



Complete sensors stations for the control of superficial waters

This product has been designed specifically for remote applications of hydrological monitoring. It is the ideal solution to know online the level of the waters without need costly and complicated facilities. It submits totally integrates with the **web platform of visualization of Smartyplanet.**

APPLICATIONS

- Level of the water surface.
- Flow.
- Level of the danger of flood.
- Pumping stations.
- Fluid container

KEY FEATURES

- Super-limited maintenance.
- Resistant to extreme conditions.
- Unlimited autonomy.
- Integrated communications.
- Without complicated infrastructures.
- Visualization in Smartyplanet's web.

AVAILABLE MODELS

- **Smarty River 402-P:**
It includes in addition pluviometer with pole of support.
- **Kit Satellite:**
To satellite communication in places without GSM signal.
- **Smarty River 403:**
To monitoring the rain in a basin headwaters.
- **Smarty Meteo 500:**
Meteorological scientific station of very high range

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Radiation Shield

Ambient temperature sensor.
Relative humidity sensor.

Solar panel

5 W
Adjustable

Radar Sensor

Level of the water surface from 0,3m up to 15m of height

Stainless steel shell

Easy installation on any support: pole, post, wall, bridge, etc..

Datalogger case

Datalogger with a module GPRS
Intelligent solar charge controller.
Batteries Ion-Lithium of high capacity.

GSM Antenna

Quad-band.
For sending of the GPRS Data.



Plug and play Installation

The design of this Station allows his installation under the concept 'to plug and play'. He places of simple form on posts, walls or poles, and his entail with the web of visualization is immediate and automatic.



Without complicated infrastructures

With the different models of station it will be able to create networks of sensors adapted to the needs of his sector, without need of complicated infrastructures not costly.



Better relation Cost - benefit

The new concept of station of sensors allows to have the best technology to monitor and to control his resources to a cost very lower than other existing alternatives on the market.



Visualization in web page

The control of the sensors is realized by means of a web application personalized with multiple functionalities as alarms, historical, multiple users, etc.. Accessible from any device connected to Internet.



Sensors Networks

The number of Stations to linking to his network is unlimited, being able to incorporate different models and configurations to form extensive networks that connect the information of his resources to Internet, to give response to the Smart cities of the future



Multiple sensors

There are multiple the precision sensors that can join. The model of Station selects depending on the type and I number of sensors that he needs.





Mechanical construction

Structure supports of stainless steel
Data logger case of Aluminum
Integrated arms for housing the sensors
External optional arms for housing the sensors
Total weight: 5 kg



Environmental protection

Circuit boards with tropicalized protection
Protection class of all the elements: IP-68
Operating temperature : -30 a +70 °C
Wired up shielded with case of steel.
Tight connections with a military connectors type
Resistant painting
Water-repellent treatment of the exposed surfaces



Communications

Antenna external GPRS
Module GSM Cinterion Quadband
Interval record information: every 15 minutes
Interval sending information: every 30 minutes
Protocol communication: TCP
Information stored in Cloud Data Server
SIM card communications included
Fully setup and ready to work.



Ambient temperature sensor incorporated

Range: -35°C to +70°C
Resolution: 0,1 °C
Precision: ±0.1°C



Relative humidity sensor incorporated

Type: Radiation Shield protection
Range: 0-100 % HR
Resolution: 0,1 % HR
Precision: ± 5% HR
Temperature compensated



Water level sensor incorporated

Type: Radar
Antenna: Plastic cone.
Frequency: K-band
Range: 30 a 1500 cm
Resolution: 1 cm
Measurement error: ±2 mm
Official approval: IEC
Leaked of information opposite to anomalous readings.

Leaks interferences of the rain, blizzards...

Adjustable to compensate the slope of the area.

Working range: -40°C a +80°C

Beginning of measurement: extremely short Impulses of microwave are issued by the system of antennas on the product to measuring, reflected by the surface of the product and caught again by the system of antennas. The same ones propagate to the speed of the light.

The time from the transmission up to the receipt of the sign is proportional to the level. A special process of stretching of time makes possible the exact and sure measurement of the times extremely short. The sensors of radar are employed with power of very low transmission at the ranges of band of frequency K.

A proven processing of signs leaks safely the echo of correct level from one without number of parasitic reflections.

Applications for liquids: The compact sensors of high frequency in the band K are specially adapted for applications that need accuracy. There is reached an approach of excellent sign enclosed by sizes of antenna small.

