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Installation Manual: Moisture Sensor with Decoder

Introduction: This manual provides step-by-step instructions for installing VGB moisture sensor with a decoder. The moisture sensor measures the moisture content in soil, and the decoder translates the sensor readings into meaningful data. Follow the instructions carefully to ensure a successful installation.

Materials Required:

1. Moisture sensor
2. Decoder
3. Connecting wires, 1 box, cable clips, tie rips
4. Screwdriver
5. Electrical tape
6. Power source (if required)
7. Heron Controller

Step 1: Prepare the Moisture Sensor

1. Carefully unpack the moisture sensor and check for any visible damage.

Step 2: Prepare the Decoder

1. Unbox the decoder and inspect it for any physical damage.
2. Ensure that all the necessary cables and connectors are included with the decoder.

Step 3: Identify Installation Location

1. Determine the optimal location for the moisture sensor in the soil.
2. Choose an area where you want to monitor the moisture level consistently.
3. Ensure the location is easily accessible for future maintenance.

Step 4: Installing in the field

1. Drill/Dig a hole first.
2. The sensor should be placed in the correct direction. (see the below picture)

3. Attention: do not force the sensor in the soil as it is fragile. The soil might be hard, therefore, better to make two small holes with a e.g. screwdriver and then gently slide the sensor in those holes.
4. The sensor should be inserted at different depths depending on the root of the tree/berry you are cultivating. At the end of this manual you can see a general guideline for different crops. Note: This is a general guideline, therefore please refer to your crop advisor as soil type, root depth is always important to take into consideration.

Step 4: Connect the Moisture Sensor to the Decoder

1. Red wire from moisture sensor goes to blue wire of the decoder cable.
2. Black wire from moisture sensor goes to brown wire of the decoder cable.
3. If necessary, refer to the decoder's user manual for specific wiring instructions.
4. Make sure the connections are secure and properly insulated using electrical tape.
5. On the decoder you have number/numbers written on them. Write down those numbers and to which moisture sensor the decoder was connected. This will help with the set-up on the Heron Controller.

Step 5:

1. Adding the numbers to the Heron Controller. For this step contact our VGB technician and he will help add them to the system.
2. If you have a location with two sensors at different depths. Put the deepest sensor in the Heron first!!!

Step 6: Test the Installation

1. Start the program installed in Step 5 for 20 seconds to read the values.
2. Verify that the moisture sensor is connected properly to the decoder.
3. Use the provided interface to check if the decoder is receiving sensor readings correctly. The values on the Web-App should be between 25 and 40 VWC.
4. Test the sensor by inserting pouring a bucket of water on the soil where the decoder is installed and observe the readings on the decoder.

Note: It's important to refer to the specific user manuals provided by the manufacturer for detailed instructions, troubleshooting, and safety guidelines.
Congratulations! You have successfully installed the VGB moisture sensor with a decoder. Monitor the moisture levels regularly and adjust irrigation practices based on the sensor readings to ensure optimal plant health.

Humidity sensor depths:

Apples	20 cm & 40 cm
Pears	30 cm & 60 cm
Blueberries	10 cm & 30 cm
Red berries	15 cm & 35 cm

If only one sensor is installed per location it should be somewhere between the roots. If two one at the top and bottom of the roots.