



CAPACITANCE TYPE LEVEL INDICATOR AND TRANSMITTER
SERIES 103 CLT (FOR CONDUCTIVE MEDIA)

Capacitance type microcontroller based Level Indicator Transmitter, series 103 CLT, can be used in a variety of applications for continuous level indication in non fluming conductive liquids with low or medium viscosity like water, water bound solutions. The same unit can also be used for non conductive liquids like mineral oils, turbine oils, cooling oils etc. (For non conductive liquids see leaflet LF-103-0804 R02.)

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.

FEATURES:

- ❑ 2- Wire transmitter.
- ❑ Level to volume conversion with strap.
- ❑ Wide range electrodes to suit various duties.
- ❑ Possibility of calibration and programming in sealed condition of the unit.
- ❑ On site calibration. Calibration methods from 2 point calibration to multi-point calibration (upto 10 point.).
- ❑ Easy to install.

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.
- ❑ Programming Interface : magnetic key PLUGIN for setting and calibration.
- ❑ Display Range : Level = 0 To 7,000 mm
% Level = 0.0 To 100.0 %
Volume = 0 To 99999 Litres.
- ❑ Accuracy : 2 % of FSD.
- ❑ Output : 4 – 20 mA, with max. Load 500 Ohm, at 24 VDC.
- ❑ Power supply : 24 VDC ± 15%

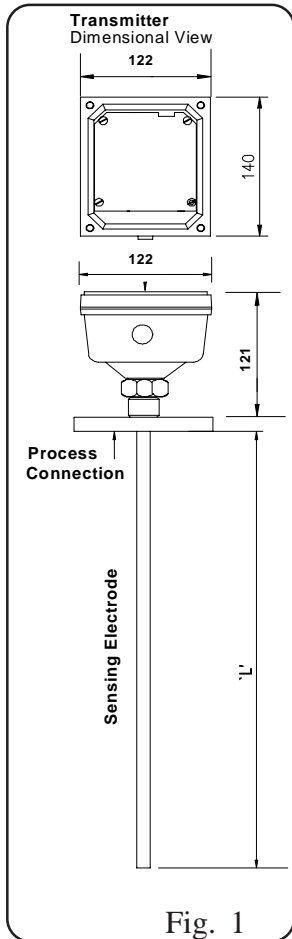
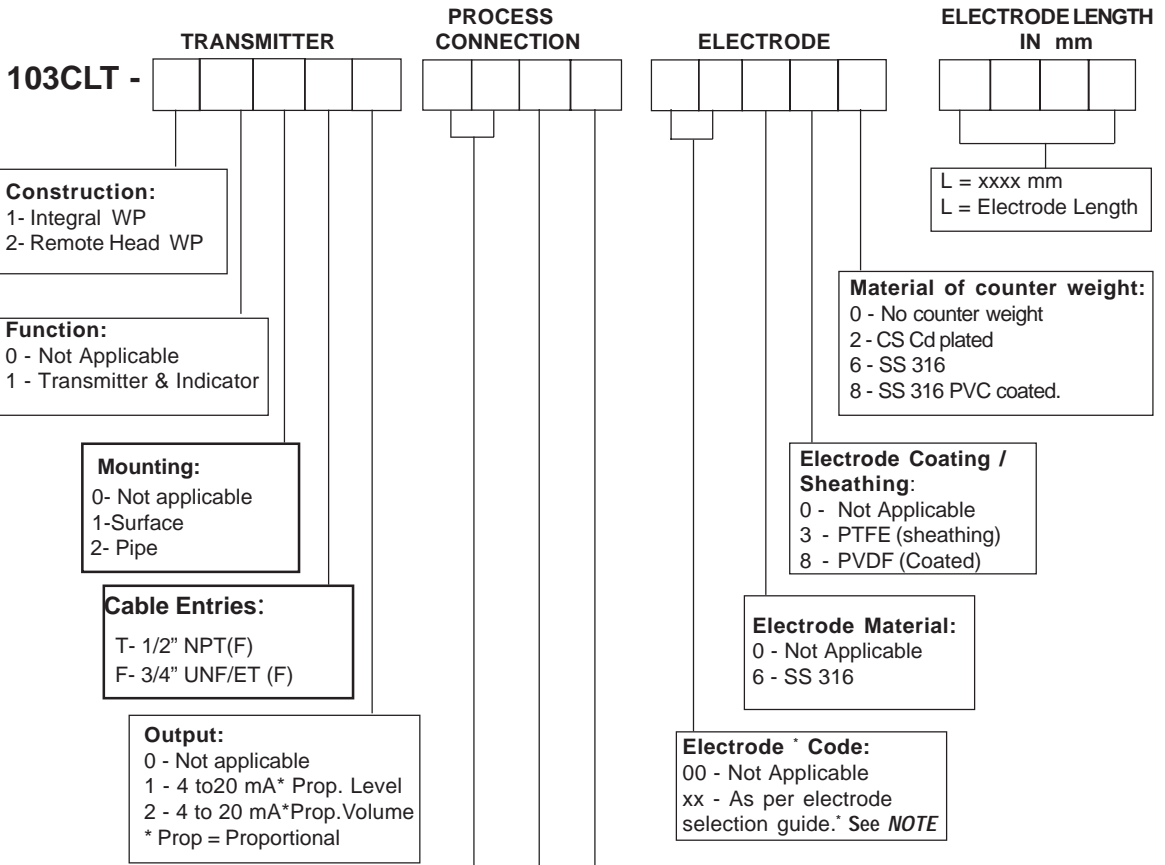


- ❑ Electrical connections : Suitable for 1.5 sq. mm size conductor (Max.)
- ❑ Cable entries : 1 Nos. of size 1/2" NPT (F) Standard, OR 3/4" UNF / ET (F) Optional.
- ❑ Mounting : On the top of the tank. (Flanged or Threaded)

❖ **ELECTRODE:**

- ❑ Electrode type : Rigid / Flexible.
- ❑ Electrode material : SS 316
- ❑ Insulation : PTFE sheathing/ PTFE wrapped
- ❑ Minimum length : 350 mm for rigid electrode
1,000 mm for flexible electrode
- ❑ Maximum length : 3,000 mm for rigid electrode
7,000 mm for flexible electrode
- ❑ Mounting : Vertical.
- ❑ Process connection : 1" BSP / Flanged
- ❑ Material : CS, SS 316, SS 304.

ORDERING CODE



Flange Table:

Pressure Rating : 150 # (10 kg/cm²)

	ANSI	BS	DIN	IS
1"	11	12	13	14
1 1/2"	16	17	18	19
2 1/2"	26	27	28	29
3"	31	32	33	34
4"	41	42	43	44
5"	51	52	53	54
6"	61	62	63	64

*** NOTE:**

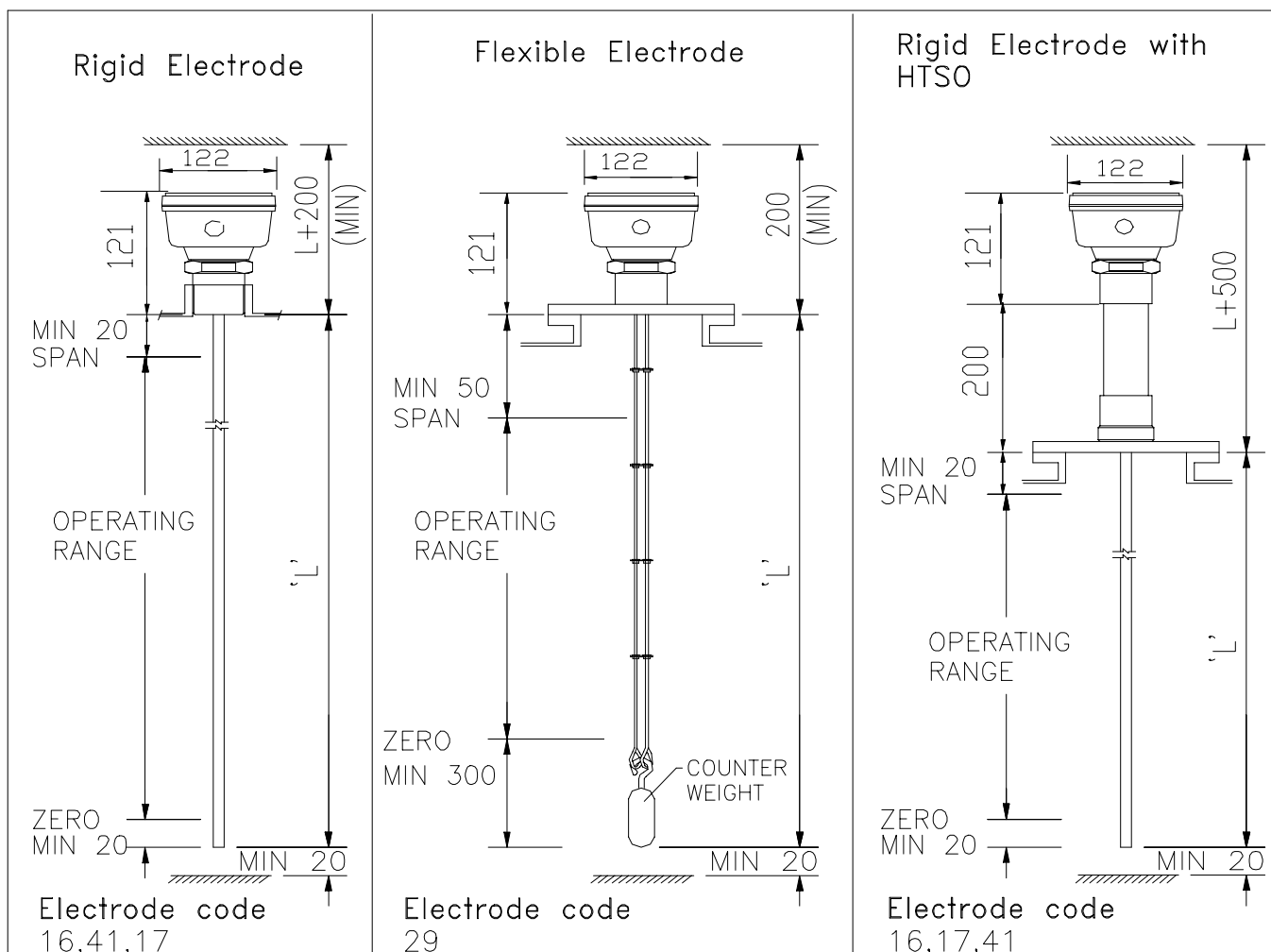
- ❖ All combinations are not possible. Please refer "Electrode Selection Guide" for compatible options.
- ❖ Transmitter power supply should be 24VDC ±1%, ripple and noise < 100 mV.
- ❖ In case of Remote type transmitter ordering code will be **103 CLT 2XX**.
- ❖ Slip on flanges of appropriate size can be supplied for electrode having threaded process connection.

ELECTRODE SELECTOR GUIDE FOR CONDUCTIVE MEDIA :

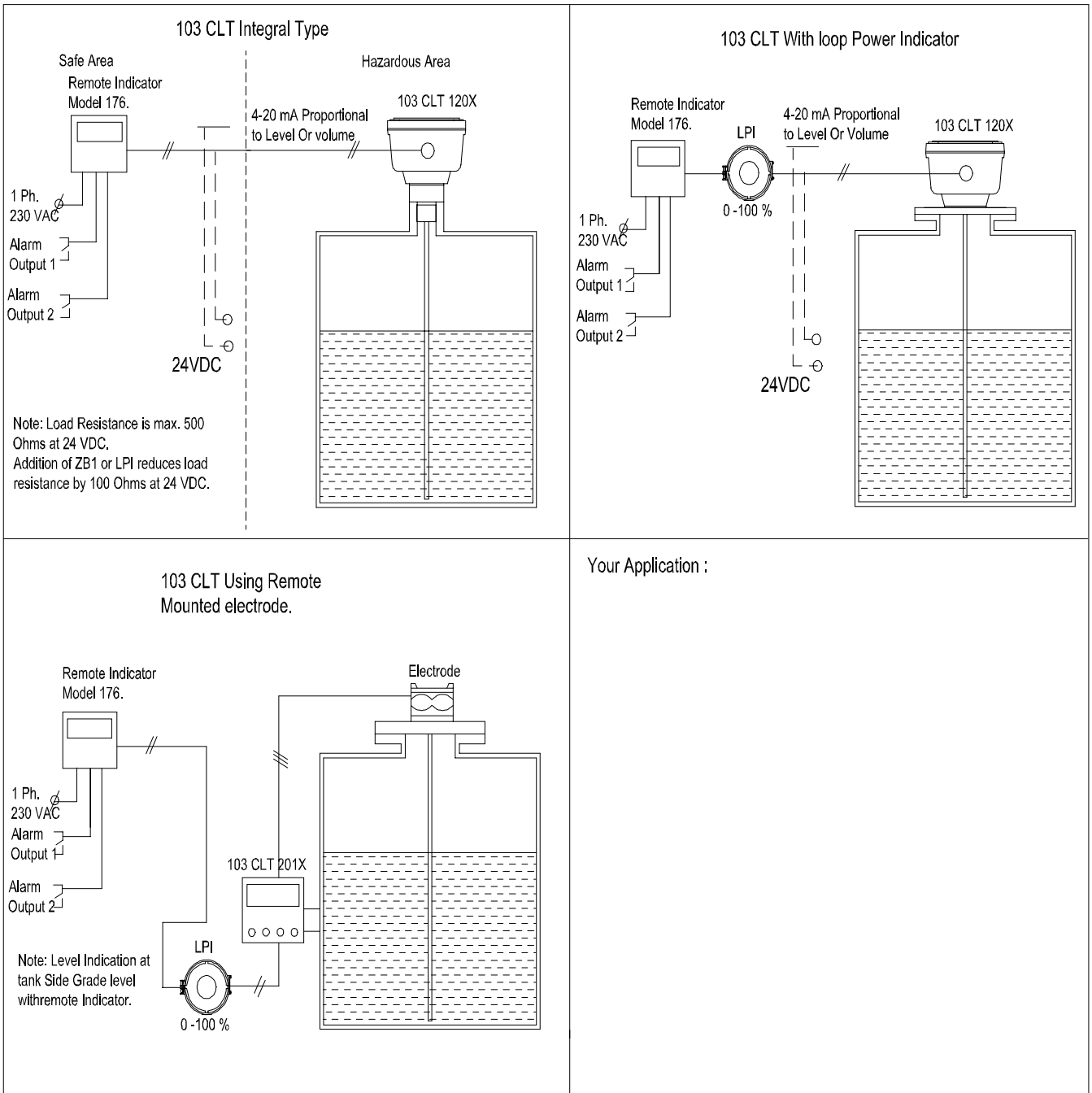
Code No.	Electrode Description	Process Connection			Material of Construction		MTG	Electrode Length		Operating Condition		Service
		Thd	Integral	Flange	Sensing Electrode	Counter Weight		min	max	Temp. In °C	Press. Kg/cm ²	
			Size	Coating								
11	Rigid Polypropylene	1"	-	-	6	0	V	350	3000	60	ATM	Water, Non-corrosive liquids in metallic tanks.
16	Rigid PTFE sheathed, Ø 16 mm.	1"	1"	0.8	6	0	V	350	3000	60	ATM	Water, corrosive/Non-corrosive liquids in metallic tanks.
17	Rigid PTFE sheathed, Ø 16 mm.	1"	1"	0.8	6	0	V	350	3000	180	10	Water, corrosive/Non-corrosive liquids in metallic tanks.
29	Double loop flexible PTFE sheathed (Inner conductor SS316)	1"	1 1/2"	0.4	6	1,2,6,8	V	1000	7000	60	ATM	Water Non corrosive liquid in non-metallic tank.
41	Rigid PVDF coated Ø 14 mm.	1"	1"	0.8	6	0	V	350	3000	140	10	Milk, beer & other food ducts in metallic tanks.

- NOTES:**
1. These are commonly used electrodes. For special applications, please contact factory.
 2. High temperature stand off is recommended for process temperature above 60°C.
 3. For food industries PVDF coated electrodes are recommended.
 4. For corrosive duties, only flanged process connections are recommended as threaded process connections are prone to deteriorate and jam.
 5. With zener barrier 103 CLT may be used in hazardous area.
 6. Power supply 230 VAC to 24 VDC module can be supplied optionally.
 7. Display can be set to show the parameters sequentially level, volume, and % volume.
 8. For Remote mounted Electrode distance between probe head and indicator /transmitter unit to be minimised less than 100 Mts. with 3 x 1.5 sq.mm. copper shielded cables.

ELECTRODES:



APPLICATIONS:



*** Continuous developments may necessitate changes without notice.

LF-103-0803 Rev.02 09/2005



SBEM Pvt. Ltd.

39, Electronic Co-Operative Estate, Pune-Satara Road, Pune - 411 009 (INDIA)

Tel. - 91-20-24220505, 24223375

Fax - 91-20-24215670

Email - sbemsales@sbem.co.in, sbemsales@vsnl.com

Works : Bibwewadi Industrial Estate, 691/A/2, Pune-Satara Road, Pune-411 037(India) Email : mfg@sbem.co.in

Office : MUMBAI

CHENNAI

NEW DELHI

Tele. : 91-22-27823601, 27823603

91-44-24451235, 24412947

91-11-26560647, 26969679

Fax : 91-22-27823603

91-44-24412947

91-11-26969679

Email : mumbai@sbem.co.in

chennai@sbem.co.in

newdelhi@sbem.co.in