



# HVAC TRANSMITTERS

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Catalogue

**VAISALA**

# EXCELLENCE IN MEASUREMENTS



## For cutting-edge SOLUTIONS

Our selection of temperature, humidity and carbon dioxide transmitters are perfect for HVAC monitoring and controls, such as building automation systems, demand-controlled ventilation and building management systems.



## Unrivalled PERFORMANCE

Accurate measurements are essential for healthy indoor air and improving the energy efficiency of buildings. Sensors and transmitters from Vaisala are renowned for their unrivalled performance, reliable results, and low total cost of ownership.



## Healthy and SUSTAINABLE

The unique, cutting edge Vaisala sensor technologies are manifested throughout our versatile range of products. The transmitters have an exceptionally long lifetime and excellent measurement stability, thus being practically maintenance free. These are among the many reasons why Vaisala's products are a sustainable choice.



## 5-year WARRANTY

We are confident in the lasting quality and long lifetime of our measurement instruments. We are offering a standard warranty period of five years on our transmitters for building automation.

### 5-YEAR WARRANTY ON SELECTED HVAC TRANSMITTERS

Vaisala's high-quality, reliable measurement instruments offer an exceptionally long lifetime, need minimal maintenance, and provide excellent measurement stability. This makes them the ideal choice for reliable HVAC control. Our transmitters for building automation are covered by 5-year warranty.

See all warranty terms:  
[www.vaisala.com/warranty](http://www.vaisala.com/warranty)









# ROOM TRANSMITTERS

Accuracy that lasts

The secret of the long lifetime of our transmitters: The winning combination of unique measurement technology and careful future-proof design of instruments. These products with exceptionally long lifetime and excellent measurement stability are practically maintenance free, and a sustainable choice.

The general purpose HVAC transmitters are renowned for their long lifetime and low total cost of ownership, their reliability and negligible maintenance needs throughout the product life cycle.

	<b>HMW90 Series</b> Humidity and Temperature Transmitters	<b>TMW90 Series</b> Temperature Transmitters	<b>GMW90 Series</b> Carbon Dioxide, Humidity and Temperature Transmitters
			
<b>INSTALLATION</b>	Wall-mount	Wall-mount	Wall-mount
<b>OUTPUT PARAMETERS</b>	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
<b>OUTPUT OPTIONS</b>	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
<b>DETAILS</b>	IP30 enclosure Display option Optional decorative covers User exchangeable measurement modules available Accuracy $\pm 1.7\%$ Rh, $\pm 0.2^\circ\text{C}$ ( $\pm 0.36^\circ\text{F}$ ) Calibration certificate included	IP30 enclosure Display option Optional decorative covers User exchangeable measurement modules available Accuracy $\pm 0.2^\circ\text{C}$ ( $\pm 0.36^\circ\text{F}$ ) Calibration certificate included	IP30 enclosure Display option Optional LED CO <sub>2</sub> indication Optional decorative covers User exchangeable measurement modules available CO <sub>2</sub> measurement range 0...5 000 ppm Accuracy $\pm 1.7\%$ Rh, $\pm 0.2^\circ\text{C}$ ( $\pm 0.36^\circ\text{F}$ ) +50 ppm at 1000 ppm CO <sub>2</sub> Calibration certificate included
<b>READ MORE</b>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>

	<b>HMW82/83</b> Humidity and Temperature Transmitters	<b>TMW82</b> Temperature Transmitters	<b>GMW83/84/86</b> Carbon Dioxide, Humidity and Temperature Transmitters
			
<b>INSTALLATION</b>	Wall-mount	Wall-mount	Wall-mount
<b>OUTPUT PARAMETERS</b>	Relative humidity Temperature	Temperature	Carbon dioxide Relative humidity Temperature
<b>OUTPUT OPTIONS</b>	4...20 mA loop powered 0...10 V	4...20 mA loop powered	4...20 mA 0...10 V
<b>DETAILS</b>	IP30 enclosure Accuracy $\pm 3\%$ Rh, $\pm 0.5^\circ\text{C}$ ( $\pm 0.9^\circ\text{F}$ ) Display option	IP30 enclosure Accuracy $+0.5^\circ\text{C}$ ( $\pm 0.9^\circ\text{F}$ )	IP30 enclosure Display option (GMW83) LED CO <sub>2</sub> indication (GMW83A) Range: 0...2000 ppm Accuracy $\pm 60$ ppm at 1000 ppm CO <sub>2</sub> , $\pm 3\%$ Rh, $\pm 0.5^\circ\text{C}$ ( $\pm 0.9^\circ\text{F}$ )
<b>READ MORE</b>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>






Watch the installation and calibration video of the HMW90 series to learn how easy it is: [www.vaisala.com/HMW90](http://www.vaisala.com/HMW90)

# WALL TRANSMITTERS

Perfect for demanding environments

The unique, cutting edge Vaisala sensor technologies are manifested throughout our versatile range of products. The measurement technology is known for superior performance even in challenging environments. Prestigious for unrivalled performance and reliability, our sensors and transmitters stand out for low total cost of ownership.

	<b>HMT120/130 Series</b> Humidity and Temperature Transmitters	<b>TMT120/130 Series</b> Temperature Transmitters	<b>HMW110 Series</b> Humidity and Temperature Transmitters
			
<b>INSTALLATION</b>	Wall-mount, duct-mount, outdoor	Wall-mount, duct-mount, outdoor	Wall-mount
<b>OUTPUT PARAMETERS</b>	Relative humidity Temperature Dew point / frost point temperature Wet bulb temperature Enthalpy Mixing ratio	Temperature	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy
<b>OUTPUT OPTIONS</b>	4...20 mA loop powered 0...1/0...5/0...10 V	4...20 mA loop powered 0...1/0...5/0...10 V	4...20 mA loop powered Modbus RTU
<b>DETAILS</b>	IP65 Available with fixed and remote probe Interchangeable probes Accessories for duct/outdoor installation Accuracy $\pm 1.5\%$ Rh, $\pm 0.1$ °C ( $\pm 0.18$ °F) Calibration certificate included Display option	IP65 Interchangeable probes Accuracy $\pm 0.1$ °C ( $\pm 0.18$ °F) Calibration certificate included Display option	IP65 Accuracy $\pm 2\%$ Rh, $\pm 0.2$ °C ( $\pm 0.36$ °F) Calibration certificate included Display option Optional M12 connector available
<b>READ MORE</b>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>

	<b>TMW110 Series</b> Temperature Transmitters	<b>HMW88/89</b> Humidity and Temperature Transmitters	<b>TMW88</b> Temperature Transmitters	<b>GMW87/88</b> Carbon Dioxide Transmitters
				
<b>INSTALLATION</b>	Wall-mount	Wall-mount	Wall-mount	Wall-mount
<b>OUTPUT PARAMETERS</b>	Temperature	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Temperature	Carbon dioxide
<b>OUTPUT OPTIONS</b>	4...20 mA loop powered Modbus RTU	4...20 mA loop powered 0...10 V	4...20 mA loop powered 0...10 V	4...20 mA, 0...10 V Modbus RTU (GMW87)
<b>DETAILS</b>	IP65 enclosure Display option Accuracy $\pm 0.3$ °C ( $\pm 0.54$ °F) Optional M12 connector available	IP65 enclosure Display option Accuracy $\pm 3\%$ Rh, $\pm 0.3$ °C ( $\pm 0.54$ °F)	IP65 enclosure Accuracy $\pm 0.3$ °C ( $\pm 0.54$ °F)	IP64 enclosure Range: 0...5000 ppm Accuracy +60 ppm at 1000 ppm CO <sub>2</sub>
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## UNIQUE SENSOR TECHNOLOGY INSIDE





The unique, cutting-edge Vaisala sensor technologies are manifested throughout our versatile range of products. Accuracy and long-term stability of Vaisala sensors is absolutely the best of class within the industry. When it comes to reliable measurements, Vaisala products are in the league of their own.

# DUCT/IMMERSION TRANSMITTERS

Reliable measurements where it truly matters

When reliability matters, the measurements matter. Maintaining as-designed indoor conditions with minimized consumption of energy requires precision and reliability in every piece in the chain. Although influenced by many variables, eventually the control of your HVAC systems can be only as precise as your measurements are.

	<b>HMD60 Series</b> Humidity and Temperature Transmitters	<b>TMD60 Series</b> Temperature Transmitters	<b>HMD110 Series</b> Humidity and Temperature Transmitters	<b>TMD110 Series</b> Temperature Transmitters
				
<b>INSTALLATION</b>	Duct-mount	Duct-mount	Duct-mount	Duct-mount
<b>OUTPUT PARAMETERS</b>	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	Temperature
<b>OUTPUT OPTIONS</b>	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	4...20 mA loop powered Modbus RTU
<b>DETAILS</b>	IP66 (NEMA4X) A robust metal enclosure Stainless steel probes Probe length options 25 cm and 10 cm (10" and 4") Accuracy $\pm 1.5\%$ Rh, $\pm 0.1$ °C ( $\pm 0.18$ °F) Calibration certificate included	IP66 (NEMA4X) A robust metal enclosure Stainless steel probes Probe length options 25 cm and 10 cm (10" and 4") Accuracy $\pm 0.1$ °C ( $\pm 0.18$ °F) Calibration certificate included	IP65 Accuracy $\pm 2\%$ Rh, $\pm 0.2$ °C ( $\pm 0.36$ °F) Calibration certificate included Display option	IP65 Accuracy $\pm 0.2$ °C ( $\pm 0.36$ °F) Calibration certificate included Display option
<b>READ MORE</b>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>

	<b>GMD110 series</b> Carbon Dioxide Transmitters	<b>TMI110 series</b> Temperature Transmitters	<b>HMD82/83, TMD82</b> Humidity and Temperature Transmitters	<b>PDT101</b> Differential Pressure Transmitters
				
<b>INSTALLATION</b>	Duct-mount	Immersion type, in thermowell	Duct-mount	Wall-mount / DIN-rail
<b>OUTPUT PARAMETERS</b>	Carbon dioxide	Temperature of liquid	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Differential pressure
<b>OUTPUT OPTIONS</b>	4...20 mA 0...10 V Modbus RTU	4...20 mA loop powered Modbus RTU	4...20 mA loop powered Modbus RTU	4...20 mA 0...5/10 V
<b>DETAILS</b>	IP65 Accuracy $\pm 40$ ppm CO2 Calibration certificate included	IP65 Accuracy $\pm 0.1$ °C Probe lengths 100 / 150 / 200 mm Thermowells available Calibration certificate included Display option	IP65 Accuracy $\pm 2\%$ Rh, $\pm 0.2$ °C ( $\pm 0.36$ °F) Calibration certificate included Display option	IP40 Accuracy 0.4% / 1% of span Unidirectional/bidirectional options Optional pressure ranges Easy mounting
<b>READ MORE</b>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>

# OUTDOOR AND WEATHER TRANSMITTERS





For all HVAC applications

# HANDHELD METERS

For spot-checking and calibration

Vaisala as a global leader in environmental and industrial measurements offers a unique selection of indoor and outdoor instruments for HVAC applications. The versatile outdoor and weather instruments provide the best possible information on prevailing outdoor conditions.

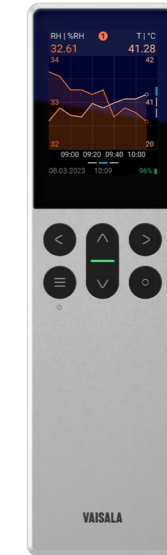
Vaisala Indigo80 Handheld Indicator is an industrial-grade portable diagnostics tool. Accommodating up to two Vaisala measurement probes, Indigo80 is ideal for spotchecking and process monitoring, as well as for configuring, troubleshooting, calibrating, and adjusting Vaisala Indigo-compatible probes and transmitters.

	<b>HMS110 Series</b> Humidity and Temperature Transmitters	<b>HMS82/83 &amp; TMS82/83</b> Humidity and Temperature Transmitters	<b>GMP252</b> Carbon Dioxide Probe with <b>DTR250</b> Radiation Shield	<b>WXT530 Series</b> Weather Transmitters
				
<b>INSTALLATION</b>	Outdoor model with integrated radiation shield	Outdoor model with integrated radiation shield	Outdoor model with radiation shield	Outdoor model with integrated radiation shield
<b>OUTPUT PARAMETERS</b>	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
<b>OUTPUT OPTIONS</b>	4...20 mA 0...10 V Modbus RTU	4...20 mA 0...10 V	4...20 mA 0...10 V Modbus RTU	Modbus RTU
<b>DETAILS</b>	Ingress protection IP65 Accuracy ±2% Rh, ±0.2 °C (±0.36 °F) Calibration certificate included	Ingress protection IP65 Accuracy ±3% Rh, ±0.3 °C (±0.54 °F)	CO <sub>2</sub> measurement ranges: 0...2000/3000/5000 ppm Accuracy ±40 ppm at 400 ppm CO <sub>2</sub>	Accuracy ±0.5 hPa, ±0.3 °C (±0.54 °F), ±3% Rh, ±3% at 10 m/s
<b>READ MORE</b>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>	<a href="#">DATASHEET</a>

## FEATURES

- Dual-probe, high-accuracy portable diagnostics and data logging tool. Log up to a month's worth of measurement data.
- Industry standard USB-C interface for data uploads and battery charging. Lithium-ion battery provides a typical operation time of 10 hours.
- Robust, durable aluminum body is resistant to chemicals and dust.
- Multilingual, menu-based user interface available in 10 languages. View live measurement data as numbers or graphs.
- Intuitive user interface that guides the user if needed. Designed to be easy to use.

### Indigo80 Handheld Indicator



#### OPERATING ENVIRONMENT

Temperature -20 ... +50 °C (-4 ... +122 °F)  
Humidity 20 ... 85 %RH, when Ta ≤ +40 °C (+104 °F)

#### MAX. NUMBER OF CONNECTED PROBES

2

#### DATA LOGGING CAPACITY

Up to 5.5 million real-time data values

#### LOGGING INTERVAL

1 s ... 12 h

#### LOGGING DURATION

1 min ... memory full

#### ALARM

Audible alarm function

#### SUPPORTE LANGUAGES

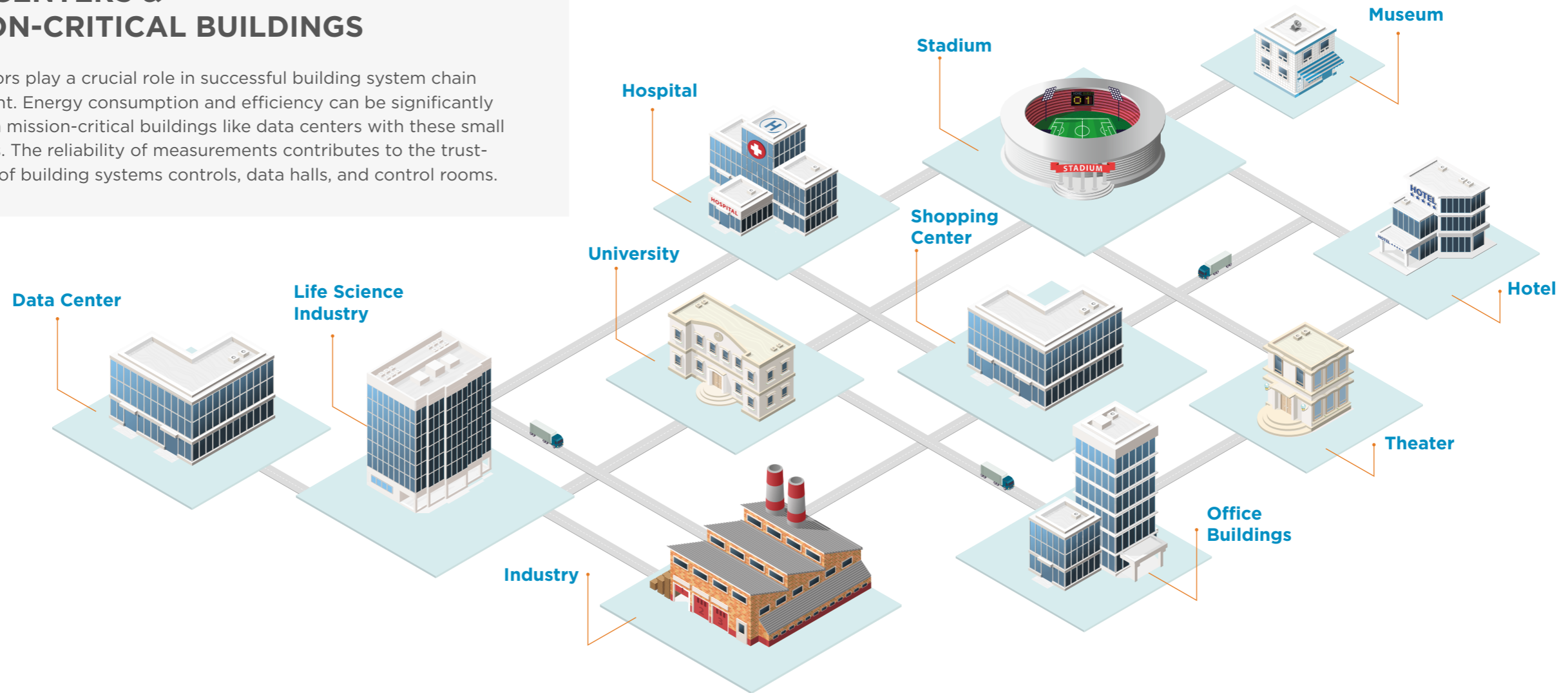
English, Chinese, Finnish, French, German, Italian, Japanese, Portuguese, Spanish, Swedish

#### READ MORE

[DATA SHEET](#)  
[VAISALA.COM](#)

## DATA CENTERS & MISSION-CRITICAL BUILDINGS

HVAC sensors play a crucial role in successful building system chain management. Energy consumption and efficiency can be significantly improved in mission-critical buildings like data centers with these small instruments. The reliability of measurements contributes to the trustworthiness of building systems controls, data halls, and control rooms.



## 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.

## COMMERCIAL BUILDINGS

A reliable measurement system is essential to a commercial building's success. Buildings in the commercial sector are expected to be energy efficient and environmentally friendly, as well as comfortable and healthy indoor environments. It is critical to have instruments that have a high degree of reliability and minimal drifting, which reduces the maintenance requirements and ensures that the building systems are operating optimally.

# ABOUT VAISALA

## 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**

Vaisala's premium measurement solutions enhance safety, efficiency, and decision-making – 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.

## 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.



### Free shipping

Fast, free deliveries on all new instrument & spare part online orders



### Safe Payment

Easy and secure payments options



### Calibration

All instruments are made to order and calibrated just before shipment





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[www.vaisala.com](http://www.vaisala.com)

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