MYSILO® MANAGEMENT by SILOSMART SOLUTIONS

MCSystems®

MONITORING CONTROL SYSTEMS

PRODUCT LEVEL SOLUTION FOR INDUSTRIAL USE

TAKE CONTROL. **BE SMART.**

Your smart choice for MYSILO management

MYSILO® MANAGEMENT by SILOSMART SOLUTIONS

MCSystems main goal is offer technological solutions that allows, stocking and managing process be automated by the use of our own designed and manufactured solutions, on continuous development and adaptable to client's needs and requirements.

Thanks to our measurement, monitoring and data managing systems, MCSystems offers reliability, commodity and safety in terms of logistic and labour activities. Our wide range of solutions cover from agribusiness to industrial use.

TAKE CONTROL. BE SMART.

MCSystems®
MONITORING CONTROL SYSTEMS

PRODUCT LEVEL SOLUTION FOR INDUSTRIAL USE

MySILO by SILOSMART SOLUTIONS

MCSystems®
MONITORING CONTROL SYSTEMS

PRODUCT LEVEL SOLUTION FOR INDUSTRIAL USE

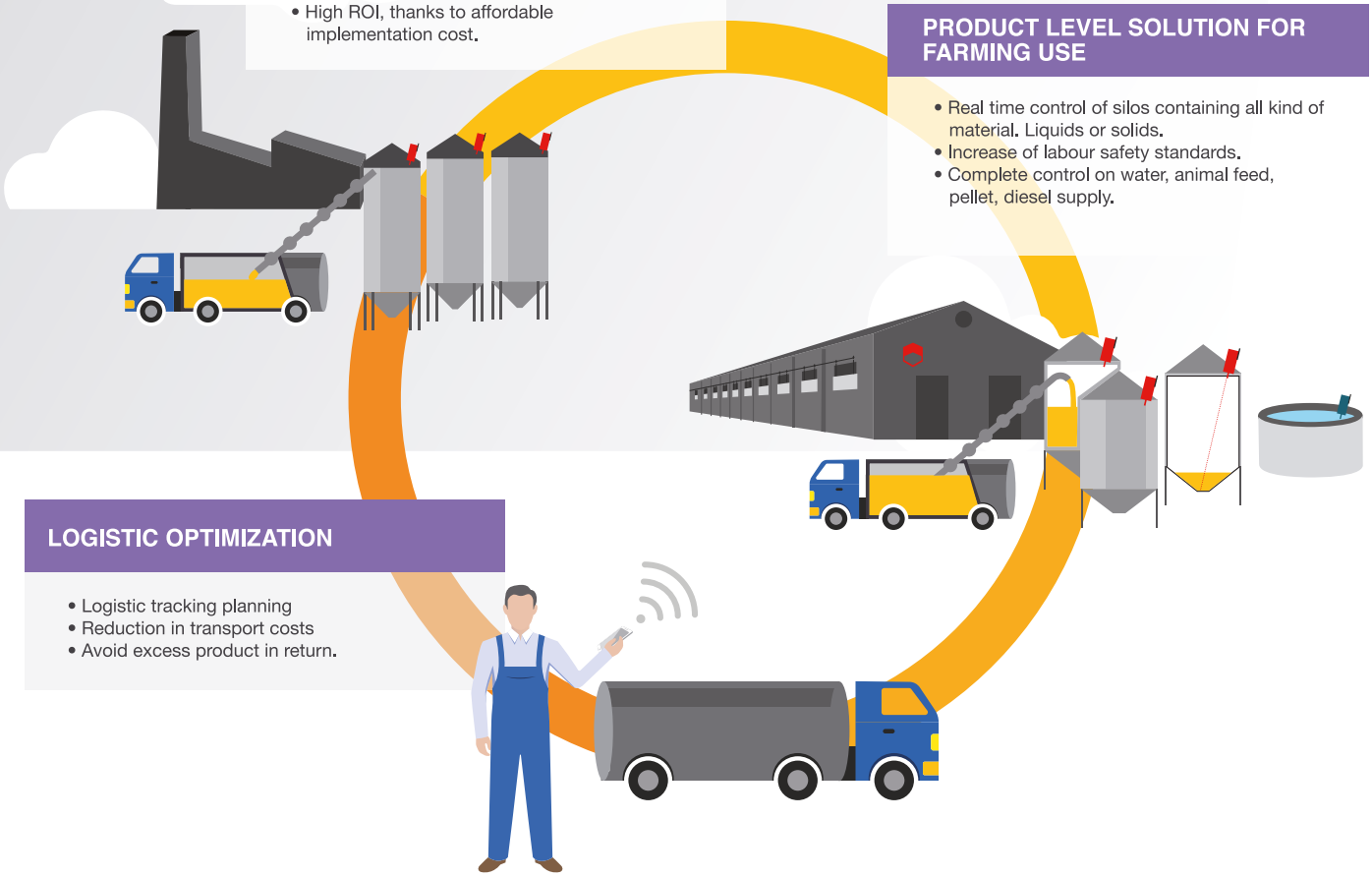
- Monitoring stock inside silo in real time
- Improve scheduling of production and distribution
- High ROI, thanks to affordable implementation cost.

PRODUCT LEVEL SOLUTION FOR FARMING USE

- Real time control of silos containing all kind of material. Liquids or solids.
- Increase of labour safety standards.
- Complete control on water, animal feed, pellet, diesel supply.

LOGISTIC OPTIMIZATION

- Logistic tracking planning
- Reduction in transport costs
- Avoid excess product in return.



SIMPLICITY

- Wireless.
- Maintenance free.
- Requires no calibration.
- No need for electronic power supply.

STRENGTHENS

- Ingress protection IP65.
- Wide range of working temperature.

HIGH PERFORMANCE

- Low consumption.
- High battery durability.
- Very accurate measurements.

ADAPTABILITY

- Does not matter how big the storage silo, bin or container are.
- Programmable measure frequency.

RAW MATERIAL VERSATILITY

- Accurate measurement of bulk solids regardless of the type of material or product characteristics.

LABOUR SAFETY

- Improve labour safety, avoiding climbing silos for manual double-checking.

MySILO management by SILOSMART SOLUTIONS

DIGITPLAN, THE APPLICATION THAT MONITORS AGRICULTURAL OR INDUSTRIAL FACILITIES IN REAL TIME

User-oriented monitoring software, where user can control the status of your installation in real time, using data obtained from the various level sensors (Silometric or Fluidmetric) or temperature sensors (SecurDetect), through any electronic device connected to the Internet.

Features

- Multiplatform.
- Real-time status and inventory display.
- Consultation of historical data in graphic format, exportable to a spreadsheet (csv).
- Geo-location of the devices.
- Low level alarms configuration
- Possibility of integration with other programs.

SiloMetric®

Solids

Wireless and easy to install laser sensor for bulk materials stored inside silos or bins.

FluidMetric®

Liquids

Wireless ultrasonic sensor, suitable to measure the level of liquid products stored inside tanks.

SecurDetect®

Wireless device for different environmental condition detection. The sensors can be equipped to detect temperature, moisture, enlightenment, tilts, vibration, gasses, intrusion, etc

Services

Tank volume calculations tools.	Data display in all international measurement units.	Data calibration and corrections.	Historical data in graphical format and exportable to spreadsheet.
Alarm notifications via SMS or e-mail.	Direct API connection with other software applications.	Generate personalized user profiles.	Status and control diagnosis of the devices.

SiloMetric

Product Description

Silometric LM sensor uses laser technology to measure the level of solid material inside silos and bins.

SiloMetric®

Solid Materials

Easy to install, wireless	**Low maintenance**	**Customization of the measuring frequency**	**Powered with long last battery**

Data sheet

Model	LM-1	LM-100 INDUSTRIAL
Material	Solid materials, not recommended in dusty environments.	
Measuring range	Up to **10 m.**	Up to **40 m.**
Working temp. range	From -15º to + 55º.	
Voltage	Lithium Battery 7,2 V. Capacity 19.000 mAh.	Lithium SAFT Battery 7,2 V. Capacity 19.000 mAh.
Battery life	**Measures every 2 h:** Up to 4 years. **Measures every hour:** Up to 2 years. **En continuo:** not recommended with battery	
Sensor	Class II laser, <1mW, 635 nm.	
Accuracy	+/- 3mm.	
Measuring frequency	Every 2 h. Customizable.	
Case	IP65. High density polypropylene. UV protection.	
Communication	Wireless. Radiofrequency, free frequency bands: 433 Mhz, 868 Mhz, 905 Mhz, 922 Mhz, depending on the country.	
Data	• The data measured by the Fluidmetric can be visualized in the web DIGITPLAN. • Data Export to a .xls file. • Data integration with other systems using a Web Service or Modbus protocol. • Data visualization with Panel View Pi-100.	
Dimensions	335 x 120 mm.	

Optionals

Continuous reading

Customizable reading.

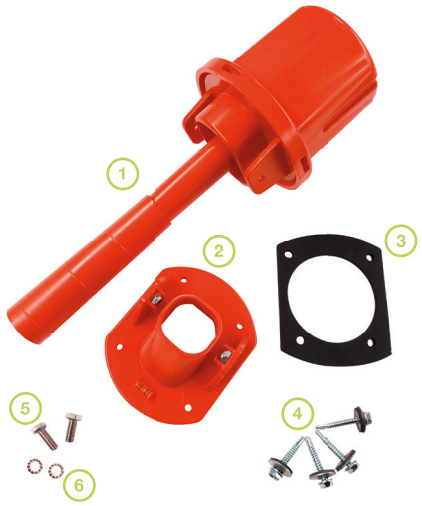
12V power supply is required in continous reading.

Installation

Drill a hole in the superior part of the bin, we recommend to use a 40mm drill crown. Place the **rubber gasket (3)** under the **support kit (2).** Make sure that the **Silometric (1)** will be focusing the center of the silo before fixing the **support kit (2).** Use the screws provided to fix the support. Place the **Silometric (1)** through the support kit, place the **packing rings (6)** between the support and the **Silometric (1).** Finally fix the **screws (5)** adjusting the correct inclination .

Check the **Mounting Manual** for more detailed information. No need of activation, deviced ready to use.

Silometric parts



1. Silometric Device
2. Support kit
3. Rubber gasket
4. Autodrilling screws.
5. Inox M-6 screws
6. Inox M-6 packing rings

Certifications

CE

MCSystems declares under our sole responsability that **Fluidmetric** complies with the applicable requirements of the EC Directive and the current standards.

RoHS COMPLIANT

None of our products contains lead.

FluidMetric

FluidMetric®
Liquids

Product Description

Fluidmetric is a wireless device that uses a rugged ultrasonic sensor to measure the level of liquids inside silos or tanks.

Easy to install, wireless	**Low maintenance**	**Customization of the measuring frequency**	**Powered with long last battery**

Data sheet

Measuring range	From 30 cm to 10 m.
Working temp. range	From -40º up to +65º.
Voltage	Lithium Battery · 7,2 V · 19.000 mAh.
Battery life	**Measures every 2 h:** Up to 5 years.
Sensor	Ultrasound with robust PVC housing which meets the IP67 water.
Accuracy	+/- 3 mm.
Measuring frequency	Every 2 h. Customizable.
Case	IP65. High density polypropylene. UV protection. Size: 335 x 120 mm.
Communication	Wireless. Radiofrequency, free frequency bands: 433Mhz, 868Mhz, 905Mhz, 922Mhz, depending on the country.
Data	• The data measured by the Fluidmetric can be visualized in the web DIGITPLAN. • Data Export to a .xls file. • Data integration with other systems using a Web Service or Modbus protocol. • Data visualization with Panel View Pi-100.

Optionals

Reading Frequency	Customization on request. External power supply needed if continuous reading required.
IP68	Praylene coating arround the transducer to prevent corrosion.
Anticorrosivo	Flurosilicone treatment arround the sensor with an addition back up FET Teflon for more chemically inert selling.

Installation

Drill a hole in the superior part of the bin, we recommend to use a 40mm drill crown. Place the **rubber gasket (3)** under the **support kit (2)**. Make sure that the **Fluidmetric (1)** will be focusing the center of the silo before fixing the **support kit (2)**. Use the screws provided to fix the support. Place the **Fluidmetric (1)** through the support kit, place the **packing rings (6)** between the support and the **Fluidmetric (1)**. Finally fix the **screws (5)** adjusting the correct inclination.

Check the **Mounting Manual** for more detailed information.
No need of activation, deviced ready to use.

Silometric parts

1. Silometric Device
2. Support kit
3. Rubber gasket
4. Autodrilling screws.
5. Inox M-6 screws
6. Inox M-6 packing rings

Certifications

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None of our products contains lead.

PANEL VIEW Pi-100

Product description

The **PANEL VIEW Pi-100** is a communication device capable of concentrating the packets coming from the radio network formed by different sensors or Silometric® equipment and showing the received values in a graphical way.

Technical specifications

Capacity	No limitation of Silometric® devices.
Distance range	300 m without obstacles.
Protocols	IEEE 802.3, IEEE 802.11
Power supply	5V – 3A
Dimensions	20 x 5 x 11,5 cm (width x depth x height).
Communications	Wireless, radio. Frequency 433MHz, 868MHz, 905Mhz or 922MHz depending on the country.

Optional

Possibility of connecting the equipment to the Internet, enabling the supervision and control of the data through the Digitplan® web application.

Instalación

Connect the device to a 5V and 3A power supply and screw the antenna.
Place the Panel View PI in a centred position of the other silometric devices, where there is the best possible visibility between the **Panel View PI-100** and the Silometric®.

Certifications

CE

MCSystems declares that the **Panel View Pi-100** product complies with current regulations and standards.

SecurDetect · **Multisensor**

Product description

Wireless device for different environmental condition detection.
The sensors can be equipped to detect:

- Moisture
- Temperature
- Enlightenment
- Tilts
- Vibration
- Gasses
- Intrusion

Easy to install, wireless

Low maintenance

Technical specifications:

Measuring frequency	Programmable lectures every 2 hours.
Voltage	Replaceable battery CR123A 3V. 1.500 mAH.
Case	IP67. Dimension: 85x80x50mm. Weight: 180gm.
Communication	Radio frequency 868 Mhz, 905 Mhz or 922Mhz according to countries current regulations.

Optional

*CO_2 sensor, Specific sensors might require external power supply.

Programmable lectures frequency.

Possibility to add different sensors according to client's requirements.

Temperature probe tube, until 2,5m length.

Installation and start up

Wall fixed with 4 anchor screws.
Can be installed and placed everywhere whenever it is covered by radio frequency.
Ask for specific coverage study.
In case there is a lack of radio frequency coverage, it will be required an extra Master Pi-100 communication device.

Data access

Measures taken by sensors are presented trough DIGITPLAN website.

Certifications

MCSystems declares under our sole responsability that **Fluidmetric** complies with the applicable requirements of the EC Directive and the current standards.

None of our products contains lead.

MASTER Pi-100

Product description

The Master Pi-100 is a communication gateway that gathers the data collected by the different sensors or Silometric® devices and transmit it to Internet. Once the information is on the cloud, it can be managed from the Digitplan® Platform.

Technical specifications

Capacity	No limitation of Silometric® devices.
Distance range	300 m without obstacles.
Protocols	IEEE 802.3, IEEE 802.11.
Power supply	5V – 3A.
Dimensions	9,2 x 6 x 3 cm (width x depth x height).
Communications	Wireless, radio. Frequency 433MHz, 868MHz, 905Mhz or 922MHz depending on the country.

Installation

Connect the device to a 5V and 3A power supply and screw the antenna.
Place the Master PI-100 in a centred position of the other silometric devices, where there is the best possible visibility between the MASTER Pi-100 and the Silometric®.

Certifications

CE

MCSystems declares that the **Master HMI Pi-100** product complies with current regulations and standards.

MySILO by SILOSMART SOLUTIONS

DigitPlan®

Digitplan, the application that monitors agricultural or industrial facilities in real time

User-oriented monitoring software, where user can control the status of your installation in real time, using data obtained from the various level sensors (Silometric or Fluidmetric) or temperature sensors (SecurDetect), through any electronic device connected to the Internet.

Features

- Multiplatform.
- Real-time status and inventory display.
- Consultation of historical data in graphic format, exportable to a spreadsheet (csv).
- Geo-location of the devices.
- Low level alarms configuration
- Possibility of integration with other programs.

Services

- Tank volume calculations tools.
- Data display in all international measurement units.
- Data calibration and corrections.
- Historical data in graphical format and exportable to spreadsheet.
- Alarm notifications via SMS or e-mail.
- Direct API connection with other software applications.
- Generate personalized user profiles.
- Status and control diagnosis of the devices.

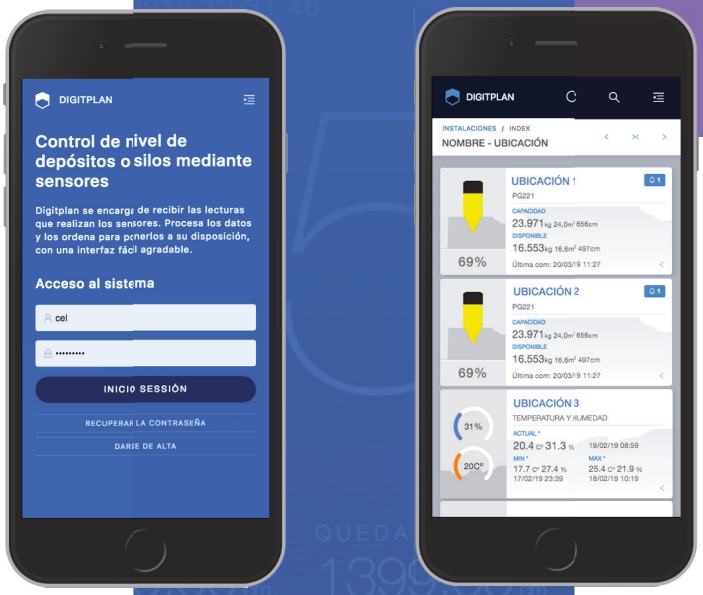
DIGITPLAN · March 2019

MySILO by SILOSMART SOLUTIONS

DigitPlan®

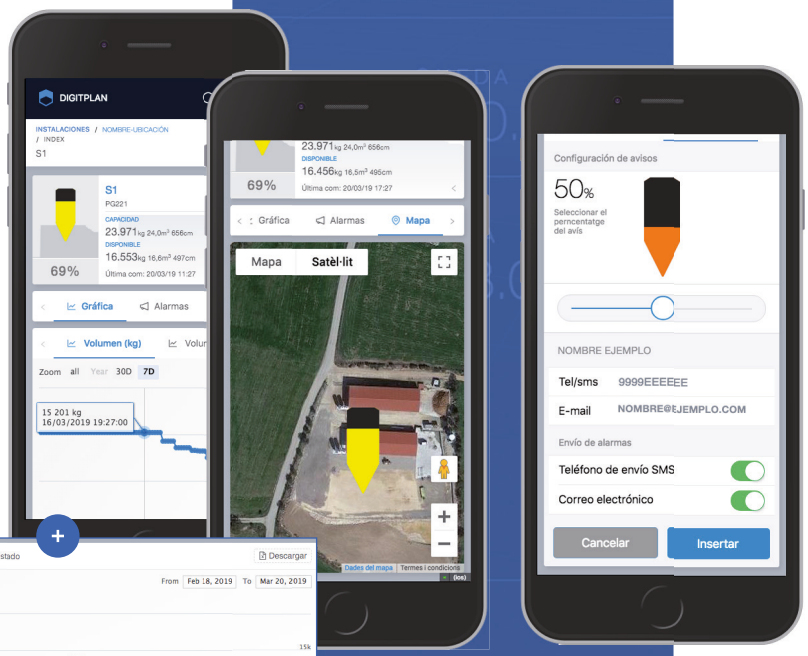
- Create different user profiles.
- Limited access to the platform depending on a user profile.

It is necessary to have installed at least one sensor.
View **Silometric** techincal card.



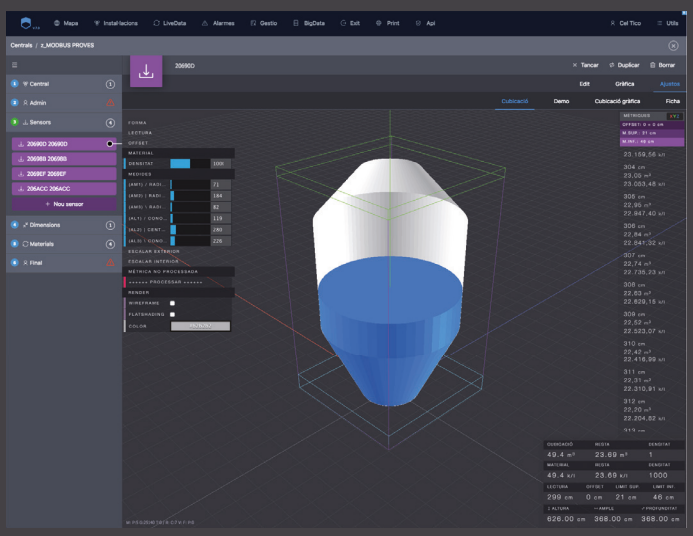
- Installation general dashboard.
- Temperature and moisture.
- Graphs of inventory.

- Inventory data historical and alarms.
- Geo-location.
- Material density set up and customization.
- Historical data exportable to CSV. format.



- Configuración de alarmas.
- Alarm notifications via SMS or e-mail.

Metrics are created from 3D models.
Standard tanks and silos shapes are generated directly from DIGITPLAN software. Out of standard silos or tank shapes and dimension can be imported in 3D format.



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