



## Priva Sensors

Responding to the elements with the aid of sensors

Greenhouse climates have to be perfectly balanced to create optimal growing conditions. This includes temperature, light, air humidity and CO<sub>2</sub> concentrations. This requires accurate measurement and control. Priva supplies a wide range of sensors. The information generated by the sensors is used in the Priva process computer, for instance for the intelligent control of CO<sub>2</sub> dosage, vent position, shading curtain or heating.



### Priva CO<sub>2</sub> Monitor

CO<sub>2</sub> is an essential building block for the growth and development of plants. The Priva CO<sub>2</sub> Monitor measures and monitors carbon dioxide concentrations. The Priva CO<sub>2</sub> Monitor hangs in the working area and extracts air via a hose from the greenhouse. By inserting a CO<sub>2</sub> selector it is possible to measure the CO<sub>2</sub> concentration at up to five places. The Priva CO<sub>2</sub> Monitor provides accurate digital measurement, is expandable and is easy to calibrate.



### Priva E-Measuring Box

The Priva E-Measuring Box (Electronic Measuring Box) is a modular, low-maintenance, accurate instrument for reading temperature, relative air humidity and, if required, CO<sub>2</sub> concentrations. The E-Measuring Box with CO<sub>2</sub> module is designed for rapid local measurements over large areas where it would take too long to suction in the air for a central measurement.



### Priva Groscale and Priva Root Optimizer

Optimum humidity of the root environment reduces disease and prevents accumulation of salt in the substrate. The Priva Groscale measures the weight of the substrate slab extremely accurately. The exact transpiration is determined by a measurement of the slab weight, the water dosage and the quantity of drain water. The Priva Root Optimizer software then ensures the optimum moisture balance for the substrate. Based on the (climate) conditions, the state of the crop and the type of substrate, the water dosage automatically starts at the right moment.



### Priva Infrared Plant Temperature Sensor

Measuring the plant temperature provides you with an insight into the transpiration of your crop. The plant temperature influences the cell division rate, cell differentiation (generative/vegetative) and cell elongation. The plant temperature measurement gives you a better insight into these processes than the greenhouse air temperature. By controlling the heating, ventilation, screens, overhead irrigation, humidification and/or CO<sub>2</sub> dosage based on the plant temperature, you can prevent overheating by water stress or condensation on the crop and save energy and CO<sub>2</sub>.



### Priva PAR sensor

The PAR Sensor measures that part of the light spectrum that stimulates the photosynthesis of plants. This sensor therefore gives a very accurate indication of PAR illumination. The shading curtains and assimilation lighting can be controlled by entering the desired PAR value.



### Priva Meteorological Station

The Priva Meteorological Station forwards climate data to the process computer from its sensors for measuring wind speed, wind direction, precipitation, temperature and quantity of sunlight. The meteorological station is a standard tool for every horticultural entrepreneur and can be expanded with additional sensors.



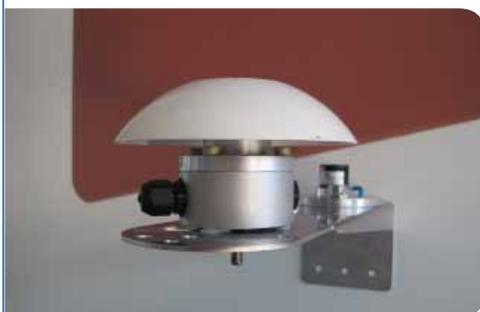
### Priva Precipitation Sensor and Precipitation Intensity Sensor

Rapid and accurate rainfall measurement is essential for controlling ventilation windows and maintaining a stable climate within the greenhouse. The ideal situation is a combination of a precipitation sensor to detect rainfall and a precipitation intensity sensor to then adjust ventilation windows to the optimal position.



### Priva Outside Humidity Sensor

The Priva Outside Humidity Sensor measures the relative air humidity outside the greenhouse, as this can differ greatly from that inside. The greenhouse climate can be optimally controlled based on data from both inside and outside measurements.



### Priva Irradiation Sensor

The Irradiation Sensor measures heat radiation losses from the greenhouse to the ambient air. In clear weather, irradiation is higher than when cloudy. To combat heat loss from the greenhouse, screens can be closed sooner in clear weather by using this sensor. This prevents damage to your crop and saves energy.

For more information or for a complete overview of all available climate and water sensors, please feel free to contact Priva at any time.

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