



## Product Profile

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## About SBEM

SBEM was established in 1974 and is India's market leader in Level, Flow and Pressure Instrumentation. With a futuristic approach and a warm beginning in providing Oil Companies, with tank Level Gauging Solutions, SBEM has evolved into an organization offering multiple Products. SBEM Pvt. Ltd. has established itself as a FLOW MEASUREMENT Solutions Provider & it also deals in Automation Packages Business. An ISO 9001:2015 and ISO 45001:2018 certified company with a DSIR approved R & D Centre. SBEM's core strength is its ability to custom design solutions for each Application and Customer's from every Industry including :

### Public Health Engineering

PHE Instrumentation Package, WTP Automation Package Over head tanks (OHT), Elevated storage reservoirs (ESR), Reservoirs and Distributed Pipelines. 24 X 7 Water Supply Scheme and Tubewell Applications.

### Thermal Power

Steam Turbine, Turbo Generator, Condenser / Heat Exchanger, Condensate Polishing Unit (CPU), Coal Handling Plant (CHP), Ash Handling Plant (AHP), Fuel Oil Handling, DM Plant, Pre Treatment – Water Treatment Plant (PT-WTP), Effluent Treatment Plant (ETP), Cooling Tower and Fire Protection

### Indian Navy

### Oil Refineries & Gas (End To End)

### Cement

### Steel

### Edible Oil

## Vision:

To become the Preferred Partner and Solution Provider in the Process Control and Automation Industry

## Mission:

To provide Continuous Value Addition to our Customers by offering Reliable, Cost effective and Customized Solutions

## SBEM in a capsule:

- Pioneer in Level, Flow & Pressure Measurement Solutions since 1974
- One of first MSME to obtain ISO 9001:2015 & ISO 45001:2018 certification in India
- Largest number of installed Tank Farm Management Systems in India
- The only 100% indigenous Servo Gauge in 1992
- Integration of Radar Gauges (other makes) with SBEM Tank Farm Management systems
- Indigenously developed Phased Capacitance Level Transmitters and Ultrasonic Switches for Indian Naval Submarines
- Accurate Magnetostrictive Level Probes for Retail Outlet Automation

### Certifications :

- ATEX & IECEx Certified Retail Outlet Tank Gauging System as per IEC 60079-0 and IEC 60079-11
- NABL accredited Calibration Laboratory as per ISO/IEC 17025
  - Flow Meter
  - Residential Water Meter
- ISO 4064:2014 / W&M (OIML R49:2013) / Drinking Water Approval
  - \* - As per OIMLR49 / ISO4064
- SIL 2 certified 139 Servo Gauge as per IEC 61508
- CE Certified Level Transmitters as per EN Directives



## Electromagnetic Flow Meters 151MFM

### Product Features

- Measurement of flow rates of electrically conductive liquids/water.
- Flanged and Wafer versions available.
- The liquid flow is measured with no obstructions and no pressure drop.
- Rubber / PTFE / Neoprene / Hard Rubber / Polyurethane Lined Sensors
- Graphical LCD backlit / 2 line LCD backlit display
- Excellent long term accuracy
- Bi-directional flow measurement
- Empty pipe detection
- Selectable flow units
- Can be submerged in water or buried in ground
- Ex-proof Version

### Applications

- Used for Water & Waste Water in closed Pipe Flow

### Specification

- **Power Supply:**  
Universal 85-265 VAC, 45-65 Hz / 24 VDC
- **Measuring Range:** DN 15 - DN 3000
- **Pressure:** 6 / 10 / 16 kg/cm<sup>2</sup>
- **Minimum conductivity of measured liquid:** 5µS/cm
- **Electrode material:** SS 316;  
Optional-SS 316L, Hastelloy C, Titanium or Tantalum
- **Output:**  
Frequency, pulse and current outputs.  
Optional RS 232 and RS 485 outputs.  
Optional HART O/P  
Optional GSM / GPRS connectivity
- **Protection:**  
Remote Sensor-IP 68,  
Remote Converter - IP 67  
Integral Sensor-IP 67



## Battery Operated Electromagnetic Flowmeters 151 MFM B

### Product Features

- Measurement of flow rates of electrically conductive liquids/water.
- Pressure Measurement Feature
- The liquid flow is measured with no obstructions and no pressure drop.
- Rubber / PTFE / Neoprene / Hard Rubber / Polyurethane Lined Sensors
- GSM/ GPRS feature
- Inbuilt Data Logger
- Graphical LCD
- Excellent long term accuracy
- Bi-directional flow measurement
- Empty pipe detection
- Selectable flow units
- Can be submerged in water or buried in ground

### Applications

- Water and Waste Water
- Irrigation and Dewatering

### Specification

- **Power Supply:**  
3.6V Battery Pack Max. 5 yrs life
- **Measuring Range:** DN 15 - DN 1000
- **Pressure:** 6 / 10 / 16 Kg/cm<sup>2</sup>
- **Pressure Transducers:** Inbuilt Provision
- **Minimum conductivity of measured liquid:** 5µS/cm
- **Electrode material:**  
SS 316, SS 316L, Hastelloy C, Titanium
- **Output:**  
Opto-mos relay pulse output, 50 Hz max.  
RS 485 (Optional) / GSM/GPRS (Optional)
- **Protection:**  
Remote Sensor-IP 68,  
Remote Converter - IP 67  
Integral Sensor-IP 67



\*\* For 15 sec sampling

## Ultrasonic Flow Meter 153UCW / Multipath 153 MUF

### Product Features

- Measurement & detection of volumetric flow rates of most Liquids
- Hand held (Portable) / Wall mounted converter
- Easy to install
- Measuring accuracy ±1%
- Wide range of pipe sizes  
15 mm - 6000 mm
- Totalized Flow
- Multipath version for higher accuracy

### Clamp-on type Sensors / Insertion Sensors

#### Applications

- Drinking water, raw water, waste water
- Sewage/ drainage water with < 2% of Total suspended solids
- Boiler feed water
- Pipeline leak detection

### Specifications

- **Power Supply:**  
85 To 230 VAC / 24 VDC  
153UCH: Rechargeable battery powered with 230 VAC
- **Measuring Range:**  
15 - 6000 mm pipe diameter
- **Pressure:** 10 kg/cm<sup>2</sup>
- **Output:**  
153UCW: 4-20 mA + Pulse + Relay
- **Output:**  
153UCW: Temperature (Pt100) and analog input for heat flow and pressure measurement
- **Protection:**  
Sensor - IP 68,  
Converter - IP 67







# FLOW METERS

## Ultrasonic Residential Water Meter AQUASONIC 153-RWM

### Product Features

- No moving parts and robust design.
- No air measuring, Indifferent to sand and particles in the flow.
- 15 years of battery life.
- 100 m radio signal range.

### Applications

Smart Residential Water Metering Systems -

**AquaNet** : Automatic Meter Reading System

**AquaView** : Automatic Meter Infrastructure System

### Specifications

**Line Sizes** : DN15 / DN20 / DN25

**Accuracy** : As per OIML R49 / IS779

**Display** : LCD meter reading and alarm indication.

**Maximum Working Pressure** : 16 bar

**Temperature** : 0.1°C to 50°C

**Electromagnetic Environment** :

Residential, Commercial and Light Industrial

**Head Loss** : 0.16 bar at Q3

**Body** : PPS, highly reinforced composite material

**Protection** : IP68



## WIRELESS SOLUTION GSM / GPRS & DATA LOGGER [MODEL-200 SB410M]

### Product Features

- Intelligent Modbus, IO, Data logger, GPRS/ 4G/ LTE Connectivity Management.
- 1 x RS 485 port for Modbus, 1 x USB Port for utility configuration.
- Configurable multiple Slave IDs, Selectable Address Range.
- RS485 Transparent or Modbus Polling – Formatted as (ASCII/HEX)
- Datalogger during Server/Network Disconnection.
- Authorized Number list for Commanding.
- Remote configuration through SMS/FTP/TCP Utility Server / IP commands.
- GSM / GPRS / Data logger version available.
- Power Failure, Shutdown, IO Alerts with Optional Battery.
- Can act as Modbus to 4G Gateway or Transparent Modbus Gateway.

### Application

- Wireless Transmission of :-  
Level Instruments, Flow Instruments,  
Level Transmitter, Flow Switches, etc.
- Panel Tampering Detection.
- Power Fail Detection.
- Battery Voltage Monitoring.
- Pump Control, Energy Monitoring.
- Pulse Counting.
- Various Applications in Monitoring for Several Industries like PHE, Water Treatment, Power, Cement, Chemical and Others.
- Water Monitoring Applications in Distribution & Treatment.
- Tank Level Monitoring, Remote Monitoring And Automatic Meter Reading.

### Specifications

- **Power Supply** : Universal 85 to 260VAC, 50~60Hz
- **Communication** : GSM / GPRS
- **Temperature** : 0°C to 85°C
- LED Indication for Network Strength and Power Supplies



## Water Balancing SCADA [WBS]

SBEM's Water Monitoring/Balancing system is used in large industrial setups (Power, Cement, Chemical etc.) for reliable online monitoring of water withdrawals from water sources, consumptions & thereby calculating losses.

### Product Features

- Real time monitoring of instantaneous flow rate and cumulative flow.
- Reliable Measurement and wireless data transfer considering remote locations.
- Seamless integration with M2M using standard MODBUS TCP or SBEM proprietary protocol (ASCII)
- TCP/IP or UDP transport layer.
- Displays the Flow rate trends & reports of the field devices with selectable Date/Time ranges.
- Separate Consumptions are provided for Industrial / Domestic Purpose.
- Expandability in System. New Stages, Clusters, Devices can be added as per user requirement.
- Multi Location monitoring to view data / reports simultaneously.
- Other process instruments (Level, Pressure etc.) can be integrated with the system.
- Provision for Virtual Flow Meters.

### Applications

- Water and Waste Water Management (WTP).
- Effluent Treatment Plant (ETP).
- Public Health Engineering (PHE).
- Elevated Storage Reservoirs & Distributed Pipeline Monitoring
- 24x7 Water Supply Scheme.
- Tubewell Application.



# LEVEL TRANSMITTERS

## Pulse Radar 138 K For Liquids - Solids

### Product Features

- Two wire
- Variety of antennas to suit application
- Measuring range up to 70 m
- 6 GHz & 26 GHz Versions
- High accuracy up to  $\pm 3$  mm
- Low dead band
- Small beam angles of up to  $4^\circ$
- Dual chamber construction separates electronics from terminals
- Aiming device helps focusing the beam for use in solids
- Integrated air purge connection for use in dusty atmospheres

### Applications

#### Solids:

- Coal, cement, fly ash, clinker, gypsum, storage tanks or process vessels in dusty media, with or without aiming device
- Storage silos, hoppers
- Bunkers

#### Liquids:

- Level measurement specially for corrosive media
- Edible Oil

### Specification

- **Power Supply:** 14 - 30 VDC
- **Temperature:** Up to  $200^\circ\text{C}$
- **Pressure:** Up to  $16\text{ kg/cm}^2$
- **Process Connection:** Threaded or flanged
- **Output:** 4-20 mA, 2 Wire, HART
- **Protection:** IP67



## Hydrological Radar Gauge 138-W For Liquids - Solids

### Product Features

- Maintenance-free and durable.
- Measurement not affected by build-up or condensation.
- User friendly adjustments (via Bluetooth) Save installation time.
- Sensor active LED indication.
- Ergonomic and environment friendly design.
- Flexibility in output options.

### Applications

- Hydrological Applications (Lakes, Rivers, Reservoirs, Sinks, Channels).
- Solvents as well as aggressive Liquids.
- Lightest to the heaviest of bulk Solids.
- Applications with stringent hygiene requirements.

### Specifications

- **Power Supply:** 24 V dc.
- **Display:** With or Without Display
- **Output:** 4-20 mA / with HART 7 .
- **Measuring Range:** Up to 70 m depending on output option.
- **Temperature:**  $-40$  to  $+80^\circ\text{C}$
- **Pressure:** -1 to +3 bar
- **Process Connection:** Threaded / Flanged / Custom.
- **Protection:** IP67 / IP68



## Ultrasonic Level Transmitter ULTRAMATE 136-ULT

### Product Features

- 2 wire / 4 wire (AC supply)
- Aluminium or Plastic Enclosure
- Optional HART7 output with 2 wire units
- Measuring Range: 4m, 8m, 10/15m
- Graphical Display
- Automatic Temperature Compensation
- No site calibration required
- Self diagnostic functions i.e. error messages on Display provided to ease setting up
- Device Description (DD) file available for Standard HART configurator

### Applications

#### For Liquids

Can be used for open channel flow measurement

### Specifications

**Power Supply:** 16 to 36 Vdc

**Temperature:**  $-20$  to  $60^\circ\text{C}$

**Pressure:** Atmospheric

**Process Connection:** Threaded / Slip-on-flange

**Output:** 2 wire, 4-20 mA, HART7

**Protection:** IP67 / IP68 (with integral cable)

**Sensor Material:** PP/PVDF







# PRESSURE TRANSMITTERS

## Intelligent Pressure Transmitter 171 IPT

### Product Features

- Two Wire + HART
- Low Cost Solution
- Available in Wide Pressure Range

### Application

- WTP, ETP, STP, Closed Pipes
- Filtration System Monitoring

### Gauge Pressure

- |                 |                |
|-----------------|----------------|
| 1) 0 To 2.5 bar | 2) 0 To 10 bar |
| 3) 0 To 16 bar  | 4) 0 To 20 bar |
| 5) 0 To 30 bar  |                |

### Specifications

- **Power Supply:** 24VDC
- 2 Wire 4-20 mA @ 250  $\Omega$  OR
- 2 Wire 4-20mA + HART Communication
- **Accuracy:**  $\pm 0.25\%$  of Full Scale\*\*
- **Ambient Temperature:** 0°C To +60°C
- **Display:** LCD Display
- Display Parameters Pressure
- **Burst Pressure:** 2 Times of Range
- **Over Pressure:** 1.5 Times over the Range
- **Diaphragm:** Stainless Steel SS316L
- Process Connection & Material  
1/4" NPT (M) / 1/2" NPT (M) Threaded in
- Stainless Steel SS316L
- Sealing Ring NBR / FKM / PTFE
- Transmitter Housing Aluminum Alloy
- Housing Sealing Ring NBR
- Filling Liquid Silicone Oil
- **Protection:** IP67

\*\* Consult H. O.



## Pressure Transmitter 171 PT

### Product Features

- Two Wire + HART
- Low Cost Solution
- Compact Size
- Measures Pressure & Current
- Available in Wide Pressure Range

### Application

- WTP, ETP, STP, Closed Pipes
- Filtration System Monitoring

### Gauge Pressure

- |                 |                |
|-----------------|----------------|
| 1) 0 To 2.5 bar | 2) 0 To 10 bar |
| 3) 0 To 16 bar  | 4) 0 To 20 bar |
| 5) 0 To 30 bar  |                |

### Specifications

- **Power Supply:** 24VDC
- 2 Wire 4-20 mA @ 250  $\Omega$  OR
- 2 Wire 4-20mA + HART Communication
- **Accuracy:**  $\pm 0.5\%$  of Full Scale\*\*
- **Ambient Temperature:** 0°C To +60°C
- **Display:** With Display or Without Display
- **Display Parameters :** Pressure (With Display)
- **Over Pressure:** 1.2 Times over the Range
- **Diaphragm:** Stainless Steel SS316L
- **Process Connection and Material :**  
**With Display :**  
• G1/4" & NPT1/4" Male Threaded in Stainless Steel SS316L  
**Without Display :**  
• G1/4" & G1/2" Male Threaded in Stainless Steel SS316L
- **Sealing Gasket :** Viton
- **Transmitter Housing :** SS 316L
- **Plug Housing :** Plastic
- **Protection:** IP65

\*\* Consult H. O.



## Battery Operated Pressure Transmitter 171 BPT

### Product Features

- Low Cost Solution
- Compact Size
- Measures Pressure & Current
- Available in Wide Pressure Range
- Data Logging & Storage Option Available

### Application

- WTP, ETP, STP, Closed Pipes
- Filtration System Monitoring

### Gauge Pressure

- |                |                |
|----------------|----------------|
| 1) 0 To 4 bar  | 2) 0 To 6 bar  |
| 3) 0 To 10 bar | 4) 0 To 16 bar |
| 5) 0 To 20 bar | 6) 0 To 24 bar |

### Specifications

- **Power Supply:** Battery Powered
- **Accuracy:**  $\pm 0.5\%$  of Span
- **Ambient Temperature:** 0°C To +60°C
- **Display:** With Display
- **Display Parameters :** Pressure
- **Over Pressure:** 1.5Times over the Range
- **Diaphragm:** Stainless Steel SS316L
- **Process Connection and Material :**  
1" BSP Male Threaded or 1" NPT Threaded
- **Transmitter Housing :** SS 304
- **Protection:** IP68



# LEVEL GAUGES

## Float & Board 131

### Product Features

- Wetted parts available in SS304 / Ss316.
- Suitable for installation on "Tank in Service"
- Large numerals visible from a distance
- Simple installation and commissioning
- Liquid seal for trap vapour for highly evaporating material
- Indicator rolls on gauge board with the help of nylon rollers
- Supplied with all installation accessories
- Floats of various materials & sizes are available to suit specific requirements

### Applications

- Top mounted version designed specifically for sump application is available
- Number of configurations to suit various tanks underground & above ground, Cone Roof, Sump, Floating Roof, Horizontal Cylindrical, Reservoir, etc.

### Specifications

- **Float Diameter:** 200 or 300 or 400 mm.
- **Process Connections:** 1 1/2" threaded / Flanged
- **Tank Height:** Suitable for 2 to 20 mtr.



## Float & Tape Tank Gauging System 133 ATLG

### Product Features

- Level Measurement for Petroleum storage tanks in Refineries, Marketing Terminal or Oil storage tanks, Fire Water Tanks
- Accessories for remote Control / Indication
- Solutions for Level measurement of clear liquids in large bulk storage tanks ( Cone Roof, Floating Roof, Underground )
- **Mounting:** Side or top
- **Ranges:** 0-8 m, 0-12 m, 0-16m, 0-24 m
- **Resolution:** 1 mm
- **Accuracy:**  $\pm 2$  mm with 400 mm dia. float

### Automatic Tank Level Gauge (133ATLG)

#### Accessories

- **Limit switch assembly (133LA)**  
Switches (2 point or 4 point)
- **Two wire transmitter (133TS)**  
4-20 mA proportional to level
- **Smart Tank data Transmitter (133STDT)**  
Transmission of level & temperature data
- **Liquid seal assembly (133LS)**  
For blanketed tanks
- **Communication Interface Unit (CIU)**  
Control room unit for communication with the tank level gauges
- **Tank farm Management Software (SBTFMS)**  
Versatile Inventory Management Programme



## Servo Operated Tank Gauging System 139 M

### Product Features

- Accurate Level, interface level, temperature & density measurement in one instrument.
- Useful for automation in Refineries, Marketing Terminal /depots — Storage Tanks Strategic Reservoirs, Caverns.
- LPG Servo Gauge for Level, Temperature Measurement for Spheres & Bullets.
- Display at Local, at Grade Level, Remote possible
- Hybrid Servo Gauge provides Online Density Measurement.
- RS 485 Communication for Communication Interface Unit (CIU) & SBTFMS software for inventory report, trends, alarm monitoring
- SIL - 2 Certified current & Relay output.

### Servo Gauge (139 M)

#### Accessories

- **Portable programming Unit (139PPU)**  
For programming of Servo Gauge
- **Calibration chamber (139CC)**
- **Tank side Indicator controller (139TSIC)**  
Visual indication of level and volume at tank side
- **Communication interface unit (133CIU / 133RCU)**  
Control room unit for communication with the tank level gauges (133 CIU with CMA supervisor systems on standard modbus protocol)
- **Average temperature indicator (133TMP)**  
For measurement of temperature
- **LPG Servo Gauge**
- **Tank Inventory Management Software (SBTFMS)**  
Versatile Inventory Management programme
- **Custody Transfer Approval :**  
Weight & Measures as per OIMLR85 standard.





# MARINE PRODUCTS

## Ultrasonic Level Switch ULS/ ULR/ SULS

### Product Features

- Detects presence or absence of liquids
- For high or low level alarms
- Selectable Fail Safe High (FSH) / Fail Safe
- Low installations
- Mounting may be adopted to use other usage
- Can be mounted vertically or horizontally
- Rugged stainless steel or titanium construction
- Sealed construction for high pressure up to 45 Kg/cm<sup>2</sup>
- Inbuilt sensor health check facility
- May be interfaced direct to PLC

### Applications

#### Marine & Naval:

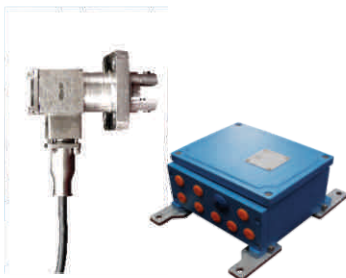
- Detection of water Sea water, fuel oil, etc.

#### Others:

- Detection of light muds, viscous fluids
- Detection of creams, lotions, oils
- Detection of chemicals And pharmaceutical products

### Specifications

- **Power Supply:** 18-30 VDC
- **Temperature:** -10°C to 55°C
- **Pressure:** Up to 45 kg/cm<sup>2</sup>
- **Process Connection:** Flanged
- **Output:** Open Collector
- **Tripping Point:** ± 5 mm
- **Protection:** IP68



## Phase Capacitance Level Sensor, CLS/ CLR/ PCLS Indication and Display System, IDU

### Product Features

#### CLS

- Continuous Level measurement up to 20 meters
- Sensor Protection by Stainless steel hose
- Quick and easy installation and calibration
- Flexible sensor to suit any tank shape
- Mounting may be adapted to suit other usage
- Maintenance – free. No moving parts
- Sealed and rugged stainless steel construction
- Suitable for high pressure up to 15 kg/cm<sup>2</sup>
- Microprocessor based intelligent electronics
- Two wire system; Power and Signal on same wires

#### IDU

- Indicator and Display Unit – IDU for six tanks
- Displays % Level and % Volume
- Panel mounted unit with bright LED seven segment display
- Auto scrolling / manual tank data display selection
- Offline diagnosis and Programming
- Remote indication by slave unit-RDU
- Automatic changeover in case of IDU failure

### Applications

- EKM Class Submarines
- Conductive liquids with low /medium viscosity like water, water bound solutions
- Fresh water / Salt water
- Non-conductive liquids like mineral oil



## Fuel Water Sensors [FWS]

### Product Features

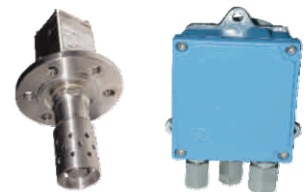
- Rugged construction
- Type tested for naval and marine use
- Remote Level Alarm

### Applications

- To check the level of fuel – Sea water boundary on board the ship
- LSHS Diesel & Sea water interface

### Specifications

- **Power Supply:** 220 V, 400 Hz, ± 10%
- **Output:** Relay energised / de-energised in presence / absence of liquid
- **Max Pressure (wet side) at Sensor:** 40 Kg/cm<sup>2</sup>
- **Max Pressure at cable side:** 5 Kg/cm<sup>2</sup>
- **Max Temperature:** 0 to 50 °C
- **Set Value (for signaliser) & indicate rising / Falling:** 6 mm from the lower end of the sensor
- **Accuracy:** ± 10 mm
- **Protection:** IP 68





## Hydrostatic Pressure Transmitter 103HPT

### Product Features

- Submersible transmitter - Two wire
- Highly accurate and long-term stable sensor elements
- Compensated for temperature and air pressure fluctuations
- Stainless Steel Housing
- < 17 mm diameter can be used even in 1" Bore pipes.
- No site calibration required

### Applications

- Level indication of tanks
- Water level measurement in Rivers, Bore Wells and Tube Wells

### Specifications

- **Power Supply:** 14 - 30 VDC
- **Temperature:** 0 to 70°C
- **Measuring Range:** Up to 200 m of WC
- **Output Signal:** 4 - 20 mA + HART
- **Accuracy:** +/- 0.5% FSD  
\* ( +/- 0.25% FSD on request)



## Side mounted Float 137EA/EY Top mounted Displacer 137D

### Product Features

- Weatherproof or Flameproof models
- Enclosure in cast aluminium
- Wetted parts in stainless steel or polypropylene
- Side mounted version with various float extensions like horizontal, vertical
- Top mounted switch for up to 2 set points
- Set point adjustability over entire measuring range (up to 20 m) by adjusting displacer position
- Different type of chambers for external mounting of the switch
- High temperature and pressure versions available
- "CE" declaration of conformity for side mounted versions

### Applications

#### 137- EA / EY

- Low / High alarm Interface level control.
- Differential level control
- Controlling level of liquids like Water, Oils, Fuels, Condensate, Acids, Alkalies, etc.

#### 137- D

- For liquids with density 0.5 to 1.2 gm/cc

### Specifications

- **Switch Rating:**  
5A@230 VAC Resistive
- **Temperature:**  
Side mounted: 0°C to 180°C, -20°C to 300°C  
Versions for very high temperature up to 450°C  
Top mounted: 0°C to 150°C, 0°C to 350°C
- **Pressure:**  
Side mounted: 30 Kg/cm<sup>2</sup> or 40 Kg/cm<sup>2</sup>  
Top mounted : 10 Kg/cm<sup>2</sup> or 40 Kg/cm<sup>2</sup>
- **Process Connection:**  
Flanged
- **Protection:** IP67



## Conductivity 130IC / RC

### Product Features

- Uses field proven level control technique.
- Wide range of electrodes to suit various applications
- No calibration required
- For upto 5 set points
- Field settable fail safe feature
- Simple to install
- Surface or Pipe mounting options in remote version

### Applications

- In Non-fuming liquids like water
- Water bound solutions as corrosive liquids like acids and alkalies

### Specifications

- **Power Supply:** 24 VDC or 110 / 230 VAC
- **Switch Rating:** 5A@230VAC / 115 VAC, 50 Hz
- **Temperature:** 0°C to 50°C
- **Relative Humidity:** 0-95%
- **Cable Entries:** 1 / 2" NPT, 3 / 4" UNF/ET
- **Protection:** IP67





# LEVEL SWITCHES

## Paddle Level Switch 135LC

### Product Features

- Weatherproof enclosure ,
- Cast aluminum polyurethane painted.
- Separate cable entries for supply & control.
- Lip seal to prevent ingress of dust particles in to main enclosure.
- Fixed / adjustable shaft extensions to suit the functional requirement.
- Optional air purging facility.
- High temperature stand off available.

### Applications

- It controls the level of free flowing powders or granules or solids in the hoppers, bins and silos

### Specification

- **Switch Rating:** 24VAC or 230VAC, 5A or 230VAC, 10A
- **Temperature:** 0°C to 100°C  
100° To 400°C (with HTSO & Sindano Flange)
- **Pressure:** Atmospheric
- **Protection:** IP67



## Top Mounted Float 134S

### Product Features

- Single or dual set points
- Contact type
- Alarm with relay output
- Suitable for top mounting
- Minimum connection size of 2 1/2" NB
- Weatherproof & Flameproof enclosure

### Applications

- High Level Alarm for LPG Bullets
- Hi or Low Level Alarms

### Specifications

- **Hysteresis:** 10mm
- **Pressure:** 16kg/cm<sup>2</sup>
- **Operating Temperature:** -25 to +100 °C
- **Measuring Range:** Up to 3000 mm
- **Density Range:** 0.45 g/cc minimum
- **Protection:** IP67



## Tank Level Indicator, 103HTL

### Product Features

- Weatherproof IP67 housing
- Field mounted indicator for display of tank data at tank bottom
- Powers and connects with any transmitter
- Bright LED display
- Site programmable
- Up to 4 configurable relays
- Display of Volume with 64 point level vs. volume strap table
- Bargraph display of % level or % volume
- Differential output with selection of model with dual inputs
- Ready to mount with wall/pipe mounting kit

### Applications

- Overhead tanks and sumps
- Horizontal storage tanks

### Specifications

- **Power Supply:** 110 VAC / 230 VAC, ±10%, 50Hz
- **Input:** 4-20 mA (Single / Dual)
- **Display:** 5 digit, 10 mm seven segment LED
- **Accuracy:** ± 0.1% of FSD
- **Range:**
  - Std. 0 – 100%
  - Optional -1999 to 9999
- **Output:**
  - Up to 4 Nos. potential free relay outputs
  - Retransmission 4-20 mA
  - MODBUS RTU RS 232/ RS 485
- **Transmitter supply:** 24 VDC
- **Mounting:** Wall / Pipe







# ACCESSORIES

## Rate of Flow, 104ROF Loss of Head, 104LOH

### Product Features

- Two wire
- Low cost solution for filter beds
- No site Calibration required
- All still pipes & accessories for fitment are supplied
- Higher accuracy with multipoint calibration
- All entries are protected through password in EEPROM
- Self diagnostic function i.e. error message on display

### Applications

#### 104 LOH

- Differential Level Measurement ( Loss of Head) for water in filter beds

#### 104 ROF

- Measurement of flow rate in the inlet or outlet of filter house or filter beds, effluent treatment plants & other similar applications
- Open channels

### Specifications

- **Power Supply:** 24 VDC
- **Accuracy:**  $\pm 2\%$  of probe length
- **Display:** 6 digit LCD display
- **Temperature:** 0 to 60°C(Max.)
- **Pressure:** Atmospheric
- **Cable Entries:** 1/2" NPT or 3/4" UNF(F)



## Digital Process Indicator 176 / Flow Indicator Totaliser 191

### Product Features

- Displays flow of the open channels & Keeps the control room informed about the tank data
- Panel mounted indicator – controller with optional 2/4 alarm/Control relays ( one for instantaneous flow and one for totalised flow ) and display
- Powers and connects with any transmitter
- Bright LCD / LED display of level, instantaneous flow, totalised flow and % Volume
- Optional MODBUS RS 232/ RS 485 output
- Differential output with selection of model with dual inputs
- Dust proof enclosure with epoxy powder coating
- Tamper proof key board programming

### Applications

- Open channels
- Overhead tanks and sumps
- Storage tanks

### Specifications

- **Power Supply:** 110 VAC / 230 VAC,  $\pm 10\%$ , 50Hz
- **Input:** 4-20 mA (Single / Dual)
- **Display:** 4 digit, 12.5 mm high red LED
- **Accuracy:**  $\pm 0.1\%$  of span
- **Range:**
  - Std. 0 – 100%
  - Optional -1999 to 9999
- **Output:**
  - Up to 2/4 Nos. potential free relay outputs
  - Retransmission 4-20 mA
  - MODBUS RTU RS 232 or RS 485
- **Transmitter supply:** 24 VDC
- **Dimensions :**
  - Front Facia (mm) : 96X96
  - Cut out (mm) : 92X92
  - Depth (mm) : 110



## Tank Farm Management System, SBTfMS

### Product Features

- Real time tank gauging data such as level, temperature, water interface and pressure
- Real time inventory calculations
- Liquid and mass calculations of vapor in LPG .
- Volumes are calculated as per strap table entry. Cylindrical and spherical tanks are also supported.
- Reliable alarm handling - Receive alarm summary, alarm log and alarm event log
- Leakage alarms
- Reports - Schedule report times. Reports may be saved as pdf.
- Historical data storage
- Audit log for events
- Tank & Group views
- Numerical & graphical displays
- System capability up to 128 tanks through 2 Communication Interface units & 200 tanks with up to 4 Communication Interface Units.

### Applications

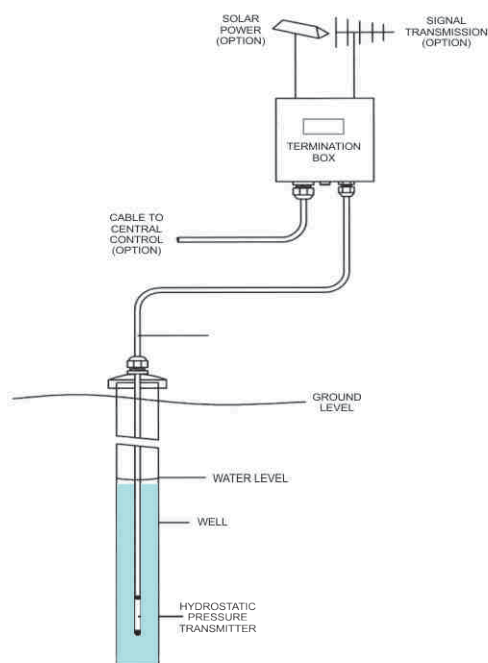
- Refineries
- Independent Tank terminals
- Marketing Terminals
- Fuel Depots
- Pipeline terminals
- Petrochemical Industry
- Bio fuel storage
- Aviation Fuel Depots



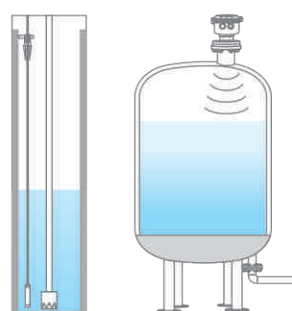


# APPLICATIONS

## Tubewell Level Measurement System

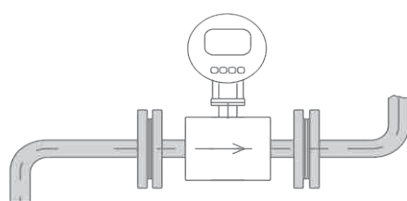


## Tank Level Monitoring



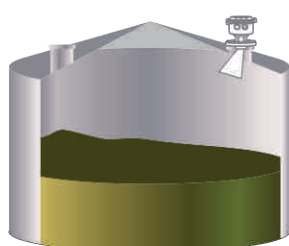
- Ultrasonic, 136ULT
- Hydrostatic, 103 HPT
- Pulse Radar, 138

## Closed Pipe Flow



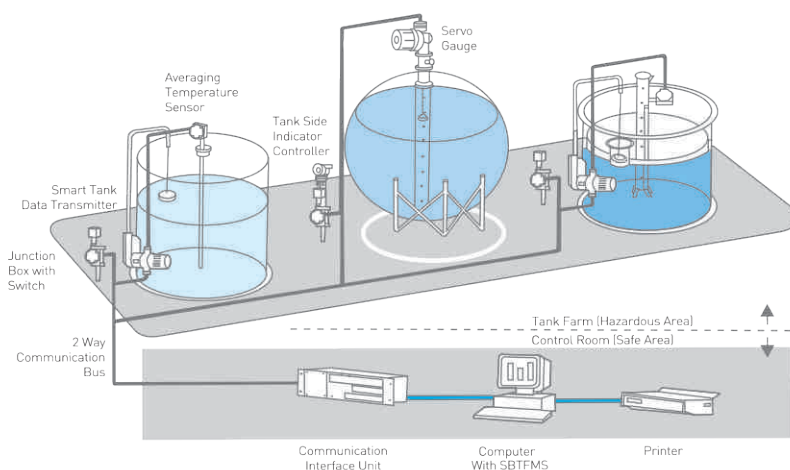
- Electromagnetic, 151MFM
- Ultrasonic, 153UFM

## Bulk Solids



- Pulse Radar, 138

## Typical Tank Inventory Management System Servo Gauge / Float & Tape based

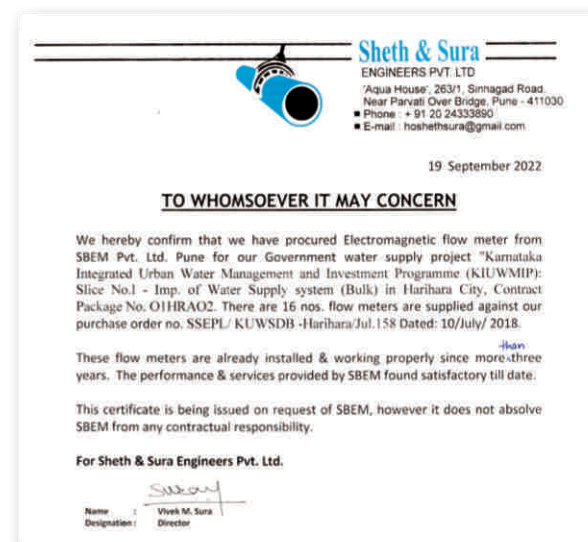


- Servo Gauge, 139M
- Automatic Tank Level Gauge (Float & Tape) 133ATLG with accessories
- Temperature Sensor, 133TMP
- Tank Farm Management System, SBTfMS

# Customer Appreciation- Our Success Stories

Our biggest motivation is customer satisfaction. Words of appreciation from our customers not only make us happy, but drive us

for further innovation and better service. A token of appreciation from our customers- our hard earned reward.



# Our Clients Portfolio

## Ingenious solutions from Indigenous source

Our products are used across multiple industries and clients. From raw water to sewage and treated water, SBEM has an extensive presence in the market. Illustrations are given below:

Water & Waste Water	Larsen & Toubro	NCC Ltd.	Vishwaraj Infrastructure	The Indian Hume Pipe	JMC Projects (I) Ltd.	Cimcon Software
Cement & Steel	Ambuja	India Cements	Aditya Birla	SAIL	Tata Steel	JSW
Power	BHEL	NTPC	Reliance	MAHAGENCO	ESSAR	Adani
	LANCO	Jindal Power	India Bulls	Tata Power	Coastal Energen	DVC
Oil, Refineries & Gas	IOCL	BPCL	HPCL	ONGC	NAYARA	EMERSON
	Indian Strategic Petroleum Reserves Limited		ONGC Petroleum Additions Limited		IOT Infrastructure & Energy Services Ltd	
Chemical, Sugar & Food	Deepak Nitrite Limited	Shree Renuka Sugars Ltd.	MECTECH	Cargill	Desmet ballestra	Ruchi Soya
Consultants	EIL	WAPCOS	TCE	Mecon	DCPL	STC
	PDIL	Jacobs	M.N.Dastur	Toyo Engg.	Uhde India	
Indian Navy & Marine	Mazagaon Dock Limited (MDL)	Ship Building Centre (SBC)	Defence Machinery Design Establishment (DMDE)		INS Sindhu dhvaj	INS Sindhukesari



# Your Applications & Our Solutions

## Public Health Engineering

Application	SBEM Solution
Gravity Filter beds	Loss of Head Level Indicator - Transmitters,
Sumps at Water Treatment	Ultrasonic Level Transmitters, 136 ULT
ESR at various Locations	Ultrasonic Level Transmitters, 136 ULT
Raw water intake, Distribution channels And Tube Wells	Flow Meters, 151 MFM, 153 UFM, Electromagnetic Flow Meters, 151 MFM
Sewage Treatment Plants	Open Channel Flow Meters, 136 ULT

## Water & Waste Water Treatment / Distribution

Application	SBEM Solution
Raw Water Intake	Electromagnetic Flowmeter 151 MFM Ultrasonic Flow Meter 153 UFM Residential Water Meter 153 RWM
Coagulation	pH, Turbidity TURL, Conductivity Controller
Chlorine Injection	Free Chlorine, pH
Effluent Treatment Plant	pH, Conductivity Controller
Aeration Basin	Dissolved Oxygen DOT, pH, Conductivity Controller
Secondary Clarifier	pH, Conductivity Controller
Swimming Pool and Spa	Free Chlorine, pH

## Steel Industry And Iron Ore

Application	SBEM Solution
Gas Holder	Float & Tape Level Gauge with Two Wire Transmitter, 133 ATLG +TWT
Iron Ore/ Direct Reduced Iron (DRI)	Ultrasonic Level Transmitter, 136 ULT, Pulse Radar, 138
Back Filter Hopper	Capacitance Type Level Switch, 114MLS
LPG Tanks	Servo Gauge, 139 M
Fuel Oil Tanks	Float & Tape Level Gauge with Two Wire Transmitter, 133 ATLG +TWT

## Thermal Power

Application	SBEM Solution
Coal Bunkers	Pulse Radar, 138
Travelling Water Screens	Hydrostatic Pressure Transmitters, 103 HPT, Ultrasonic Transmitters, 136 ULT
Gravity Filter beds	Loss of Head Level Indicator - Transmitters, 104 LOH
Flow Measurement	Electromagnetic Flow Meters, 151 MFM
Various Tanks	Float, Displacer, Conductivity, Capacitance Type level
Ash Slurry	Ultrasonic Level Transmitters, 136 ULT, Pulse Radar,
Ash Hoppers	RF Admittance Type Level switches, 114 RFS

## Oil, Gas & Refineries

Application	SBEM Solution
Cone Roof and Floating Roof Tank Mounded Vessels / Spheres	Float Operated Microprocessor based Level Transmitter & Indicator 133/STDT/CIU/SBTFMS Servo Operated Microprocessor based Level Transmitter & Indicator 139M/ TSIC / CIU
Mounded Vessels and Underground Bullets in Auto LPG Stations	Displacer Level Switch 137 Magnetostrictive Level Transmitter & Indicator, 134 DLi / 134 H / 134 S / 176
CAVERNS	Servo Operated Microprocessor based Level Transmitter & Indicator 139/ TSIC / CIU/SBTFMS

## Cement Industry

Application	SBEM Solution
Coal Bunkers	Pulse Radar, 138; Paddle Type Level Switch, 135 LC
VRM Feed Belt Disc / VRM Lime Stone	
Coal Mill	
Kiln & Cooler ESP	Capacitance Level Switch, 114 MLS, Paddle Type Level Switch, 135 LC
Bauxite Storage	
Limestone Storage	
Fly Ash ESP Hoppers	
Cement Bins	Pulse Radar, 138
CM CLR Hoppers	Pulse Radar, 138, Paddle Type Level Switch, 135 LC
Lime Stone, Iron Ore, Bauxite, Lignite,	
Silo HLA	
Kiln Feed Bin	
Water Balancing System	151 MFM / 153 UFM + SCADA

## Edible Oil

Application	SBEM Solution
Raw Material Storage	Paddle Level Switch, 135 LC, Float Type Level Switch, 137EA
Cleaning, Dehulling	Paddle Level Switch, 135 LC, Capacitance Level Switch, 114 MLS
Crush, Cooking, Expelling	Capacitance Level Switch, 114 MLS, Float type w Level Switch, 137EA, Displacer Type Level Switch 137 D
Refining, Deodorising	Side Mounted Float type Level Switch, 137EA, Displacer Type Level Switch 137 D, Capacitance Level Switch, 114 MLS
Oil Storage	
Hydrogenation	
Liquid Extraction	



# Product Overview

## Closed Pipe Flow Meters / Accessories



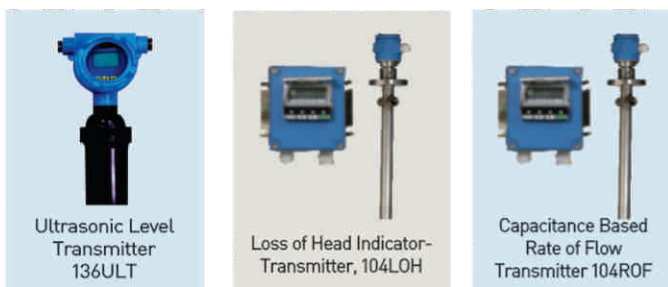
## Level Indicators & Transmitters



## Tank Gauging Systems



## Open Channel Flow Meters



## Tank gauging solutions

- Servo (139M) based, Float & Tape type level gauges (133ATLG) based, Magnetostrictive [134DLi] based etc.
- Tank farm management systems with field gauges, control room unit and SBTfMS software
- Site survey, project planning, detailed engineering, execution, installation & commissioning, support & training

• Solutions for solids and liquids

• Multiple technologies

• Multiple segments

• Multiple parameters

• Multiple applications

# Site Installations

SBEM ensures the Highest Standards &  
Quality of Measurements



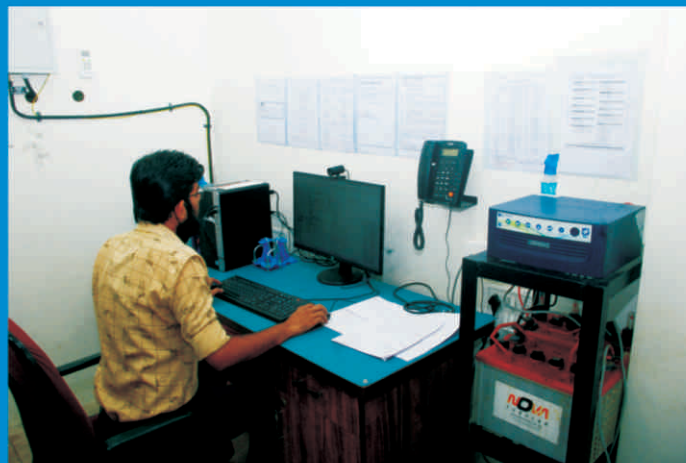


# NABL Accredited Flow Laboratory

ISO / IEC 17025



Certificate No.:  
CC-2440





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