

ABB MEASUREMENT & ANALYTICS

Sensi+™

Natural gas quality monitoring



Natural gas contaminant measurement made easy

Continuous measurements of H₂S, H₂O and CO₂ for custody transfer, tariff compliance, and process monitoring

Sensi+, the single device using ABB's proven laser-based technology, provides accurate measurement and responds in seconds to allow for quick actions to process upsets

Overcome natural gas industry challenges

Continuous measurements of natural gas contaminants for custody transfer, compliance, and process monitoring

— 01 Regulatory aspects and tariff compliance mandate specific contaminants be monitored

The Sensi+ series is a laser-based analyzer developed for measuring multiple contaminants in process streams. It is designed for remote and hazardous locations, offers superior performance, low cost of ownership and fast response in seconds to process upsets.

Multiple contaminants in a single analyzer

The Sensi+ GLA533-NG model is specifically designed for natural gas contaminant monitoring by targeting H_2S , H_2O and CO_2 . Real-time monitoring of contaminant levels allows triggering of threshold alarms to redirect contaminated streams that would otherwise compromise safety and operational yield.

Modern analyzer designed for peace of mind

Sensi+ is specifically designed for reliability with low maintenance and low cost of ownership. It provides intuitive user interfaces with quick access to in-depth information.

The embedded AnalyzerExpert™ features provide expert insights, self-diagnostics and health monitoring directly from your analyzer.

Fast and accurate measurement

Sensi+ allows for rapid online measurement and total response in seconds to allow decisive and quick actions to process upsets.

The accurate measurement and low cross-interference reduce the amount missed shut-ins and false shut-ins.

Fit for multiple applications

- Custody transfer monitoring station
- Post-production and pre-processing plants
- Post-gas processing
- Consumer quality natural gas measurement
- Renewable natural gas and biogas

ABB delivers more for your process

With Sensi+, along with the market-leading natural gas chromatograph (NGC) series, ABB becomes the first company to offer a complete gas quality solution that combines composition, total flow and contaminant measurements with a comprehensive, compact, and economical measurement system.



The Sensi+ laser analyzer delivers more

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01 Single, compact analyzer based on one technology: multiplexed laser absorption spectroscopy

For over 15 years, ABB's Integrated Cavity Output Spectroscopy (ICOS) laser absorption technology has been at the core of the world's most reliable gas analyzers used for applications requiring highest overall performance. Advanced spectroscopic analyses provide highest accuracy, precision, sensitivity, and reliability.

Simultaneous measurements of multiple gas contaminants (H₂S, H₂O, CO₂)

Single, compact analyzer based on one technology, multiplexed laser absorption spectroscopy, brings all the advantages of laser technology, saves space and removes the need for multiple analyzers. It also simplifies deployment, operation, and service without compromising performance.

Advantages of ICOS technology

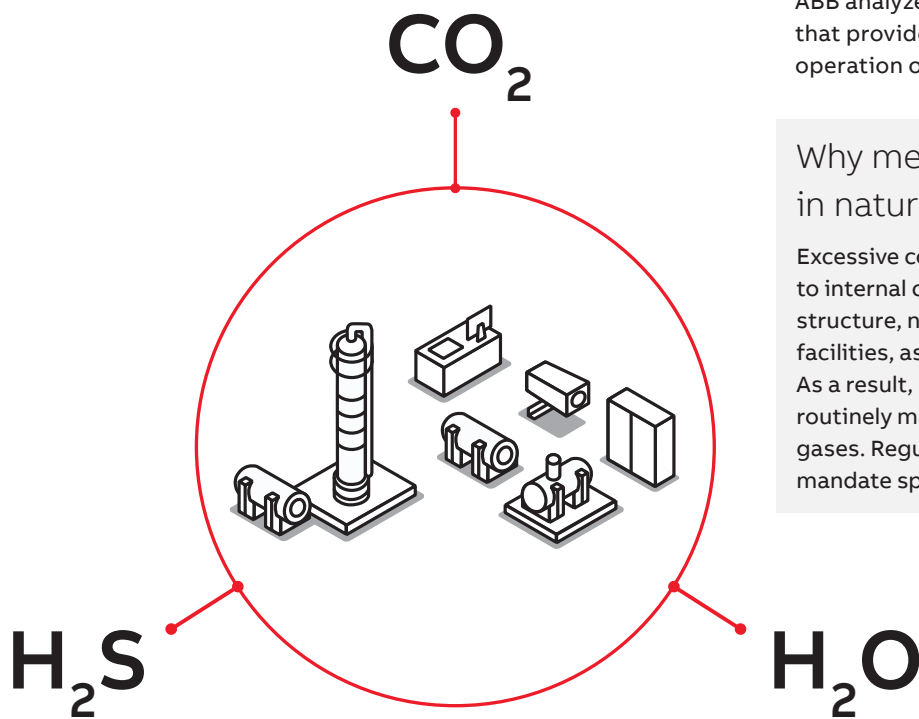
- Fast response time to variations and quick refreshment rate on measurement
- Minimizes cross-interferences through the use of high-resolution diode laser absorption technology, low pressure and data analytics
- Reduced cost of ownership: The sample is directly measured without conditioning and the design reduces the use of consumables, such as tapes, light source or scrubbers
- Low sample flow, lowering the environmental impact and financial loss due to venting of gas
- No need for periodic calibration
- Internal performance metrics for asset health monitoring

Rugged laser technology eliminates need for light source replacement

ABB analyzers employ near-infrared diode lasers that provide many years of reliable continuous operation over all environmental conditions.

Why measure contaminants in natural gas?

Excessive concentrations of the target gases lead to internal corrosion within the natural gas infrastructure, notably in gas pipelines and storage facilities, as well as other mission critical assets. As a result, requirements in custody transfer routinely mandate measurements of these target gases. Regulatory aspects and tariff compliance mandate specific contaminants be monitored.



Thoughtfully designed with the user in mind

Easy installation, use and maintenance

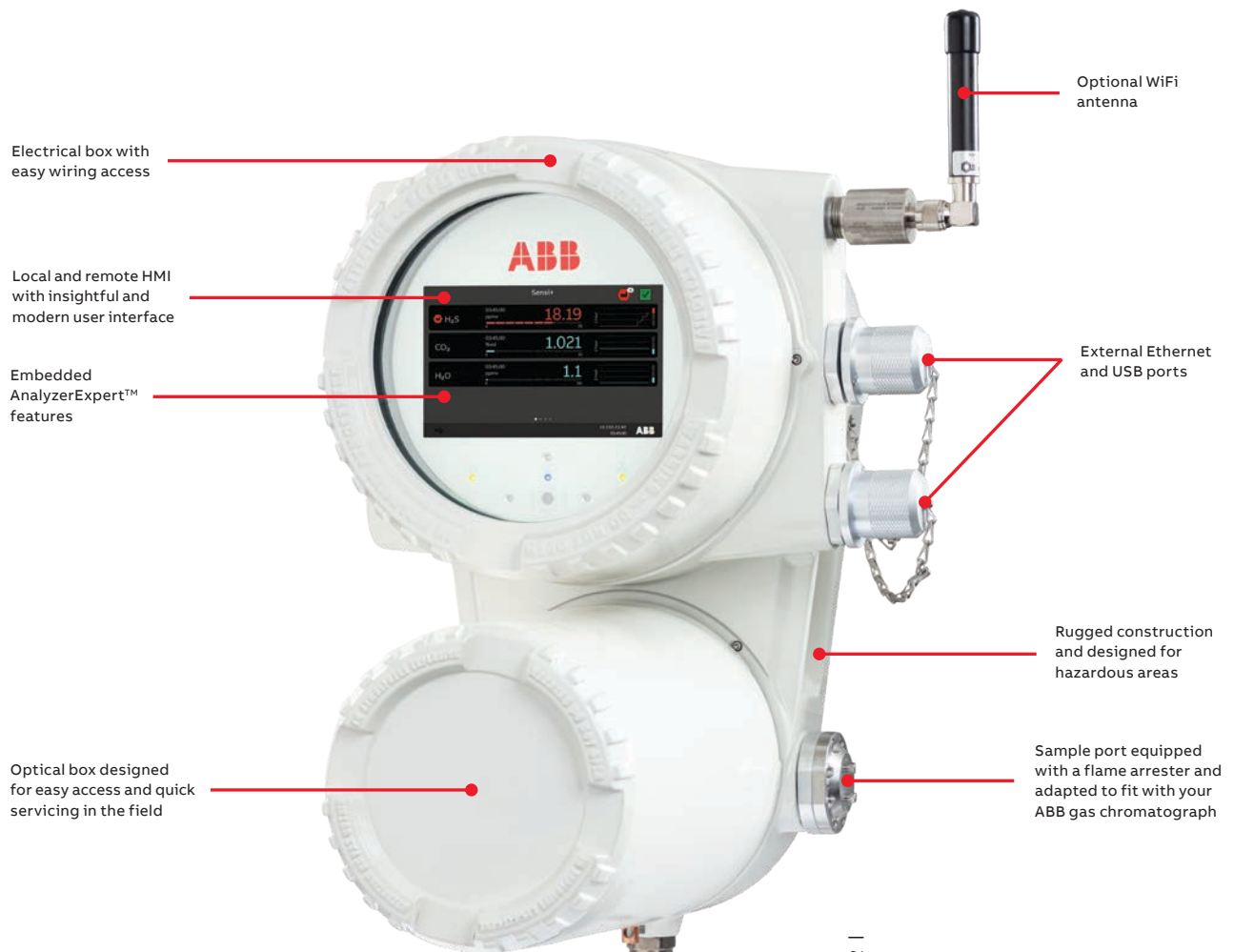
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01 Sensi+ analyzer

Low-maintenance, easy to service

Sensi+ is designed for easy serviceability. This analyzer was designed from the ground up to be maintained by personnel with little or no prior knowledge of spectroscopic instruments. Its modular design assures that, all replaceable parts are quickly accessible in the field.

Easy installation and commissioning for hazardous areas

With flame-proof and dual-seal design, the hazardous area compliant analyzer necessitates only a simple wallmount installation and process tie-in with no complex purging system. Needing no field calibration, a simple validation in the field can be done and the analyzer is ready to deliver fast and reliable measurements.



Intuitive and insightful user interface on a modern software platform

Sensi+ offers a simple and comprehensive user interface with AnalyzerExpert™ features for increased information and user experience

— 01 Local HMI main screen with multiple information in the blink of an eye

The Sensi+ modern user interface provides users with health data confidence that the system is operating reliably and allows fast, easy service.

Local HMI

Sensi+ is equipped with a 7-inch screen. Three informational LEDs and a gesture control system. The local HMI provides multiple views of detailed information:

- Measurement screen
- Alarms screen
- Advanced diagnostics
- System information
- ABB's Dynamic QR feature

The remote HMI is an HTML-based UI that provides in-depth information and configuration without the need of proprietary software. The remote HMI provides multiple access and menus such as:

- Measurement screen
- Settings and configurations of gas parameters, physical interfaces and general parameters
- Alarms display, acknowledgement and information
- Process events
- Reports and export of historical data
- Systems information

The Sensi+ analyzer is loaded with AnalyzerExpert™ features that provide expert actions and insights directly from your device. The expert is inside the device.

- Self-diagnostics
- Automated line-locking on spectrum
- Real-time cross-interference compensation
- Comprehensive alarms
- Metrics for health monitoring

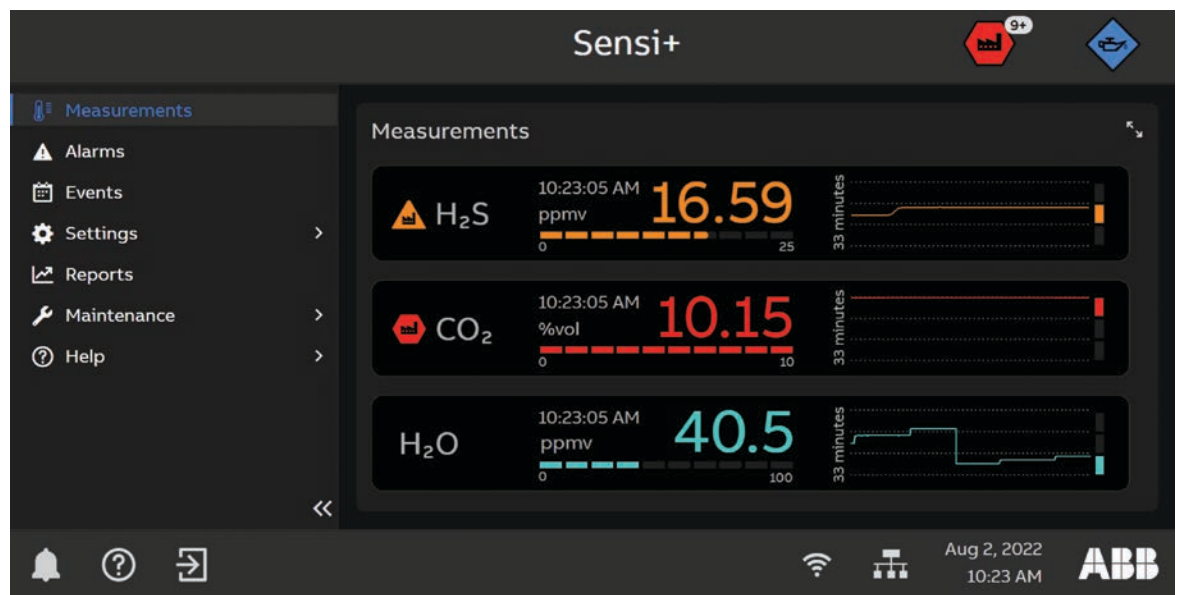




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