



# Vaasudeva

Your Instrumentation and Automation Partner

## INDUSTRIAL IOT SOLUTIONS



## PLC / SCADA AUTOMATION



ENTERPRISE APPLICATIONS

ERP

ALARM & ASSET MANAGEMENT

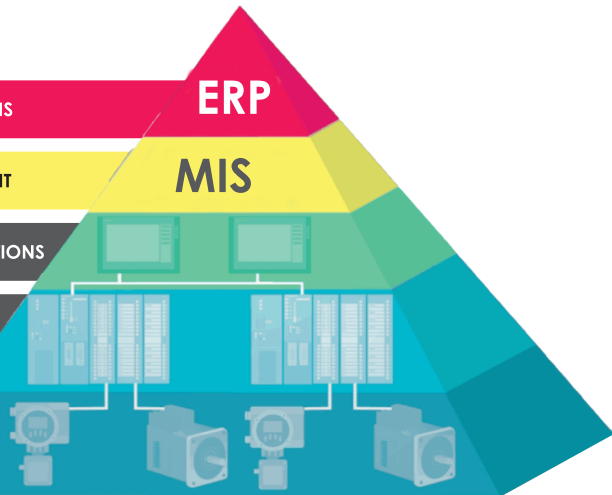
MIS

INDUSTRIAL IOT PRODUCTS & SOLUTIONS

PLC / SCADA AUTOMATION

ENGINEERING AUTOMATION

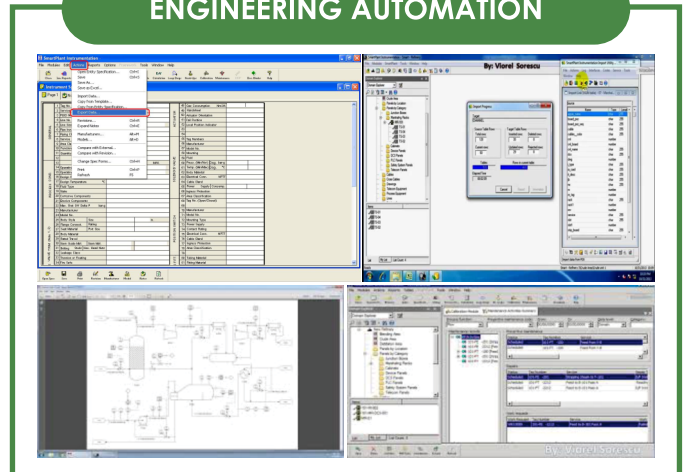
MEASURING & CONTROL INSTRUMENTS



## MEASURING & CONTROL INSTRUMENTS



## ENGINEERING AUTOMATION



## **CORPORATE PROFILE**

Vaasudeva Process Management Private Limited ( VPMPL ) is a Technology driven Process Instrumentation and Automation Solutions company lead by Industrial Automation domain experts. Team has 100 + man-years of hands on industry experience in understanding Process Industry applications and critical problems affecting the Process / Product Performance. We provide comprehensive solutions through cost-effective and Innovative products.

VPMPL Team is confident of providing Reliable, Innovative, Cost effective, Integrated Process Measurement and Automation solutions to meet the desired objectives of customers. We are committed to provide Value added Products to satisfy our customer needs.

## **MISSION**

Our aim is to offer Highest Quality Products & Services along with our Technology Partners to improve Customer's Process Performance, add value to their Business Operations by reducing Cost and Risk.

## **TEAM**

The VPMPL team is Skilled, Knowledgeable, Passionate and Professional. Our Team has relevant industry expertise and skills in customising Process / Factory Automation solutions.

We provide High Quality reliable Sensors, SMART Instrumentation Engineering Services, PLC / SCADA Systems, Industrial IOT Products & Solutions.

## TEMPERATURE MEASUREMENT

### THERMOCOUPLES & RTDS WITH THERMOWELLS



Base Metal Thermocouples (K, J, E, T, N)	: -200 to 1300 °C
Noble Metal Thermocouples (S,R,B,C)	: 0 to 2200 °C
Special type of Thermocouples (all types)	: 0 to 3000 °C
Resistance Temperature Detectors (Pt, Ni, Cu)	: -200 to 800 °C
Thermowell (Screwed / drilled Bar stock ) type	: Cylindrical bar stock / Tube stock / Fabricated / Flanged
Material	: SS304, SS321, SS316, SS310 , HRS 446, INCONEL 600/601/800, Nickel, Hastelloy, Titanium, Tantalum, Ceramic 610 & C -799, Silicon Carbide, Monel, Nimonic etc.
Class of Tolerance	: IEC 584-2 Class 1 & 2
Configuration	: Simplex / Duplex / MultiPoint
Element size (MI)	: 0.25, 0.5, 1, 1.5, 3, 4.5, 6, 8 (mm)
Element size (Non - MI)	: 1.2, 1.6, 2, 2.5, 3.2 (mm), Other Sizes on request
Protection	: IP 55, 65, 67 ,ATEX, CCOE, Flame proof

### SMART TEMPERATURE TRANSMITTERS



Input Type	: Thermocouple / RTD
Output	: 4-20 mA with / without HART
Accuracy	: +/- 0.1% FS
Power supply	: 24 V DC @ 30 mA
Response time	: < 500 mSec
Electronics Enclosure	: Die Cast Aluminum / SS
Operating Conditions	: Temp -20 to 75 degc , Humidity 5 to 95 % condensing
Mounting	: Din Rail , direct Line & PIpe mounting

### RADIATION PYROMETER



Range	: 0 to 3000 °C
Detector type	: Thermopile
Response time	: 2 mSec - 10 Sec
Accuracy	: +/- 0.3% to 2% of Measured value
Power Supply	: 24 V DC
Protection	: IP65
Distance to Spot size ratio	: 50:1 / 100:1 / 200:1
Output	: 4-20 mA or USB / RS232 / RS485
Features	: Digital Pyrometer with Laser targeting & Bluetooth interface


## PRESSURE MEASUREMENT

### LOW COST INDUSTRIAL PRESSURE TRANSMITTERS



Sensor	: Piezoresistive
Power supply	: 10-32 V DC
Output	: 4-20 mA DC
Operating Temperature	: -40 to 125°C
Process connection	: 1/4" BSP Male
Accuracy	: +/- 0.5%
Calibration range	: -1/ 0 bar / 0 / 600 mbar to 1000 bar (HP version up to 5000 bar)

## SMART PRESSURE TRANSMITTERS

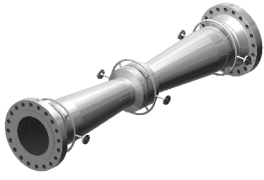
	Sensor	: Piezoresistive Silicon and Capacitance
	Power supply	: 10-32 V DC
	Output	: 4-20 mA with superimposed signal for HART Protocol
	Operating Temperature	: -40 to 85°C
	Process connection	: 1/4" BSP , 1/2" BSP , 1/4" NPT, 1/2" NPT ( M / F )
	Accuracy	: +/- 0.075%
	Diaphragm	: SS316 / SS316L /Hastelloy C
	Calibration range	: - 0.1 bar to 690 bar
	Turndown ratio	: 100:1
	Ingress Protection	: IP67
	Response time	: 150 mSec
	Built in Digital indicator	: 5 digit display with bar graph
	Approx. Weight	: 1.2 kgs

## FLOW MEASUREMENT

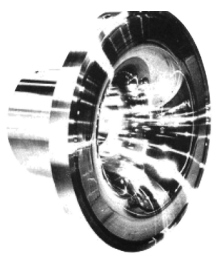
### ORIFICE PLATES

	Sizes	: 15 to 1000 NB
	Standards	: ISA / AGA/ API / ANSI /BS 1042, ISO 5167 etc.
	Material of construction	: SS304 /SS316 / SS316L /Hastelloy C / Monel / PTFE
	Orifice types	: Concentric Square Edge, Quarter of Circle, Conical Entrance, Segmental, Eccentric
	Accuracy	: Within +/- 1 %


### VENTURI TUBES

	Material of construction	: Carbon steel, SS304, SS316, Hastelloy C, Inconel
	Venturi Types	: Cast Convergent, Machined Convergent, Rough welded sheet
	End connection Type	: (A) Buttweld (B) Flanged
	Accuracy	: Within +/- 1 %
	Optional Testing	: PMI, Hydrotest, Radiography, Calibration, NACE, PWHT, IBR, Oxygen cleaning & others

### FLOW NOZZLES

	Sizes	: 50 - 650 NB
	Standards	: ASME MFC-3M, BS-1042 & ISO-5167 etc.
	Material of construction	: Carbon steel, SS304, SS316, SS304L, SS316L as standard. Hastelloy C, Monel, Inconel
	Nozzle Types	: Holding Ring type , Flanged type, Weld-in type
	End connection Type	: (A) Buttweld (B) Flanged
	Accuracy	: Within +/- 1 %
	Optional Testing	: PMI, Hydrotest, Radiography, Flow Calibration, NACE, PWHT, IBR, Oxygen cleaning, Dye penetration test, Magnetic Partial Test, HIC test, IGC various practices, etc.

### AVERAGING PITOT TUBE

	Sizes	: 12 - 4000 mm
	Standards	: ASME MFC-3M, BS-1042 & ISO-5167 etc.
	Material of construction	: Carbon steel, SS304, SS316, SS304L, SS316L as standard. Hastelloy C, Monel, Inconel
	Venturi Types	: Averaging Pitot Tube with / without End Support, with Gear Drive Mechanism
	End connection Type	: (A) Buttweld (B) Flanged
	Accuracy	: Within +/- 1 %
	Optional Testing	: PMI, Hydrotest, Radiography, Flow Calibration, NACE, PWHT, IBR, Oxygen cleaning, Dye penetration test, Magnetic Partial Test, HIC test, IGC various practices, etc.

## SMART DIFFERENTIAL PRESSURE TRANSMITTERS



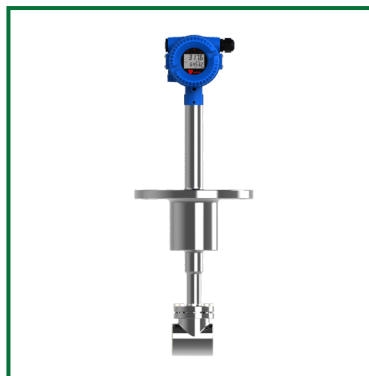
Sensor	: Capacitance sensor with diaphragm
Power supply	: 12.5 to 45 V DC
Output	: 4-20 mA with superimposed signal for HART Protocol
Operating Temperature	: -40 to 85°C
Process connection	: ¼" BSP , 1/2" BSP , 1/4" NPT, 1/2" NPT ( M / F )
Accuracy	: +/- 0.075%
Diaphragm	: SS316 / SS316L /Hastelloy C
Flange	: SS304 /SS316 /Hastelloy C
Calibration range	: - 0.01 bar to 69 bar
Turndown ratio	: 100:1
Ingress Protection	: IP67
Response time	: 150 mSec
Built in Digital indicator	: 5 digit display with bar graph
Approx. Weight	: 3.5 kgs

## ELECTRO MAGNETIC FLOW METERS



Working Principle	: Farady's law of Electromagnetic Induction
Power supply	: 90 to 250 V AC
Output	: 4-20 mA DC, Isolated, HART Protocol, Pulse / Frequency
Operating Temperature	: -40 to 85 Deg C
Conductivity	: > 5 Micro siemens / cm
Accuracy	: +/- 0.5% of MV
Repeatability	: +/- 1 %
Process Temp	: -20 to 85°C for Rubber lining; -20 to 220°C for PTFE lining
Excitation	: Pulsed DC Coil
Flange	: ANSI 150 class
Size	: 15 to 2000 NB
Turndown ratio	: 100:1
Ingress Protection	: IP68
Electronics	: Integral / Remote
Response time	: 150 mSec
Built in Digital indicator	: 16 x 2 LCD, 6 digit for flow rate, 8 digit for Totalized flow
Certification	: CE
Velocity range	: -6 to + 6 mts/sec
Viscosity	: 200 cp Max

## VORTEX FLOW METERS




Sensor	: von Kármán effect. - Vortex Shedding
Power supply	: 10 to 42 V DC
Output	: 4-20 mA + HART Protocol , Transistor output
Operating Temperature	: -40 to 85 Deg C
Accuracy	: +/- 0.75% of MV
Process Temp	: -20 to 250 deg C
Process Pressure	: - 1 bar to flange rating
Signal cable	: 5 to 95 mts
Flange	: ANSI 150 class to 900
Size	: 15 to 300 NB
Ingress Protection	: IP68
Electronics	: Integral / Remote


## ULTRASONIC FLOW METERS




Working Principle	: Ultrasonic principle using Transit Time Technology
Power supply	: 1) 230 V AC 2) 24 V DC
Output	: 4-20 mA, HART Protocol, RS 232, RS 485
Operating Temperature	: -20 to 85°C
Viscosity	: 200 cp Maximum
Accuracy	: +/- 0.5% to 2 % of MV
Material of Construction	: Flow tube SS/ MS/CS

	Acoustic Paths	: Single , Dual ,Four paths
	Process Pressure	: 15 Kg / cm <sup>2</sup> Max
	Size	: 15 to 2000 NB
	Turndown ratio	: 100:1
	Ingress Protection	: Electronics - IP 66 , Flow Tube - IP68
	Electronics	: Integral / Remote
	Flange	: ANSI 150 class
	Response time	: Less than 1 Sec
	Built in Digital indicator	: 16 x 2 LCD, 6 digit for flow rate, 8 digit for Totaliser
	Data Logging	: For 10 Years (Per Day 1 Sample ) - Optional
	Certification	: CE
	Electronics	: Integral / Remote


## TURBINE FLOW METERS

	Sensor	: Vaning Rotor and Pick-up coil
	Power supply	: 24 V DC
	Output	: 1) 4-20 mA 2) Pulse 30 mA Peak -to- Peak (Open collector)
	Operating Temperature	: -20 to 75°C
	Viscosity	: 100 cp Maximum
	Accuracy	: +/- 1% of FS
	Material of Construction	: Bearings - Tungsten Carbide, Rotor -SS410, Shaft - Tungsten carbide, Body/Support/Flange - SS
	Acoustic Paths	: Single , Dual ,Four paths
	Process Pressure	: 10 Kg / cm <sup>2</sup> Max
	Size	: 15 to 300 NB
	Turndown ratio	: 10: 1 to 100:1
	Ingress Protection	: Electronics - IP 66
	Electronics	: Integral / Remote
Flange	: ANSI 150 class	
Response time	: Less than 100 mSec	
Built in Digital indicator	: 8 x 1 LCD, 4 digit for flow rate, 8 digit for Totalized flow	
Certification	: CE	

## IRRIGATION WATER FLOW SENSORS


	Sensor	: Submerged Ultrasonic Doppler Velocity Sensor
	Power supply	: Internal 12 V, 7.2 Ah battery with external solar panel or mains charger
	Operating Temperature	: -15 to 50°C
	Accuracy	: ±1% up to 3.0 m/s (±1% up to 10 ft/s)
	Expansion	: Multiple PCBs for Multiple Sensors/Solutions
	Program Memory	: 2 Mb flash (sufficient for 600,000 discrete readings)
	Range	: 13 feet above transducer surface
	PIPe Sizes	: 100 to 2540 mm ( 4" - 100" )
	Velocity range	: ±0.025 to ± 8.0 m/s (±0.08 to ± 26 ft/s)
	Application software	: FloCom+ PC software for system configuration,
	GPRS data transmission	: 3G/GSM gives remote access to your data
	Ingress Protection	: Enclosure - IP66

## DOMESTIC WATER METERS

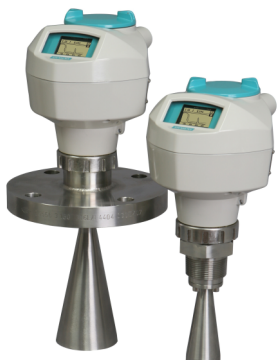
	Ultrasonic Flow Meter	: Ultrasonic technology
	Media	: For clear Potable water
	Operating pressure	: 0.1 to 10 Bar
	Pressure loss	: 0.6 bar
	Media temperature	: 0.1 to 60°C
	Battery Life	: 10 years
	Available Line sizes	: 15,20,25,32,40 & 50 NB
	MOC - electronics enclosure	: Die cast Al / SS 316 /ABS
	MOC Flow tube	: SS304/ SS316 / ABS /Brass
	Std	: In accordance with OML R-49 & ISO 4064
	Output	: with LORA / RF / GPRS / GSM / Zigbee / RS485

## LEVEL MEASUREMENT


### CAPACITANCE TYPE LEVEL TRANSMITTERS

	Working Principle	: Capacitance type measurement
	Type	: 2 / 3 / 4 wire - 4- 20 mA DC
	Power supply	: 24 V DC External
	Operating Temperature	: - 25 to 100°C Max
	Process pressure	: 10 Kg/cm <sup>2</sup> max
	Accuracy	: ±1% of F.S
	Probe length	: Rod / Rigid probe type : Upto 3000 mm
	Measuring range	: From 2 mts to 15 mts - Flexible Rope type
	Output	: 4 - 20 mA DC , 2 wire or 0 -5 VDC
	Probe MOC	: SS316
	Resolution	: 5 mm
	Accuracy	: +/- 0.5 to 1 % F.S
	Ingress Protection	: Enclosure - IP65
GPRS data transmission	: Remote data transmission through GPRS network is optional	
Built in Digital indicator	: 8 x 1 LCD ( 4 digit )	


### ULTRASONIC LEVEL TRANSMITTERS

	Sensor	: Ultrasonic type, Time of flight type measurement
	Type	: 2 / 3 / 4 wire - 4- 20 mA DC
	Power supply	: 24 V DC External
	Operating Temperature	: 0 to 85°C Max
	Operating Pressure	: Atmospheric
	Process pressure	: 10 Kg/cm <sup>2</sup> max
	Accuracy	: ±1% of F.S
	Probe length	: Rod / Rigid probe type : Upto 3000 mm
	Measuring range	: 0.6 to 15 mtrs
	Output	: 4 - 20 mA DC , 2 wire or 0 -5 VDC
	Beam angle	: < 8 deg
	Response time	: < 500 mSec
	Measuring frequency	: 25 KHz
Accuracy	: +/- 0.25 of F.S	
GPRS data transmission	: HART / Remote data transmission through GPRS network is optional	
Built in Digital indicator	: 8 x 1 LCD	
MOC Sensor assembly	: SS/PP/PVC/Aluminum	

### RADAR LEVEL TRANSMITTERS


	Sensor	: Pulse Radar
	Measuring range	: 12000 - 20000 mm
	Output	: Output 4- 20 mA / 20 - 4mA - 4 wire output
	MOC Sensor assembly	: SS 316

### BOREWELL WATER LEVEL SENSORS

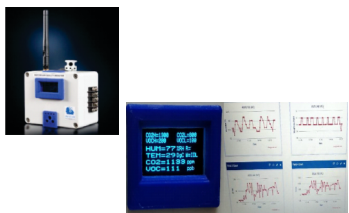
	Sensor	: Piezoresistive ; Ceramic
	Measuring range	: 250 - 1150 ft
	Output	: Modbus / RS485 / SDI -12
	MOC Sensor assembly	: SS 316
	Diameter, Length , Weight	: 2.62 cm , 14.73 cm, 170 gms
	Battery type & life	: 23.6V lithium; 10 years or 2M readings
	External Power	: 8 - 36 V DC
	Memory	: 2 MB
	Fastest logging rate	: 1 per Sec
	Accuracy	: ±0.1% full scale (FS) typical or ±0.3% FS max.

## GAS ANALYSERS

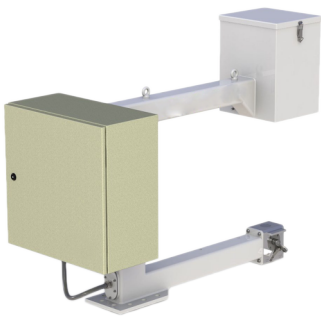
### INDUSTRIAL GAS DETECTORS

	<p>Single Gas detectors for Human Safety monitoring with replaceable sensors for monitoring O<sub>2</sub>, CO, H<sub>2</sub>S, SO<sub>2</sub>, H<sub>2</sub>, NH<sub>3</sub>, Cl<sub>2</sub>, NO<sub>2</sub>, HCN, O<sub>3</sub>, ETO, PH<sub>3</sub>, NO, ClO<sub>2</sub></p> <p>Compact Size : 1.1 x 2.0 x 3.75 in. or 2.8 x 5.0 x 9.5 cm</p> <p>Weight : 80 gms</p> <p>Alarms - : Visual, vibrating, audible (95dB)</p> <p>Tests : Sensor integrity, Circuit health, battery and alarms</p> <p>Battery Life : Replaceable 3 V battery approx life 1.5 year life</p> <p>User options : Beep, Backlight, Latching alarms, Calibration,</p> <p>Ratings : EMI/RFI: Complies with EMC Directive 89/336/EEC</p> <p>Ingress Protection : IP 66/67</p> <p>Certifications and approvals : Class I, Div. 1, Gr. A- D, ATEX: II 1 G T4 , CE, Ex ia IIC T4</p> <p>Warranty : Full two year warranty including sensors (One year NH<sub>3</sub>, Cl<sub>2</sub>, O<sub>3</sub>, ETO, ClO<sub>2</sub> sensors)</p>
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### AMBIENT AIR QUALITY MONITORING


	<p>Building / Room Air-Quality management System : Working Range:</p> <ol style="list-style-type: none"> <li>1. eCO<sub>2</sub> (equivalent CO<sub>2</sub>) → 400 to 8192 ppm</li> <li>2. TVOC (total volatile org. compounds) → 0 to 1187 ppb</li> <li>3. Relative humidity (RH%) → 0 to 100%</li> <li>4. Temperature → 0 to 120 Deg C</li> </ol> <p>Remote management/reporting of Air-Quality</p> <p>Air-Quality audits using recorded SD CARD data</p>
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### COAL MOISTURE ANALYSER

	<p>Measuring Principle : Variable Frequency Microwave Transmission (VFMT™)</p> <p>Parameter Measured : Total Coal Moisture</p> <p>Measurement Range : 0-95% (application dependent)</p> <p>Measurement Frequency : 50Hz</p> <p>Wavelength : 0.5MHz – 3.0GHz (application dependent, application optimised)</p> <p>Instrument Precision : Typically 0.3% at 1 SD (application dependent)</p> <p>Plant Inputs : Conveyor running DI, Beltscale mass flow rate</p> <p>Plant Outputs : Instantaneous moisture, Time averaged moisture</p> <p>Power Supply : Instrument quality 110/240V AC 60/50 Hz</p> <p>Plant Connections : 2 x 4-20 mA, Ethernet, RS232, RS422, RS485 serial ports</p> <p>Remote Configuration : Optional through 3 G Modem connection</p>
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## LIQUID ANALYSERS

### MULTI PARAMETER WATER QUALITY TESTING INSTRUMENTS

	<p>GROUND WATER QUALITY MONITORING SYSTEM- Multiparameter Sonde</p> <p>Standard Sensors: pH, ORP, Conductivity, TDS, Salinity, Rugged Dissolved Oxygen (RDO), Turbidity, Ammonia, Nitrate, Chloride</p> <p>Operating Temperature - (non-freezing) : -5 to 50° C (23 to 122° F), ISE: Ammonium &amp; Nitrate 0 to 40° C, Chloride 0 to 50° C</p> <p>Dimensions : Length: 46 cm, With bail: 59 cm, Diameter: 4.7 cm</p> <p>Max Pressure Rating : Up to 150 PSI Ammonium/Nitrate up to 30PSI</p> <p>Environmental Rating : IP68 with all sensors, IP67 without the sensors</p> <p>Output Options : RS-485/MODBUS, SDI-12, Bluetooth</p> <p>External power voltage : 8-36 VDC; Sleep: &lt; 0.2 mA typical;</p> <p>Reading rates : 1 reading every 2 second</p> <p>Integrated LCD display : Sonde Status, Sensor Ports, Volts and Connectivity</p> <p>Certifications : CE, FCC, WEEE, RoHS Compliant</p> <p>Accuracy : +/- 0.5% to 10 % based on type of parameter</p>
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## ONLINE WATER QUALITY ANALYSER


	Water Quality control system	: for measurement of Free & Active Chlorine / Chlorine Dioxide / Ozone / Turbidity
	ALGAE Control	: Fluorescence monitoring of Algae classes and Toxic Algae
	BACT Control	: Enzymatic monitoring of bacteria activity
	CHEM Control	: On-line toxicity monitoring for chemical screening Enzyme activity monitoring & concentration in ONE, Within 1H BACT control can: Indicate changes in specific bacteria activity (eg E.coli, coliform) in the water Raise an alarm which can be followed automatically by a sampling action for further analysis (and confirmation) by the lab.

## PANEL INSTRUMENTS


### INDICATORS / CONTROLLERS

	Indicators	: Bar graphic indicator Multi channel scanner
	Temperature / Single / Multi Loop PID Controller	: Digital Indicating Controller with Retransmission output
	Type	: Positon Proportional / Heating / Cooling
	Additional outputs	: 2 DI + 2 DO
	Communication	: RS 485 / Ethernet / CC Link / Profibus DP
	Power supply	: 24 V DC
Colour	: White / Black	

### DATA LOGGERS, CHART LESS RECORDERS


	SMART Data Acquisition system	: Portable / Panel mounted
	Data acquisition type	: 12" TFT color LCD (800 × 600 dots), 5.5" TFT Color LCD
	Display	: Color LCD
	Touch screen	: 4 wire resistive touch screen, 2-point touch detection
	Analog Inputs	: 30 to 100 Universal
	Internal Memory	: 500 MB
External memory	: SD Card	
Communication	: Ethernet / TCP-IP / Modbus	
Power supply	: 100 - 240 V DC	

### INSTRUMENTATION CONTROL PANELS

	Instrument Control Panel	: Design and Supply of Control Panels as per customer requirements along with Annunciator, Digital Process Indicators & Controllers, Data loggers
		: These Panels are normally made in MS with Powder coating, but we can provide in SS and Flameproof enclosures also. Enclosure type : IP 52, IP 54, IP 65 or Flameproof

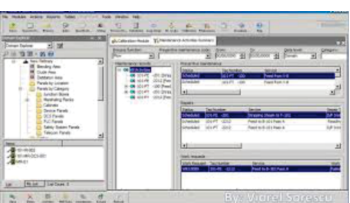
## TEST & CALIBRATING INSTRUMENTS

### CALIBRATORS

	Multimeters	: Handheld / Desktop Multimeters
	Process function calibrators	: Temperature Calibrators Pressure Calibrators Flow Calibrators Multifunction Calibrators mA Loop Calibrators

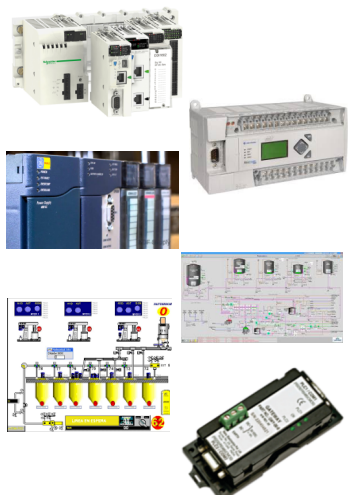
## SMART ENGINEERING AUTOMATION SOLUTIONS

### SMART PLANT INSTRUMENTATION


	Smart Plant Instrumentation (Intools) Customisation and Migration Services	: Symbol / Template Customization Interlock Logic Diagrams Instrument Index Junction Box Termination Drawings Cable Tray/ Cable Trench Layouts Writing diagrams, Instrument Hook Up Drawings Application and Specs for Instruments Loop drawings
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## CONTROL SYSTEMS

### PROCESS CONTROL PLC/ SCADA AUTOMATION SOLUTIONS

	<b>PLC Engineering Services</b> <ul style="list-style-type: none"> <li>• Design Consultant Services</li> <li>• Field Engineering Services</li> <li>• Panel Engineering Services</li> <li>• System Integration Services - PLC/SCADA</li> <li>• Project Management Services</li> <li>• Internet and Web Based Solutions Services</li> <li>• Advanced Optimization Solutions Services</li> <li>• Total Engineering , Installation and Commissioning at Site</li> <li>• Skilled resources deployment- on site for Short term / Mid term / Long term contracts</li> <li>• Remote SCADA engineering services</li> </ul>	<b>PLC Hardware &amp; SCADA Software</b> <ul style="list-style-type: none"> <li>• Supply of GE / Rockwell / Schneider PLCs</li> <li>• CPU with built in Analog / Digital IO</li> <li>• Completely wired, loop checked PLC Marshalling racks / PLC cabinets with HMI</li> <li>• HMI / SCADA :</li> <li>• Cimplicity, Ifix / FTView SE / FTView ME / Vijeo Citect</li> <li>• RTU - Remote Terminal Units</li> <li>• HMI MODULES</li> <li>• Communication Gateways</li> </ul>
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### VFD DRIVES

	Variable speed fully digital AC Drive	: Variable Frequency Drive for Fan & Pump Applications
	Sensorless Vector Drive	: Precise and reliable control for IE2, IE3 & IE4 motors. <ul style="list-style-type: none"> <li>• Induction Motors (IM)</li> <li>• Permanent Magnet Motors (PM)</li> <li>• Brushless DC Motors (BLDC)</li> <li>• Synchronous Reluctance Motors (SynRM)</li> </ul>

# INDUSTRIAL IOT PRODUCTS & SOLUTIONS

## INDUSTRIAL IOT PRODUCTS



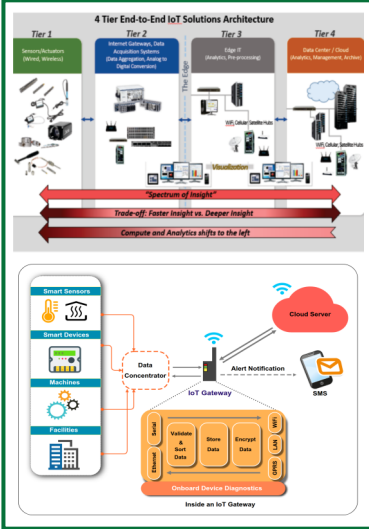
### Industrial IOT Product development

- System Architecture (Products & Enterprise)
- Hardware and Firmware Design
- Prototype development
- HMI miniature design
- Product Testing & Certification Services

### Typical Industrial IOT Products

- Single protocol device connectors  
Ex: Transmitters, Valves.
- Multiple Device -Multi Protocol connectors - Pump & Drive
- PLC Data interface

## INDUSTRIAL IOT SOLUTIONS



### Activity Description

- IOT solution design and development
- Sensor & Device connectivity
- Data aggregation
- Cloud connectivity & workflow integration
- Integration of Industrial IOT products with Smart Factory network
- Remote data monitoring Services
- Multiple data network connectivity solutions
- Embedded technologies

### Typical Industrial IOT Solutions

- Remote Asset Monitoring like Telecom Tower, ATM, UPS
- Machine productivity monitoring
- Water distribution management
- River Pumphouse / WTP / ETP / STP monitoring
- Borewell Water level , flow data with Pump Protection
- Diesel Generator fuel consumption monitoring
- Energy management, HVAC monitoring
- Human Safety, People, Machine and Asset tracking
- Dynamic Inventory level & Ware house monitoring
- Wearables for Human health monitoring

# BUSINESS CONSULTING SERVICES

## BUSINESS PROCESS MANAGEMENT CONSULTING SERVICES



### MSME Business Process Transformation

- Business Process and Transformation
- Preparation of effective business plan
- Business & Financial Risk Mitigation
- Enterprise management
- EPC Consulting

- Digital Marketing, Branding and Promotions
- Human Resource management
- Training & educational services
- Finance and Accounts
- Statutory compliances

## TECHNICAL TRAINING SERVICES



- Field Instrumentation Sensors / Transmitters
- PLC / SCADA Control systems
- Smart Plant Instrumentation ( INtools )

- : Functional philosophy, testing and calibration of Transmitters, Flow meters, Controllers, Recorders, Data Loggers etc.
- : Selection and Configuration of PLC hardware, Wiring concepts, PLC programming, SCADA configuration, Report customization, Trouble shooting
- : Symbol, Template customization, preparation of Data sheets, Wiring diagram, Loop drawings, Hook up drawings

# OUR CUSTOMERS



📍 **Sales off:** No.32, Brindavan Street, 80 ft Road, Gubbalala, Bengaluru -560061  
**Regd off :** No.9, KEB Layout, 1st Main, 1st Cross, Kathriguppe, Bengaluru -560085

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Represented by :