

VAISALA

# HVAC transmitters

Catalogue



# Excellence in measurements

## Unrivaled performance

Vaisala is a global leader in environmental and industrial measurements. Our sensors and transmitters are renowned for their unrivaled performance, reliable results, and low total cost of ownership. You can rest assured that our products will ensure the highest precision and reliability for your controlled processes.

## For cutting-edge solutions

When reliability matters, sensors matter. Control of your HVAC systems and processes, and consequently, your building's performance, can only be as precise and reliable as your measurements. The more critical your building, the more important your sensors become. Precision and reliability are required in every link of the chain, starting with sensors.



## Sustainable buildings

Sustainability in buildings means taking every measure to improve energy efficiency and reduce emissions of the facility. Accurate sensors with reliable measurement capabilities are essential for optimizing building performance and improving the energy efficiency of the facility. Additionally, precise measurements also support achieving optimal indoor conditions for various types of spaces and creating more efficient and comfortable indoor environments.

## Peace of mind throughout the life cycle

As the trusted provider of measurement instruments, we offer you peace of mind. Our top-of-the-line products offer an exceptionally long lifetime, require minimal maintenance, and provide excellent measurement stability. Our transmitters for building automation are covered by a 5-year warranty. Although sensors represent a small investment, it is a strategic one with the potential to unlock huge long-term value.

# 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, $\pm 0.2^\circ\text{C}$ ( $\pm 0.36^\circ\text{F}$ ) 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, $\pm 0.2^\circ\text{C}$ ( $\pm 0.36^\circ\text{F}$ ) $\pm 50$ ppm at 1000 ppm CO <sub>2</sub> CO <sub>2</sub> range 0...5 000 ppm Display option LED CO <sub>2</sub> 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
			
INSTALLATION	Wall-mount	Wall-mount	Wall-mount
OUTPUT PARAMETERS	Relative humidity Temperature	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
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 $\pm 60$ ppm at 1000 ppm CO <sub>2</sub> , $\pm 3\%$ Rh, $\pm 0.5^\circ\text{C}$ ( $\pm 0.9^\circ\text{F}$ ) CO <sub>2</sub> range 0...2000 ppm Display option (GMW83) LED CO <sub>2</sub> indication option (GMW83A) 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.

	HMT120/130 SERIES Humidity and Temperature Transmitters	TMT120/130 SERIES Temperature Transmitters	HMW110 SERIES Humidity and Temperature Transmitters
			
INSTALLATION	Wall-mount, duct-mount, outdoor	Wall-mount, duct-mount, outdoor	Wall-mount
OUTPUT PARAMETERS	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
OUTPUT OPTIONS	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
DETAILS	Accuracy $\pm 1.5\%$ Rh, $\pm 0.1$ °C ( $\pm 0.18$ °F) Display option IP65 enclosure Interchangeable probes Cable probe option Duct mounting kit option Calibration certificate	Accuracy $\pm 0.1$ °C ( $\pm 0.18$ °F) Display option IP65 enclosure Interchangeable probes Cable probe option Duct mounting kit option Calibration certificate	Accuracy $\pm 2\%$ Rh, $\pm 0.2$ °C ( $\pm 0.36$ °F) Display option IP65 enclosure M12 connector option Calibration certificate
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	TMW110 SERIES Temperature Transmitters	HMW88/89 Humidity and Temperature Transmitters	TMW88 Temperature Transmitters	GMW87/88 Carbon Dioxide Transmitters
				
INSTALLATION	Wall-mount	Wall-mount	Wall-mount	Wall-mount
OUTPUT PARAMETERS	Temperature	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Temperature	Carbon dioxide
OUTPUT OPTIONS	4...20 mA loop powered Modbus RTU	4...20 mA loop powered 0...10 V	4...20 mA loop powered	4...20 mA, 0...10 V Modbus RTU (GMW87)
DETAILS	Accuracy $\pm 0.2$ °C ( $\pm 0.36$ °F) Display option IP65 enclosure M12 connector option Calibration certificate	Accuracy $\pm 3\%$ Rh, $\pm 0.3$ °C ( $\pm 0.54$ °F) Display option IP65 enclosure	Accuracy $\pm 0.3$ °C ( $\pm 0.54$ °F) IP65 enclosure	Accuracy $\pm 60$ ppm at 1000 ppm CO <sub>2</sub> CO <sub>2</sub> range 0...5000 ppm IP64 enclosure
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# 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.

	HMD60 SERIES Humidity and Temperature Transmitters	TMD60 SERIES Temperature Transmitters	HMD110 SERIES Humidity and Temperature Transmitters	TMD110 SERIES Temperature Transmitters
				
INSTALLATION	Duct-mount	Duct-mount	Duct-mount	Duct-mount
OUTPUT PARAMETERS	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
OUTPUT OPTIONS	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
DETAILS	Accuracy $\pm 1.5\%$ Rh, $\pm 0.1\text{ }^\circ\text{C}$ ( $\pm 0.18\text{ }^\circ\text{F}$ ) Metal enclosure & probe IP66 (NEMA4X) enclosure Optional probe lengths 25 cm / 10 cm (10" / 4") Calibration certificate	Accuracy $\pm 0.1\text{ }^\circ\text{C}$ ( $\pm 0.18\text{ }^\circ\text{F}$ ) Metal enclosure & probe IP66 (NEMA4X) enclosure Optional probe lengths 25 cm / 10 cm (10" / 4") Calibration certificate	Accuracy $\pm 2\%$ Rh, $\pm 0.2\text{ }^\circ\text{C}$ ( $\pm 0.36\text{ }^\circ\text{F}$ ) Display option IP65 enclosure Calibration certificate	Accuracy $\pm 0.2\text{ }^\circ\text{C}$ ( $\pm 0.36\text{ }^\circ\text{F}$ ) 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	PDT101 Differential Pressure Transmitters
				
INSTALLATION	Duct-mount	Immersion type (in thermowell), or duct-mount	Duct-mount	Wall-mount / DIN-rail
OUTPUT PARAMETERS	Carbon dioxide	Temperature	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Differential pressure (air)
OUTPUT OPTIONS	4...20 mA 0...10 V Modbus RTU	4...20 mA loop powered Modbus RTU	4...20 mA loop powered 0...10 V	4...20 mA 0...5/10 V
DETAILS	Accuracy $\pm 40\text{ ppm CO}_2$ CO <sub>2</sub> ranges 2000/5000/10000 ppm IP65 enclosure Calibration certificate	Accuracy $\pm 0.1\text{ }^\circ\text{C}$ Probe lengths 100/150/200 mm Thermowells available IP65 enclosure Calibration certificate	Accuracy $\pm 3\%$ Rh, $\pm 0.3\text{ }^\circ\text{C}$ ( $\pm 0.54\text{ }^\circ\text{F}$ ) Display option IP65 enclosure	Accuracy 0.4% / 1% of span Unidirectional / bidirectional models Optional pressure ranges IP40 enclosure
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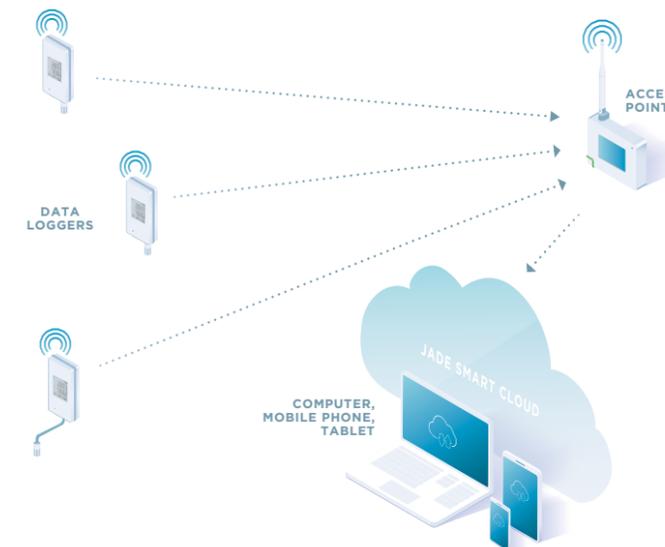
# Outdoor and weather transmitters

# Wireless monitoring system

	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 $\pm 2\%$ Rh, $\pm 0.2\text{ }^\circ\text{C}$ ( $\pm 0.36\text{ }^\circ\text{F}$ ) IP65 rating Calibration certificate	Accuracy $\pm 3\%$ Rh, $\pm 0.3\text{ }^\circ\text{C}$ ( $\pm 0.54\text{ }^\circ\text{F}$ ) IP65 rating	Accuracy $\pm 40$ ppm at 400 ppm CO <sub>2</sub> CO <sub>2</sub> ranges 0...3000/3000/5000 ppm	Accuracy $\pm 0.5$ hPa, $\pm 0.3\text{ }^\circ\text{C}$ ( $\pm 0.54\text{ }^\circ\text{F}$ ), $\pm 3\%$ Rh, $\pm 3\%$ at 10 m/s
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## Jade Smart Cloud

Vaisala Jade Smart Cloud combines high-class industrial measurements with easy-to-use cloud-based remote monitoring to enable new levels of competence and flexibility for professionals.



### System hardware

The Jade Smart Cloud hardware selection contains data loggers, access points, and measurement probes. Simply choose the number of measurement points you want, add the probes to match, and start measuring. The system is always delivered ready to use.

### Jade Smart Cloud application

Get insights easily in real-time. You can choose to see an overview of readings from all your connected loggers or drill down to view data from a specific site or measurement group. Accessing the system couldn't be easier – all you need is a laptop, tablet, or smartphone with an internet connection.

[» Vaisala.com/jade](https://www.vaisala.com/jade)

# Measurement solutions where it truly matters

## Data Centers & Mission-Critical Buildings

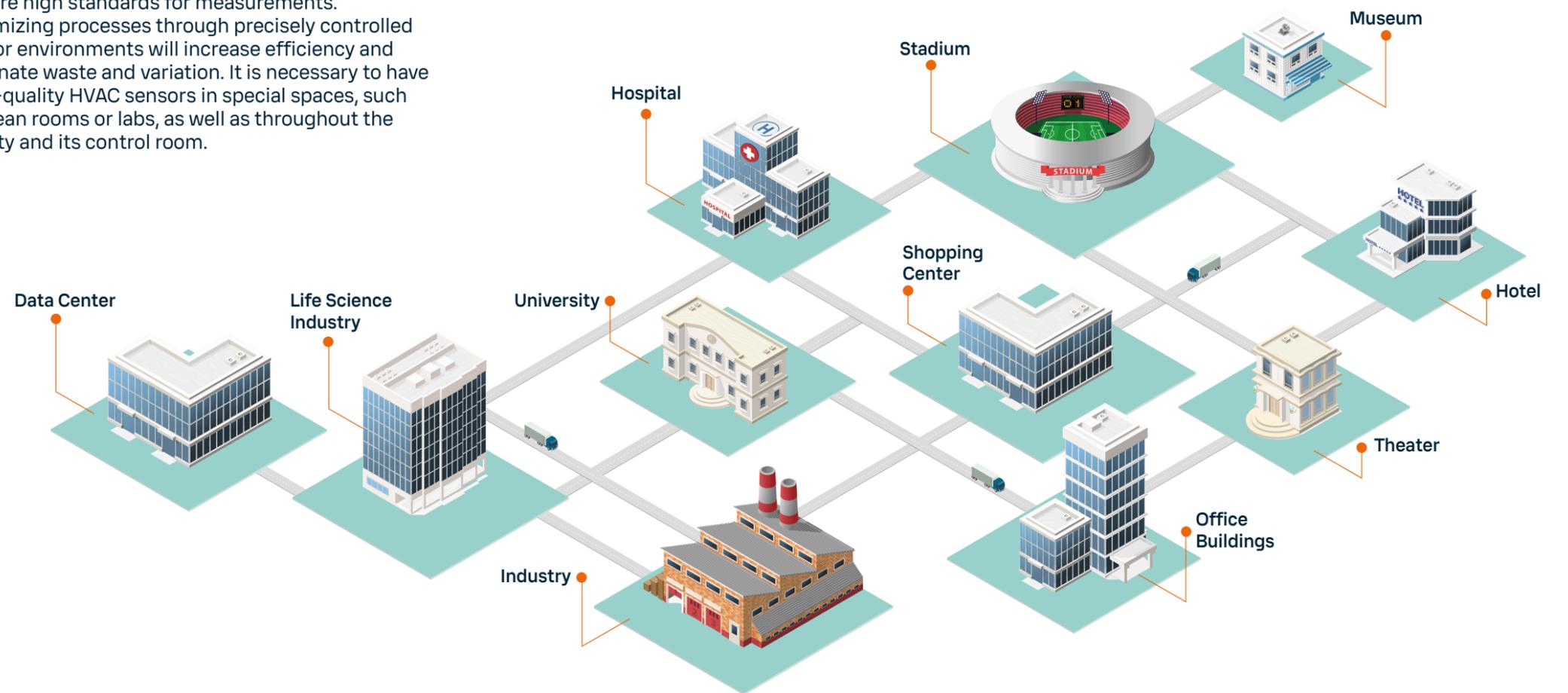
HVAC sensors constitute an integral component in the management of building systems. In mission-critical facilities, such as data centers, the importance of these sensors becomes even more pronounced, given their potential to impact energy consumption and efficiency. The reliability of these sensors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





## 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](https://store.vaisala.com)



### 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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