

# CAPACITANCE LEVEL INDICATOR

[FDI - CLT - 504] / [FDI - CLT - 504B]



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# INTRODUCTION

## WORKING PRINCIPLE

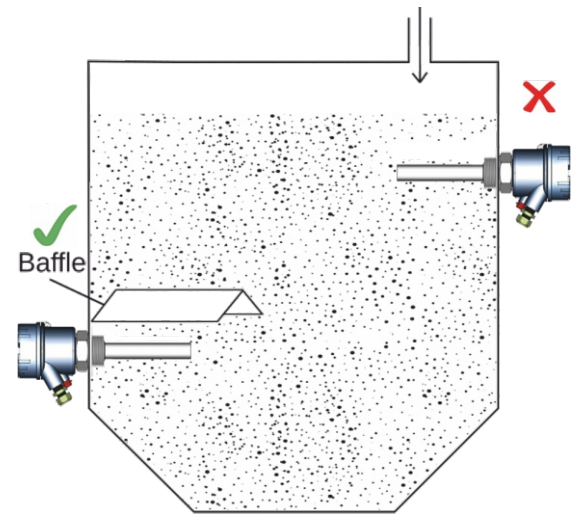
The principle of capacitive level measurement is based on the capacitance change of a capacitor. The probe and the tank wall form a capacitor whose capacitance is dependent on the amount of product in the tank; An empty tank has a lower, a filled tank a higher capacitance.

The sense electrode and tank wall serve as two electrodes of a capacitor with the service material acting as dielectric. A change in level of material causes a change in dielectric, which in turn causes the value of this tank capacitor to change.

## MEASURING SYSTEM

The instrument when calibrated at a single point i.e. in air, can be used with a variety of materials for level detection. When material reaches the switching point, the instrument detects the presence of material according to the principle mentioned above and changes the outputs accordingly.

The relay contacts / PNP output / Current Output could be used for maintaining the level of the material within the desired range in the tank. See Figure.

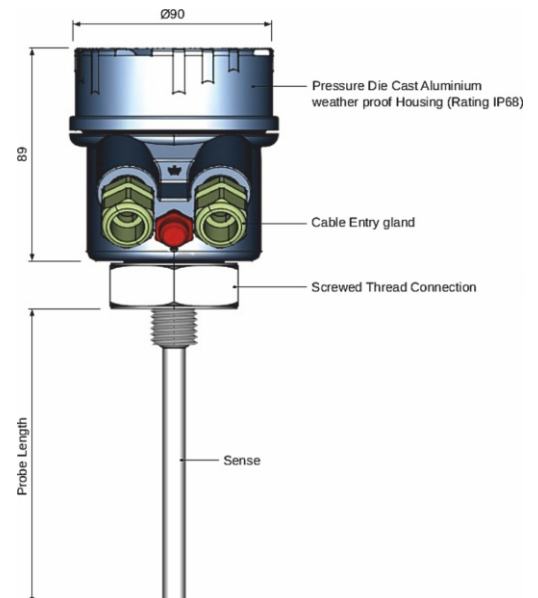


## FEATURES

- Compact Probe Size (minimum probe length of 100 mm)
- Output : Relay / PNP / Analog
- Micro Controller - based design
- Self-diagnosis of installation errors
- Suitable for conductive and non conductive media
- External visible output and error indication
- Works well with fluffy powders
- Universal power supply of 18 - 55 V DC & 90 - 265 V AC on same terminal.

## TECHNICAL SPECIFICATIONS

- Housing : Pressure Die-Cast Aluminum, Flameproof
- Mounting : 1/2", 3/4", 1 1/2" BSP / NPT, & Flanged ,available as per customer specification
- Cable Entry : 2 x 1/2" BSP / NPT or PG 13.5
- Probe Length : 100 to 3000 mm, as per customer specification



## TECHNICAL SPECIFICATIONS

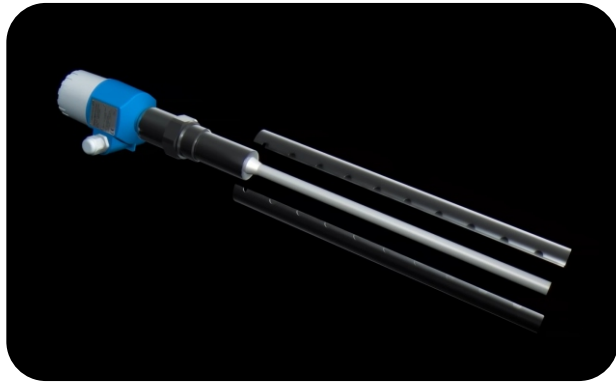
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- Input Supply : 18 - 55 VDC / 90-265 VAC
- Indication : Bi-color LED ( Normal : Green , Alarm : Red )
- Output : SDPT / DPDT / PNP / Analog
- Operating Temperature : up to 250° C
- Insulation : Part PTFE / Full PTFE
- Fail Safe : Field Selectable [ Min. Fail Safe Low ; Max. Fail Safe High ]
- Power Consumption : 3 Watts
- Time Delay Setting : 1-25 seconds

## TYPES

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- [FDI - CLT - 504B] Barrel Type Sensing Rod  
( Preferred for Non Metallic Tank Body Materials )



- [FDI - CLT - 504] Non-Barrel Plain Sensing Rod Type  
( Commonly used with Metallic Body Tank )

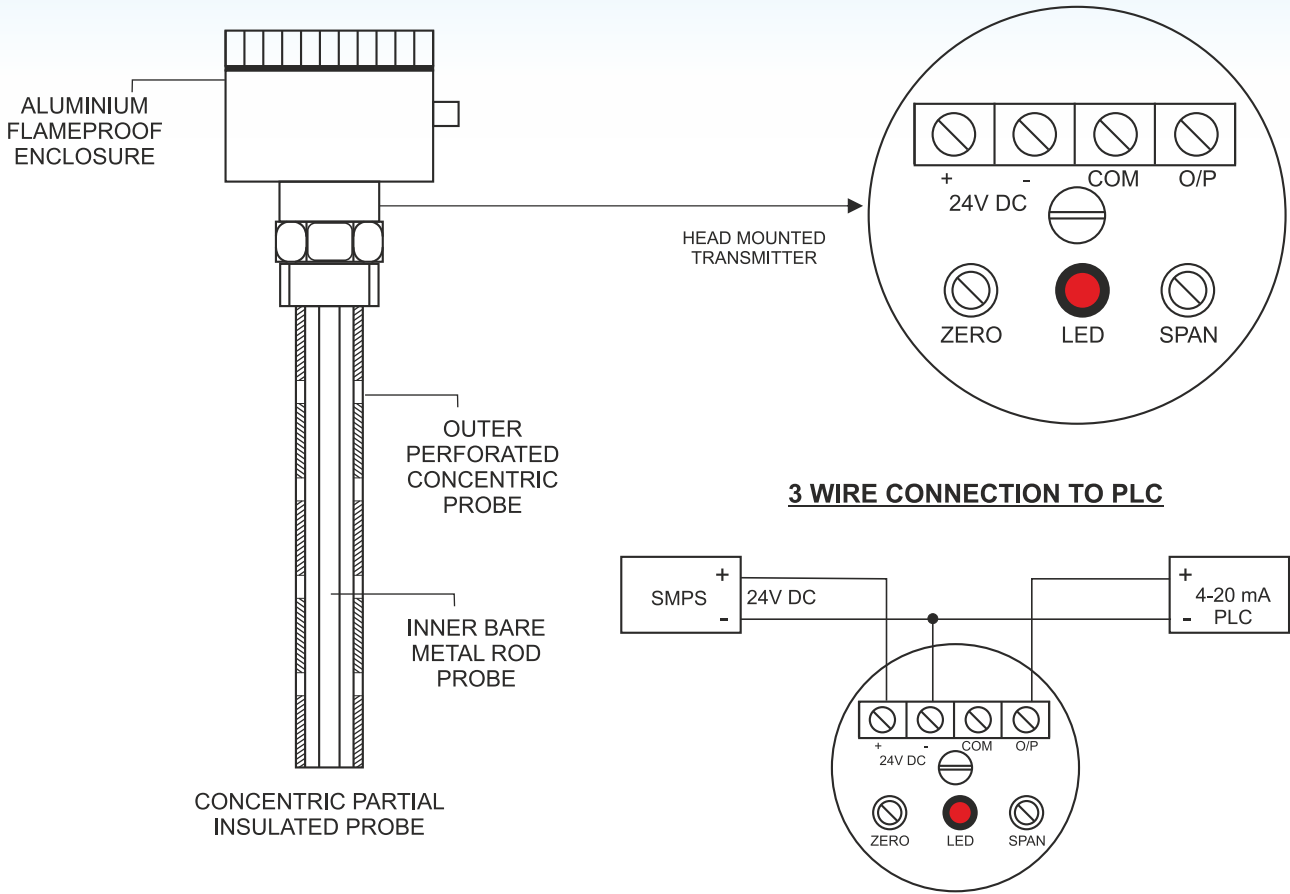


## APPLICATIONS

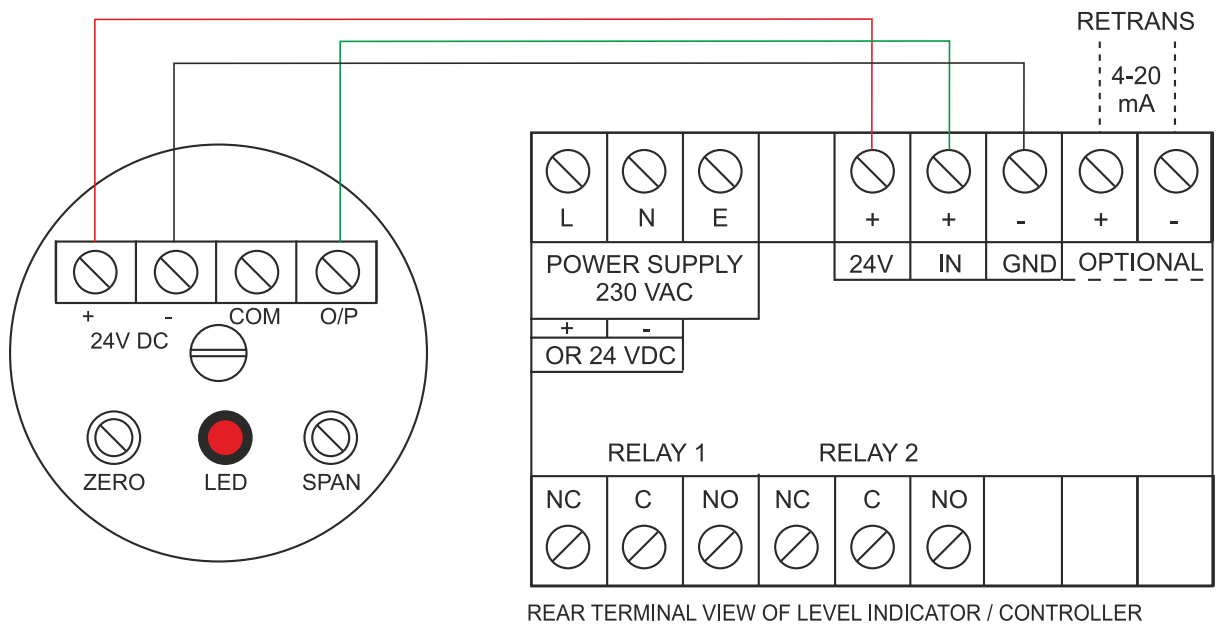
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- Dairy
- Pharmaceutical
- Food & Beverages
- Packaging Industry
- Material Handling
- Chemical & Process Equipment

# WIRING DIAGRAM



## CONNECTION WIRING DIAGRAM WITH DIGITAL INDICATOR / CONTROLLERS



WIRING DIAGRAM IS SUBJECT TO CHANGE DEPENDING UPON SELECTION OF SWITCH TYPE & WITHOUT PRIOR NOTICE.



## ENQUIRY SPECIFICATIONS:

- [1] Service Media Details.
- [2] Tank Volume, Height, Diameter
- [3] System Operating and Design Pressure.
- [4] System Operating and Design Temperature.
- [5] Limit Switch Set Ranges ; High & Low
- [6] Material Specifications ( Body / Wetted Parts )

## RECOMMENDED SPARES

- [1] Gaskets / as per customer needs.

## OTHER RANGE OF PRODUCTS

- Metal Tube Rotameter
- Breather Valve In-Built Flame Arrester
- Gauge Hatch / Emergency Hatch
- Mcleod Gauge
- Variable Area Flowmeter
- Orifice Flange Assemblies

### Any Query?

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