

Conductivity Type Liquid Level Switch-CNS

BOMBAY INSTRUMENT MFG. CO.

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 control unit. 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. The control unit 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 :

Probe:	
Terminal Enclosure	: Cast AL, weatherproof to IP 56 or IP 65 or Ex-proof for Gr IIA & IIB or IIC
Conduit Connection	: Brass, 3/4" EIT
Process Connection	Flanged : 40 NB / 50NB to BS10TD" or any standard if required Screwed : 1 1/2" BSP/2" BSP(M)
Probe Type	Material : CS/SS304 /SS316/CS (Rubber lined)
	: Solid for heights upto 4 meters Suspended for heights upto 10 meters
Electrode Material	: CS /SS304 /SS316. Titanium tips can be provided if required
Electrode Insulation	: PVC (70°C) / PTFE (200°C) / Rubber lining (80 °C)
No of preset Levels	: One to Six
Max current	: 20mA AC
Max Voltage	: 12 V AC
Resistance	: 40 K (Max) between mass & control electrode
Min Conductivity	: 25µs / cm
Max Temperature	: 200°C
Test Pressure (Max)	: 20Kg /cm ² at amb. temp.

Control unit:	
Supply	: 110 / 230 V AC, 50 Hz
Output	: SPDT rated for 6A at 230V AC (Resistive)
Power Consumption	: 5VA (max)
Ambient Temp.	: 0 - 60°C
Delay Time	: 2 sec.
Humidity	: 90% Rh
Version	: Panel / Wall mounted
Protection	: Weather proof IP 56/ IP 65 or Ex-proof for Gr IIA & IIB



Special Features

1. Auto Sensitive - Self adjusts to liquids, Conductivity ($> 25\mu\text{S} / \text{cm}^2$)
2. Safety ensured due to "optical isolation" between probe & control unit
3. Auto/Manual mode thro' toggle switch, if required
4. Foam Compensation & Fail Safe Device, if required

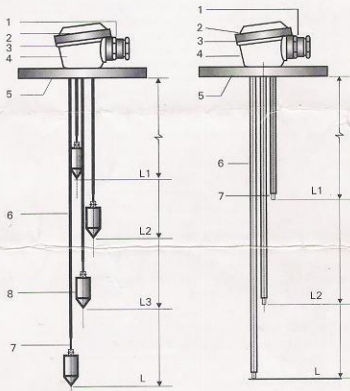
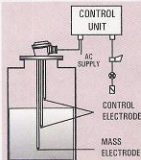
Conductivity Type Liquid Level Switch - CNS

Model No. CNS-

- Enclosure _____
- I Cast Al, wetherproof as per IP-56
J Cast Al, wetherproof as per IP-65
E Cast Al, ex-proof for Gr IIA & IIB
F Cast Al, ex-proof for Gr IIC
O Non-std.
- Process Connection Material _____
- M MS
N SS304
S SS316
C CS Rubber lined
O Non-std.
- Process Connection Dimension _____
- 1 40NB BS10T 'D' flange
2 50NB BS10T 'D' flange
3 1 1/2" BSP(M) Threaded
4 2" BSP(M) Threaded
O Non-std.
- Probe Type _____
- S Soild
U Suspended
O Non-std.
- Preset Levels _____
- 1 One
: :
6 Six
- Electrode Material _____
- M MS
N SS304
S SS316
O Non-std.
- Electrode Insulation _____
- P PVC
T PTFE
R Rubber Lined
O Non-std.
- Control Unit version X protection _____
- A Panel mounted
B Wall mtd X weatherproof as per IP-56
C Wall mtd X weatherproof as per IP-65
D Wall mtd X exproof for Gr IIA & IIB
O Non-std.
- Special Features _____
- C Foam Compensation
F Fail safe device
T Titanium Tips
O Non-std.

Installation :

The probe is generally mounted internally and wired to the control unit. Alternatively, it can be mounted externally through an external cage if service conditions,so demand.



1. Cable gland 2. Terminal cover 3. Gasket 4. Terminal head
5. Flange 6. Sleeve 7. Probe 8. Counter weight

Applications:

Water/Waste water treatment plants, food/ drug / brewery plants, paper/ suger industries.

Services suited for :

Water, Acids, Bases, Salts, Ammonia, Sugar Solution, Milk, Vegetable Juices, Cold drinks.

Ordering information :

Specify Model No.,electrode lengths, liquid its operating temperature, pressure & min. conductivity.

Quality Assurance :

Besides, incorporating correct design, supported by proper manufacturing techniques & skilled craftsmanship, we have established a documented quality assurance plan reviewed and approved by numerous critical customers. The plan is strictly adhered to, through drawing & design control, chemical composition check of incoming raw materials, bought outs & inprocess inspection, final performance check and permanent inspection records to assure manufacturing & material integrity to appropriate specifications.

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