

Case study: monitoring gardens and green spaces

RFID identification and remote reading solution using active wireless technology to track temperature and humidity levels in both the air and ground.



An easy, automatic, and autonomous way to monitor your green spaces.



The system uses wireless sensors enabling you to:

- 🕒 Automatically download **readings** for **temperature and ground/air humidity**.
- 🕒 Automatically download **readings** regarding the state of your automatic system.
- 🕒 Deploy and manage **networks using multiple long-range wireless sensors (up to 150 meters)**.
- 🕒 Collect and connect data with your monitoring system using our various **SCIEL Reader models (RS-232, RS-485, USB, Wi-Fi, Ethernet)**.
- 🕒 Benefit from trouble-free autonomous operation **with long sensor life up to several years**.

Leveraging patented RFID technology by ELA Innovation

ELA Innovation has developed RFID environmental sensors:

- 👁️ **Integrated, waterproof temperature / humidity sensor**
- 👁️ **High detection distance:** over 150 meters
- 👁️ **Extremely small size**
- 👁️ **Ultra-low power consumption (ULPW)**
- 👁️ **Long battery life**
- 👁️ **Very low level of electromagnetic emissions**
- 👁️ **Respects standards:** CE, IETS 300-220

ELA Innovation RFID tags used for this application:

- 👁️ **Integrated temperature sensor: COIN_T**
- 👁️ **External temperature sensor: ITEMS_TD**
- 👁️ **Integrated relative humidity sensor: COIN_RH**
- 👁️ **External ground humidity sensor: ITEMS_H2O**
- 👁️ **Digital or analog input for reading states: ITEM_AD**

RFID tag	
Reading distance (line-of-sight)	60 to 150 m
Operating range	-30° C to + 70° C (COIN T, ITEMS TD)
Humidity range	0 to 100% (COIN RH, ITEMS H2O)
State range	0 to 3V DC (ITEM_DG, ITEM_AD)
Casing	Waterproof (IP65 ITEMS & COIN RH, IP68 for COIN T)
Battery life	2 to 10 years
Standards	CE, IETS 300-220