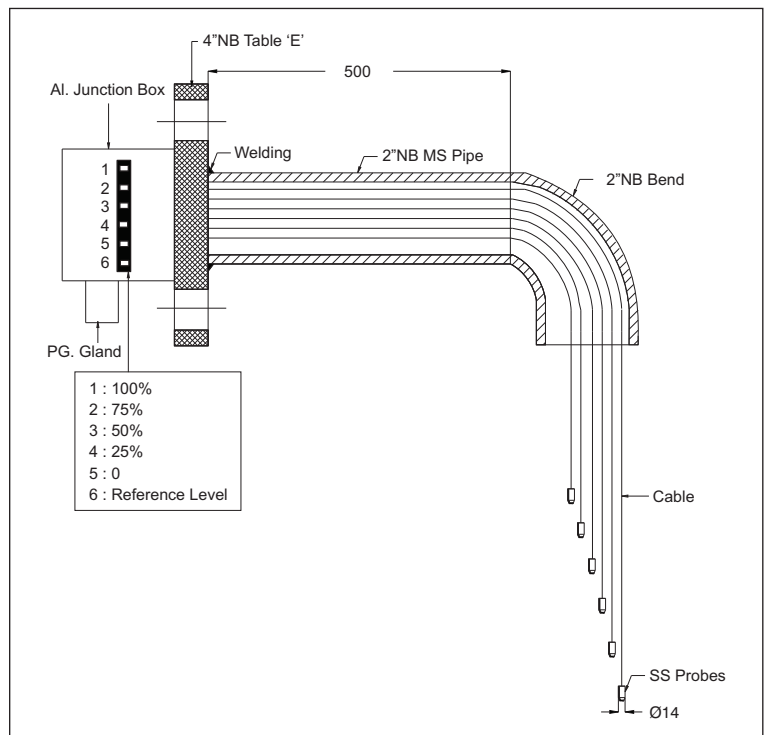
1. One (1 Level)
2. Two (1 Level)
3. Three (2 Levels)
4. Four (3 Levels)
- O Others



TYPICAL INSTALLATION INSIDE TANKS



CUSTOMIZED APPLICATION - SIDE MOUNTED CONDUCTIVITY TYPE LEVEL SWITCH



## ORDERING INFORMATION

Please specify part number, operating temperature & pressure, Total length of the probes, D1, D2 etc...

## APPLICATIONS

Water, Milk, Fruit Juice, Effluents, Caustic, Phosphate, Sludge coolant, Sulphuric Acid, Sump, Pump, Reservoir Control, Cooling, Towers, Waste water and Sewage Treatment plants.

## SHRIDHAN AUTOMATION PVT. LTD.,

#B-54, KSSIDC Industrial Estate, Kumbalagodu,

Mysore Road, Bengaluru - 560074

Ph. : 080 - 28437847 / 28437848 ; Fax : 080 - 28437849

Email : info@shridhan.com ; Website : www.shridhan.com

Note: All dimensions in MM, unless otherwise specified.

Level switches for liquids | Level transmitters for liquids | Level indicators for liquids | Level controllers for liquids

\*Custom built specs. / Options available on request. | **Disclaimer** : We reserve the right to modify the design & specification without prior notice. (CTGE/CLS/6-2009)