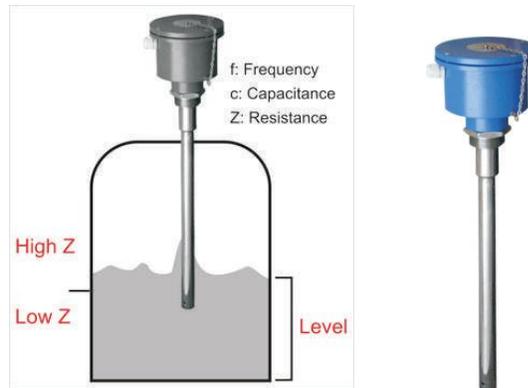


Capacitance Level Transmitter

A capacitance is formed between the probe and the vessel wall .As the level of the measuring medium rises or falls capacitance between the probe and vessel wall changes proportionately. A high frequency sine wave is applied between the probe and tank wall. A change of medium level will induce a change in the current of the applied sine wave. From when the capacitance in the vessel increase, impedance will decrease and current will increase and vice-versa. (Z=Resistance, C=Capacitance, F= Frequency)



Head mounted electronics converts the capacitance variation to 4-20mA signal for long distance transmission. It is provided with trimpots for SPAN and ZERO adjustments. With no moving parts it is free from wear and tear, rugged and robust in construction. No dead zone like float based instruments.

It must be ensured that the probe is parallel to the tank wall throughout it's length.

Technical Specification

Major make Capacitance type 3 wire Level transmitter Model (CLT-1) with non-insulated Probes for non-conductive liquids or PTFE Teflon insulated probes for conductive liquids.

| | |
|-----------------------------------|---|
| Frequency of operation | 5 to 15kHz. |
| Probe Material | Stainless Steel / Teflon insulated 10/12/16 mm rod up to Max 3 Metre length |
| Process connection | 3/4", 1", 1.1/2" BSP(M) or 1" ASA 150 lbs flanged but thickness 12mm (or as per customer specification) |
| Power supply | 24VDC |
| Output | 4 to 20 mA. (non-isolated) |
| Span & Zero adjustment | Trim pots |
| Max. Working Pressure | 10kg/sq.cm |
| Max. Working Temp. | 150deg.C |
| Accuracy | ±0.5%, ±1% or ±2% |
| Enclosure | Cast aluminium weather proof with PG9 cable gland or Flame proof (IS2148-2004, Gr II A and B gases) |
| Cable Size | 3 core, 0.75 sq.mm screened PVC cable |

Salient Features :

- Two parts isolated design-Electronic Module can be easily separated without removing the probe and without necessity of process shut down. So module replacement is easy.
- No moving parts, it is rugged and robust instrument.
- No dead band or dead zone like float based/ultrasonic instruments.
- Suitable for operation from 12 to 32 VDC, with reverse polarity protection.
Standard output 4-20mA. Voltage output of 0-10 optional. (For 12 V input supply output 0-5V and with 24V Supply output 0-10V).

- Plug and play with reference probe and rod.
Remote electronics as option with 2 Metre long coaxial cable.
- Standard enclosure weather proof-cast Aluminum or Nylon 66. Flame proof as optional.
- Trim-Pots for span and zero adjustment.
- Our new introduction is Microprocessor based Blind Transmitter (available only in weather proof version)

with Push Button Teach-in facility and damping arrangement.

While sending enquiries for capacitance type level transmitters, please furnish following information to enable us to submit a suitable offer:

1. Name of service Medium/Liquid
2. Dielectric constant of the medium.
3. Operating Temperature and pressure. Does the temperature vary? If so how much?
4. Nature of liquid - Foaming, Viscous, Sticky etc.
5. If agitation is involved whether sufficient space is available for probe between agitator and tank wall to avoid damage.
6. Material of tank- Metallic or Non- Metallic
7. If mounted on nozzle, height of nozzle, with tank dimensions and drawings.