

Co-innovating on Best-in-Class Analytical Solutions

Food & Beverage Industry



Challenges

- Reporting is more important than ever in the evolving regulatory environment and is driving demand for faster and more accurate analytical solutions.
- Inadequate clean-in-place (CIP) process detection results in higher costs and energy inefficiencies.
- Service failures can cause quality problems and loss of product.
- Integrating new technology into a validated process presents compliance issues.

Introduction

For today's wide variety of applications, there is no "one size fits all" sensor. That is why Yokogawa has co-innovated with the food & beverage industry to develop the SENCOM 4.0 Digital Smart Sensor Platform. SENCOM 4.0 provides integrated "hot swap" and "plug and play" functions to significantly decrease downtime in pH and conductivity measurements.

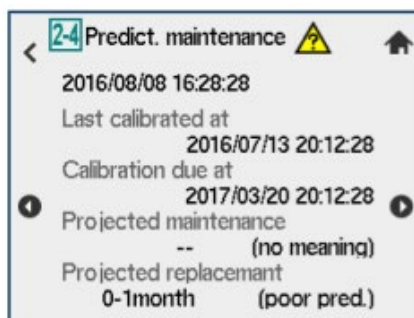
Yokogawa's liquid analyzer platforms provide full visualization while improving operation, reliability, and credibility of online process analyzers. The latest sensing technology, asset management tools, and much more enable users to "SEE MORE and DO MORE."

"Unscheduled downtime is costly for me. I cannot risk failure of my sensor."

Designed for Lifetime Service

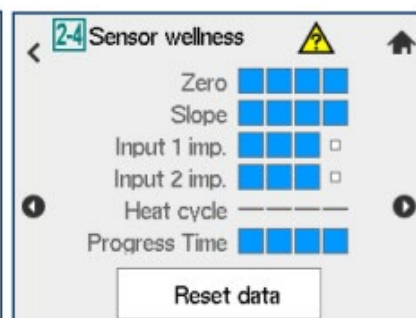
Severe process conditions such as abrasive chemicals and high temperatures present challenges to any pH or conductivity sensor. Yokogawa's sensors are designed to thrive in these difficult environments.

Accurate and reliable conductivity measurements are critical for clean-in-place (CIP) or water-for-injection (WFI) applications. Inaccurate readings could cause runtime losses and increase costs in material and energy usage. Yokogawa's inductive conductivity sensors have earned a favorable



reputation in the recovery of cleaning solutions. An accurate conductivity measurement in CIP reduces operating costs, creating savings up to 10%.

Analyzer predictive maintenance and sensor wellness functions help reduce unplanned outages



and lost production time. Gauge block based visualization of sensor wellness enables anyone to understand when a sensor is starting to fail. Predictive maintenance provides replacement and calibration data to users based on their sensor usage conditions.

"How do I set up my new instrument?"
"How long is it going to take?"

Easy-to-Use and Understand Display

For users replacing retiring, skilled employees, the FLXA series of analyzers offers new people a simplified HMI with easy-to-understand menus for analyzer setup and configuration. The intuitive menu structure and drop-down menu choices allow inexperienced technicians and operators to rapidly configure the analyzer. Clear and easy-to-understand troubleshooting screens enable quick error diagnosis, which leads to enhanced reliability of the online measurements.

To ensure maximum precision, Yokogawa's conductivity analyzers include twelve preprogrammed and two user-defined temperature compensation matrices. They also allow measurement of output concentration.

For food & beverage and pharmaceutical applications, the USP <645> safety margin is built into the firmware for easy compliance with USP23 (The United States Pharmacopeia, ed. 23). USP23 has replaced more complicated monitoring procedures.

Adapter Serial Number: N3V401167 Sensor Serial Number: N3U902100 Sticky Note:	
Sensor Information Model: FL24-VS-T1-APT Serial Number: N3U902100 Product date: 8/31/2018 10:13:02 AM	
Sensor module information Device Type: SA11-P1-AA-N-VS Model: N3V401167 Serial Number: N3V401167 Software: 00.00.01 Hardware Rev: 00.00.01	
Sensor wellness Zero: Input 1 Imp: Off Heat cycle: Off	
Calibration and Maintenance Information Predictive Replacement: >12months pH: 8/4/2020 11:31:45 AM Temperature: 8/26/2019 7:18:12 PM	
Setting Information Sensor type: pH + ORP Heat cycle temperature: 50.0 °C Sterilized temp.: 140.0 °C High temp. 1: 0.0 °C pH High limit: 13.00 pH Impedance 1: High	

Verified Sensor Performance and Proactive Maintenance

Yokogawa's instruments feature real-time diagnostics and sensor wellness checks for early detection of sensor failures.

Maintenance Manager is a data management system that predicts maintenance and calibration frequency; estimates sensor lifetime and life expectancy; and allows technicians to monitor sensor performance.

When pH/ORP measurements are combined with the SENCOM 4.0 platform, calibration data is stored within the SMART sensor's memory chip. Once the sensor is connected to the analyzer, the latest calibration data can be uploaded to the FLXA402 analyzer—this eliminates the need for calibration in the field.

Offline software provides complete control of the pH/ORP sensor calibration process. To ensure the highest accuracy in every case, real time sensor information allows the technician to decide whether to re-use or discard a sensor before reinstallation into the process.

Regulatory Compliant Auditing and Documentation

When using digital SENCOM 4.0 sensors and management software, calibration and sensor wellness information ensures consistent analysis and documentation in order to satisfy regulatory requirements. Easy to download pdfs show the history. HART communication within the FLXA analyzers allows defined logbooks to be exported and viewed offline.

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