Grodan
Industrieweg 15
Postbus 1160, 6040 KD Roermond
The Netherlands

T +31 (0)475 35 30 20
F +31 (0)475 35 37 16
info@grodan.com
www.grodan.com
www.linkedin.com/company/grodan
www.twitter.com/grodan

Installation Guide

Grodan GroSens Handheld

Grodan®

Part of the ROCKWOOL Group

Precision Growing

With its focus on using the minimum input materials to generate the maximum output, Precision Growing is the most efficient and effective form of growing. It not only reduces growing costs but increases crop yield and quality. What's more, this form of growing actively contributes to sustainable horticulture.

The GroSens HandHeld package

Grodan® GroSens

GroSens Batteries

Extra set of batteries for Reader and Sensor

GroSens Sensor (Wireless)

The Sensor takes extremely precise measurements of the WC, the EC and the temperature

GroSens Cleaning Set

Cleaning set for disinfecting the sensor pins.

GroSens Reader

The reader allows you to see data from the GroSens sensor at a glance as you walk through the greenhouse.

GroSens Components

Extra-long antenna for optimal reception and USB cable for transferring meansurement data to PC.

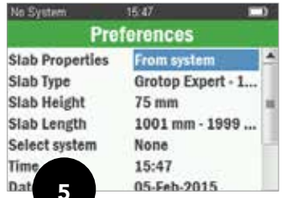
How to get started with the GroSens HandHeld

- The GroSens HandHeld case includes a short description how to get started:
  - Download the User Manual HandHeld from the website: www.grodan.com/GroSens
  - Activate the Reader by following the instructions as shown on the inlay
  - Download software program via downloader program to be installed on your PC

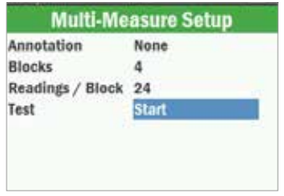
- GroSens HandHeld is ready for use.

General functions

1. Single measurement + functional check full systems
2. Multi measurement
3. Logging function
4. Storage of files
5. Preferences
6. About
   › version info

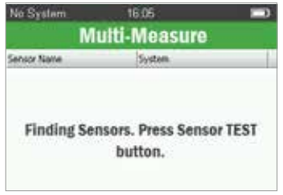


Create file



1. Annotation – name file
2. Select number of blocks
3. Select number of readings
4. Start

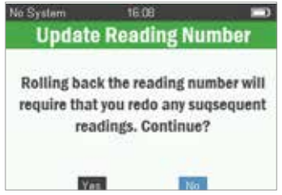
Select sensor



1. Activate Sensor

2. Select Sensor

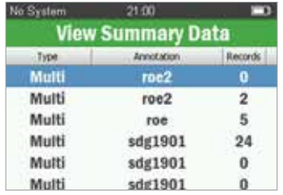
Measurements



1. Start measurements
2. Correct measurements if needed

Save data - read averages

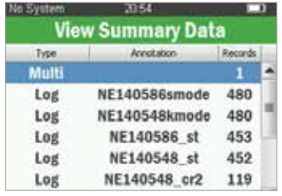
1. After last measurement - store



2. Read out averages on reader screen

1. Select logging function
2. Select Sensor
3. Set logging parameters
4. Download and store
   › from Sensor to Reader

Note: 5 days logging of data will take about 6 minutes to download.



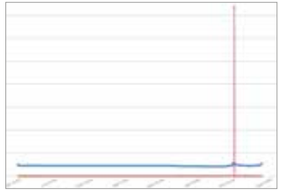
Download of files

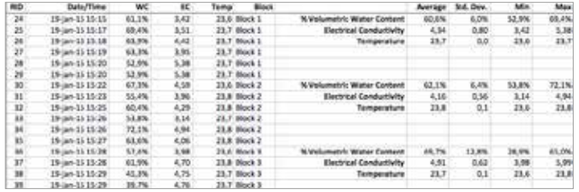
1. Connect Reader to computer
2. Select download
3. Select where to save your computer

4 Downloader program

Results in Excel

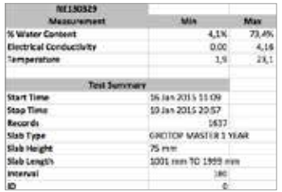
1. Multi measurement file



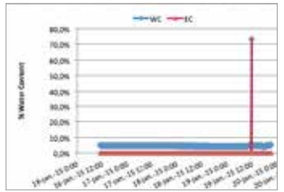


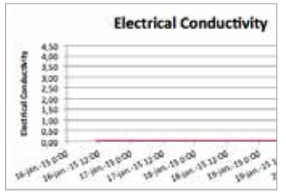
Sensor Information	
Serial Number	NE130329
Firmware Version	200
Battery	86%
Reader Information	
Serial Number	
Firmware Version	GR 2.03.124
Hardware Version	0
Battery	93%

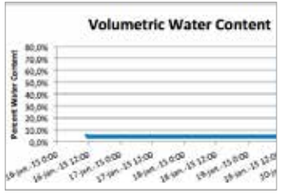
2. Logging file

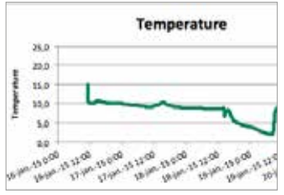


NE130329		
Measurement	Min	Max
% Water Content	4,1%	73,4%
Electrical Conductivity	0.00	4,16
Temperature	1,9	23,1
Test Summary		
Start Time	16 Jan 2015 11:09	
Stop Time	19 Jan 2015 20:57	
Records	1637	
Slab Type	GROTOP MASTER 1 YEAR	
Slab Height	75 mm	
Slab Length	1001 mm TO 1999 mm	
Interval	30	
ID	0	









Update soft & hardware

1. Update Sensor firmware
   › Sensor type
2. Update Reader firmware
3. Update Reader software

Trouble shooting - Attention points

- Sensors have to be updated to FW version 2.0 or higher
  - Sensors that have a lower FW version than 2 cannot be used for multi measurements or logging
  - You can also update Sensor manually with the Downloader program (see sheet 5)
    - connect the Reader to the computer
    - go to actions › update Sensor firmware › click on it › push test button on the Sensor
    - when the Sensor is updated, you have to set the Sensor mode click on actions › set Sensor mode choose “system mode” for growers with full systems, choose “kitt mode” for HandHeld systems.
- If growers don’t have excel on their computer, they cannot read the excel files the downloader creates. You can download the “excel reader program” on the Microsoft page to read out the excel files.

Reader Problems: several items indicate when a reader is blocked in functioning:

- Red light on the sensor and I cannot take a new measurement
- No measurements on the reader but “---”
- In multi measurements I have to push the test button to get a new reading

This means that the function of measurement is interrupted.
If you have to restart the Reader:

- push and hold the “on-button” until the screen turns grey/black › the Reader will restart and should function optimally again.