VAISALA

Measure, Monitor and Validate

IN PHARMACEUTICAL AND HIGH TECHNOLOGY CLEANROOMS

Instrumentation, Monitoring, and Services for Cleanrooms

Cleanrooms and other critical environments require high-performance environmental measurements to operate consistently and within specifications. Humidity and temperature measurement can be especially challenging in a cleanroom environment. Vaisala's accurate instruments and robust solutions address measurement challenges and help keep your cleanroom facilities running smoothly.

Continuous Monitoring

The Vaisala viewLinc Continuous Monitoring System (CMS) is designed for GxP-compliant and critical environments and monitors multiple parameters including temperature, relative humidity, CO_2, differential pressure, light, door switches, and more.

By combining Vaisala's viewLinc software, data loggers, and other measurement instruments, the system provides redundant data protection, long-term measurement accuracy, fail-safe alarming and gap-free records. Validatable software and loggers meet FDA 21 CFR Part 11, EU GMP Annex 11, and other regulatory requirements.

CMS services

- Installation
- Validation
- Mapping
- Calibration & Repairs
- Technical Support
- Support Plan
- Training

RFL100 Data Loggers use Vaisala's proprietary VaiNet wireless technology to monitor temperature, relative humidity, and carbon dioxide in cleanrooms, incubators, and other controlled environments. VaiNet provides reliable, long-range communication in complex, obstructed conditions without signal amplifiers or repeaters. All data are encrypted to ensure data integrity and security.

Vaisala's CAB100 instrument panel provides centralized integration of sensors with the viewLinc Continuous Monitoring System. The CAB100 integrates Vaisala's world-class sensors for monitoring humidity, temperature, differential pressure and other parameters into a simple, pre-configured cabinet. Configurable to your application requirements, select options for differential pressure transmitters, analog inputs for remote transmitters, and safety barriers to limit voltage in hazardous areas that require Intrinsically Safe devices. CAB100 devices can be changed or expanded as needed.

Indigo Transmitters and Smart Probes

Indigo 520 transmitter

Indigo 200 transmitter with GMP251 CO$_2$ probe

Indigo 200 transmitter with HMP1 T/RH probe

With robust transmitters, interchangeable smart probes, and optional Insight software, Vaisala's Indigo transmitters and sensors ensure accurate measurement, energy efficiency, and process quality. A modular design allows you to create the perfect fit for your measurement needs.

The Indigo500 transmitter features dual-probe support, with analog/digital/relay outputs, Power over Ethernet, a robust metal enclosure, and touchscreen display. Compatible with the viewLinc Continuous Monitoring System, the Indigo500 transmitter supports Modbus TCP/IP connection to viewLinc.

Indigo200 Features:

- Transmitter USB-C port allows easy connection with the Vaisala Insight PC software with a generic USB cable
- Numerical and graphical color display (optional non-display version for analog model)
- IP65 enclosure
- 24 V AC/DC power supply input
- Indigo201: 3 analog outputs (mA or V)
- Indigo202: RS-485 with Modbus® RTU
- 2 configurable relays

Indigo probe parameters:

- Humidity & Dew point
- Temperature
- Carbon dioxide
- Moisture in oil
- Vaporized hydrogen peroxide

GMP251 carbon dioxide probes provide %-level measurements (0–20 %CO$_2$) or the GMP252 for ppm-level measurements (0–10,000 ppm CO$_2$).

HMP1 Wall-mounted Humidity and Temperature probes provide relative humidity accuracy up to ±1 %RH and temperature accuracy up to 0.2 °C. Chemical purge provides superior chemical resistance and stability. Includes a traceable calibration certificate: up to six calibration points for humidity, one for temperature.

HPP270 series probes measure vaporized hydrogen peroxide. For accurate and repeatable measurement of vH$_2$O$_2$ bio-decontamination.

Differential Pressure Vaisala Differential Pressure Transmitters are designed especially for demanding cleanroom applications.

PDT101 is easy to mount on wall, DIN rail, or panel.

PDT102 with process valve actuator and test jacks.

Differential Pressure Transmitter PDT101

- DIN rail, panel or wall mountable with two ranges (Pa and in H$_2$O)
- Accessible zero and span adjustment potentiometers
- ¼" brass tubing connections
- Designed for critical and regulated environments

Differential Pressure Transmitter PDT102

- Easy calibration and monitoring without disturbing process tubes
- Ultrathin profile for DIN rail mount reduces installation and calibration costs
- High accuracy, two options; 0.25% or 0.50% of span
- Robust MEMS silicon sensor technology for high accuracy
- NIST traceable 9-point calibration with certificate
- Front-side accessible zero and span adjustment potentiometers

Indigo80 Handheld Indicator for field sampling and calibration, data analysis and diagnostics

Indigo80 Handheld Indicator with GMP252 and the HMP110 Humidity and Temperature Probe

Indigo300 Transmitter for Indigo-compatible, stand-alone smart probes

Handheld Meters

The Indigo80 is a compact, handheld indicator and data logger. Ideal for field sampling, data analysis and diagnostics, the Indigo80 enables measurements for multiple parameters, including: humidity, temperature, dew point, carbon dioxide, hydrogen peroxide vapor, moisture in oil. The Indigo80 handheld devices is a dual-probe, high-accuracy portable diagnostics and data logging tool. Easy to use, the devices charges quickly with USB-C, also used for data uploads and battery charging. The internal lithium-ion battery provides a typical operation time of 10 hours. The durable aluminum body is resistant to chemicals and dust and the menu-based user interface available in 10 languages. Live measurement data can be viewed as numbers or graphs and the intuitive user interface guides the user if needed.

Handheld Carbon Dioxide Meters

The Vaisala CARBOCAP® Carbon Dioxide Probes GMP252 and GMP251 probes are intelligent, stand-alone, probes for ppm or percentage measurements. Suitable for harsh and humid CO_2 measurement environments where stable and accurate CO_2 measurements are needed. The Indigo80 handheld meter has two probe inputs; Vaisala's relative humidity and dew point probes can also be used simultaneously with the CO_2 measurement. With has a menu-based interface, a graphical LCD display, and data logging capability, there are several probe options available, including traceable calibration to national standards (certificate included). To access logged data and configuration functionality, Indigo80 can be connected to Vaisala Insight PC software for Windows®. For more information, see www.vaisala.com/insight.

Fixed Transmitters

With flexible connectivity for relative humidity, dew point, CO_2, temperature, vaporized H_2O_2, and moisture in oil probes, the Indigo300 transmitters are pre-configured for up to three analog outputs (mA, V, or both) and easy to re-configure as measurement needs change.

- Arrives pre-configured and ready to use.

- Interchangeable probes for up to three simultaneous measurements.

- Numerical and graphical color display.

- Robust IP65 enclosure with back wiring for a clean installation.

- Push-button navigation for easy use.

- Cable extensions available for flexible probe placement up to 30m from transmitter.

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Please contact us at
www.vaisala.com/contactus

www.vaisala.com

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