

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.

🔺 aranet cloud	Measurements Virtual se	nsors			
Aranet Public 👻	<b>T</b> Q	Total virtual s	ensors created 2		() (VPD
Dashboard	Name 🛧	Туре	Input sensor count	Last measurement	
R Sensors	Dew point	Dew point	2	05-Jun-2024 10:29	© /
🖡 Assets	VPD Vapor Pressure Deficit	Vapour-Pressure Deficit	3	05-Jun-2024 10:29	• /
📰 Plans					
Analytics					
Alarms					
Public tiles					
🗱 Settings					
🔐 Organization					
÷					-
Aranet.Pro@	Rows per page: 25 💌	1-25 of 49 <		NEW VI	RTUAL SENSOR

Arinet RAAC Cenno X New Virtual sensor Origet Asians Offset Avinal sensor that allows to set an effort Avinal sensor that sums several sensor Avinal sensor that sums over all sensor Avinal sensor that sums over all sensor Avinal sensor that sums over all sensor
Serecret Choose template for virtual sensor Choose template for virtual sensor Choose template for virtual sensor Serecret
Sensors     Choose template for virtual sensor     O /       / Asses     Offset     Sam     > /       In uss     A virtual sensor that allows to set an effort     A virtual sensor that sums several sensor     > /
Autos Offset Sum Offset Avitual sensor that allows to set an offset Avitual sensor that sums several sensor to service that allows to set an offset Avitual sensor that allows to set an offset Avitual sensor that allows to set an offset Avitual sensor that allows to set an offset O
Elens A virtual sensor that allows to set an offset to sensor measurement values. measurements captured at approximately
Malytics the same time.
Alarms
Explicitles Average Ratio
A virtual sensor that calculates the A virtual sensor that calculates the ratio
Settings average value of several sensor between two sensor readings.
Organization the same time.
Expert Vapour-Pressure Deficit
A virtual sensor that allows manually A virtual sensor that calculates the vapor-
normalizing factor of the selected sensor current and max air moisture saturation)
data.
Day Light Integral Dew point O
A virtual sensor that calculates the A virtual sensor that calculates dev point amount of photosynthetically active (temperature below which water vapor
v2.056 4