



# HVAC TRANSMITTERS

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Catalogue

**VAISALA**

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# ABOUT VAISALA

Vaisala is a global leader in environmental and industrial measurements. Vaisala was founded in 1936 and is today a stock listed company, headquartered in Finland, with customers all over the world.

Curiosity and innovation are core values in our company. Our extensive knowledge and expertise are materialized in our selection of innovative products. Vaisala stands for observations for a better world. We believe in a world where measurements and observations improve every aspect of daily life.



# EXCELLENCE IN MEASUREMENTS



## 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.





## 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.



## 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)











# PREMIUM QUALITY TRANSMITTERS

with calibration certificate

## ROOM TRANSMITTERS

The premium quality transmitters delivered with a traceable calibration certificate, are highly accurate, versatile devices with loads of unique features.




	<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 temperature Wet bulb temperature Enthalpy Mixing ratio Absolute humidity Dew point depression	Temperature	Carbon dioxide Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy Mixing ratio Absolute humidity Dew point depression
<b>OUTPUT OPTIONS</b>	4...20 mA 0...5/0...10 V, optional relay Modbus RTU BACnet MS/TP	4...20 mA 0...5/0...10 V, optional relay	4...20 mA 0...5/0...10 V Modbus RTU BACnet MS/TP
<b>DETAILS</b>	IP30 enclosure Display option Optional decorative covers User exchangeable measurement modules available Accuracy $\pm 1.7\%$ Rh, $\pm 0.2\text{ }^{\circ}\text{C}$ ( $\pm 0.36\text{ }^{\circ}\text{F}$ ) Calibration certificate included	IP30 enclosure Display option Optional decorative covers User exchangeable measurement modules available Accuracy $\pm 0.2\text{ }^{\circ}\text{C}$ ( $\pm 0.36\text{ }^{\circ}\text{F}$ ) 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...5000 ppm Accuracy $\pm 1.7\%$ Rh, $\pm 0.2\text{ }^{\circ}\text{C}$ ( $\pm 0.36\text{ }^{\circ}\text{F}$ ) +50 ppm at 1000 ppm CO <sub>2</sub> Calibration certificate included



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)

## DUCT-MOUNT TRANSMITTERS

The premium duct-mount transmitters, delivered with a traceable calibration certificate, are the perfect choice for air-handling units and ventilation systems control.

	<b>HMD60 Series</b> Humidity and Temperature Transmitters	<b>TMD60 Series</b> Temperature Transmitters	<b>HMD110 Series</b> Humidity and Temperature Transmitters
			
<b>INSTALLATION</b>	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
<b>OUTPUT OPTIONS</b>	4...20 mA 0...10 V Modbus RTU BACnet MS/TP	4...20 mA	4...20 mA 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, $\pm 0.1\text{ }^{\circ}\text{C}$ ( $\pm 0.18\text{ }^{\circ}\text{F}$ ) Calibration certificate included	IP66 (NEMA4X) A robust metal enclosure Stainless steel probes Probe length options 25 cm and 10 cm (10" and 4") Accuracy $\pm 0.1\text{ }^{\circ}\text{C}$ ( $\pm 0.18\text{ }^{\circ}\text{F}$ ) Calibration certificate included	IP65 (NEMA4) Accuracy $\pm 2\%$ Rh, $\pm 0.2\text{ }^{\circ}\text{C}$ ( $\pm 0.36\text{ }^{\circ}\text{F}$ ) Calibration certificate included Display option

# PREMIUM QUALITY TRANSMITTERS

with calibration certificate

## LIGHT INDUSTRIAL TRANSMITTERS

Intelligent modular transmitters with exchangeable probes are especially fit for demanding conditions and processes.

	<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 0...1/0...5/0...10 V	4...20 mA 0...1/0...5/0...10 V	4...20 mA Modbus RTU
<b>DETAILS</b>	IP65 (NEMA4) 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 (NEMA4) Interchangeable probes Accuracy $\pm 0.1$ °C ( $\pm 0.18$ °F) Calibration certificate included Display option	IP65 (NEMA4) Accuracy $\pm 2\%$ Rh, $\pm 0.2$ °C ( $\pm 0.36$ °F) Calibration certificate included Display option

### 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.





# GENERAL PURPOSE TRANSMITTERS

## for HVAC controls







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>HMW82/83</b> Humidity and Temperature Transmitters	<b>TMW82/83</b> Temperature Transmitters	<b>GMW83/84/86</b> Carbon Dioxide, Humidity and Temperature Transmitters	<b>GMW87/88</b> Carbon Dioxide Transmitters
	 	 	 	 
<b>INSTALLATION</b>	Wall-mount	Wall-mount	Wall-mount	Wall-mount
<b>OUTPUT PARAMETERS</b>	Relative humidity Temperature	Temperature	Carbon dioxide Relative humidity Temperature	Carbon dioxide
<b>OUTPUT OPTIONS</b>	4...20 mA 0...10 V	4...20 mA 0...10 V	4...20 mA 0...10 V	4...20 mA, 0...10 V Modbus RTU (GMW87)
<b>DETAILS</b>	IP30 enclosure Accuracy $\pm 3\%$ Rh, $\pm 0.5\text{ }^{\circ}\text{C}$ ( $\pm 0.9\text{ }^{\circ}\text{F}$ ) Display option	IP30 enclosure Accuracy $\pm 0.5\text{ }^{\circ}\text{C}$ ( $\pm 0.9\text{ }^{\circ}\text{F}$ )	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, $\pm 0.5\text{ }^{\circ}\text{C}$ ( $\pm 0.9\text{ }^{\circ}\text{F}$ )	IP64 enclosure Range: 0...5000 ppm Accuracy $\pm 60$ ppm at 1000 ppm CO <sub>2</sub>
	<b>HMW88/89 &amp; TMW88</b> Humidity and Temperature Transmitters	<b>HMD82/83</b> Humidity and Temperature Transmitters	<b>TMD82/83</b> Temperature Transmitters	<b>GMD20</b> Carbon Dioxide Transmitters
	 	 	 	 
<b>INSTALLATION</b>	Wall-mount	Duct-mount	Duct-mount	Duct-mount
<b>OUTPUT PARAMETERS</b>	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Relative humidity Temperature Dew point temperature Wet bulb temperature Enthalpy	Temperature	Carbon dioxide
<b>OUTPUT OPTIONS</b>	4...20 mA 0...10 V	4...20 mA 0...10 V	4...20 mA 0...10 V	4...20 mA 0...10 V
<b>DETAILS</b>	IP65 enclosure (NEMA4) Display option Accuracy $\pm 3\%$ Rh, $\pm 0.3\text{ }^{\circ}\text{C}$ ( $\pm 0.54\text{ }^{\circ}\text{F}$ )	IP65 enclosure (NEMA4) Display option Accuracy $\pm 3\%$ Rh, $\pm 0.3\text{ }^{\circ}\text{C}$ ( $\pm 0.54\text{ }^{\circ}\text{F}$ )	IP65 enclosure (NEMA4) Accuracy $\pm 0.3\text{ }^{\circ}\text{C}$ ( $\pm 0.54\text{ }^{\circ}\text{F}$ )	IP65 enclosure (NEMA4) Display option Accuracy $\pm 60$ ppm at 1000 ppm CO <sub>2</sub>

# OUTDOOR TRANSMITTERS

## for all HVAC applications




Versatile selection of outdoor measurements offers you a wide perspective on prevailing outdoor conditions.

	<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 $\pm 2\%$ Rh, $\pm 0.2\text{ }^{\circ}\text{C}$ ( $\pm 0.36\text{ }^{\circ}\text{F}$ ) Calibration certificate included	Ingress protection IP65 Accuracy $\pm 3\%$ Rh, $\pm 0.3\text{ }^{\circ}\text{C}$ ( $\pm 0.54\text{ }^{\circ}\text{F}$ )	CO <sub>2</sub> measurement ranges: 0...2000/3000/ 5000 ppm Accuracy $\pm 40$ ppm at 400 ppm CO <sub>2</sub>	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

# HANDHELD METERS

## for spot-checking and calibration

Portable handheld meters for field-checking, calibration, and adjustment are easy to use wherever you are.

	<b>HM40</b> Handheld Humidity and Temperature Meter Series	<b>HM70</b> Handheld Humidity and Temperature Meter	<b>GM70</b> Handheld Carbon Dioxide Meter
			
<b>TYPE</b>	Humidity and temperature meter	Humidity and temperature meter	Carbon dioxide meter
<b>OPERATING TEMPERATURE</b>	Operating temperature range -40...+100 °C (-40...212 °F), depending on probe	Operating temperature range -70 °C...+180 °C (-94...356 °F), depending on probe	Operating temperature range: -20...+60 °C (-4...+140 °F)
<b>CONNECTIVITY</b>	No connections to fixed instruments	Data logging and data transfer to PC	Data logging and data transfer to PC
<b>DETAILS</b>	Four models available	Three remote probe options  Calibration interface with the HVAC instruments HMW90, HMD60, HMDW110, HMT120/130	Wide selection of CO <sub>2</sub> measurement ranges  Calibration interface to the HVAC instruments GMW90 & GMD20



Read more about Vaisala's HVAC products [www.vaisala.com/HVAC](http://www.vaisala.com/HVAC)





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