



# FLOW METERS

## Electromagnetic Flow Meters 151MFM

### Product Features

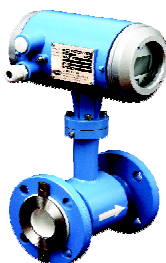
- Measurement of flow rates of electrically conductive liquids/water.
- Flanged and Wafer versions available.
- The liquid flow is measured with no obstructions and no pressure drop.
- Rubber / PTFE / Neoprene/Hard Rubber/ Polyurethane Lined Sensors
- GSM/ GPRS feature
- Inbuilt Data Logger
- Graphical LCD backlit / 2 line LCD backlit display
- Excellent long term accuracy
- Bi-directional flow measurement
- Empty pipe detection
- Selectable flow units
- 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 2000
- **Pressure:** 6 / 10 / 16 kg/cm<sup>2</sup>
- **Minimum conductivity of measured liquid:** 20 µS/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:**  
IP67 for Integral Version and  
IP67 or IP68 for Remote Version



## Battery Operated Electromagnetic Flowmeters 151 MFM B

### Product Features

- Measurement of flow rates of electrically conductive liquids/water.
- Flanged versions.
- 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

### Applications

- Water and Waste Water
- Irrigation and Dewatering

### Specification

- **Power Supply:**  
3.6V Battery Pack Max. 5 yrs life
- **Measuring Range:** DN 15 - DN 600
- **Pressure:** 6 / 10 / 16 Kg/cm<sup>2</sup>
- **Minimum conductivity of measured liquid:** 50 µS/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:**  
Sensor / Converter - IP 68



\*\* For 15 sec sampling

## Ultrasonic Flow Meter 153UCW / BTU Meter

### 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

### Clamp-on type 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:**  
153UCW: 85 to 230 VAC  
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:** IP67

## Ultrasonic Clamp-on Wall mounted Parasonic 153UCW





# ACCESSORIES

## Machine To Machine Interface 200 - M2M

### Product Features

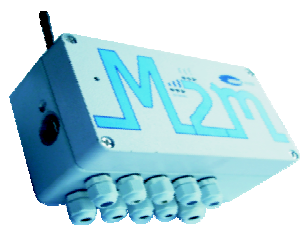
- Upto 16 Field devices ( 8 Modbus, 4 Analog & 4 Digital )
- 24 VDC Transmitter supply (Optional)
- Weatherproof IP67 as per IS / IEC 60529
- Alarm Monitoring – Programmable
- **Smart diagnostics**
  - MODBUS communication errors notification
  - Analog over & under current notification
  - Support for all data types in MODBUS RTU Communication
  - Support for upto 32 registers/parameters
  - Seamless integration with SCADA using MODBUS TCP or SBEM proprietary protocols
  - M2M Config Utility - Easy to use GUI for quick setup
- **SMS Feature**
  - Periodic data SMS & Alarm, error alert
  - Min to max interval: 5 min to 31 days
  - Max mobile no users: 10
- **Built in Data logger**
  - Min-max no of parameters enabled: (1-40)
  - Max-min no of records stored: (34K-2K)

### Applications

- 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, 50-60 Hz
- **Communication:** GSM / GPRS
- **Temperature:** 0 to +55°C
- LED Indication for Network Strength and Power Supplies
- USB Port for data retrieval on flash drive or host PC.



## 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



## Tank Level Indicator, 103HTL

### Product Features

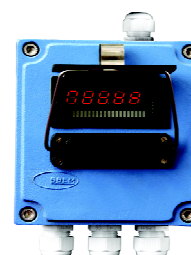
- Weatherproof IP67 housing
- Field mounted indicator for display of tank data at tank bottom
- Powers and connects with any transmitter
- Bright LED display
- Site programmable
- Up to 4 configurable relays
- Display of Volume with 64 point level vs. volume strap table
- Bargraph display of % level 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





## Digital Process Indicator 176

### Product Features

- Keeps the control room informed about the tank data
- Panel mounted indicator – controller with optional 4 alarm/ control relays & display
- Powers and connects with any transmitter
- Bright LED display of level, instantaneous 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

- 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 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



## Flow Indicator Totaliser 191

### Product Features

- Displays flow of the open channels from sensor input
- Panel mounted indicator – controller with optional 2 alarm/control relays (one for instantaneous flow and one for totalised flow ) and display
- Powers and connects with any transmitter used for flow measurement
- Bright LCD display of instantaneous flow and totalised flow
- Optional MODBUS RS 232/ RS 485 output
- Dust proof enclosure with epoxy powder coating

### Applications:

- Open channels

### Specifications

- **Power Supply:** 110 VAC / 230 VAC,  $\pm 10\%$ , 50Hz
- **Input:** 4-20 mA
- **Display:** 2 line LCD display
- **Accuracy:**  $\pm 0.1\%$  of span or  $\pm 1$  digit
- **Range:**
  - Std. 0 – 100%
  - Optional -1999 to 9999
- **Output:**
  - Up to 2 Nos. potential free relay outputs
  - Retransmission 4-20 mA
  - MODBUS RTU RS 232 / RS 485
- **Transmitter supply:** 24 VDC
- **Dimensions :**
  - Front Facia (mm) : 96X96
  - Cut out (mm) : 92X92
  - Depth (mm) : 110



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

### Product Features

#### CLS

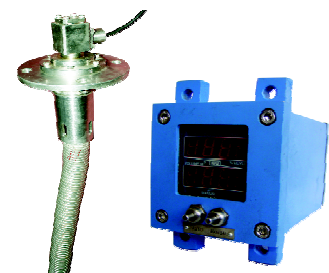
- Continuous Level measurement up to 20 meters
- Sensor Protection by Stainless steel hose
- Quick and easy installation and calibration
- Flexible sensor to suit any tank shape
- Mounting may be adapted to suit other usage
- Maintenance – free. No moving parts
- Sealed and rugged stainless steel construction
- 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





# PRODUCTS FOR MARINE DUTIES

## 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:

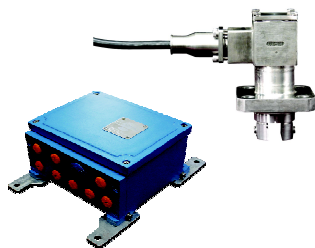
- Detection of water Sea water, fuel oil, etc.

#### 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



## Fuel Water Sensors

Function of the Fuel Water Separation sensor is to identify change in flowing medium (i.e fuel to water and vice versa) in a pipeline or tank

### Product Features

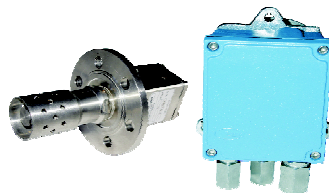
- Rugged construction
- Type tested for naval and marine use
- Remote LevelAlarm

### 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



## Tank Gauging and Flood Warning System, 171TGD + FWS

- Integration of systems & sensors from one source
- Tank Gauging
- Ballast Monitoring Water ingress detection & alarm (SOLAS)
- Flood Warning Systems

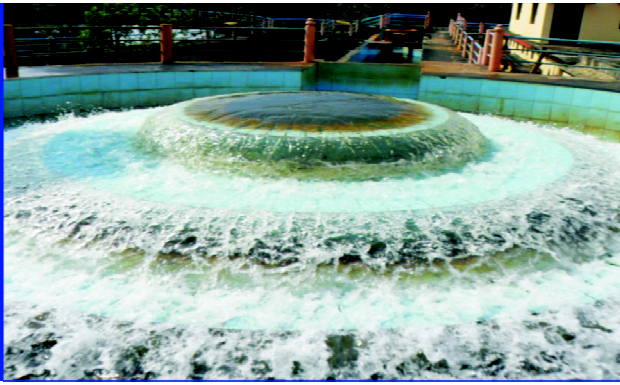
### Product Features

- Integration of systems & sensors from one source
- MULTIPLE PARAMETERS - Level, Flow, Temperature & Pressure - Switches & Transmitters
- Interface for IPMS
- Data acquisition and display
- Alarm monitoring
- Historical trending
- Remote Monitoring - Multiple locations
- Display of volume, percentage volume and other possible parameters
- Multiple Local Display Units (LDU)
- Certified for use in hazardous areas
- Marine Type Approvals

### Applications

- Trim & Heel Tanks, Black Water, Lube Oil, Sludge Tanks, Fresh Water, Fuel Oil, Bilge Water, Dirty Oil, Grey Water, AVCAT





## Online pH Analyser 141 pH

### Product Features

- Easy To Install mounting options provide optimum versatility with a one-piece construction with process threads in two places.
- Analog Output is available in loop powered 2 wire or in 4 wire transmitter mode.
- Auto Temperature Compensation is available using a NTC10K resistor. Manual temperature compensation is also available
- Easy Calibration is possible with standard buffer solutions in simple menu guided steps making site re-calibration quick and efficient.
- User Friendly UI with menu based programming, LCD with Backlit feature.

### Applications

- Water and Industrial Water Treatment Plants :
- Drinking water
  - Municipal Water treatment
  - Waste Water treatment

### Specifications

#### Sensor & Controller

- **pH Measurement Range:** 0 to 14 pH
- **Accuracy:** 0.1 pH
- **Temperature Range:** 0 to 50°C
- **Temp Accuracy:** ± 0.5°C
- **Analog Output:** Configurable 4-20mA
- **Load Resistance:** 500 ( Max), DC24V
- **Power Supply:** 220VAC/110VAC/24VDC



## Low Range Turbidity Analyser 143 TUR L

### Product Features

- Complete Integrated System with a sensor, defoaming system and a multi function controller with analog, digital and MODBUS communication outputs.
- Accurate Readings are ensured with its continuously flowing sample, cross-mazing defoaming system and tungsten lamp as a white light source.
- Convenient Cleaning with its easy to clean optics and defoaming system ensures minimum downtime during maintenance .
- User Friendly UI with menu based program.
- 3.5"320x240 TFT true color display with backlit feature.
- Multiple Outputs available with 2 channels 4-20mA output, RS485 MODBUS & 3 digital outputs.

### Applications

- Turbidity measurement in the inlet / outlet of water treatment plant.
- Turbidity measurement for Filter Monitoring, Filter back washing, Drinking water networks

### Specifications

- **Measurement Range:** 0 to 100 NTU
- **Accuracy:**  
< 40 NTU : ± 2.5 % of Full Scale  
> 40 NTU : ± 5 % of Full Scale
- **Analog Output:** (400 Ohms@24V DC)  
2 channel 4-20 mA
- **Digital Output:** (50mA 30VAC/DC) - 3nos programmable for open / close / pulse
- **Communication:** MODBUS RTU RS485
- **Power Supply:** AC 230V
- **Operating Temperature:** 0 to +50°C



## High Range Turbidity Analyser 143 TUR H

### Product Features

- Submersible Sensor Design with built-in optical maintenance brush / wiper.
- Direct Connectivity with PC, PLC, various modems like Zigbee/CDMA/GPRS/WIFI etc. Internet using RS485 Digital Communication Port
- Settable Period / Preset Timer for Cleaning Optical Window

### Applications

- Drinking Water
- Waste Water

### Specifications

- **Measurement Range:** 0.01 to 4000 NTU
- **Accuracy:**  
< 0-100 NTU : ± 2.5 % of Full Scale  
> 100-4000 NTU : ± 5 % of Full Scale
- **Light Source:** 850 nm ( Infrared light )
- **Sample Flow:** < 3 m/s.
- **Cable Length:** Standard Length 10m
- **Power Supply:** DC 24V ± 15%
- **Pressure Range:** ≤ 6 bar
- **Working Environment:** 0 to 40 °C

