



Capacitance type microcontroller based Level Indicator Transmitter, series 103 CLT, can be used in a variety of applications for continuous level indication in non fuming and non-conductive liquids like mineral oils, cooling oils etc. The same unit can also be used for conductive liquids with low or medium viscosity like water, water bound solutions. (For conductive liquids see leaflet LF-103-0803 R06.)

The model 103 CLT is available as an Integral system, where the electronic insert can either be mounted on the top of the electrode and also as Remote system where electronic insert can be mounted separately near the tank.

SPECIFICATIONS:

TRANSMITTER UNIT:

- Enclosure : Weatherproof(WP),Cast Aluminum Polyurethane painted.
- Protection : IP 65
- Location : Safe Area
- Temperature : 0-55 °C
- Humidity : 0-95% max.(non condensing)
- Display : 6-Digit LCD Display for Level/ % Level/ Volume
- Programming Interface : Magnetic Key PLUGIN for setting and calibration
- Display Range : Level= 0 to 99999 mm
0 to 9999.9 cm
0 to 99.999 meter
(Only one unit to be selected)
% Level=0.00 to 100.00%
Volume =0 to 99999 Litres.
- Accuracy : 2 % of FSD.
- Output : 4-20mA, with max. Load 500 ohm, at 24VDC
- Power Supply : 24VDC ±15 %
- Electrical Connections : Suitable for 1.5 sq mm size conductor (Max)
- Cable Entries : 1 Nos. of size 1/2" NPT(F) Standard, OR 3/4" UNF / ET (F) Optional.
- Mounting : On the top of the tank. (Flanged or Threaded)



FEATURES:

- Microcontroller Based System.
- 2-Wire Transmitter.
- Level to Volume conversion with strap.
- Wide range electrodes to suit various duties.
- Calibrations and Programming in sealed condition of the unit.
- On site calibration. Calibration methods from 2 point to multi-point calibration(upto 10 point).
- Easy to install.

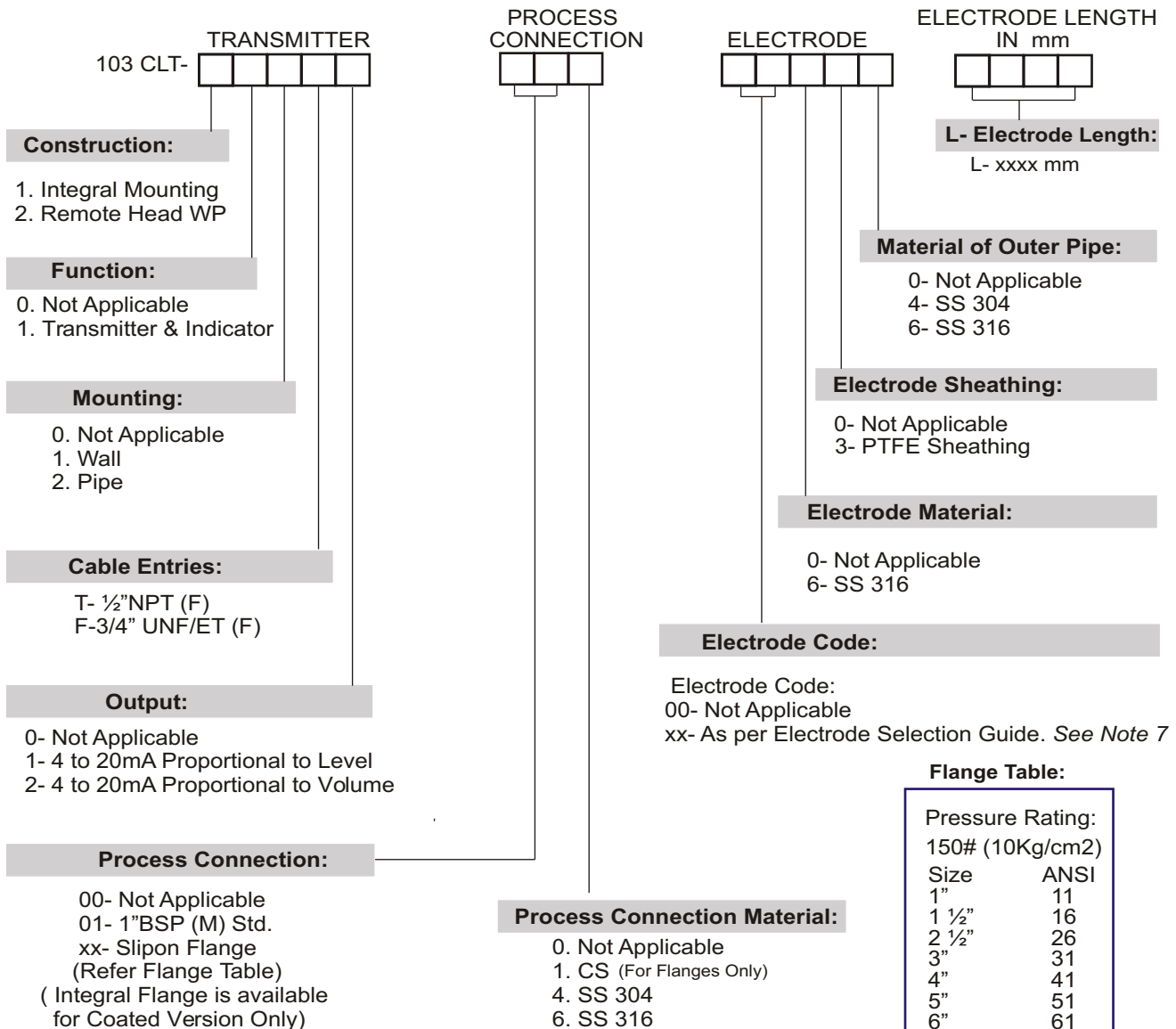
ELECTRODE:

- Electrode Type: Rigid
- Electrode Material : SS 316
- Insulation : PTFE Sheathing
- Mounting : Vertical.
- Process Connection : 1" BSP/Flanged
- Material :CS, SS 316, SS 304.

OPTIONAL ACCESSORIES:

- Power Supply Unit: 24VDC.
- 176 Remote indicator Unit (with inbuilt Power Supply Unit)

ORDERING CODE:



Example of model code selection for Integral Mounting: Model no - 103 CLT 110T1 016 35636 0600

The above model code specifies that Capacitance Type Level Indicator & Transmitter 103 CLT with Integral mounting, with cable entry 1/2" NPT (F) & 4-20 mA proportional to level. Process connection for electrode is 1" BSP(M), material of process connection is SS 316 without coating. Electrode is of following type i.e Rigid concentric PTFE sheathed, 3/4" outer pipe of SS 316, electrode material is SS 316 & length = 600mm.

Model code selection for Remote Mounting:

Indicator & Transmitter: Model No - 103 CLT 211T1 000 00000 XXXX (Underlined Code Need not be mentioned.)

Capacitance type level indicator & transmitter 103 CLT wall mounting with cable entry of 1/2" NPT(F) & 4-20 mA proportional to level.

Electrode: Model No - 103 CLT 200F0 016 35636 0600

Electrode is rigid concentric PTFE sheathed, 3/4" outer pipe of SS 316. Electrode material is SS 316, process connection is 1" BSP(M), material of process connection is SS 316 & Electrode length = 600 mm

Example of Model code Selection with Slipon Flange: Model No - 211T1 266 32636 0600

The above model code specifies that Capacitance Type Level Indicator Transmitter 103CLT, with Integral mounting with cable entry 1/2" NPT(F) & 4-20 mA output proportional to level. Process Connection is 2 1/2" ANSI 150#. Material of process connection is SS 316.

Electrode description is as follows: Electrode is Rigid Concentric, PTFE sheathed 3/4" outer pipe, electrode material is SS 316, material of outer pipe SS 316 & Electrode length = 600mm.

* Slipon Flanges to be ordered separately.

ELECTRODE SELECTOR GUIDE FOR NON-CONDUCTIVE MEDIA:

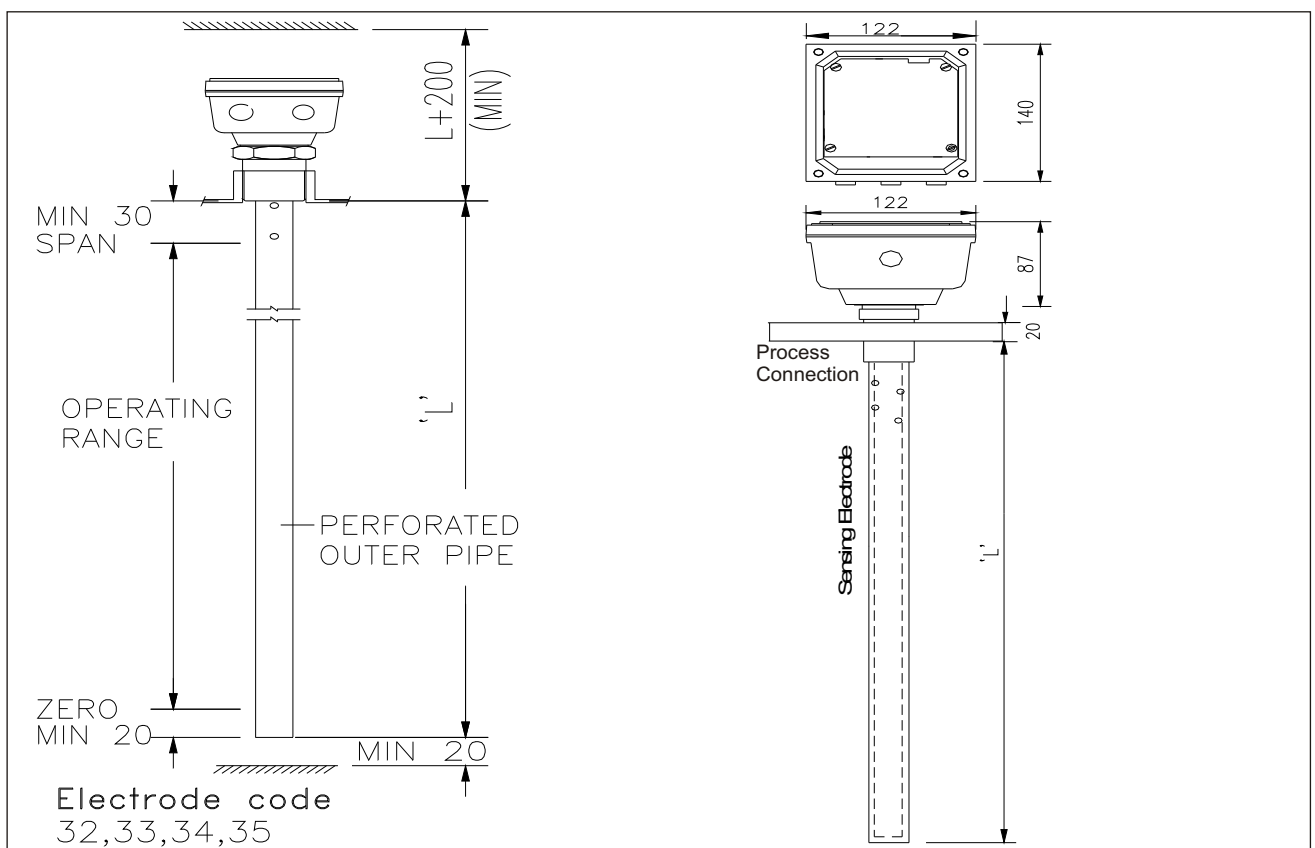
Code No.	Electrode Description	Process Connection		Material of Construction		Electrode Length		Operating Condition		Service
		Threaded	Slipon Flanged (minimum)	Sensing electrode	Outer Pipe	Mn.	Max.	Temp in deg C max	Pres. in Kg/cm2 max	
33	Rigid Concentric, PTFE Sheathed, 1/2" outer pipe	1"	1"	SS 316	SS 316 OR SS 304	350	3000	60	ATM	Edible oils, turbine oil, kerosene, synthetic oils and other petroleum products
34	Rigid Concentric, PTFE Sheathed, 1/2" outer pipe	1"	1"	SS 316	SS 316 OR SS 304	350	3000	180*	10	
32	Rigid Concentric, PTFE Sheathed, 3/4" outer pipe	1"	1 1/2"	SS 316	SS 316 OR SS 304	350	3000	60	ATM	
35	Rigid Concentric, PTFE Sheathed, 3/4" outer pipe	1"	1"	SS 316	SS 316 OR SS 304	1000	3000	180*	10	

* See Note 2

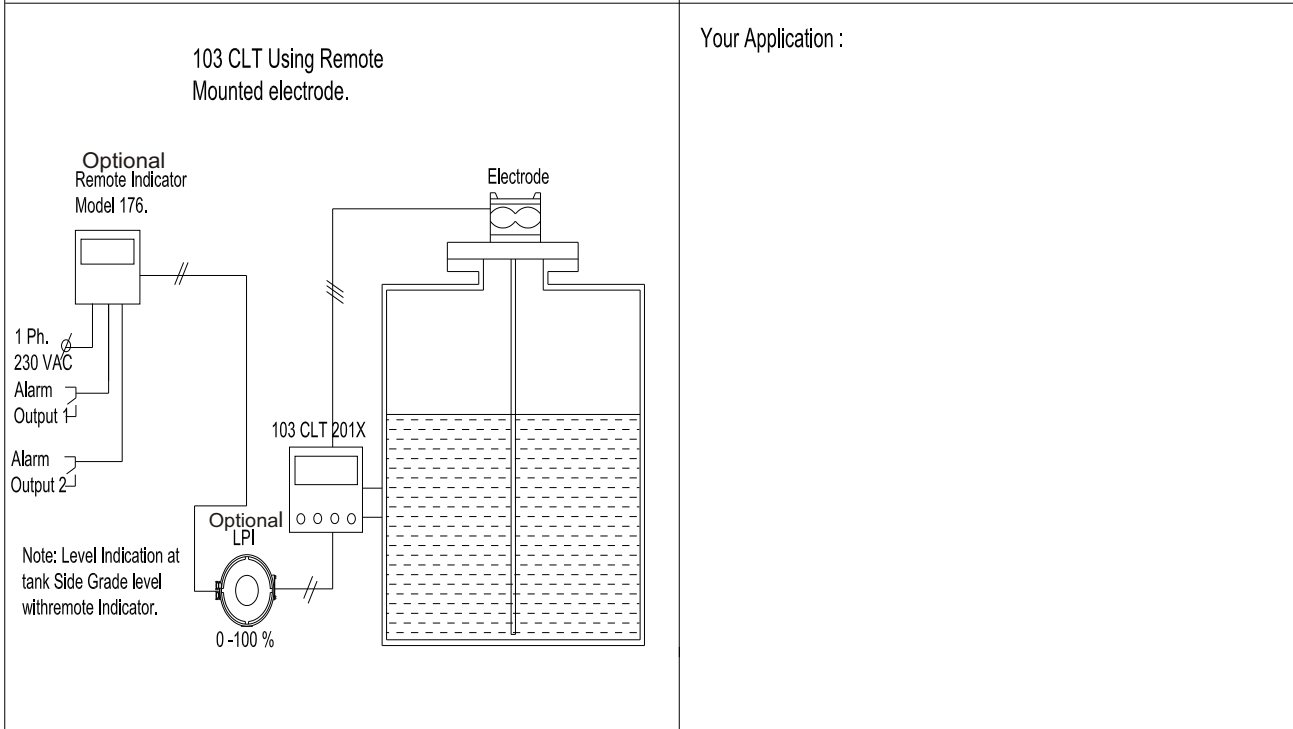
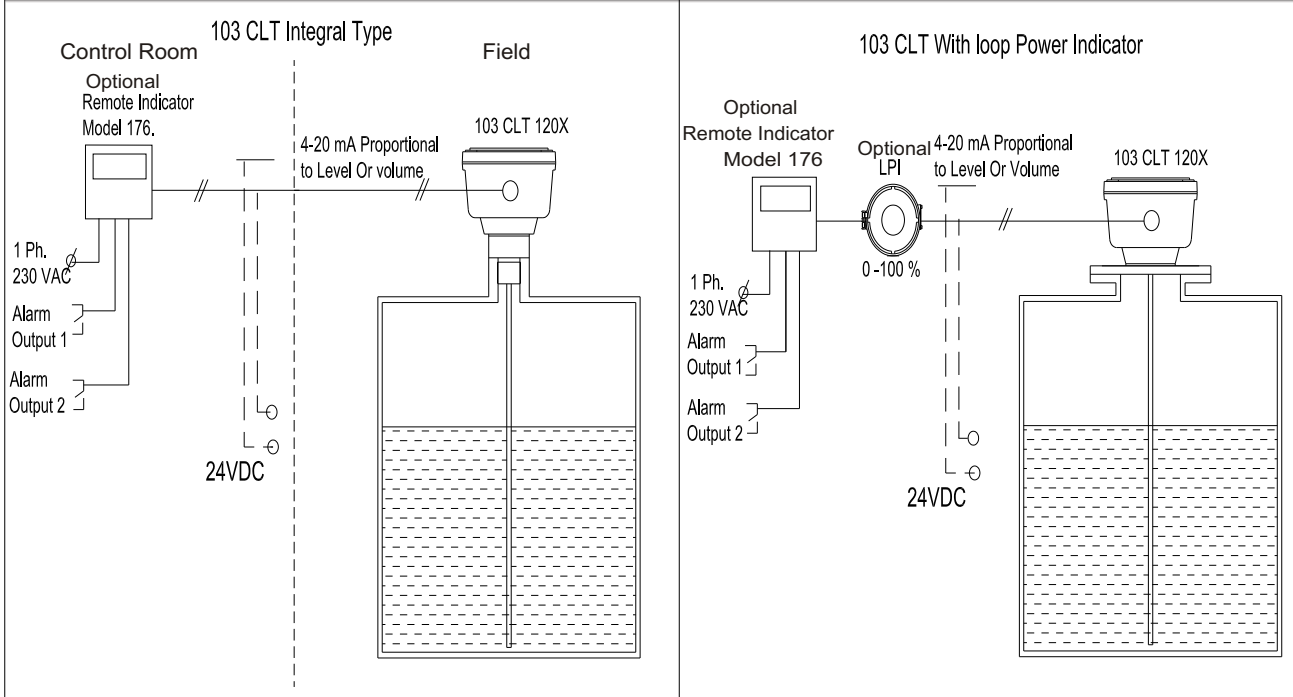
Notes:

1. In case of remote mounting transmitter unit and the probe unit must have separate model codes.
2. High temperature stand off is recommended for process temperature above 60°C.
3. Power supply 230 VAC to 24 VDC module can be supplied optionally.
4. Transmitter power supply should be 24VDC +/-1%, ripple and noise<100mV.
5. Display can be set to show the parameters level, volume, and % volume sequentially.
6. For construction Remote Head, cabling between indicator and probe head should be 300 mtrs (Max) for 1.5 sqmm Copper wire.
7. All combinations are not possible. Please refer "Electrode Selection Guide" for compatible options.

TRANSMITTER WITH CONCENTRIC ELECTRODE DIMENSIONAL DETAILS:



APPLICATION:



Your Application :

- Note: 1. Load Resistance is max 500 ohm at 24VDC
2. Addition of 28V Zener Barrier reduces load resistance by 220 ohm at 24VDC.
3. Addition of LPI reduces load resistance by 100 ohm at 24VDC.

*** Continuous developments may necessitate changes without notice.

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