



**Transmitters**  
Prepared for the latest digital communication



**Liquid & Gas**  
Highly reliable measurements for all industries



**Field**  
Advanced diagnostics for all your industrial support



**Network Solutions**  
Real-time monitoring for optimal network

# Excellence in Process Measurement



**Flowmeters**  
Offer Total Insight throughout the product & plant lifecycle

Communication Protocols

-  HART
-  FOUNDATION fieldbus
-  PROFIBUS
-  BRAIN
-  ISA100
-  Modbus



## Production Management

Optimize

Plant Information Management

Advanced Process Control



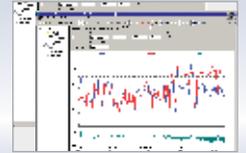
Exaquantum



Exaquantum/Batch



Exasmoc



Exarqe

## Production Control and Safety Management

Control

Integrated Production Control & Safety Management

Inherent Failsafe Logic Solver

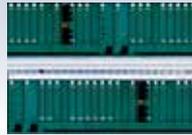
(SCADA) Supervisory Control and Data Acquisition and Network-based Control



CENTUM VP



ProSafe-RS



ProSafe-SLS



FAST/TOOLS



STARDOM

## Sensing and Actuation

Flow



Pressure



## Communications

Fieldmate Device Management Wizard

Communications

Converters & Field Indicators



## Technical Partner's Products

Flow Primary Elements

Wireless Gas Detection

Transmitter Manifolds

Remote Seals



# Your Single-Source Partner for Operational Excellence

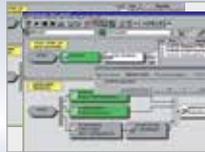
Industry leaders striving for operational excellence will benefit from a new approach to plant automation. Yokogawa solutions help you to Measure, Control, and Optimize your processes, ensuring plant-wide integration. A worldwide network of committed experts supports your operations 24/7 for life-cycle optimization.

## Asset Management and Operational Efficiency

### Operation Efficiency Improvement



Exaplog



Exapilot



AAASuite



PRM: Plant Resource Manager

### Integrated Asset Management

## Data Acquisition and Control

### Programmable Logic Controller



FA-M3R

### Paper and Paperless Recorders



GX10/GX20

### Data Acquisition Equipment



GM10

### Controllers



YS and UTAdvanced Series

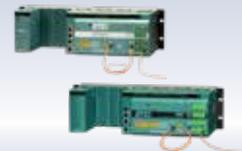
### Remote Seals



### Multivariable



### Temperature



## Liquid and Gas Analyzers

### Analysis and Quality Control



### Liquid Analyzer



### Gas Analyzer



### Sampling Systems



### Advanced Analyzer



## Measuring Instruments

### Process Calibrators



### Process Multimeter



# Flow meters



## ADMAG Total Insight magnetic flowmeter

### ADMAG AXG 4-wire

#### Predictive diagnostics

- Electrode adhesion detection
- Electrode corrosion detection
- Empty pipe detection
- Low or conductivity decrease
- Bubbles or slurries detection
- SIL1 compliance
- Unique "built in" meter verification

#### User-oriented functionality

- Multi-line, large, backlit and full dot-matrix LCD
- Wizard for easy setup, multilanguage
- Easy-to-install rotatable primary (transmitter)
- HART®, BRAIN, Modbus

#### High performance

- Dual frequency excitation
- 1 µS/cm conductivity minimum
- High grade accuracy: 0.15% of rate
- Standard accuracy: 0.3% of rate from 0.15 to 10 m/s
- High-Speed Pulse Output (up to 10,000 pps)

#### Enhanced Product Lineup

- PFA, Ceramic, Polyurethane liners
- Wide range of electrode materials
- From 2.5 mm to 400 mm
- 3A and sanitary connections compliance

### ADMAG AXW 4-Wire

- Dual frequency excitation
- 1 µS/cm conductivity minimum
- Sizes from 25 mm to 400 mm diameter (1" to 16")
- 0.35% of flow rate from 0.3 to 10 m/s
- PTFE, Hard or soft rubber, Polyurethane
- Robust, IP67 or IP68 (submersible version)
- HART®, BRAIN, Modbus
- Fieldbus Foundation, Profibus (under preparation)
- SIL1 compliance
- Unique "built in" meter verification

### ADMAG AXR 2-Wire

- Sizes from 25 mm to 200 mm diameter (1/2" to 8")
- Low power consumption
- Stable measurement under harsh flow conditions by dual frequency excitation
- High accuracy (0.5 % of rate)
- Concise indications on full dot-matrix LCD
- Magnet switch operation without opening cover
- HART® or BRAIN
- SIL2 & SIL3 compliance

### Vortex Flowmeter digitalYEWFL0

- Universal flowmeter for liquids, gas and steam
- Best "in-situ" performance; ±0.75 % of flowrate
- Superior low flow stability through Spectral Signal Processing
- Highest temperature capability; -196 °C to +450 °C
- Highest pressure capability available; 2500 lbs (PN420)
- Optional temperature sensor embedded in shedder bar inferring (saturated) steam flow
- HART®, BRAIN or Foundation™ Fieldbus

### Multivariable Transmitter DPharp EJX930A/EJX910A

- Multivariable transmitter to measure differential pressure, static pressure, temperature to calculate dynamically compensated mass flow
- 1.0 % mass flow rate accuracy
- Dual output capability; analog 4-20 mA and pulse
- PC-based FSA120 EJX-MV Configuration DTM supports the configuration for calculating mass flow
- HART®, BRAIN, Foundation™ Fieldbus, Modbus
- Conformance to ISO 5167
- Integrated temperature sensor for mass flow

### Averaging Pitot Tube

- Senses and averages the natural differential pressure created by the velocity profile
- Improved accuracy and turndown, superior signal stability
- Eliminates clogging of sensor ports
- Lower drag force and increased structural strength
- Lower energy costs

### Compact Orifice Plate

- Modular and proven concept
- No moving parts, extremely rugged and stable
- Easy to install without impulse piping
- Sizes from 1/2" to 4" (standard), other sizes on request

## ROTAMASS Total Insight Coriolis mass flowmeter

### Essential & Ultimate Transmitter

- 2 specialized transmitters with common platform
- Wizard for easy setup and guidance through the main configuration, multilanguage
- Hart, Foundation Fieldbus, Modbus RTU, Profibus PA
- Universal power supply
- Data mobility by microSD card for easy data transfer & remote service
- NAMUR NE95 compliant
- SIL2 & SIL3 compliance
- "Tube Health Check" & "Total Health Check" for in-line meter verification
- "Features On Demand" for easy expansion of functions
- Dynamic Pressure compensation
- In-line density and concentration measurement
- Net Oil Computing acc. API standard
- Viscosity function, Batching function

### Rotamass Prime Sensors

- Superior turndown with cost-effective ownership
- Process connections: from 3/8" to DN125(5")
- Nominal Flow Rate: 1,6t/h-4,7 t/h-20 t/h-51t/h-170t/h
- High flat spec accuracy for wide range of standard applications
- Compact and drainable design, low pressure loss
- Stainless steel 316L wetted parts

### Rotamass Supreme Sensors

- Superior performance under demanding conditions
- Nominal Flow Rate: 3t/h - 10 t/h - 32 t/h - 100 t/h
- Process connections: from DN15 (1/2") to DN150(6")
- Smart Power Management ensures optimum performance under extreme aeration conditions
- Optimum decoupling of core measuring element from external influences by proven box-in-box design
- Stainless steel 316L or Hastelloy C wetted parts

### Rotamass Nano Sensors

- For low flow rate: from <1 kg/h to 1,5 t/h
- Line sizes: 1/4", 3/8" DN15 (1/2"), 25 (1"), 40 (1.5")
- Process connections: up to PN420 (2500lbs)
- Smallest dual bent tube for highly accurate measurement at lowest flow.
- Drainable design
- Stainless steel 316L or Hastelloy C wetted parts

### Rotamass Giga Sensors

- Flexible installation for high flow applications
- Typical line sizes: DN100, DN125, DN150, DN200
- Nominal Flow Rate: 250 t/h and 500 t/h
- Process connections: Up to 200mm (8")
- Drainable design

### Rotamass Hygienic Sensors

- For food & beverage, biotechnology and pharmaceutical utility
- 3A or EHEDG approvals
- Typical sizes: DN25(1"), DN40, DN50, DN65, DN80(3")
- Nominal Flow Rate: 1,6t/h - 4,7t/h - 20 t/h - 51 t/h
- Process Connection: 0,8 µm roughness
- Low flow velocity and low excitation frequency
- Wide range of hygienic process connections

### Rotamass Intense Sensors

- For high pressure applications
- Typical line sizes: 1/2", 1", 2"
- Max Flow Rate: 50 t/h and Process Connection: Up to 50 mm (2")
- Pressure Rating: Up to ASME flange class 1500
- Dynamic pressure compensation

### Variable Area Flowmeter ROTAMETER™

- Rugged and durable, all 316SS and glass designs
- Low friction, hysteresis free local indication
- Linearised current output with float blocking detection
- Remote configuration using the HART® protocol
- Suitable for use in Zone 1 and 2 hazardous locations
- Digital communication through HART®
- SIL assessment by FMEDA report
- Available with ASME B31.3 compliance



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## Field Communication



### FieldMate Versatile Device Management Wizard

- PC-based field device management tool
- Multi-vendor, multi-protocol support - Foundation™ Fieldbus, HART®, PROFIBUS, BRAIN and ISA100.11a
- Automatic device data acquisition upon connection to a device or a segment (Segment Viewer)
- Easy acquisition and diagnosis of device status (Device Viewer)
- Support device database and history information
- Multi-parameter set-up (Parameter Manager)



### HART - FieldMate Communicator YHC 5150X

- Intrinsic Safe Handheld which allows the user to download directly from the manufacturer in the original DD's native format, including registered or unregistered devices

### BRAIN - Communicator BT200

- Easy to use for setting, changing, displaying, parameters for transmitters with BRAIN communication protocol



### Segment Indicator for Foundation™ Fieldbus FVX110

- 2 wire segment powered indicator
- Displays up to 16 process values
- Link master capability & Software download function
- Easy access to target display (back lighted)
- Variety of function blocks supported



### MLX Loop Indicator

- "Break Out" up to three analog signals proportional to a HART®
- High/Low process and loop diagnostic alarms
- Sets up as a primary or secondary master, or in "Listen" mode
- Large, 5-digit display
- Isolated output channels

## Pressure



### Pressure & Differential Transmitter DPharp EJP & EJA Series

- Ultra-high performance, 0.04 % (opt. 0.025 %) accuracy
- 200 to 1 turndown
- Multi-sensing (Differential pressure + Static pressure)
- Fast response 90 ms
- Multi-functional indicator (optional)
- Alarm output for measured and static pressure (opt.)
- Digital communication through HART®, BRAIN, FOUNDATION™ Fieldbus
- SIL2 certified by TÜV IT
- Custody transfer approved
- ISA100 wireless models available

### Manifold and Direct Mounted Manifold

- 3, 5-Valve manifolds for differential pressure and 2-valve in-line manifolds for gauge pressure
- Low profile for the bottom connection available
- Compact design with fewer potential leak points
- Ease of installation and large number of options
- Direct mounted manifolds are connected and supported at the differential pressure taps
- Hook-up for Enclosure solutions, heat tracing



### Diaphragm Seals for Differential Pressure and Pressure Transmitter

- Diaphragm seal to combine with EJA and EJP series pressure and differential pressure transmitters
- Intended for corrosive, contaminated, hot or viscous pressure media
- Various process connections, wetted materials and pressure ranges are available

### Level Transmitter Digital Remote Sensor (DRS)

- Flange-mounting, compact differential pressure transmitter
- Direct mounting to a tank
- Small flange size model also available
- Two pressure sensors, master (high pressure side) and slave (low pressure side)
- Monitoring or parameter, remotely done via HART communication.

## Temperature



### Temperature Transmitter YTA610 & YTA710

- A highly accurate temperature transmitter with BRAIN, HART® or Foundation™ Fieldbus communication
- Sensor type is selectable from 12 Thermocouples, 6 RTDs, ohms, or DC millivolts
- Dual compartment housing for harsh environments
- Dual input bumpless change over
- Integral indicator with both a digital readout and percent bargraph
- Choice of the latest digital communication protocols
- Improved self-diagnostics and sensor diagnostic functions
- Local parameter settings
- SIL3 Capable

### Wireless Multi-Input Temperature Transmitter YTMX580

- Accept inputs from up to 8 channels
- Perfect for multipoint measurement applications
- High performance measurements with intervals as fast as 1 seconds (3 channels) or 2 seconds (8 channels)

### Wireless Temperature Transmitter YTA510

- The high performance temperature transmitter YTA510 accepts Thermocouple, RTD, ohms or DC mill volt inputs

### Temperature Transmitter YTA70

- A head mount temperature transmitter with HART® communication
- Dimension conforming to DIN form B standard
- Sensor type is selectable from 12 Thermocouples, 2 RTDs, ohms, or DC millivolts
- Isolated Input/Output signals
- SIL assessment by FMEDA report



### Industrial Temperature Assemblies

- Pt100 RTD: 3-, 4-wire, single or dual configuration
- Thermocouple: Type J, K, E, T, 2-(dual), 4-(single) wire with single or dual configuration
- Thermowell style: tapered, straight or stepped
- Complete quality assurance program of NDT's (Diepenetrant inspection, X-ray and Ultrasonic testing)
- Single or duplex sensor configurations available
- YTA series can be installed onto the industrial assembly or within the termination head
- Unique explosive environment approvals allow transmitters installation on-site

### Fiber Optic Distributed Temperature Sensing (DTSX)

- Measure up to 50 km distance using fibre optic cable
- Operating Temperature range from -200 C till 800 C
- Top-level Resolution of 0.03 C
- Compact modular Industrial design
- Certified for Zone 2
- Low power system
- Optional 2, 4 & 16 channel optical switch
- Temperature profiles easy integrated in FAST/TOOLS
- Direct I/O capability
- Ethernet and Serial ModBus Communication
- Embedded Alarm Management Tool

### DTSX1 fiber optic heat detector

- Cost-effective and easy-to-install all-in-one solution
- Able to measure data from 4 cables up to 16 km in length
- Ready-to-use GA10 templates for monitoring facility status

## Wireless



### Field Wireless System

- ISA100.11A Protocol
- Temperature Transmitter YTA510
- Pressure Transmitter DPharp EJX B Series
- Field Wireless Gateway
- Field Wireless access point YFGW510

### Control proof

- Quick update time of 1 second
- Redundant star network for control applications
- AES 128 bit security mechanism by NIST approval
- Transmission rate of 250 kbps with wireless frequency bandwidth: 2400 to 2483.5 MHz

### Power proof

- Unique battery housing compartment and battery pack design for devices
- Battery pack design exchangeable in hazardous area and replaceable internal cells

### Future proof

- IPv6-based wireless protocol for expandability of existing plant network architecture in the future
- Upper communication protocol: Modbus/TCP & OPC

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### Field Wireless Communication Module FN110

- Built-in high-performance wireless communication function module has excellent radio sensitivity and low power consumption, provides a stable wireless communication platform with excellent power saving capabilities

### Field Wireless Multi-Protocol Module FN310

- HART or Modbus communication protocol can be selected
- Various wired legacy device required by plant operation can be converted into a wireless device as required
- Direct support of SENCOM communication for analytical sensors

### Field Wireless Multi-Function Module FN510

- Analog input, digital input/output or pulse input are selectable

### Gas Detector GS01

- The hydrocarbon gas detector that operates truly wireless
- Based on innovative MEMS technology the GS01 enables battery-powered gas detection with wireless communication in demanding industrial applications

## Liquid Analyzer



### FLXA402: Multi sensor multi input analyzer

- pH, ORP, Conductivity, resistivity, inductive conductivity and Dissolved Oxygen
- 4-wire modular transmitter
- Unique Easy to use Color touchscreen
- Advanced Sensor diagnostics
- connecting up to 5 sensors simultaneous
- HART7, Ethernet, Bluetooth, Modbus RTU & TCP

### pH/ORP Electrodes & Fittings

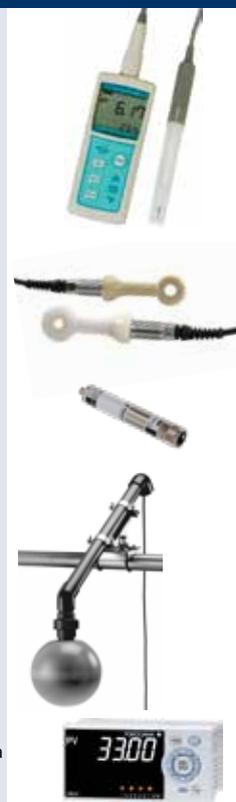
- FU20 4-in-1 wide body electrode best sensor for most applications
- FU20-FTS differential pH sensor with virtual no maintenance
- SC25 pH sensor with proven high degree of stability
- FU24 with integrated automatic pressure compensation
- PR10 retractable fitting, one model for all parameters

### pH/ORP/Conductivity/Inductive Conductivity/ Dissolved Oxygen FLXA21 and FLXA202

- 2-wire Modular Transmitter
- Menu structure & graphical display with touch screen
- Redundant system configuration possible
- One or two sensor modules can be installed
- Digital communication through HART®

### Conductivity Sensors & Fittings

- SC4A conductivity sensor for low conductivity and Pharma applications
- SX42 high temperature (up to 250 °C) and high pressure (up to 40 bar) conductivity sensor
- SC42 electrode with 2- and 4-electrode design with a wide range of sensors to suit most applications
- Easy mounting, servicing and installation by using a wide range of installation options and materials



### PH71 / PH72 / SC72 Pocket Meters

- "One-touch" auto-calibration
- Long term reliability
- Auto power off function
- Water resistant and durable
- Easy cleaning
- Manual or automatic temperature compensation
- Including Redox (PH71)

### Inductive Conductivity Sensors & Fittings

- Inductive Conductivity technique
- Elimination of fouling and polarization errors
- Maintenance free construction
- Wide conductivity measuring range

### SA11 SENCOM SMART Adapter & Sensors

- Automatic Sensor recognition
- Automatic buffer recognition
- Calibration data stored in the sensor
- Re-usable electronics
- pH/ORP, conductivity and Dissolved Oxygen
- SA11 can connect directly to PLC, DCS, Dataquisitions systems etc.

### Dissolved Oxygen Sensors & Fittings

- Visiform Optical SMART DO in a 12 mm design
- Oxyferm and Oxygold ppm and ppb DO sensors ruggedized design
- PB30 floating ball holder ensures minimum user maintenance

### UM33A-S: Single sensor multi input analyzer

- Easy-to-read, 14-segment large color LCD display
- Scrolling text feature for parameters
- Automatic buffer recognition
- Automatic sensor recognition

## Gas Analyzer

### Tunable Diode Laser Spectrometer TDLS8000

- SIL2 TruePeak combined with smart laser technology
- Intuitive touchscreen HMI
- Display on both laser and sensor unit for one-man installation
- HART and Modbus TCP communications standard
- 8-stage auto-gain adapts to difficult applications
- Fully field repairable with 50 days of data and spectra storage
- Area classification Zone2/Div2 or Zone1/Div1

### OX400 Low Concentration (ppm) Zirconia Oxygen Analyzer:

- Long life, high reliability Zirconia sensor
- Wide range from 0-10 ppm to 0-100 vol% O<sub>2</sub>
- Multi-selector function allowing measurement up to three streams
- Pump or aspirator sampling

### Probe type Tunable Diode Laser Spectrometer TDLS8100

- Easy installation - single flange
- Long-term stable measurement realized by excellent probe design
- Intuitive touchscreen HMI
- Sealed laser and detector modules
- Area Classification Zone1/Div1



### In Situ Zirconia Oxygen Analyzer ZR402G / ZR22/ ZR202

- Long-life, high-reliability Zirconia sensor
- LCD touch-screen for ease of operation
- The integrated type integrates both probe and converter, to reduce wiring, piping, and installation costs
- Explosionproof approval
- Remote maintenance using HART® communication

### Oxygen Analyzer Averaging Converter AV550G

- Handles input of up to 8 oxygen detectors
- "Hot swap" of channel cards so the analyzer remains on line while maintenance is performed
- Full color touch screen for ease of operation
- Multiple display modes shows average data, single detector or all detector gas concentrations
- Remote maintenance using HART® or FOUNDATION™ Fieldbus communications



# Analyzer Solutions



## Process Gas Chromatograph GC8000

- The GC8000 has a built-in 12-inch color touchscreen display that simplifies operations. At the touch of the screen, the technician can access all the analytical parameters and measurement results; displayed in easy-to-understand graphical color screens.
- GC8000 analytical possibilities are greatly expanded through the multi-oven capability of the analyzer. GC8000 is recognized for its reliable and precise performance.
- GC Applications are executed in GC laboratories in the Netherlands, Japan, China, USA and Singapore.

## Analyzer Bus System

**Comprehensive and centrally located system for remote monitoring of analyzers**

- Max 254 analyzers in one network
- Connection to FCS; direct by Modbus TCP/IP, Modbus RTU, OPC
- Centralized analyzer operation, view & maintenance
- Storage of analyzer results
- Interface Unit to reduce wiring of third party analyzers



## Analyzer Systems

Providing a one-stop solution for analyzer system integration. Being a business partner for complete Life Cycle Management:

- Pre-sales engineering and site surveys
- Detailed engineering and project management
- In house integration, FAT
- Commissioning, start up, SAT, training
- Service and annual maintenance contract



## Advanced Reflux Sampler

- Self-acting temperature controller, no electric power supply required
- Dual 360° Cooling coils
- Sample outlet over temperature shut-off valve
- High sample flow rate reduce lag-time

# Network Data Acquisition & Control Solutions



## Paperless Videographic Recorder FX1000

- Up to 12 universal input channels
- 5.7" TFT Colour LCD Display with wide viewing angle
- Network functions: E-mail, FTP, web service
- Dust-proof and water-proof front panel (IP65)
- Power measurement option
- Standard PC software for configuration and historical data viewing



## Paperless Videographic Recorder Daqstation DXAdvanced DX1000/DX2000

- Up to 12 or 48 Universal input channels
- Connects to DAQMASTER MW100 via Modbus/TCP for up to 240 external channels
- Standard-equipped with an Ethernet port
- Sends a variety of informative e-mail messages
- Compliant with FDA 21 CFR Part 11: login function/audit trail/electronic signature function (/AS1 option)



## SMARTDAC+ GX10/GX20, GP10/GP20

- Multi-touch interface, hand-writing function
- Modular universal I/O, easy to extend, up to 450 channels
- Compliant with FDA 21 CFR part11: login function, audit trail, electronic record/signature function (/AS option)
- Webserver for real-time monitoring and configuration
- Network security functions



## SMARTDAC+ Wireless Model GX20W

- Paperless recorder that includes a gateway function for ISA100 field wireless systems
- communication to max 50 wireless devices
- max 100 analogue inputs for wired devices
- max 200 mathematical channels (option)
- advanced network functions (FTP, webserver, SNMP, SMTP)



## SMARTDAC+ GM data logger and Control Unit

- Universal inputs, up to 1000 channels
- Supports SD card for local data storage
- Modbus RTU/TCP for easy integration
- Webserver and Bluetooth interface for real-time monitoring and configuration
- Network security functions
- Advanced mathematical functions
- PID and logic Control Junction



## Data logging Software GA10

- On-line monitor and record up to 2000 channels and 2000 math channels
- Up to 50 Custom Displays with interactive control elements
- Communication to Yokogawa data acquisition systems and controllers
- Modbus/TCP communication to third party devices
- Remote access for more than 32 client PC's



## STARDOM

- Dual-redundant-configurable hybrid PLC / Intelligent RTU
- Reliable hardware & low power consumption controller
- Wide support of field networks e.g TCP/IP, FOUNDATION™ Fieldbus, Hart, ModBus and DNP3
- Efficiency Engineering by IEC61131-3 programming languages and libraries
- Seamless integration with FAST/TOOLS Web based SCADA solutions



## IT Machine PLC FA-M3R

- Ultra-fast Processing Speed 100,000 steps of ladder program scanned per 1ms and minimum scan time of 100 µs
- Postcard-size Controller
- Compact 147(W) 100(H) 88(D) mm size handles 192 I/O points
- Universal I/O range achievable with one PLC. Controls up to 8,192 points and contain devices of up to 344K words per system



## Single-loop Process Controller YS1000

- Uses a full dot matrix color LCD display
- Designed with a lightweight, compact case
- Graphical programming tool for reduction of engineering costs
- Dual CPU and hard manual control as the control output backup function
- Ethernet (Modbus/TCP), Modbus, expansion I/O, and peer-to-peer communication



## UTAdvanced Digital Indicating Controllers

- Advanced Control. PID Control — 8 built-in Control Functions / Algorithms. Ladder Sequence Control
- Simplicity. Bright & Easy to read Active Color LCD Display. Multiple language support
- Networking: Ethernet (Modbus / TCP), RS485
- Reliability: IP56
- DIN rail mount version without display available



## Compact Signal Conditioner JUXTA VJ

- Compact design for space saving
- Universal input to accept either a thermocouple, RTD or mV signal
- Second isolated current or voltage (pulse) output available
- Modbus (RS-485) communication along with analog output signal from a single unit.
- PC-based parameters setting tool available



## Industrial Chart Recorders SR10000, µR100000/µR20000

- 100 mm chart recorder with 1-4-pens and 6-dot models (SR1000 and µR100000)
- 180 mm chart recorder with 1-4-pens and 6, 12, 18, 24-dot models (µR200000)
- Configurable inputs (mV/V/TC/RTD/DI)
- Large digital display
- Optional Ethernet and RS422/485 comm. interface
- Optional SD Card support for local back up (uR1000/uR2000 only)

# Wireless solution for Industrial IoT (IIoT)



## Sushi Sensor

- Industrial IoT(IIoT) sensor for vibration and temperature monitoring
- ATEX certified and LoRaWAN compatible
- On premises and cloud solutions for data monitoring
- Easy setup via smartphone Sushi Sensor App

# Test & Measurement



## Process multimeter CA450

- The ideal all-in-one tool for the installation and maintenance of process instrumentation such as transmitters, flow meters, signal conditioners and valve positioners
- 2-wire transmitter simulator (20 mA SINK)
- Loop check – Simultaneously provides 24V transmitter power and precisely measures DC mA signals
- HART mode setting with loop power (250  $\Omega$  resistance)
- Step or sweep response test of valve positioners



## Handheld multifunction calibrators CA51 and CA71

- Source: DCV, DCA, Resistance, RTD, TC, Frequency, Pulse
- Measure: DCV, DCA, ACV, Resistance, Frequency, Pulse (also RTD, TC on CA71)
- Simultaneous source and measure, Automatic step and sweep
- PC communication interface (CA71)



## CA150 - Handheld multifunction process calibrator

- Source: DCV, DCA, Resistance, RTD, TC, Frequency, Pulse
- Measure: DCV, DCA, Resistance, RTD, TC, Frequency, Pulse
- Simultaneous source and measure, Automatic step and sweep
- 24V transmitter loop power supply and current measurement (SINK)
- Internal memory for data and settings



## CA300 series – Process calibrators

- CA310 Volt mA calibrator: with loop checking and transmitter simulation (20 mA sink)
- CA320 thermocouple calibrator: simulates 16 types of TC with voltage source and measurement
- CA330 RTD calibrator: with resistance source and measurement

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