Use Case

ELGO DIMITRA – INSTITUTE OF SOIL AND WATER RESOURCES
"NEW TELEMETRY NETWORK FOR MULTI-POINT SOIL MOISTURE MEASUREMENT, ALONG
WITH A COMPLETE METEOROLOGICAL STATION, IN RETHYMNO, AND CHIOS."







Project ID:

Supply and Installation of Eight (8) Automatic Telemetry Stations within the framework of the implementation of the research project titled: "CONVERTING MARGINAL LANDS OF THE MEDITERRANEAN BASIN INTO PRODUCTIVE AND SUSTAINABLE AGRO-ECOSYSTEMS USING LOW WATER DEMANDING NEGLECTED AND UNDERUTILIZED SPECIES."

A total of two fully automatic telemetry meteorological stations were installed in two experimental fields, in Crete and Chios, to monitor key environmental parameters. Additionally, a total of 6 soil moisture and temperature monitoring stations were installed within the experimental plots.

Each station measures the above parameters at 6 different points, resulting in a total of 36 different measurement points, using high-precision sensors from the leading manufacturer METER (USA).



Overview

Type: 8 Telemetry Stations

2 Meteorological Stations

6 Soil Moisture and Temperature Monitoring

Stations

Region: A) Crete, Greece

B) Chios, Greece

When: Feb 2025

Parameters:

- Temp & Humidity
- Wind Speed & Direction
- Solar Radiation
- Precipitation
- Soil Temperature
- Soil Moisture
- Soil EC



- The measurements are automatically transmitted to an online platform (cloud).
- The system is expandable and can support additional sensors.
- Extremely low energy consumption with autonomy provided by a photovoltaic system.
- Requires minimal maintenance.

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ELGO DIMITRA – Institute of Soil and Water Resources
"New Telemetry Network for Multi-Point Soil Moisture Measurement, along
with a Complete Meteorological Station, in Rethymno, and Chios."



Administrator

Institute of Soil and Water Resources (ELGO DIMITRA)







Soil Moisture, Temperature, and Electrical Conductivity Sensor - Model TEROS 12

The sensor is equipped with 3 metal pins through which the measurements are taken.





Key Features:

- Volume of influence 1010 ml
- Easy Installation (to avoid air gaps and ensure higher measurement reliability)
- Robust construction for harsh field conditions





Important!

Very high accuracy in all parameters

Important!

Extremely low maintenance requirements

Important!

36 measurement points for soil parameters



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