E+E

your partner
in sensor
technology.

Sensors for Meteorological Applications

www.epluse.com

Company Headquarters
& Production Site

E+E Elektronik Ges.m.b.H.
Langwiesen 7
4209 Engerwitzdorf | Austria
T +43 7235 605-0
F +43 7235 605-8
info@epluse.com
www.epluse.com

The solution for your meteorological application

E+E Elektronik is your partner for high-end measurement technology in meteorology. Our sensors set standards for highly accurate and reliable measurement data - from mobility monitoring in rail, road or air traffic to the high requirements of national and public weather services. Whether temperature and humidity measurement, CO2 or air velocity - discover our proven solutions for your application.

Step into the world of highest precision!

1 Weather Stations

Accurate weather forecasts even under difficult environmental conditions

2 Traffic Weather

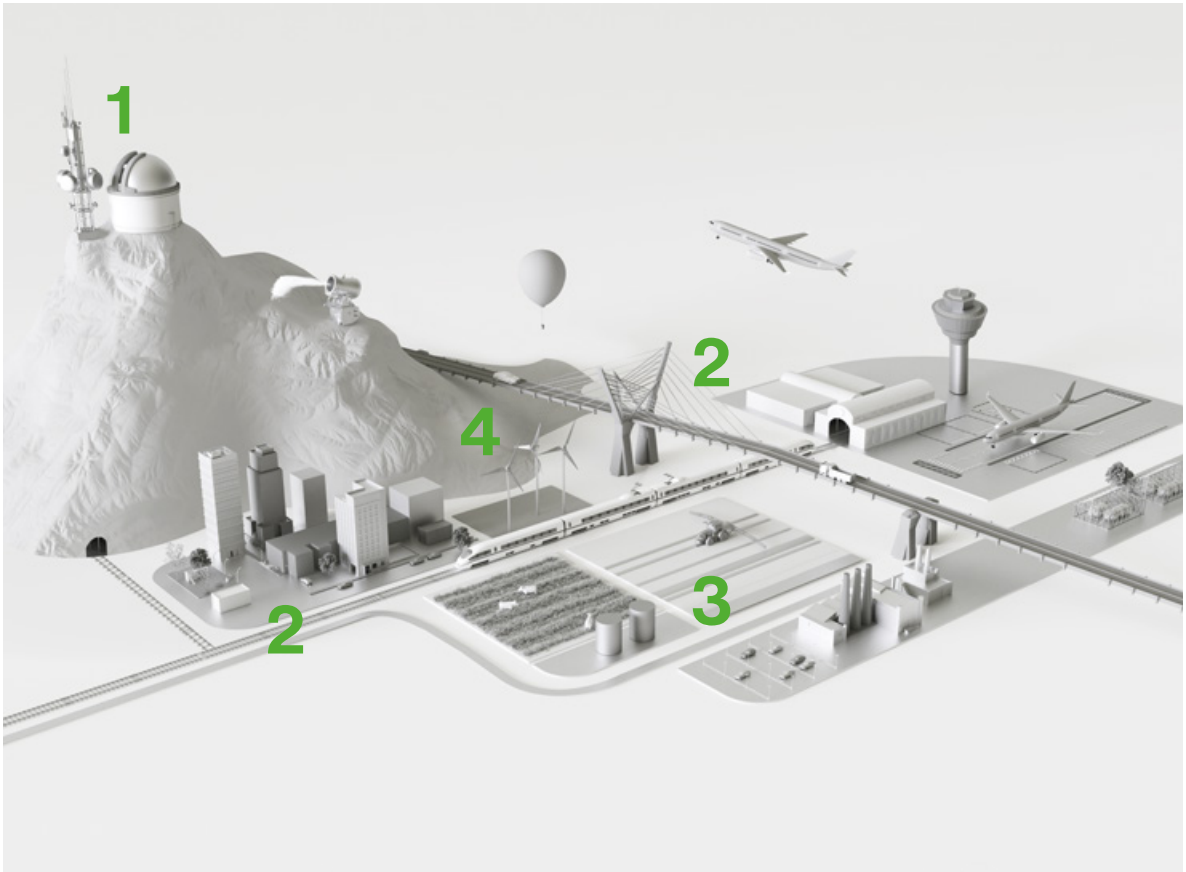
Monitoring of roads and railways as well as weather data for aviation

3 Agricultural Weather

Long-term stable measurement results for a successful harvest

4 Wind-power

Recognising icing hazards to protect man and machine



Weather Stations

The global meteorological monitoring network comprises a large number of measuring instruments and field sensors for remote weather monitoring. They measure the state of the earth's atmosphere on land, on water, in the air and from space. This complex technology is used around the globe by national weather services and other meteorological organisations

Temperature and humidity sensors play a particularly important role in providing reliable meteorological data. The exact measurement of these climate values is the basis for precise forecasts and records.

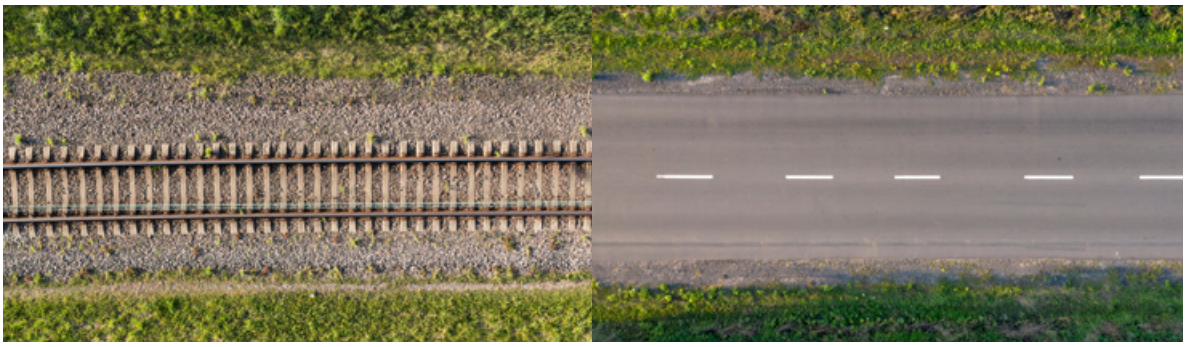
Sensors from E+E Elektronik help to master the major challenges of measuring meteorological data in every area. Highest precision and long-term stable results even under challenging environmental conditions guarantee the most accurate measurement data for reliable weather forecasting.

Key technology: radiosondes

Radiosondes are used in meteorology to measure parameters of the earth‘s atmosphere up to the stratosphere. They are carried by a weather balloon and transmit the measured values - usually air temperature and humidity - to a ground station via radio data transmission. Sensors used in radiosondes must be highly accurate and have short response times even at very low temperatures.

With the two humidity sensors HMC03M and HC103M2, E+E Elektronik offers the ideal measurement technology for use in radiosondes. They are manufactured using the latest thin-film technology and provide highly accurate data even under adverse conditions. With the HMC03M, an integrated heating resistor also ensures excellent measurement behaviour under condensation and icing conditions. This makes the sensor ideal for weather observations in the upper atmosphere.

Traffic Weather



As part of environmental measurement technology, the condition monitoring of road and rail networks, especially in difficult weather conditions (fog, rain, ice, etc.), is of great importance for accident prevention and traffic control, but also for the efficiency of private and public transport.

To ensure that roads are safe and passable at all times, precise information about the current weather conditions must be available. This is crucial, for example, for the optimal coordination of the deployment of winter services or for the necessary installation of road closures, thus helping to prevent traffic accidents or traffic jams in good time.

The same applies to monitoring weather conditions along railway lines. If the risk of points icing up is recognised promptly, the use of point heating systems can be controlled much more efficiently. The potential for energy savings can be up to 70% through the intelligent use of local humidity and temperature measurements.

Aviation meteorology

In aviation, safety and operational efficiency are of the utmost importance. The weather has a significant influence on both aspects. Access to accurate and reliable data is crucial to overcome weather-related challenges and ensure compliance with regulations.

Aviation meteorology is the branch of meteorology that deals with the collection and provision of information and weather forecasts relevant to the conduct of safe flight operations.
The technologies and models of normal meteorology are largely used, but the information obtained is compiled specifically for aviation.
The compact and heated EE260 meteorological sensor is optimised for use in aviation weather stations.

The results provide pilots with early and comprehensive information about dangerous weather situations such as thunderstorms, turbulence or icing zones.

Agricultural Weather

The weather plays a decisive role in agriculture. Remote locations, difficult climatic conditions and a high risk of contamination pose major challenges for measurement technology. Without precise and reliable measurement of temperature, humidity, wind, rain and solar parameters, a successful harvest is practically impossible today.

The data flows directly to the controls of irrigation systems, frost protection systems, hail protection and much more. In addition, weather stations are often powered by batteries charged by solar cells. This means that low power consumption and fast response times of the measuring devices are an advantage.

With the EE08 and EE260 in combination with special radiation protection with artificial ventilation, E+E Elektronik offers temperature and humidity sensors that are ideal for use in agricultural weather stations.

Windpower

Ice build-up on the rotor blades of wind turbines poses a major risk in terms of operation and maintenance as well as the safety of the system. Icy rotor blades can cause aerodynamic imbalances and thus impair efficiency. In addition, ice can form on the wind turbine under certain weather conditions. This can lead to ice fall and ice throw.

To ensure efficient operation and safety for people and animals, it is necessary to integrate a reliable ice detection system into the system. This allows the system to be stopped automatically in the event of safety-relevant ice build-up.

Heated humidity and temperature sensors with a special sensor coating, such as the HTS801 from E+E Elektronik, are particularly suitable for use on wind turbines - both onshore and in the salty conditions offshore.

Sensor Solutions

EE260

Heated Humidity & Temperature Probe

- Innovative design with heated RH measuring head and additional T-sensor element
- Automatic ReCovery (ARC) function
- E+E sensor coating
- Analogue outputs / Modbus RTU

HTS801

High-End Humidity & Temperature Sensor

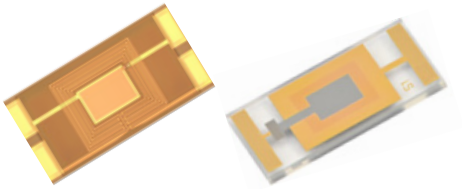
- Heating modes for temporary condensation or permanent high humidity
- Automatic ReCovery (ARC) function
- E+E sensor coating
- 3.5'' TFT display with integrated data logger

EE08

High Precision Humidity & Temperature Probe

- Highest measuring accuracy
- Outstanding long-term stability
- Short start-up time for energy-saving mode
- E+E sensor coating

HMC03M & HC103M2



Humidity Sensors for Radiosondes

- Fast response time at low temperatures
- Fast recovery after condensation or icing
- High sensitivity and excellent linearity

Calibrating your Limits

Your products and services can only be as precise as the devices you use to measure them. With more than 20 years of experience, the calibration team at E+E Elektronik is focused on providing a reliable service with minimal potential for error.

Discover the value of working with an expert in calibration that prioritizes accuracy, speed and reliability.

Company Headquarters
& Production Site

E+E Elektronik Ges.m.b.H.
Langwiesen 7
4209 Engerwitzdorf | Austria
T +43 7235 605-0
F +43 7235 605-8
info@epluse.com
www.epluse.com

your partner
in sensor
technology.

Version 1.0 | 09 - 2024

www.epluse.com