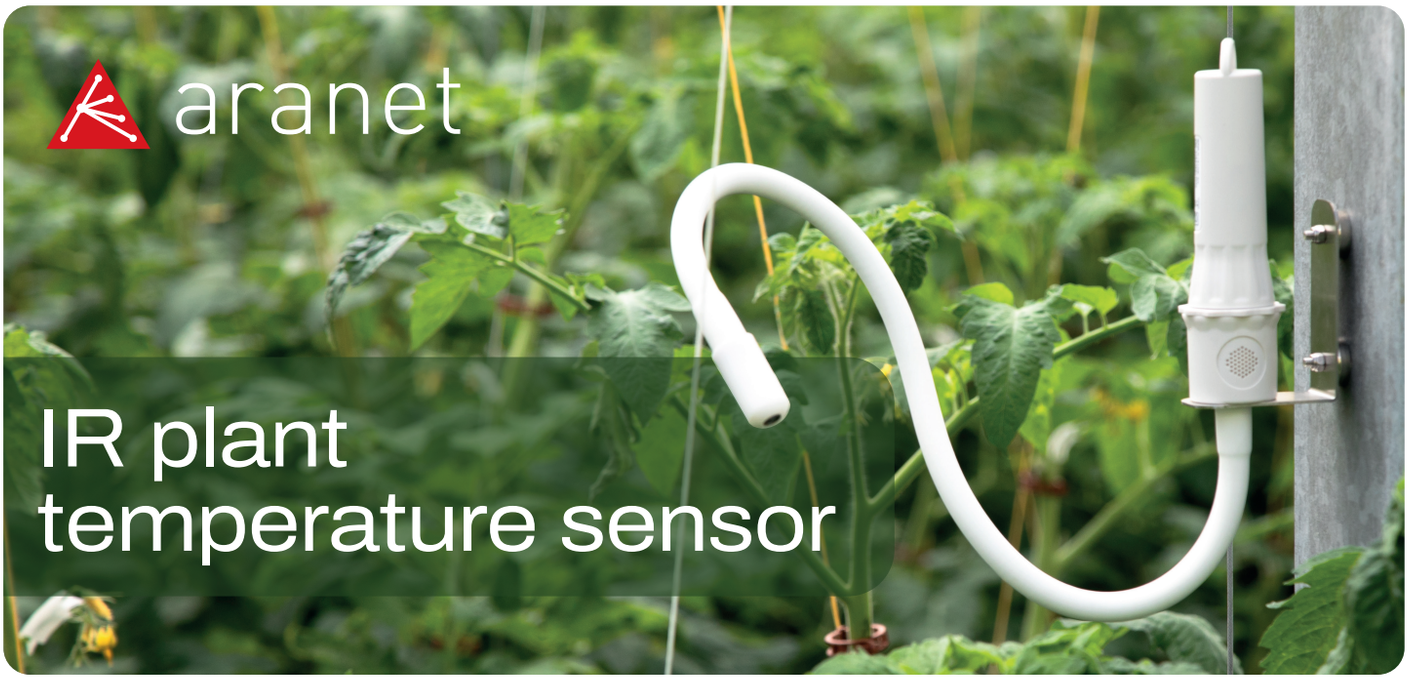

IR plant temperature sensor

The Aranet IR Plant Temperature sensor is designed to measure the surface temperature of plant leaves. An adjustable arm provides precise sensor installation for plant temperatures measurements in greenhouse applications making it a valuable tool to calculate Vapor Pressure Deficit (VPD).

Features:

- Contactless plant temperature measurements
- Evaluate Vapor Pressure Deficit
- Sensor has an adjustable arm for precise installation
- Wireless sensor
- Battery life up to 10 years

The sensor uses an infrared (IR) thermometer and adjustable arm for contactless plant leave temperature measurements. The sensor mount has two magnets for simple installation on a metallic constructions.

The sensor provides temperature data, which in combination with relative humidity measurements can be used to determine dew point and vapor pressure deficit.

Use cases:

This sensor is crucial for precise vapor pressure deficit (VPD) calculations. In the Aranet Cloud platform, users can determine VPD by combining plant leaf temperature data with relative humidity measurements from the T/RH sensor.

VPD parameter informs about the impact of humidity on plant growth. VPD measures the difference between the moisture in the air and how much moisture the air can hold at a given temperature.

When the VPD level is high, meaning air is relatively dry, the plant experiences increased pressure. This increases the transpiration rate and plants consume more water. Inadequate watering in such conditions can lead to the wilting of plants. On the other hand, if the VPD level is low, the plant will transpire less. In such conditions, it is important not to overwater the plant

Make data-based decisions to adapt ventilation, irrigation, and other greenhouse systems for healthy plant growth.

Use cases:

Aim the sensor's adjustable arm at the plant leaves. Keep in mind that plant leaves move during the daytime, so maintain a distance of around 20 cm (approximately 8 inches) between the sensor arm tip and the plant leaves.

To create virtual sensors like VPD or dew point in the Aranet Cloud “Sensors” section, opt for the "NEW VIRTUAL SENSOR" feature in the Virtual Sensor sheet. Select the Vapor Pressure Deficit or Dew Point template and choose sensor measurements to create the appropriate virtual sensor.