GrowSphere™
Operating System

GrowSphere™ ONE

Field Monitoring Unit

Quick Setup Guide

2025

orbia | Precision Agriculture

NETAFIM™ DIGITAL FARMING

Overview

- A stand-alone monitoring unit, based on cellular communication
  * It is essential to verify 3G/4G cellular coverage prior to installation
  * Global SIM card – included
- The ONE can be connected to a wide range of sensors to collect real-time data from the field and optimize irrigation management

Specifications:

→ Type of Inputs

- 3X Analog Input
- 1X Serial Input
- 2X Digital Input

→ Environmental Specifications

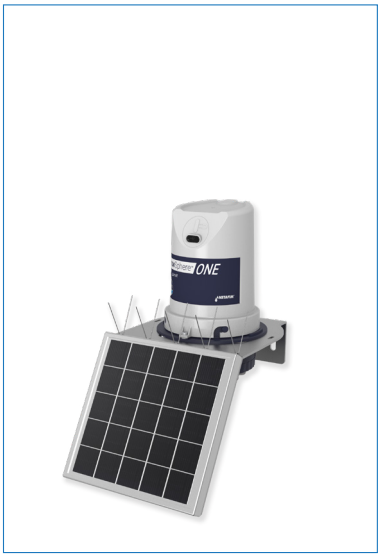
- Operating temperature: -10°C to 55°C (14°F to 131°F)
- Storage temperature: -20°C to 60°C (-4°F to 140°F)
- Air humidity: 0 to 95%

→ Hardware

- Outdoor Installation: IP65 , UV protection
- Standard Compliance: CE & FCC.
- Power Source:
  - Optional solar panel 5.5 watt (external solar panel is provided with a 5m extension cable)
  - Battery rechargeable li-ion pack 3.7V 5200mAh
  - Optional operation via external source (charging cable is included)

→ 3 different solar panel configurations:

1



GrowSphere™ **ONE**
integrated solar panel

2

GrowSphere™ **ONE**
external solar panel

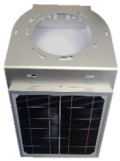
3

GrowSphere™ **ONE**
Without a solar panel (relevant for specific places)

What is in the BOX

GrowSphere™ **ONE**
Integrated solar panel

ONE monitoring unit



Integrated solar panel 5.5W

GrowSphere™ **ONE**
External solar panel

ONE monitoring unit + bracket

External solar panel 5.5W + 5m extension cable

GrowSphere™ **ONE**
Without a solar panel

ONE monitoring unit

Accessories Kit:

Antena

Charging cable

Base plate

Bird spikes

Metal cable ties

Plastic bands

Magnetic screwdriver 2x50mm

Activation magnet

Sensor portfolio

Digital Inputs

Water Meter

Pressure Switch

Rain Collector

Serial Input

NetaCap

WET150

Analog Inputs

Temp & Humid

Pressure

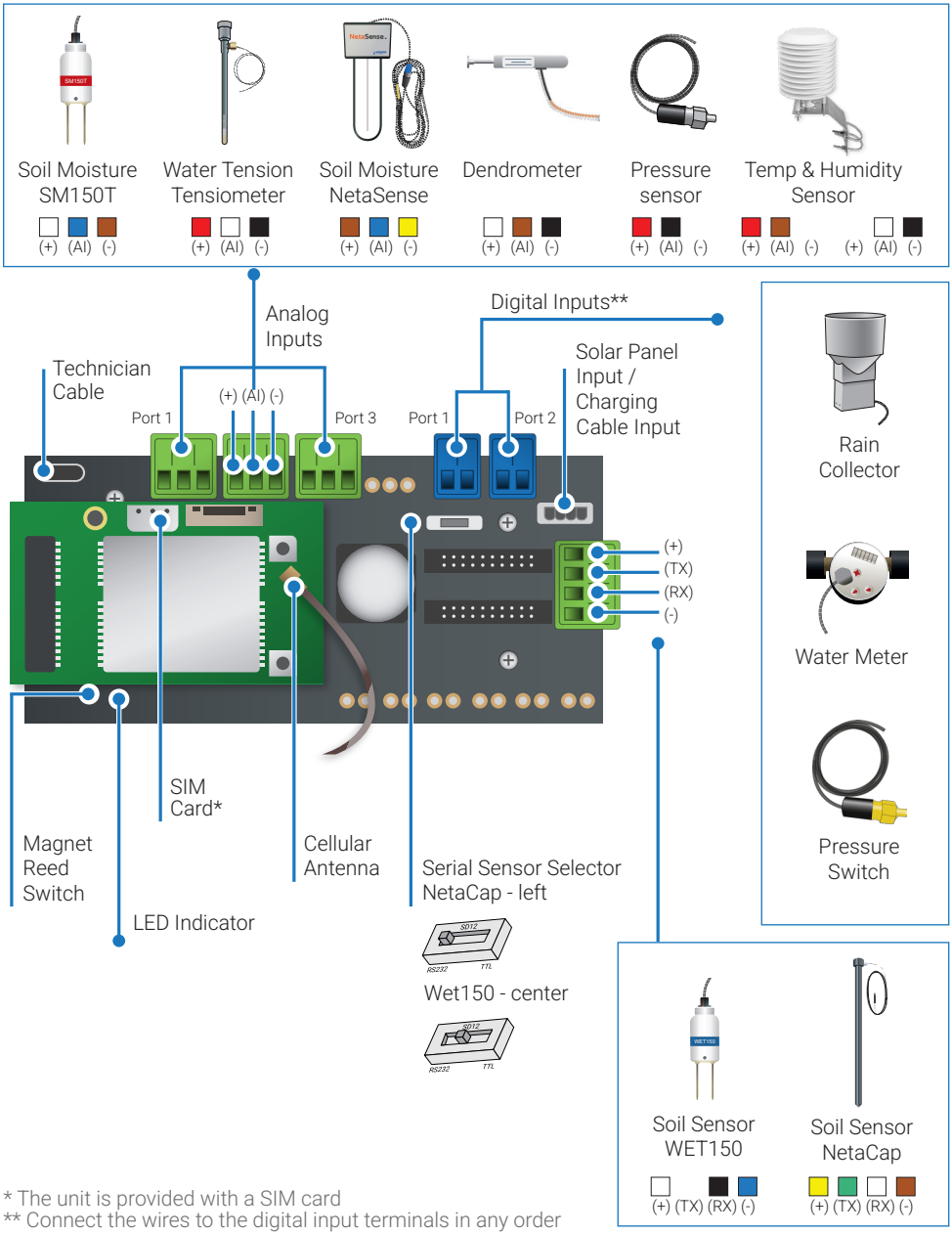
SM150T

Tensiometer

Dendrometer

NetaSense

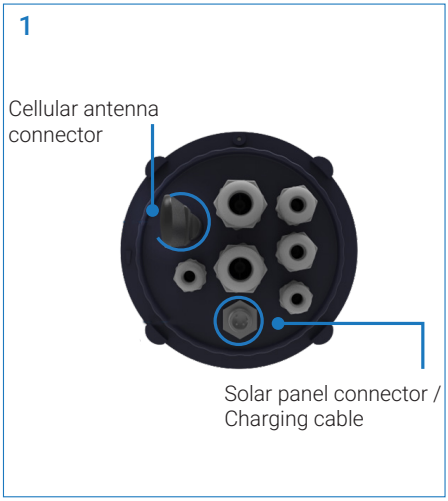
Sensor Wiring Diagram



* The unit is provided with a SIM card
** Connect the wires to the digital input terminals in any order

Installation Preparation

1. Connect the antenna to the device



2. Connect the charging cable to the device

3. Charge the device for at least 5 hours (A blue LED will indicate battery charging)
4. After charging the device, disconnect the cable

5. For the “integrated solar panel” device, assemble the device to the solar panel

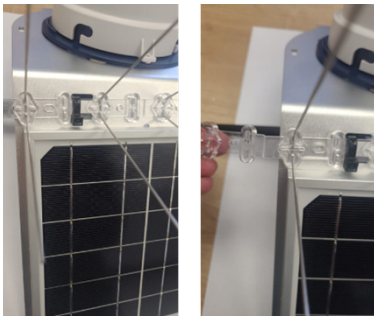
6. Connect the solar-panel cable

5

6

7. Connect the bird spikes to the solar panel if required

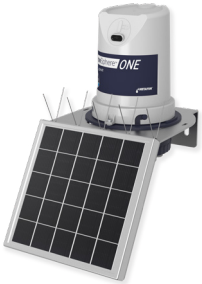
7



ONE Installation

- Place the unit at least 1m above the ground, to avoid dirt inside the unit
- To improve cellular reception it is recommended to place the device above the crop
- To improve sun absorption it is recommended to install the solar panel above canopy

Integrated solar panel



External solar panel, 5m cable

Northern Hemisphere – panel facing south

Southern Hemisphere – panel facing north

Mobile Application

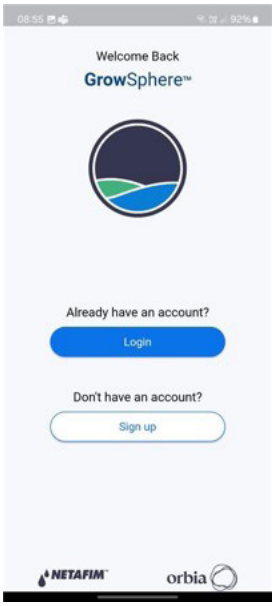
Download the **Grow**Sphere™ mobile application:

GET IT ON Google Play

Download on the App Store

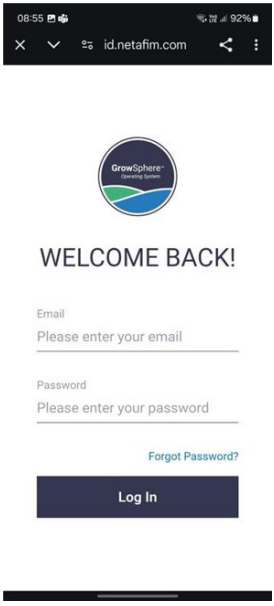
or simply Scan the QR code:

Open the **Grow**Sphere™ app



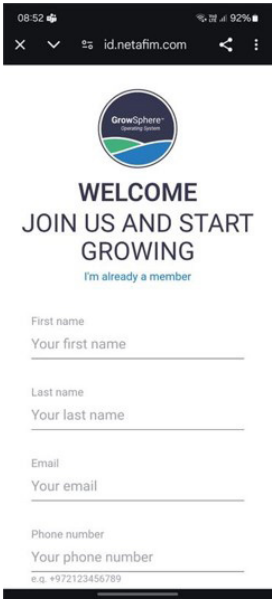
Existing user?

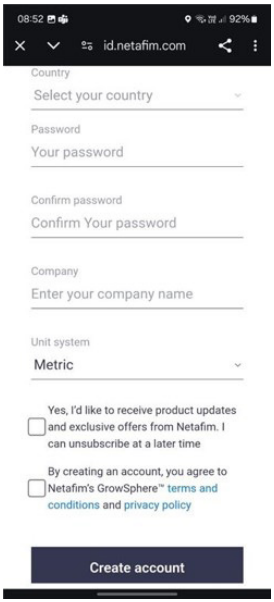
Click 'Login'



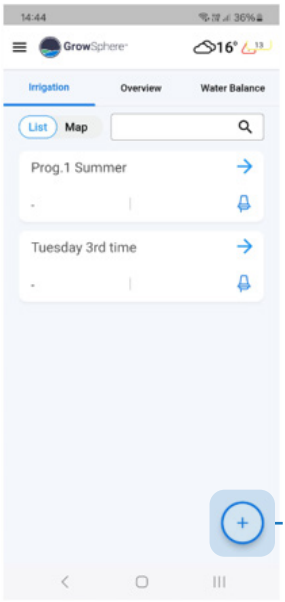
New user?

Click 'Sign up' and fill in your details

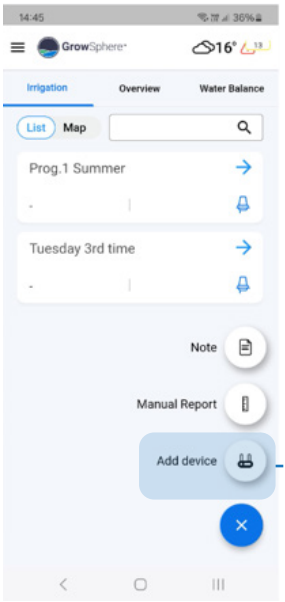




Add device



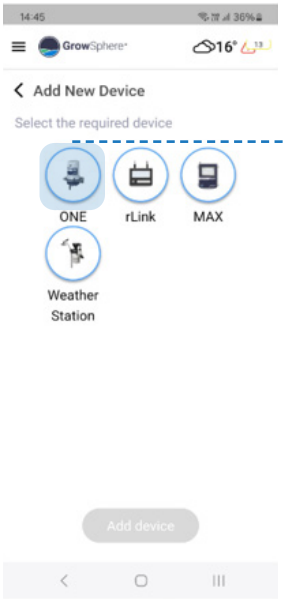
Click the + button



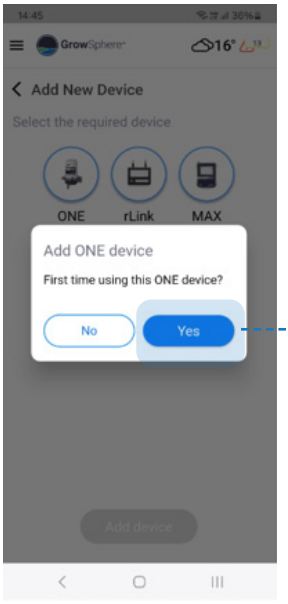
Add device

For first users –

Your journey starts here:

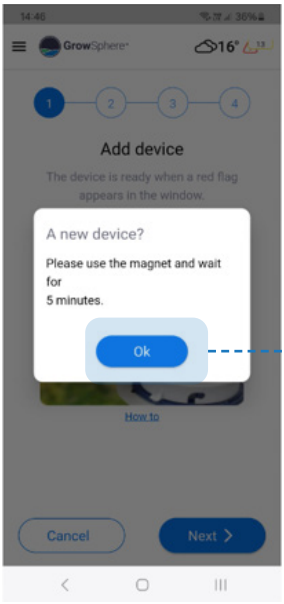


Choose the ONE



For new device click Yes

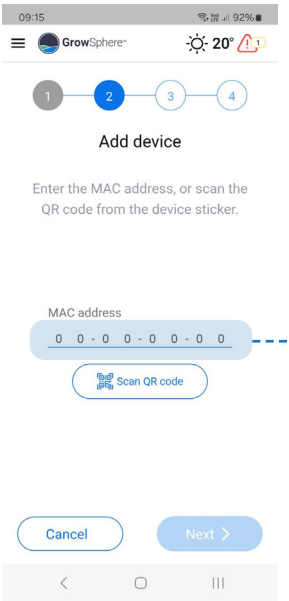
Follow the instructions



Click OK

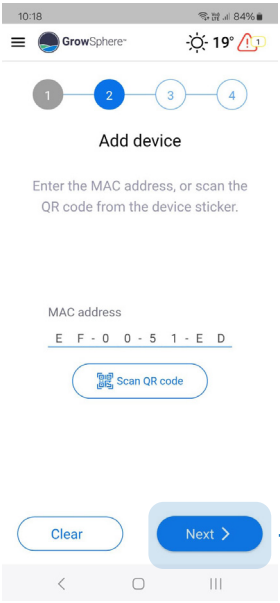
Attach the magnet to the designated spot

Click next

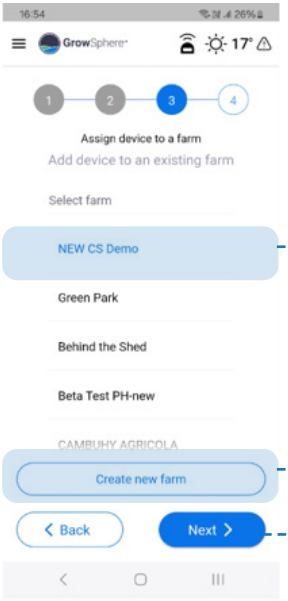


Device sticker:

Asign to a farm



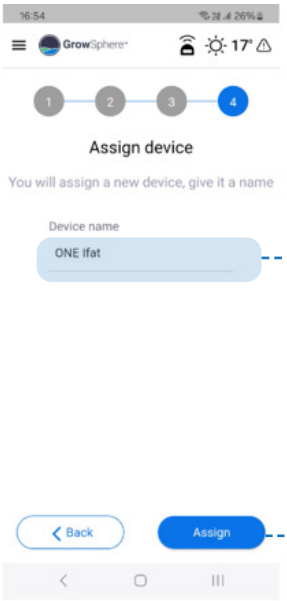
Click next



Choose an existing farm

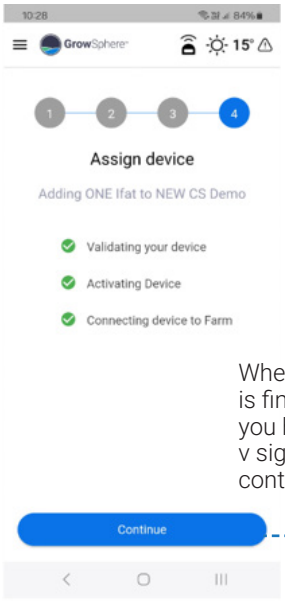
Create new farm

Click next



Name your device

Click assign



When the process is finished and you have 3 green v signs, click continue

Sensor configuration

For example:

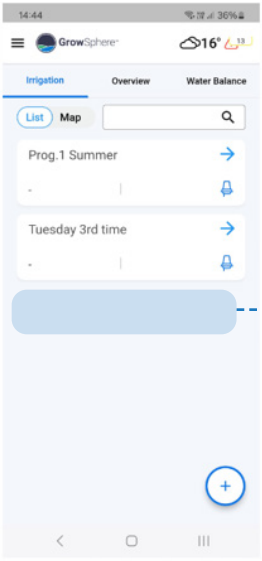
Choose sensors you wish to config

Click next

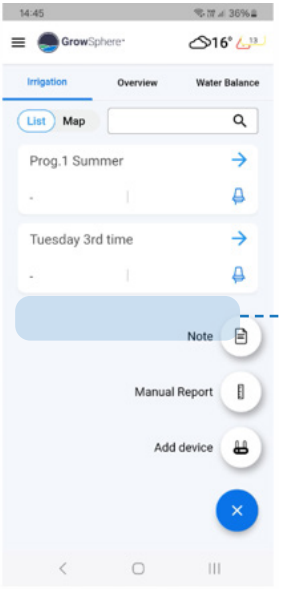
Confirm

Choose the sensor length

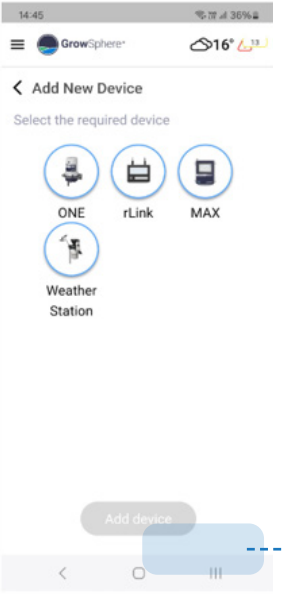
Click next



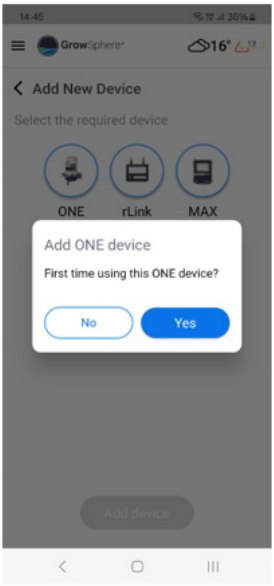
Name your sensor



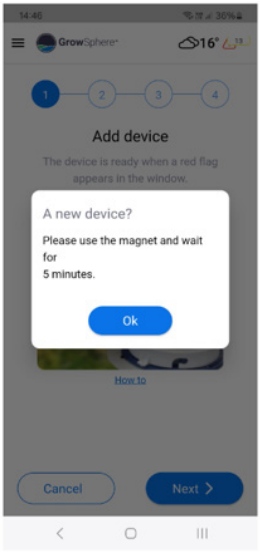
Name your sensor

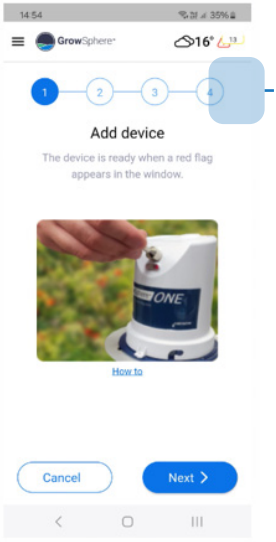


Confirm



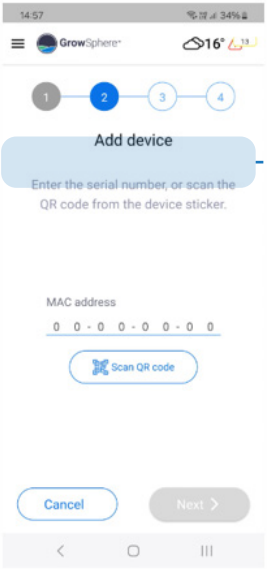
Sensor wiring



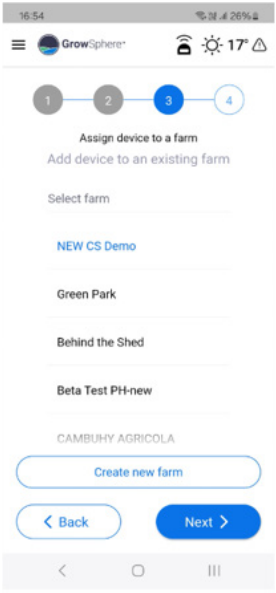


Click 'How to' to get the proper wiring instructions

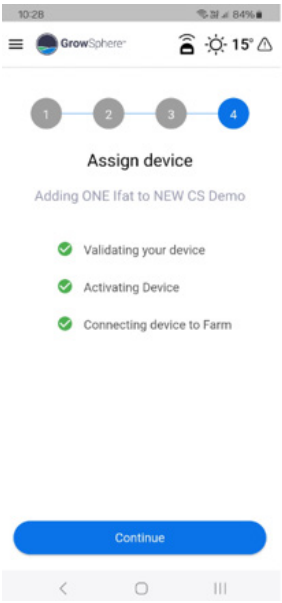
1st sensor:

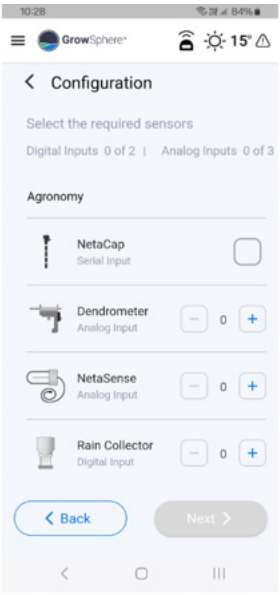


Choose the sensor you wish to wire

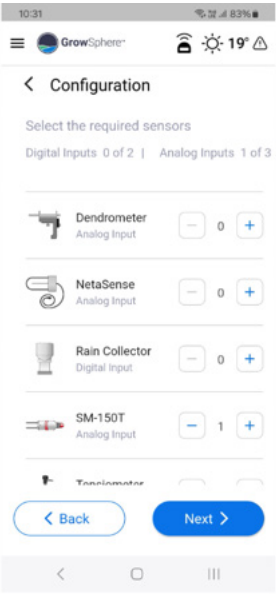

16:54
GrowSphere
17°
1
2
3
4
Assign device to a farm
Add device to an existing farm
Select farm
NEW CS Demo
Green Park
Behind the Shed
Beta Test PH-new
CAMBUHY AGRICOLA
Create new farm
Back
Next

16:54
GrowSphere
17°
1
2
3
4
Assign device
You will assign a new device, give it a name
Device name
ONE Ifat
Back
Assign

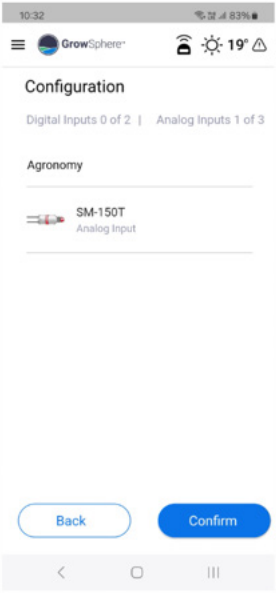

10:28
GrowSphere
15°
1
2
3
4
Assign device
Adding ONE Ifat to NEW CS Demo
Validating your device
Activating Device
Connecting device to Farm
Continue


10:28
GrowSphere
15°
Configuration
Select the required sensors
Digital Inputs 0 of 2 | Analog Inputs 0 of 3
Agronomy
NetaCap
Serial Input
Dendrometer
Analog Input
0
NetaSense
Analog Input
0
Rain Collector
Digital Input
0
Back
Next

2nd sensor (example):

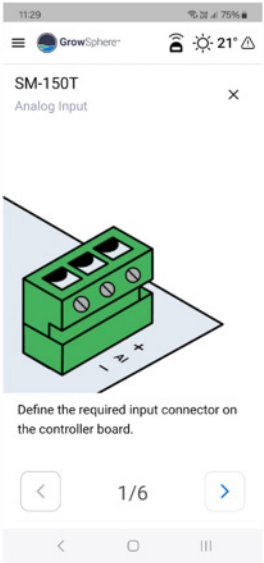


3rd sensor (example):



To validate correct wiring and sensor functionality, click on 'Get measurements'

Click 'Results' to get the sensor's readings



For **Grow**Sphere™ Support Center Scan:

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www.netafim.com