

VAISALA

HVAC transmitters

Catalogue





Excellence in measurements

When reliability matters, sensors matter.

Reliable environments start with reliable measurements. From efficiency and comfort to compliance and long-term performance, accurate sensing forms the foundation of building performance.

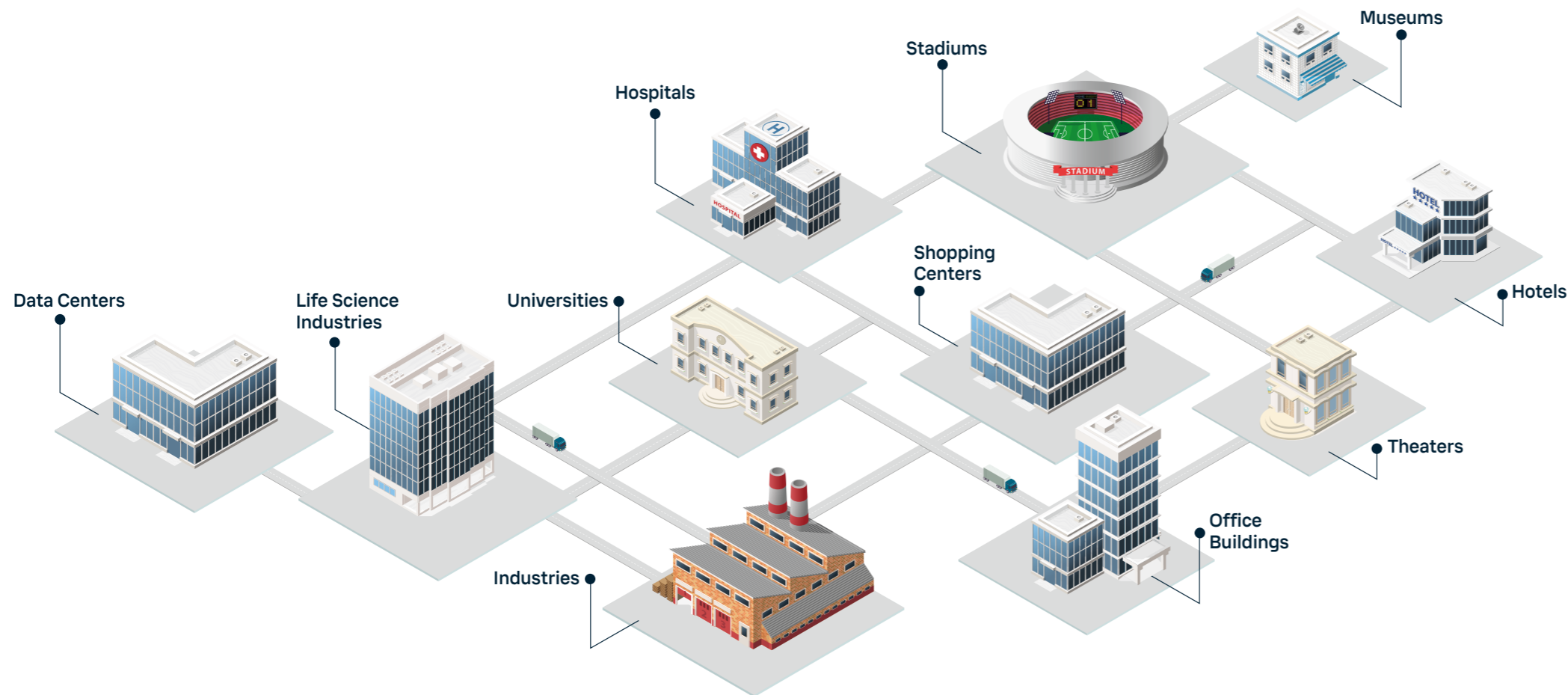
Creating and maintaining optimal indoor conditions - whether in mission-critical environments or commercial buildings - depends on sensors that perform accurately and consistently, every moment, in every application. Temperature, humidity, and other critical parameters continuously shape HVAC performance across controlled environments. When these measurements are stable and trustworthy, systems function precisely, efficiency improves, and buildings perform as intended.

Vaisala delivers trusted measurement solutions for buildings and critical environments.

As a committed partner to customers and building automation professionals worldwide, we provide confidence where reliability matters most. Our solutions are designed to deliver consistent accuracy and long-term stability, supporting precise control and dependable performance in every application.

We invite you to explore our portfolio - engineered to deliver dependable measurements with accuracy and ease.

Measurement solutions where it truly matters



Cleanrooms, Hospitals & Life-Science Buildings

In the healthcare and pharmaceutical industries, measurement accuracy is essential for ensuring product safety and regulatory compliance. Whether in cleanrooms, patient rooms, or storage facilities, all relevant parameters must be controlled, monitored, and verified.

Data Centers & Mission-Critical Buildings

HVAC sensors constitute an integral component in the management of building systems. In mission-critical facilities, such as data centers, the importance of these sensors becomes even more pronounced, given their potential to impact energy consumption and efficiency. The reliability of these sensors is critical to ensuring optimal control of building systems, be it in data halls or control rooms.

Commercial Buildings

In the realm of commercial buildings, reliable measurements play a critical role in ensuring optimal operations. Of paramount importance in these structures are energy efficiency, sustainability, as well as comfortable and healthy indoor conditions. This necessitates the use of high-reliability instruments with minimal drifting, as they serve to mitigate maintenance requirements and ensure smooth operation of all building systems. It is crucial to prioritize reliable measurements and invest in high-quality instruments to achieve optimal efficiency and minimize operational costs.



Manufacturing & Industrial Facilities





Manufacturing facilities and industrial facilities require high standards for measurements. Optimizing processes through precisely controlled indoor environments will increase efficiency and eliminate waste and variation. It is necessary to have high-quality HVAC sensors in special spaces, such as clean rooms or labs, as well as throughout the facility and its control room.

Room transmitters

Accuracy that lasts

Future-proof design combined with unbeatable measurement stability – the secret of low total cost of ownership of our products.





	HMW90 SERIES Humidity and Temperature Transmitters	TMW90 SERIES Temperature Transmitters	GMW90 SERIES Carbon Dioxide, Humidity and Temperature Transmitters
			
INSTALLATION	Wall-mount	Wall-mount	Wall-mount
OUTPUT PARAMETERS	Relative humidity Temperature Dew point / frost point temperature Wet bulb temperature Enthalpy Mixing ratio Absolute humidity Dew point depression	Temperature	Carbon dioxide Relative humidity Temperature Dew point/frost point temperature Wet bulb temperature Enthalpy Mixing ratio Absolute humidity Dew point depression
OUTPUT OPTIONS	4...20 mA loop powered 0...5/0...10 V, optional relay Modbus RTU	4...20 mA loop powered 0...5/0...10 V, optional relay	4...20 mA 0...5/0...10 V Modbus RTU
DETAILS	Accuracy $\pm 1.7\%$ Rh, $\pm 0.2^\circ\text{C}$ ($\pm 0.36^\circ\text{F}$) Stability $\pm 0.5\%$ Rh /year Display option IP30 enclosure Calibration certificate included	Accuracy $\pm 0.2^\circ\text{C}$ ($\pm 0.36^\circ\text{F}$) Display option IP30 enclosure Calibration certificate included	Accuracy $\pm 1.7\%$ Rh, $\pm 0.2^\circ\text{C}$ ($\pm 0.36^\circ\text{F}$) ± 50 ppm at 1000 ppm CO ₂ Stability $\pm 0.5\%$ Rh /year, ± 75 ppm CO ₂ /5 years CO ₂ range 0...5 000 ppm Display option LED CO ₂ indication option IP30 enclosure Calibration certificate included
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	HMW82/83 Humidity and Temperature Transmitters	TMW82 Temperature Transmitters	GMW83/84/86 Carbon Dioxide, Humidity and Temperature Transmitters	XMW85 Carbon Dioxide, Humidity and Temperature Transmitter
				
INSTALLATION	Wall-mount	Wall-mount	Wall-mount	Wall-mount
OUTPUT PARAMETERS	Relative humidity Temperature	Temperature	Carbon dioxide Relative humidity Temperature	Carbon dioxide Relative humidity Temperature
OUTPUT OPTIONS	4...20 mA loop powered 0...10 V	4...20 mA loop powered	4...20 mA 0...10 V	Modbus RTU
DETAILS	Accuracy $\pm 3\%$ Rh, $\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$) IP30 enclosure	Accuracy $\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$) IP30 enclosure	Accuracy ± 60 ppm at 1000 ppm CO ₂ , $\pm 3\%$ Rh, $\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$) Stability ± 15 ppm + 2 % of CO ₂ reading /5 years CO ₂ range 0...2000 ppm Display option (GMW83) LED CO ₂ indication option (GMW83A) IP30 enclosure	Accuracy ± 60 ppm at 1000 ppm CO ₂ , $\pm 3\%$ Rh, $\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$) Stability ± 15 ppm + 2 % of CO ₂ reading /5 years CO ₂ range 0...2000 ppm Display option IP30 enclosure
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Wall transmitters

When reliability is a priority

Transmitters designed for demanding environments – prestigious for reliability and unrivaled measurement performance.

	ORIGO10 SERIES	HMW110 SERIES Humidity and Temperature Transmitters	TMW110 SERIES Temperature Transmitters	HMW87 Humidity and Temperature Transmitter
				
INSTALLATION	Wall-mount, duct-mount, DIN-rail, magnet	Wall-mount	Wall-mount	Wall-mount
OUTPUT PARAMETERS	As per connected probe: Relative humidity Temperature Dew point / frost point temperature Wet bulb temperature Enthalpy Absolute humidity Mixing ratio Carbon dioxide	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Temperature	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy
OUTPUT OPTIONS	4...20 mA loop powered 4...20 mA, 0...5/10 V Modbus RTU BACnet MS/TP	4...20 mA loop powered Modbus RTU	4...20 mA loop powered Modbus RTU	Modbus RTU
DETAILS	Accuracy as per probe, up to ±1% Rh, ±0.1 °C (±0.18 °F) Display option IP65 enclosure Interchangeable probes Cable probe option Duct mounting kit option Calibration certificate	Accuracy ±2% Rh, ±0.2 °C (±0.36 °F) Stability ±0.5 %RH /year Display option IP65 enclosure M12 connector option Calibration certificate	Accuracy ±0.2 °C (±0.36 °F) Display option IP65 enclosure M12 connector option Calibration certificate	Accuracy ±3% Rh, ±0.3 °C (±0.54 °F) Display option IP65 enclosure
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	HMW88/89 Humidity and Temperature Transmitters	TMW88 Temperature Transmitters	GMW87/88 Carbon Dioxide Transmitters	PDT101 Differential Pressure Transmitters
				
INSTALLATION	Wall-mount	Wall-mount	Wall-mount	Wall-mount / DIN-rail
OUTPUT PARAMETERS	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Temperature	Carbon dioxide	Differential pressure (air)
OUTPUT OPTIONS	4...20 mA loop powered 0...10 V	4...20 mA loop powered	4...20 mA, 0...10 V Modbus RTU (GMW87)	4...20 mA 0...5/10 V
DETAILS	Accuracy ±3% Rh, ±0.3 °C (±0.54 °F) Display option IP65 enclosure	Accuracy ±0.3 °C (±0.54 °F) IP65 enclosure	Accuracy ±60 ppm at 1000 ppm CO ₂ Stability ±15 ppm + 2 % of CO ₂ reading /5 years CO ₂ range 0...5000 ppm IP64 enclosure	Accuracy 0.4% / 1% of span Unidirectional / bidirectional models Optional pressure ranges IP40 enclosure
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Origo10 series transmitters

Modular measurement solutions for HVAC applications

The Origo10 Series comprises a versatile selection of flexible, multi-purpose HVAC transmitters. Origo transmitters are designed for smooth, effortless operation and maintenance through exchangeable measurement probes and modules.

Featuring exceptionally high reliability and excellent longterm measurement stability, these modular devices are the ideal choice for buildings and critical spaces where precise and reliable control and monitoring of HVAC systems are essential.

Interchangeable measurement probes

The Origo10 series includes humidity, temperature, carbon dioxide, and dew point measurements models with interchangeable probes.

A wide selection of compatible probes is available to meet the requirements of different applications.

In particular, the XMP10 humidity and temperature probes provide multiple RH accuracy options - 1%, 1.5%, 2%, and 3% RH - allowing you to choose the level of measurement accuracy best suited to your application.

Origo10 transmitters are available as two main models with several output options.

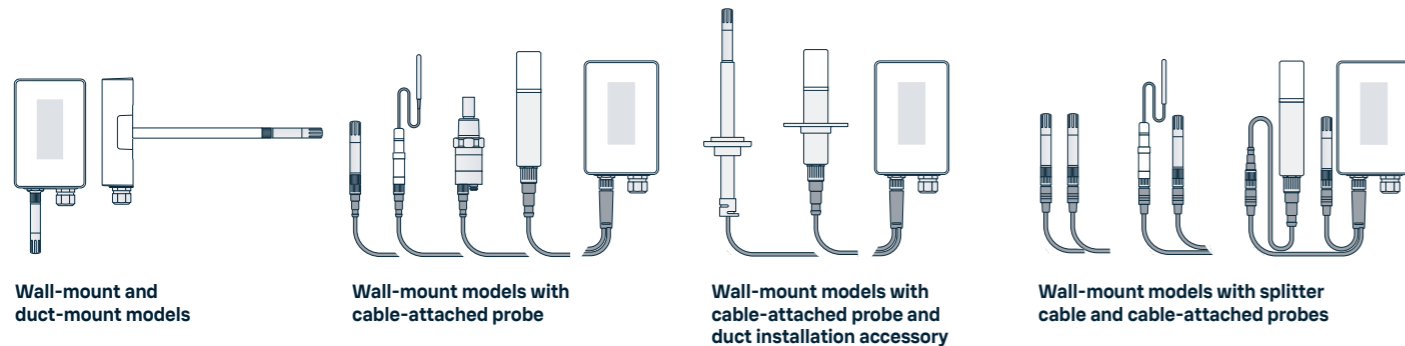
ORIGO10A

RH, T, CO₂, Td
3 x analog output
(4...20mA, 0...5/10V)
Modbus RTU
BACnet MS/TP
Relay output option
Binary input option
Two-probe option

ORIGO10L

RH, T
2 x analog output
(4...20mA,
loop powered)

RANGE OF PRODUCT CONFIGURATIONS



Wall-mount and duct-mount models

Wall-mount models with cable-attached probe

Wall-mount models with cable-attached probe and duct installation accessory





Wall-mount models with splitter cable and cable-attached probes






Duct/immersion transmitters

For the premium performance





With our top-of-the-line sensors you can always trust the measurement. It is the best possible input to your control loop.





	ORIGO10 SERIES	HMD60 SERIES Humidity and Temperature Transmitters	TMD60 SERIES Temperature Transmitters	HMD110/TMD110 SERIES Humidity and Temperature Transmitters
				
INSTALLATION	Wall-mount, Duct-mount, DIN-rail, magnet	Duct-mount	Duct-mount	Duct-mount
OUTPUT PARAMETERS	As per connected probe: Relative humidity Temperature Dew point / frost point temperature Wet bulb temperature Enthalpy Absolute humidity Mixing ratio	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy Absolute humidity Mixing ratio	Temperature	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy
OUTPUT OPTIONS	4...20 mA loop powered 4...20 mA, 0...5/10 V Modbus RTU BACnet MS/TP	4...20 mA loop powered 0...10 V Modbus RTU BACnet MS/TP	4...20 mA loop powered	4...20 mA loop powered Modbus RTU
DETAILS	Accuracy as per probe, up to ±1% Rh, ±0.1 °C (±0.18 °F) Display option IP65 enclosure Interchangeable probes Calibration certificate	Accuracy ±1.5% Rh, ±0.1 °C (±0.18 °F) Stability ±0.5 %RH /year Metal enclosure & probe IP66 (NEMA4X) enclosure Optional probe lengths 25 cm / 10 cm (10" / 4") Calibration certificate	Accuracy ±0.1 °C (±0.18 °F) Metal enclosure & probe IP66 (NEMA4X) enclosure Optional probe lengths 25 cm / 10 cm (10" / 4") Calibration certificate	Accuracy ±2% Rh, ±0.2 °C (±0.36 °F) Stability ±0.5 %RH /year Display option IP65 enclosure Calibration certificate
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GMD110 SERIES Carbon Dioxide Transmitters	TMI110 SERIES Temperature Transmitters	HMD82/83, TMD82 Humidity and Temperature Transmitters
		
Duct-mount	Immersion type (in thermowell), or duct-mount	Duct-mount
Carbon dioxide	Temperature	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy
4...20 mA 0...10 V Modbus RTU	4...20 mA loop powered Modbus RTU	4...20 mA loop powered 0...10 V
Accuracy ±40 ppm CO ₂ Stability ±60 ppm CO ₂ /year CO ₂ ranges 2000/5000/10000 ppm IP65 enclosure Calibration certificate	Accuracy ±0.1 °C Probe lengths 50/100/150/200 mm Thermowells available IP65 enclosure Calibration certificate	Accuracy ±3% Rh, ±0.3 °C (±0.54 °F) Display option IP65 enclosure
» DATASHEET	» DATASHEET	» DATASHEET

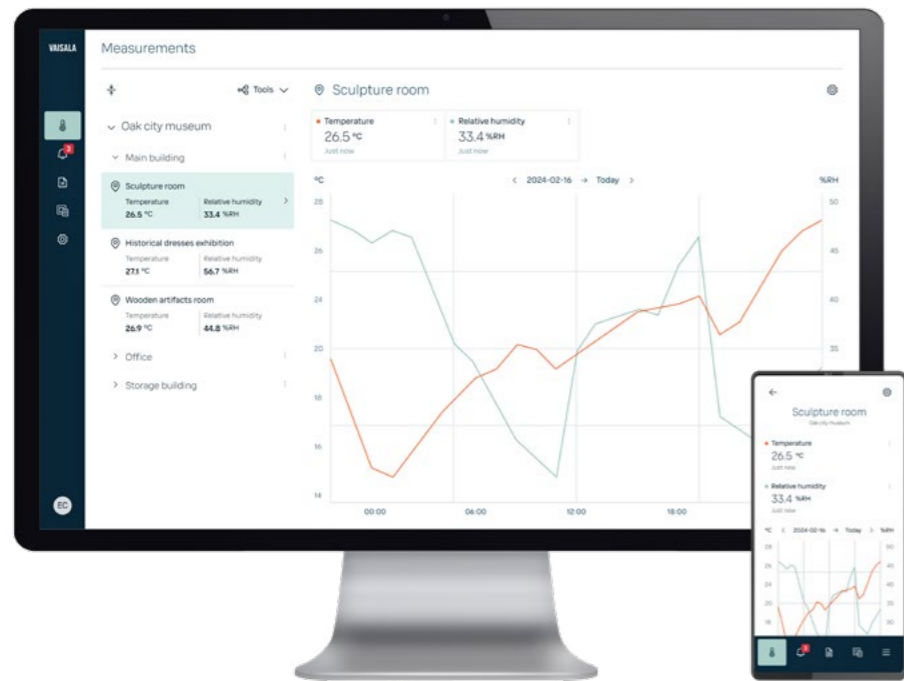
Compact probes

Outdoor and weather transmitters

	XMP10 SERIES	HMP110/113/115	HMP60/63	TMP115
				
INSTALLATION	Used with transmitters and loggers, or as miniature transmitters	Used with transmitters and loggers, or as miniature transmitters	Used with transmitters and loggers, or as miniature transmitters	Used with transmitters and loggers, or as miniature transmitters
OUTPUT PARAMETERS	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy Mixing ratio Absolute humidity	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy Mixing ratio Absolute humidity	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Temperature
OUTPUT OPTIONS	0...1/0...2.5/0...5/1...5 V Modbus RTU	0...1/0...2.5/0...5/1...5 V Modbus RTU	0...1/0...2.5/0...5/1...5 V Modbus RTU	Modbus RTU
DETAILS	RH accuracy options: ±1 %, ±1.5 %, ±2 %, ±3 %RH T accuracy ±0.1 °C (±0.18 °F) Stability ±0.5 %RH / year M8 4-pin connector IP65 stainless steel / plastic options Calibration certificate (except for 3 %RH models)	Accuracy ±1.5% Rh, ±0.1 °C (±0.18 °F) Stability ±0.5 %Rh / year M8 4-pin connector IP65 (stainless steel), IP54 (plastic) Calibration certificate	Accuracy ±3% Rh, ±0.5 °C (±0.9 °F) M8 4-pin connector IP65 (stainless steel), IP54 (plastic)	Accuracy up to ±0.25 °C (±0.45 °F) Range -196...+150 °C IP67 (sensor tip), IP65 (probe body) Sensor cable 3m Calibration certificate
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	HMS110 SERIES Humidity and Temperature Transmitters	HMS82/83 & TMS82 Humidity and Temperature Transmitters	GMP252 Carbon Dioxide Probe with DTR250 Radiation Shield	WXT530 SERIES Weather Transmitters
				
INSTALLATION	Outdoor model with integrated radiation shield	Outdoor model with integrated radiation shield	Outdoor model with radiation shield	Outdoor model with integrated radiation shield
OUTPUT PARAMETERS	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Carbon dioxide	Air pressure Temperature Humidity Rainfall Wind speed Wind direction
OUTPUT OPTIONS	4...20 mA loop powered Modbus RTU	4...20 mA loop powered 0...10 V	4...20 mA 0...10 V Modbus RTU	Modbus RTU
DETAILS	Accuracy ±2% Rh, ±0.2 °C (±0.36 °F) Stability ±0.5 %RH /year IP65 rating Calibration certificate	Accuracy ±3% Rh, ±0.3 °C (±0.54 °F) IP65 rating	Accuracy ±40 ppm at 400 ppm CO ₂ Stability ±60 ppm CO ₂ /year CO ₂ ranges 0...3000/3000/5000 ppm	Accuracy ±0.5 hPa, ±0.3 °C (±0.54 °F), ±3% Rh, ±3% at 10 m/s
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Wireless monitoring



Vaisala Jade Smart Cloud seamlessly integrates local and remote monitoring into a single system, offering unparalleled flexibility and convenience. This ensures that users have continuous, reliable access to critical measurement data, enhancing operational efficiency and peace of mind.

MONITORING

Continuously track and visualize measurement values in real-time, providing immediate insights into your processes.

HISTORY DATA

Track long-term data trends through interactive, zoomable graphs, which help in visualizing trends and understanding process and environmental conditions over time.

ALERTING

Vaisala Jade Smart Cloud provides a flexible and reliable alerting feature to ensure timely notifications when conditions deviate from set thresholds.

REPORTING

The easy-to-use reporting feature provides users with detailed and accessible data insights. Reports are simple to generate quickly, without extensive training or technical knowledge.

Life cycle services

Compatible devices



RFL100 & AP10

VaiNet data loggers and access points for wireless data logging

- Temperature, humidity and CO₂
- > 100m signal range
- Up to 32 loggers per AP10
- Ethernet port (PoE) in AP10
- Onboard memory (30d)
- Gap-free data
- Interchangeable probes

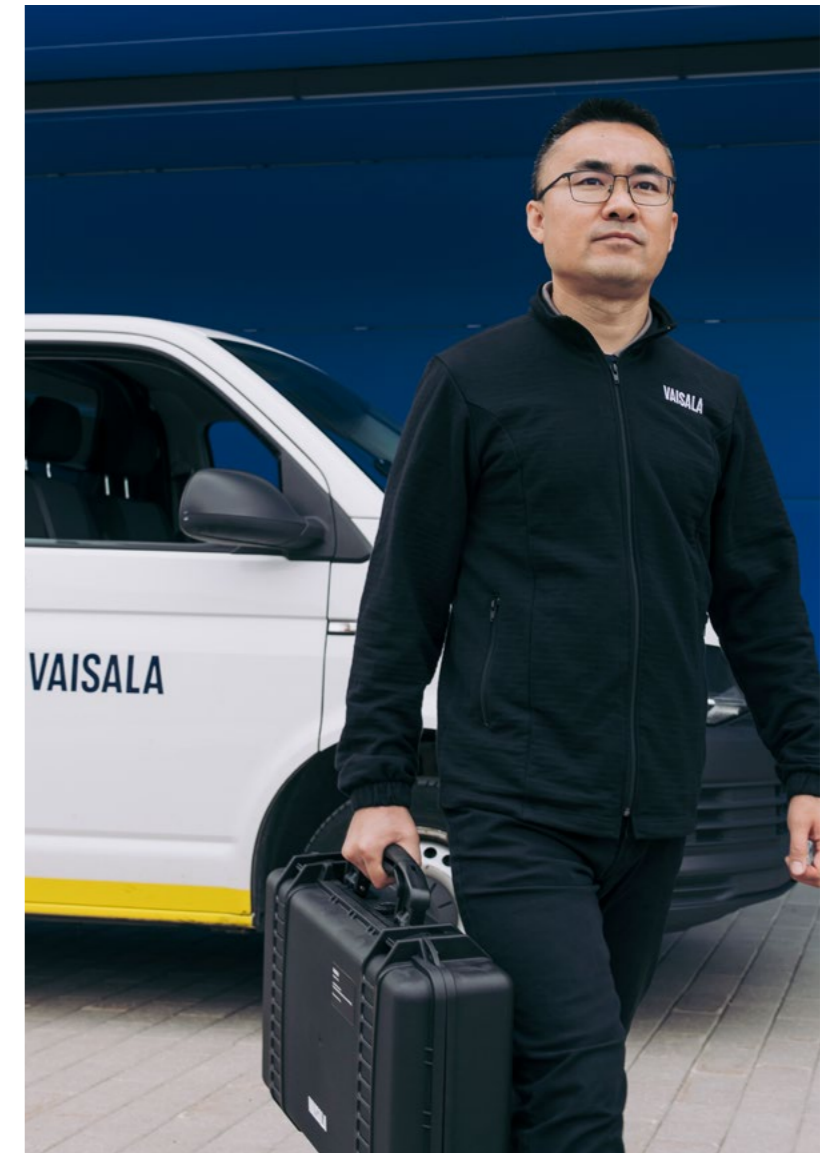
Vaisala is your trusted lifecycle services partner

As the manufacturer we offer more than just calibration of your Vaisala instruments – we support you throughout your entire measurement journey with high-quality services that minimize total cost of ownership and maximize long-term measurement stability.

Our lifecycle services cover every stage of the solution lifecycle, from configuration and technical support to calibrations and long-term care agreements for ultimate peace of mind. With all our services, you benefit from vast global expertise delivered at a local level.

Whatever your business drivers or regulatory requirements, you can count on our expert team to provide timely, professional service using their deep knowledge of your equipment and processes.

» [Discover Vaisala's services](#)





Sustainability in the heart of our business

Vaisala's premium measurement solutions enhance safety, efficiency, and decisionmaking – for a sustainable future on our planet.

The heart of Vaisala's sustainability lies in the positive impact of our products, as they help our customers, for example, to increase energy efficiency and reduce emissions.

» [Learn more about our sustainability.](#)



Global coverage with local presence

As a global leader in industrial, weather and environmental measurements, we provide reliable, accurate and innovative products and solutions that enabling better decision-making, increased productivity, and improved safety and quality.

Customers all over the world and in a multitude of industries use our measurement solutions. Everywhere from forecasting weather and making sure it is safe for your flight to take off, to staying ahead of power outages or monitoring incubators for premature children in hospitals, you can find Vaisala's premium measurement solutions in action all over the world.

» [Find your local contact.](#)

Available online 24/7



Our products are easily available, any time, through the Vaisala Online Store. We have fast deliveries on all new instrument as well as spare part online orders. All instruments are made to order and calibrated just before shipment.

» store.vaisala.com



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