

Advantages



Quick & easy installation. Gatewayless digitalization of hydraulic and agricultural installations.



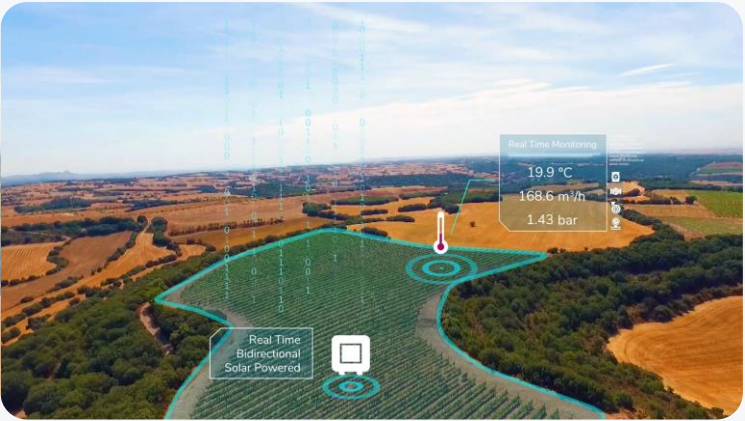
Real time smart water metering: SPHERAG autonomous IoT devices monitor water & pressure.



Costs & time savings by using our edge intelligence IoT and real time alerts



Link the irrigation management to local and remote sensing. Easily integrate your existing sensor information



30%
Water savings



70%
Cheaper to install (\$)

Smart Solar & Real Time IoT Actuator for Precision Farming



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About us

SPHERAG is a pioneer in the integration of solar powered & real time IoT & Cloud solutions in agricultural environments, parks, gardens and sport fields.

What does SPHERAG offer?

SPHERAG proposes an innovative solution that bi-directionally combines IoT devices and cloud computing services, linking **monitored & analyzed** data with autonomous **AI powered automation**.

IoT Data sheet

Electrical characteristics

Battery Type	Li-Po
Battery capacity	5000mAh
Output voltage	14 V (latch solenoids and relays)

Modem

Modem	LPWA
Technology	NB-IoT/GPRS/RF/LTE/LTE-M

Input/Output

Number of outputs	2 – Latch
Pressure reading input	YES – Digital
Input	2 Digital inputs
Water meter Reading input	2 – pulse

Device

Action mode	Real-time
Supply power	100% solar energy
Dimensions	100x100x40
Protection	IP67
Installation	Up to 70% savings

PLATFORM SERVICES

SATELLITE INFORMATION

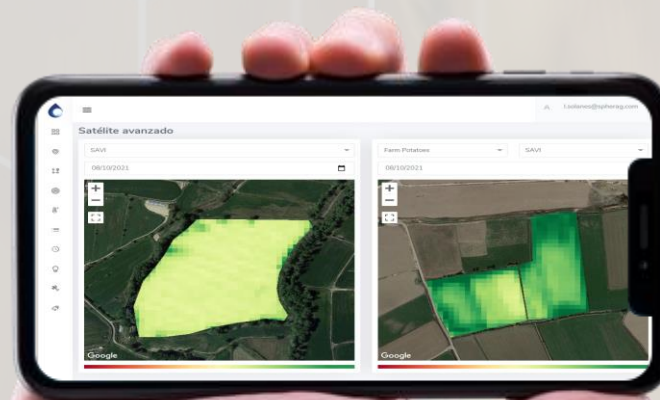
- Viewing satellite indices: NDVI, NDWI, SAVI and RGB.
- Monitoring your field on a large scale
- Comparison of farms and at different time points

AGROCLIMATIC FORECAST

- Daily & hourly forecast of temperature, precipitation and relative humidity
- Forecast of reference crop evapotranspiration (ET₀), leaf moisture and soil moisture.

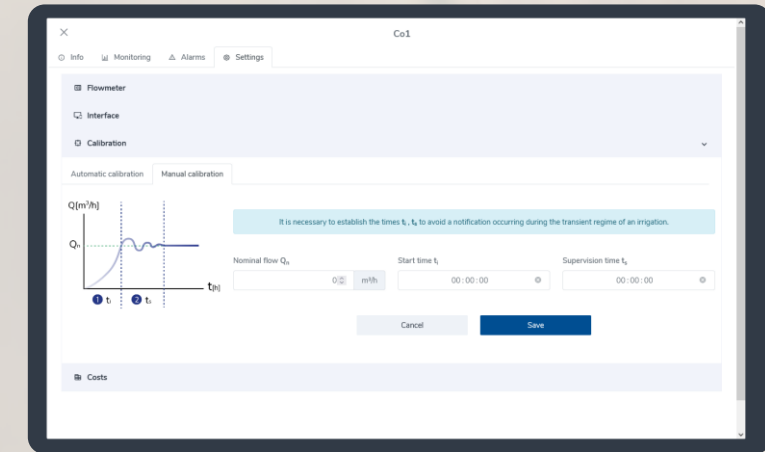
ALARMS & NOTIFICATIONS

- Notifications via push and email
- Water theft and pressure alarm
- Notification and / or shutdown due to excess pressure
- Notification and / or stop in case of flow out of nominal range
- Other customizable alerts



SMART WATER METERING

- Reading based on a pulse emitter connected to a meter
- Record of eventual daily, weekly, monthly and annual consumption
- Graphs of total consumption, eventual, flow and costs, updateable with a single click



IRRIGATION AND NUTRITION MANAGEMENT

- Real-time performance and scheduling
- Independently and sequentially programmable actuators
- Configuration can include pre-irrigation and post-irrigation.
- Programming by time, volume, sensors, weather forecast and crop models
- Intelligent irrigation based on third-party sensorics "CLOUD INTELLIGENCE" or integrated into the device, "EDGE INTELLIGENCE"
- Models for horticultural and woody crops based on mathematical-inferential "Artificial Intelligence"

* *Integration through API Available*