



# LEAF TEMPERATURE SENSOR

- ✓ Keep an eye on the plant's exact leaf temperature
- ✓ Read off measurement in your LCC4 climate control
- ✓ Keep track of the leaf temperature on graphs in SuperLink and change climate settings, if necessary



## Keep an eye on the plant's well-being

### How does the sensor work?

The leaf temperature sensor is used to indicate the plant's current well-being. Via infrared radiation the sensor measures the leaf temperature, providing data that can reveal overheating or unwanted cooling, thereby providing insight to the greenhouse's climate impact on the plant.

Data on temperature measured by the leaf temperature sensor is sent to the LCC4 climate control to SuperLink. In Super-Link you can read the current temperature, while you can also see temperature data from a given period - an hour, a day or longer time - in the graph module. This allows you to analyse on data and note if you should take extra precautions, e.g., if temperature takes an inexpedient plunge at a certain time of day.

### Why is knowledge of leaf temperature relevant?

The rays from the sun can heat stress the leaves, resulting in an undesirable raise in temperature. Being aware of the raising temperature allows you to change screen settings accordingly. On the contrary, if leaves are chilled you should consider adjusting room temperature and the distribution of top- and bottom heating - or consider adjusting the basis temperature. These are merely examples of some of the parameters, which can affect leaf temperature and thereby plant growth.

The leaf temperature indicates the growth rate. Controlling plant temperature is part of ensuring that plants grow sufficiently and that you prevent production delays. It also contributes to consistent plant quality.

### Sensor position

It is important to position the sensor correctly, as the measurements might otherwise be incorrect. If the sensor is incorrectly placed, e.g., pointing in half on the leaf and in half on the tabletop, the data provided from the measurement will be misleading. It will also impact the measurement if the leaf measured is placed near a heat supply. The sensor must be positioned so that it points towards more than just one leaf, as the leaf's temperature depends on its age.



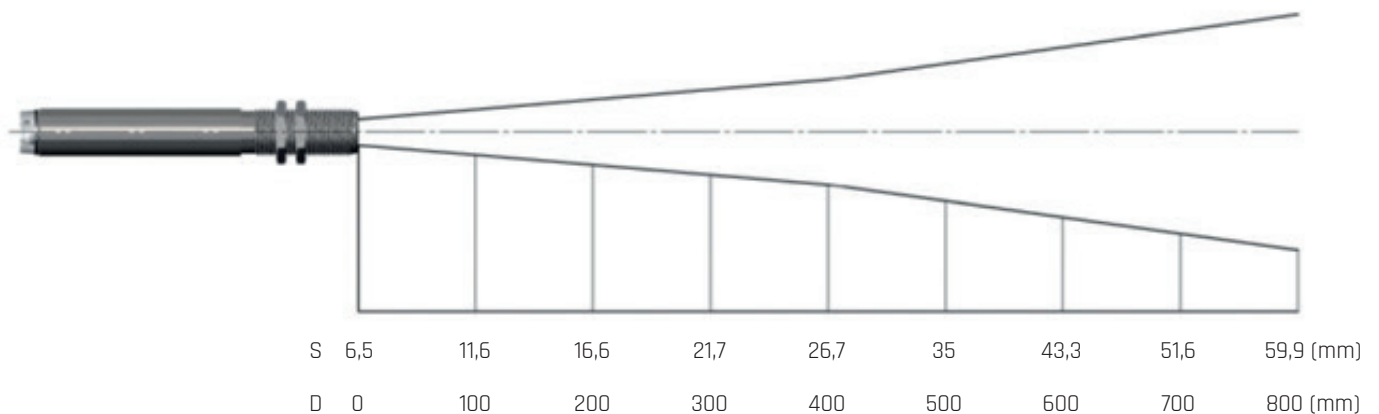
## SPECIFICATIONS / LEAF TEMPERATURE SENSOR

### Technical specifications

Ambient temperature:	Up to 125°C without cooling
Warm-up time:	10 min
Response time:	15 sec
Spectral range:	8 - 14µm
Power supply:	9 mA (5 to 30 VDC) / 24 VDC
Analogue output:	0-10V / 0-50°C
System accuracy:	±1.5% or ±1.5°C. At ambient temperature 23 ±5°C; object temperature > 0°C; whichever is greater
Adjustable emissivity:	Default 0.95, which is preferable for leaves
Density:	IP65 (NEMA-4) sensor head
Optical resolution:	15:1
Controller dimensions:	Length 35 mm - Ø12 mm
Cable length:	3 meters

### Range of measurement depending on distance

The following optical chart shows the measurement point's diameter depending on the distance between leaf and sensor.



S = Spot - the area being measured.

D = Distance - the distance between the sensor tip and the leaf

The greater the distance between sensor and leaf, the greater the area measured.

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