

General Specifications

Model WE430 Hydrazine Analyzer

GS 12Y18A03-01EN

■ General

As the demand for electricity expands, the quality and consistency of each plant's operation is essential for efficient power generation. To maintain high purity water standards for peak production, accurate and reliable analysis is critical.

The Yokogawa WE430 Hydrazine analyzer offers unmatched results for the control and optimization of oxygen scavenger systems. Control spending and protect your system using the WE430 – the perfect balance of performance and ease of use.

The WE430 Hydrazine Analyzer is ideally suited to analyzer oxygen control in feedwater, boiler water, deaerator inlet/outlet, condensate discharge and economizer inlet. Ensure a sufficient amount of oxygen scavenger without upsetting system pH and without additional expenses.

The WE430 provides stable, drift-free measurements with minimal maintenance and less frequent calibrations.

■ Features

- Oxygen scavenger detection of 0 ppb to 200 ppb hydrazine with the highest accuracy and precision available
- Continuous online measurement ensures real time information for optimum control of the oxygen scavenger feed pump without excessive operating costs
- Extremely easy to use while maximizing uptime – simple step-by-step scrolling instruction for setup, calibration, operation and diagnostics menus
- Measurements at a glance from any distance for even the lowest light conditions using the large operator friendly backlit display
- Fastest and most stable measurements, limiting unnecessary calibration cycles due to drift with superior iodide electrode technology
- Minimize operator time and maintenance without use of complicated moving parts or pumps that often require frequent attention and expensive spare part expenditures
- Extend reagent consumption up to 2 months using our uniquely simple reagent addition design to condition the sample pH and suppress interfering ions for optimal measurement performance
- Advanced user interface with detailed calibration, measurement and diagnostic logs for early diagnostic and action level notification, configurable for your facility's desired level of performance – all password protected if preferred
- Simple and fast user selectable calibration modes for precise 2 point calibration for ultimate accuracy or offline calibration for lab correlation to have your system back online with security and confidence
- Easy installation has your plant up and running in minutes



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■ General Specifications

Measurement performance

Measurement range: 0 ppb to 200 ppb
 Accuracy: $\pm 5\%$ of reading or ± 2 ppb, whichever is greater
 Resolution: 2, 3 or 4 significant digits
 Response time: Reach 90% of reading within 4 minutes of injecting a standard solution

mV measurement:

Range; ± 1999.9 mV
 Accuracy; $\pm (0.5 \text{ mV} + 0.1\%)$
 Resolution; 0.1 mV

Temperature measurement:

Range; -10 to 120 °C
 Accuracy; ± 0.5 °C
 Resolution; 0.1 °C

ATC probe: 30 K thermistor

Environmental

Ambient operating temperature:
 5 to 45 °C (41 to 113 °F)
 Storage temperature: -20 to 60 °C (-4 to 140 °F)
 Humidity: 10 to 90% at 40 °C (104 °F) (Non-condensing)
 Shock and vibration:
 Install in a place without vibration and impact

Power

Power supply rating: 100 - 120 V AC, 200 mA, 50/60 Hz
 or 200 - 240 V AC, 100 mA, 50/60 Hz

Outputs

Analog outputs:
 Number of analog outputs; 2, one dedicated to oxygen scavenger, one to temperature; shared ground
 Output selections; 0/4 - 20 mA (Isolated)
 Relative accuracy; $\pm (0.05 \text{ mA} + 0.5\%)$
 Maximum load; 500 ohm or 10 V
 Relay outputs:
 Number of relay outputs; 3
 Maximum relay load;
 $250 \text{ V AC}/5 \text{ A}$, $30 \text{ V DC}/5 \text{ A}$, resistive load only

Sample requirements

Sample flow: 40 mL/min nominal set by pressure regulator
 Sample pressure (Inlet): 8 to 100 psig
 Sample supply: Continuous
 Sample temperature range: 5 to 45 °C (41 to 113 °F)
 Sample inlet connections: 1/4 NPT female tube fitting
 Drain tubing: 3/4 NPT male
 Total alkalinity: Less than 250 ppm CaCO_3 equivalent
 Sample streams: One

Mechanical and others

Enclosure dimensions (HxWxD):
 $28 \text{ inches} \times 18.6 \text{ inches} \times 8.6 \text{ inches}$ ($711 \text{ mm} \times 472 \text{ mm} \times 218 \text{ mm}$)
 Weight: Approx. 18 kg (40 lbs) without reagents
 Display method: Custom backlit LCD

Regulatory Compliance

Safety: CAN/CSA-C22.2 No. 61010-1
 UL Std No. 61010-1

Installation altitude: 2000 m or less

Category based on IEC 61010-1: II (Note 1)

Pollution degree based on IEC 61010-1: 2 (Note 2)

Note 1: Installation category, so called overvoltage category, specifies impulse withstanding voltage. Category II is for electrical equipment.

Note 2: Pollution degree indicates the degree of existence of solid, liquid, gas or other inclusions which may reduce dielectric strength. Degree 2 indicates the normal indoor environment.

EMC: EN 61326-1 Class A, Table 2
 EN 61326-2-3
 EN 61000-3-2
 EN 61000-3-3
 RCM: EN 61326-1 Class A, Table 2
 Korea Electromagnetic Conformity Standard
 Class A 한국 전자파적합성 기준

RoHS: EN IEC 63000

Information of the WEEE Directive

This product is purposely designed to be used in a large scale fixed installations only and, therefore, is out of scope of the WEEE Directive. The WEEE Directive does not apply.
 The WEEE Directive is only valid in the EU.

■ Model & Suffix Codes

Model	Suffix code	Option code	Description
WE430	.....	.....	Hydrazine Analyzer
Range	-S	.....	Standard range 0 - 200 ppb
Housing	-N	.....	Always -N
Type	-AA	.....	General purpose
Spare	-N	.....	Always -N
Language	-E	.....	Always -E

Reagent and standard solution

The following reagents should be purchased directly from Thermo Fisher Scientific, Inc.

Thermo Fisher Scientific Model code	Description
151810	Hydrazine Standard Solution – includes (1) x 1 pint bottle 100 ppm hydrazine standard solution
181073	Reference Electrode Filling Solution – (5) x 2 oz bottles, for use with reference electrode (K9705CH), 3 month supply when used with pressurized reference assembly
181811	Iodide Reagent – for 6 months operation, includes (3) x 1 L bottles iodide reagent and (3) x 6 ft diffusion tubing assemblies with O-rings (15 small for use on reagent bottle adapter connection barbs and 3 large for reagent bottle cap)

Please always order above 3 solutions with the main units at same time.

Calibration kit

The calibration kit is necessary for installation and calibration. Please place order to Thermo Fisher Scientific, Inc.

Thermo Fisher Scientific Model code	Description
2118XPCAL	Calibration Kit with Carrying Case – includes (1) dynamic calibrator, (1) x 1 pint bottle 100 ppm hydrazine standard solution (151810) and syringe kit for use with dynamic calibrator

Reagent bottle adapter

Use for installation. Please always order a reagent bottle adapter with the main units at same time.

Part number	Description
K9705CQ	Reagent bottle adapter assembly with diffusion tube assembly

Maintenance and service part

Part number	Description
K9705CG	Iodide Sensing Electrode – for use with WE430
K9705CH	Iodide Reference Electrode – for use with WE430, reference electrode filling solution must be purchased separately
K9705CJ	Diffusion Tubing Kit – (3) x 6 ft diffusion tubing assemblies with O-rings

■ Dimensions

