Biral visibly better

THIES CLIMA

The world of weather data.
Measurement instruments for meteorology, environmental protection and industry.

METEOROLOGICAL SENSORS

Today more than ever the measurement, processing and analysis of meteorological data requires a high degree of instrument measurement precision and an optimal adaptation of the data acquired for the task at hand.

The Thies Clima ranges of meteorological sensors are highly respected and wide ranging. For more than 70 years Thies have been developing, producing and supplying instruments and systems for the analysis of weather data. Biral is the official UK Distributor for Thies products and the following is just a small selection of what Biral can offer from the extensive Thies range. For more detailed information, please contact a member of the Sales team who will be pleased to discuss your requirements and identify the options available to meet your specific application needs.

Wind

The measurement of wind speed and direction is an important aspect of many areas of life from general meteorology to aviation and off-shore activities. Biral can offer a wide range of anemometers ensuring that we have a solution to almost every environmental wind measurement requirement. Traditional cup and vane anemometers range from simple devices for general wind monitoring through to certified products for use in wind energy applications. The very latest in ultrasonic anemometers benefit from having no moving parts and provide for everything from simple 2-axis measurement through to research quality 3-axis sensing and integrated turbulence measurement.

Mechanical Sensors

Cup & Vane wind sensors are available in four model ranges with different measurement ranges, accuracies and output signals to cover almost all measurement requirements.

Applications:

- Meteorology
- Environmental Technology
- Wind Farm Site Survey
- Marine and Off-shore
- Traffic Control

Ultrasonic Sensors

Ultrasonic anemometers provide accurate and reliable wind speed and direction measurement without the need for any moving parts. With no moving parts these sensors are more reliable than traditional cup and vane devices which makes them especially suited to challenging environments. Our heated sensors can continue to operate in even the most extreme icing conditions where the traditional cup and vane devices would freeze solid.

Ultrasonic anemometers are available for 2 and 3-axis wind measurement. The absence of moving parts allows rapid sampling of air movement making them suitable for a range of general monitoring and research applications. Sensors are available with a range of options including analogue outputs and integrated turbulence calculations.

Applications:

- Meteorology
- Climatology
- Aviation
- Traffic Control
- Air Monitoring
- Emmission Control
- Flow Measuring

Ultrasonic Anemometer 3D

Ultrasonic Anemometer 2D

Displays & Wind Alarms

Displays are available for use with a number of our wind speed and direction sensors. Wind alarm units that can trigger warning devices according to both wind speed and direction are also available. Some displays offer the facility to re-transmit measured values to additional display units, data loggers or computers.

Applications:

- Meteorology
- Navigation
- Traffic Engineering
- Airport Technology
- Crane Alarms
- Mobile Performance Stages

Wind Display LED Combined

Wind Measuring Systems

The Meteo Comp System consists of a Small Combined Wind Speed and Direction transmitter and a simple display unit to provide an easy to use basic weather monitoring system. The display unit provides a digital display of wind speed and an octant display of wind direction. Measured data can also be re-transmitted to other downstream devices such as data loggers. The temperature at the transmitter is also displayed.

Meteo Comp System

Temperature, Humidity & Pressure

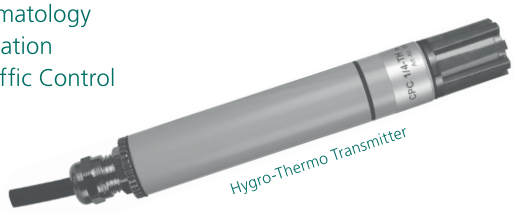
Biral offers a range of sensors for the measurement of standard meteorological parameters such as temperature, humidity, atmospheric pressure and solar radiation.

Hygro-Thermo Transmitters

Measures air temperature and humidity. A wide variety of connection types and outputs are available. Weather and thermal radiation shield is available for outdoor use.

Applications:

- Meteorology
- Climatology
- Aviation
- Traffic Control



Hygro-Thermo Transmitter

Precision Pressure Sensors

Two models are available, a high precision barometer for general use and a precision pressure sensor which features a single analogue output and a low current consumption making it particularly suited for remote data logging applications.

Applications:

- Meteorology
- Remote Data Logging
- Climatology

Precision Pressure Transducer

Radiation

Accurately measuring the strength and duration of solar radiation is an important aspect of many weather applications and is particularly relevant to the solar energy, agriculture, horticulture and climate change fields. From simple brightness and global radiation to UV-A/UV-B Biral can provide the right sensor for your application.

Pyranometer

A range of pyranometers designed to measure both the direct and diffuse radiation on a plane surface, to meet WMO Secondary Standard, First Class and Second Class classifications.

Applications:

- Solar Farms
- Agriculture
- Horticulture
- Climatology

Pyranometer

Precipitation

Biral provides a wide range of instruments for the detection, measurement and study of precipitation:

- Precipitation Monitors to detect the presence of precipitation
- Rain Gauges for the measurement of precipitation amount
- Laser Precipitation Monitors for the detection and classification of precipitation in real-time.

Precipitation Transmitters

A range of precipitation transmitters incorporating both tipping bucket and ombrometer models are available to provide a wide range of resolution and intensity options.

Applications:

- Meteorology
- Hydrology
- Climatology
- Aviation

Precipitation Monitor

These devices, detect the beginning and end of a precipitation event. A simple monitor typically used in building control applications, detects the presence of rain and other precipitation types.

Applications:

- Building Management Systems
- Horticulture
- Agriculture

Laser Precipitation Monitors

For the accurate measurement of precipitation type and quantity in real-time. The sensor is able to differentiate between different types of precipitation e.g. drizzle, rain, hail, snow, etc. and reports this along with intensity and spectrum.

Applications:

- Meteorology
- Hydrology
- Traffic Control
- Aviation
- Research & Development
- Alignment of Weather Radar Systems

Precipitation Transmitter

Laser Precipitation Monitor

Compact Weather Stations

Compact weather stations combine a number of standard meteorological sensors including wind speed and direction, precipitation and radiation into a single, easy to use package. These compact stations are often used in building control applications for basic weather monitoring but are also suitable for mobile applications. Both the Clima Sensor US and WSC11 can provide serial data outputs with MODBUS RTU format.

Clima Sensor US

A sophisticated, integrated weather station intended for general meteorological and environmental monitoring and control systems. Depending on which of the four available models is chosen the sensor can provide up to ten measured parameters plus a number of calculated values and the built-in magnetic compass and GPS receiver make it ideally suited to mobile applications. The top section of the sensor contains a doppler radar which detects both rate and quantity of precipitation.

Measures:

- Wind Velocity
- Wind Direction
- Precipitation Rate and Quantity
- Brightness
- Air Temperature
- Rel. Air Humidity
- Air Pressure
- GPS Receiver

Applications:

- Building Control
- Traffic Control Systems
- Meteorology
- Renewable Energy
- Agriculture

Weather Station Compact WSC11

Specifically designed for building services control the WSC11 provides a cost effective measurement solution in a compact, easy to install package. The eleven measured values are output via a serial RS485 interface for ease of integration into building management information and control systems.

Measures:

- Wind Velocity/Direction
- Precipitation Detection
- Brightness
- Air Temperature
- Air Humidity
- Air Pressure
- Global Radiation

Applications:

- Building Technology
- Building Automation
- Greenhouse Control

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