



Measuring device *flora II*

Climate supervision on plants breeding

- Temperature and relative humidity supervision
- Ventilated single-chip-sensor with digital analysis
- Exchange of the sensor without re-calibration
- Best rain- and radiation protection
- Output signals for temperature, relative humidity
- Large, wide visible 20 mm LED-indicator
- Response time in a few seconds



Description and operating

Safety reference



Attention! Read these instructions carefully, before you insert or connect this item. Only qualified personnel who is familiar with installation, construction and operation of the equipment should work around this device.

Application

For a profitable breeding of plants, besides of plants specific fertilizing and best solarization, especially the climate of the ambient air is of great importance. First of all climate means here air temperature and relative humidity.

The measuring device *flora II* got developed for the correct inclusion of those climate values under the circumstances as one can find especially in greenhouses.

This measuring device gets hanged directly over the plant beds.

Description and mounting

A single-chip-sensor for temperature and relative humidity is mounted inside a double-walled protection tube. A fan is installed above of this tube which leads continuously the air to be measured along the sensor.

This arrangement grants a maximum protection against rain and radiation. Which gets additionally improved by the white construction of the device.

A large, wide visible LED-indicator shows in rotation of approx. 3 sec. one after another the temperature and relative humidity. There are output signals 0...10 V or 0/4...20 mA for each measured values for controlling a climate plant. The supply voltage for the device is 24 Vac.

The installation is easily done by a plug in connection. Furthermore the single-chip-sensor is also plugged in and can get exchanged without re-calibration of the measuring device.

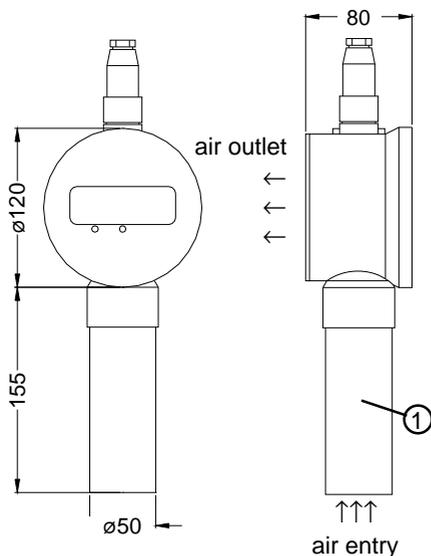
A 5-wire cable is required for supplying and signals transmitting. The device is hanged up directly to this cable.

Changing the fan

Put the indication side of the device on to a horizontal plane. Unscrew the six screws of the rear cover (3 pcs M3x16, 3 pcs countersunk screws).

Pull out the rear cover with fan. Take care of polarity on changing the fan (red = +, black = -).

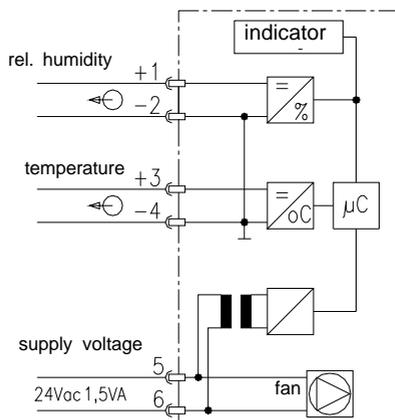
Physical dimensions



Changing the single-chip-sensor

After removing the white plastic tube 1 downwards, the single chip-sensor for temperature and humidity is accessible. By means of a pincette it can be plugged out of its 4-wire connector and can be replaced. A re-calibration after changing the sensor is not necessary.

Electrical wiring



Pin 2 and 4 are internally connected

Attention! Connect supply voltage 24 Vac only to pins 5 and 6. Any other connection might destroy the unit!

Technical data

Case:	double-walled white plastic tube (PP), 50 mm Ø with fixed electronic case 120 mm Ø, installed fan
Indicator:	4 digits red LED-indicator, character height 20 mm, automatically shifting to each measuring value every 6 seconds.
Connection:	waterproofed plug connector, protection class IP65
Supply voltage:	24 Vac
Power consumption:	approx. 1,5 VA
Weight:	approx. 0,6 kg
Temperature	
Range:	-30...+70 °C, 0...100 °C, 0...50 °C
Measuring element:	single-chip-sensor
Error limits:	± 0,5 °C at 25 °C, ± 1,5 °C at -30 °C and + 100 °C smaller error limits on request
Response time:	approx. 20 sec. (63%-time)
Output signal:	0...10 V, max. 5 mA or 0/4...20 mA, max 500 ohms
Rel. Humidity	
range:	0...100 % r. h.
Measuring element:	single-chip-sensor
Error limits:	± 3% r.h. at 30...70 % r.h., ± 5% r.h. at 0...30 and 70...100 % r.h. smaller error limits on request
Response time:	approx. 4 sec. (63%-time)
Output signal:	0...10 V, max. 5 mA or 0/4...20 mA, max 500 ohms