Solana

IoT autonomous planter

Urbidermis Team
2023

Product description

Certificates

CE IK 08 IP 66

Finishes

Brown HPL

The colours shown are purely indicative. Other colours are available upon request. Check finishes for marine environments. Check our plant and shrub catalogue.

Materials

- Container in rotomoulded recycled PE.
- External panels made of strips of compact high pressure laminate (HPL).
- Upper cover made of powder-coated AISI304 stainless steel.
- Support elements made of hot-dip galvanized steel.
- Exudation watering system through porous hoses.
- Watertight box made of PP for electronic elements.
- A2 stainless steel hardware.

Installation

- Does not need to be anchored to pavement.
- The element is supplied assembled and packaged
- It includes a battery.
- It can be connected to the main water and electrical system.
- Installation and assembly instructions included.

Maintenance

Container with useful capacity of 100l. Volume of substrate 0.24 m^3. Includes an IoT system with integrated sensors, connected to a cloud-based management platform. The planter regulates itself, depending on the plant's water needs, thus saving water. It detects movement, impacts and vandalism. It does not require any maintenance. Open the Urbidata platform on Cloud or OnPremise.

Regulations

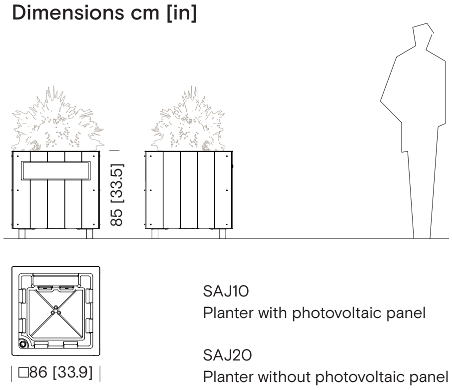
— ETSI EN 301 489-1
— ETSI EN 301 489-17
— UNE-EN IEC 61000-6-1
— UNE-EN IEC 61000-6-3
— UNE-EN IEC 61000-6-1
— UNE-EN 62368-1
— UNE-EN 61215-1-4
— UNE-EN 62485-3
— UNE-EN 62262
— UNE-EN 60529

Weight kg [lb]

- Planter (no water, no substrate): 80 [176.4]
- Planter (with water and substrate): 450 [992.1]

Weight without packaging.

Dimensions cm [in]



SAJ10
Planter with photovoltaic panel

SAJ20
Planter without photovoltaic panel

Technical information

IoT functions

Watering logic
- Self-regulated with sensors.
- Programmed to a schedule.
- Forced remote.

Monitoring
- Temperature and humidity of the substrate.
- Impact and movement detection.
- Tank water level detection.
- Tamper-proof to prevent unauthorised access to the Hardware.
- Weather events.
- Battery condition.
- Location.

Communication

Wi-Fi, GSM/GPRS, LoRA, Bluetooth.
OTA Firmware updates (except LoRa).

Hardware

- Three-pin humidity and temperature sensor.
- Integrated 12Ah battery and charging module.
- Self-priming 12V pump.
- Three-axis accelerometer.
- Urbidermis micro-controller with 12V/5V power.
- Operating temperature: +5/+40ºC.
- Energy consumption (approximate):
- Standby: 0.10Wh
- Connected: 1.25Wh / 2.30Wh
- Watering: 14.60Wh / 15.60Wh

Photovoltaic plates

Photovoltaic panels with monocrystalline cells.
- Nominal power: 20Wp.
- Maximum voltage: 18V.
- Tempered glass: 3.2 mm.
- STC (Standard Test Conditions):
  1000W/m^2 of irradiance, spectral distribution AM 1.5,
  temperature 25±2ºC.

Software

Urbidata, City operative system.
API integration with external services.
Monitoring of asset condition.

Location
Interactive map for remote location and management of IoT elements.

Analysis
Interpretation and archiving of data:
- Substrate humidity.
- Substrate temperature.
- Watering.
- Water tank level.
- Battery condition.

Warnings
Incident and notification management screen:
Watering.
- Water tank low.
- Battery low.
- Impact detected.
- Access detected.
- Communication failure.

Automated notifications on the platform and/or via email.
Summary of digitized asset condition.
Desktop, tablet and mobile version.