



PIUSI
®

 **B.SMART**

Technical Training



Agenda

Welcome & Presentation

- ☐ B.Smart Overview
- ☐ System Requirements
- ☐ Installation
- ☐ Configuration
- ☐ Testing
- ☐ Training review
- ☐ Questionarie



B.Smart Overview

B.SMART is an electronic system for controlling the dispensing of fluids via smartphone by a dedicated APP.

The control system consists of:

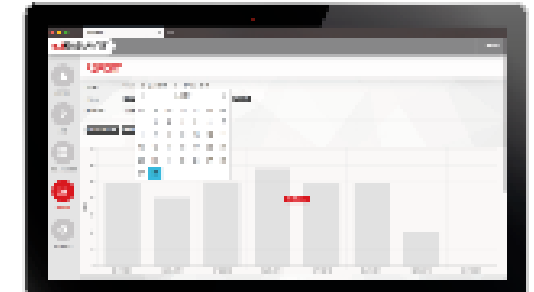
1. **An electronic controller** equipped with a Bluetooth interface (BLE 4.0), iButton reader and with/without keypad that controls a dispensing pump. (B.Smart)
2. **An APP** installed on a smartphone equipped with an Android operating system or Apple iOS. (Mobile APP)
3. **A specific website** accessible from any electronic devices equipped with a browser connected to the internet from which the entire site can be monitored. (Web APP)



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B.Smart with Keyboard

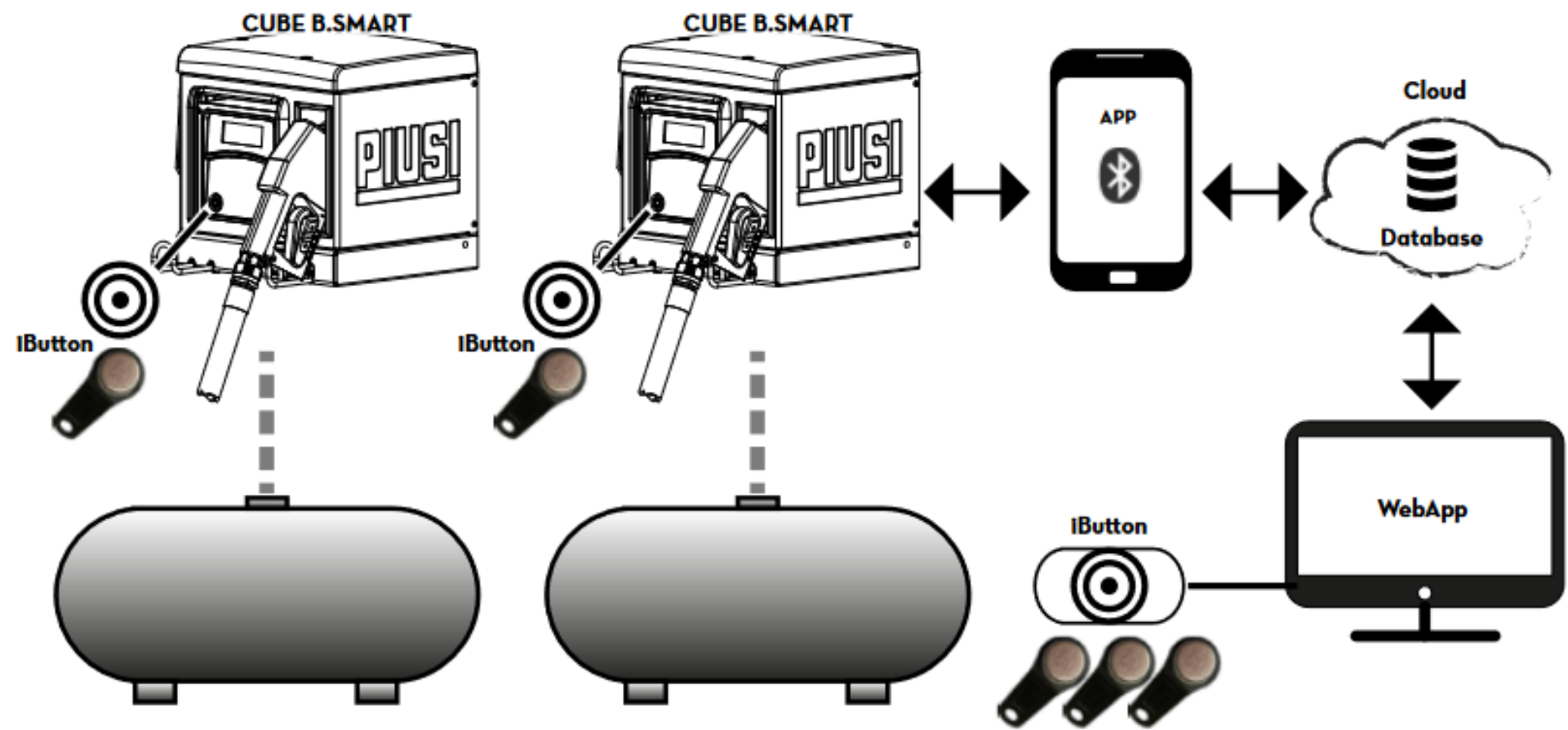
Important Note:

The Keyboard as well as the iButton key, must be use in case of emergency only and when the B.Smart MobileApp is not available.

Using the Keyboard and iButton key, all the fuel limits for the drivers will be bypass.



B.Smart - Architecture



System Requirements – Smartphones

The system is compatible with the following iOS versions:

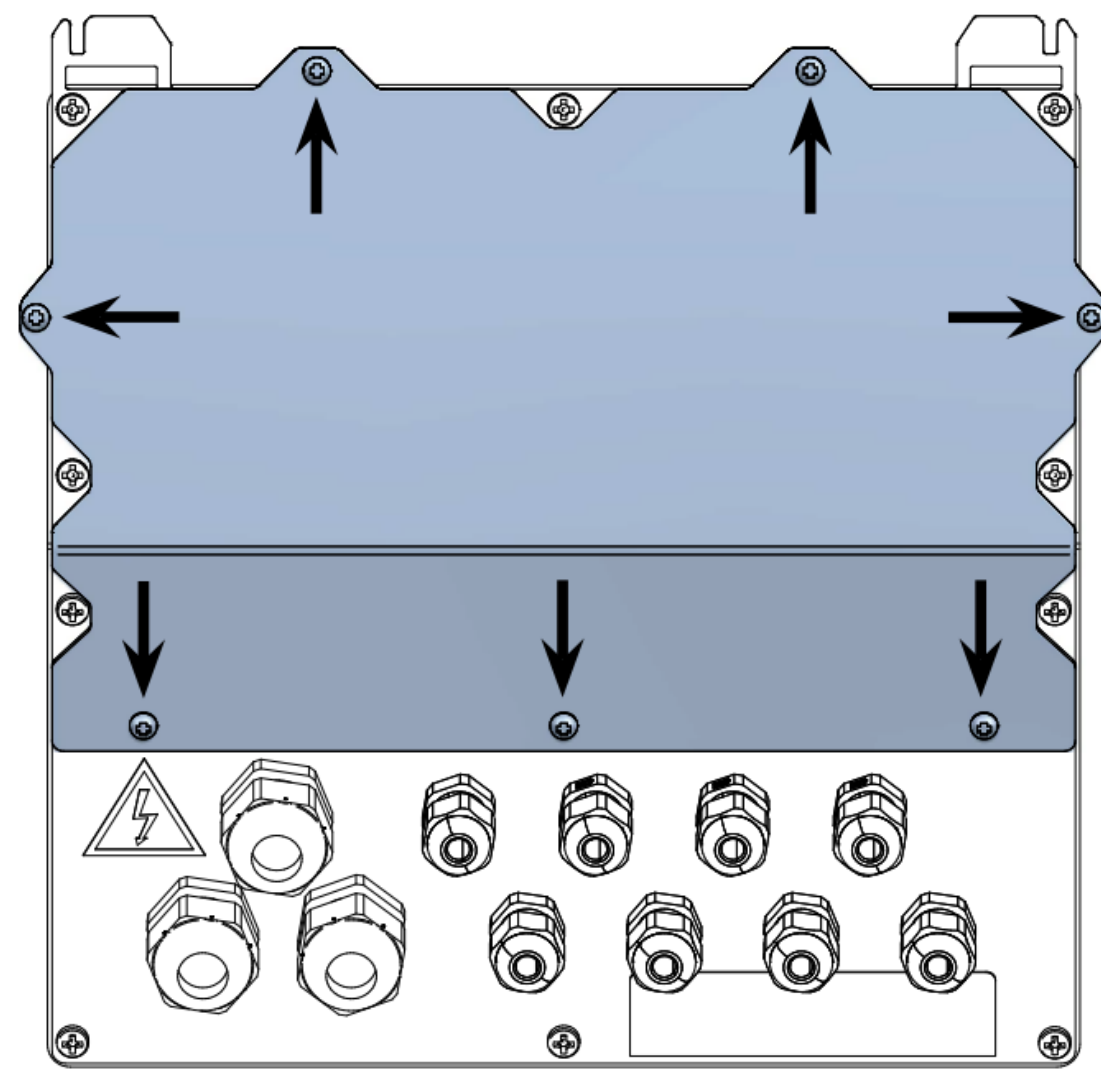
- iOS10
- iOS11
- iOS12 and higher

The system is compatible with the following Android versions:

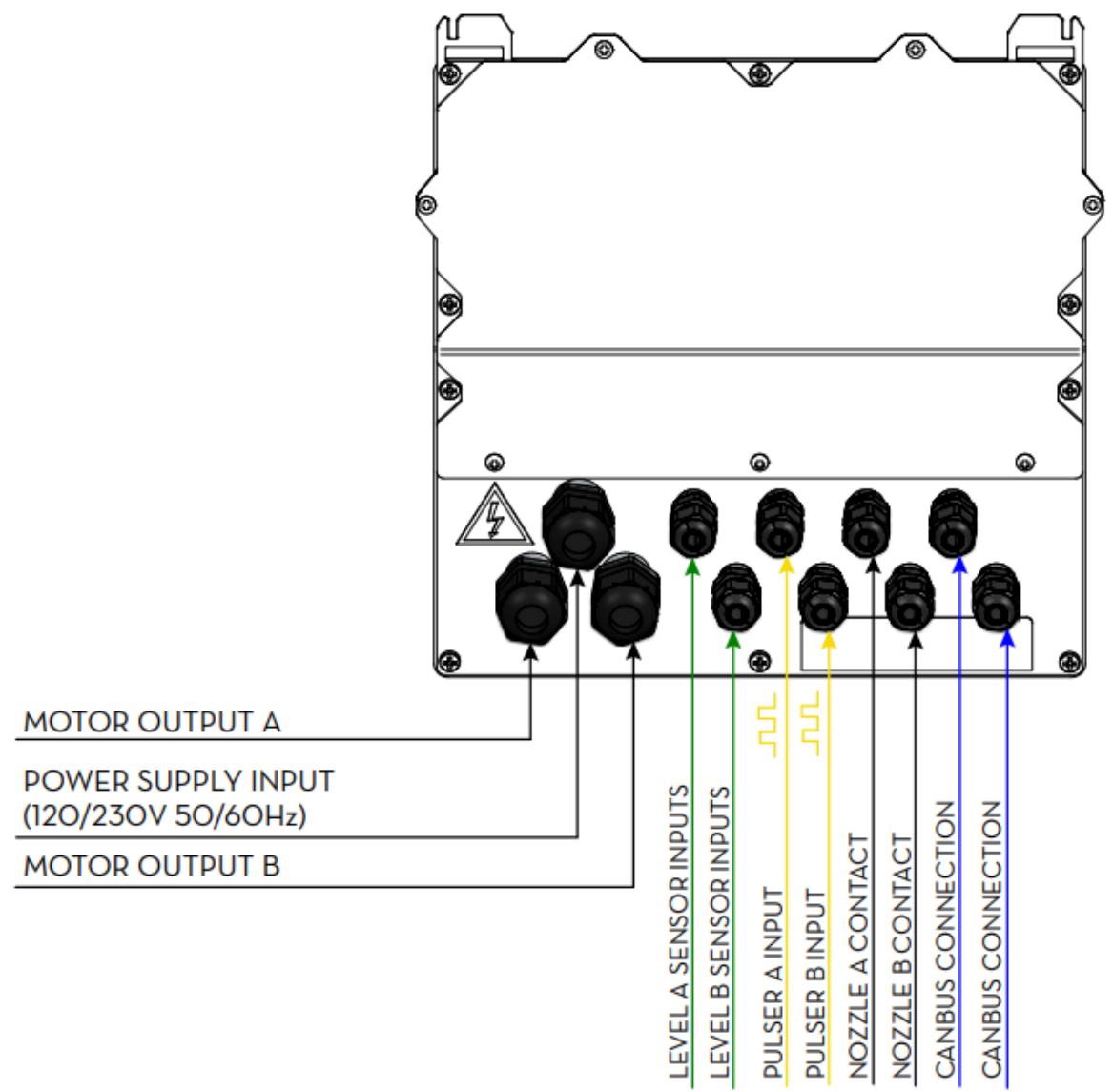
- 5.0 - 5.1
- 6.0
- 7.0 - 7.1
- 8.0
- 9.0 or higher



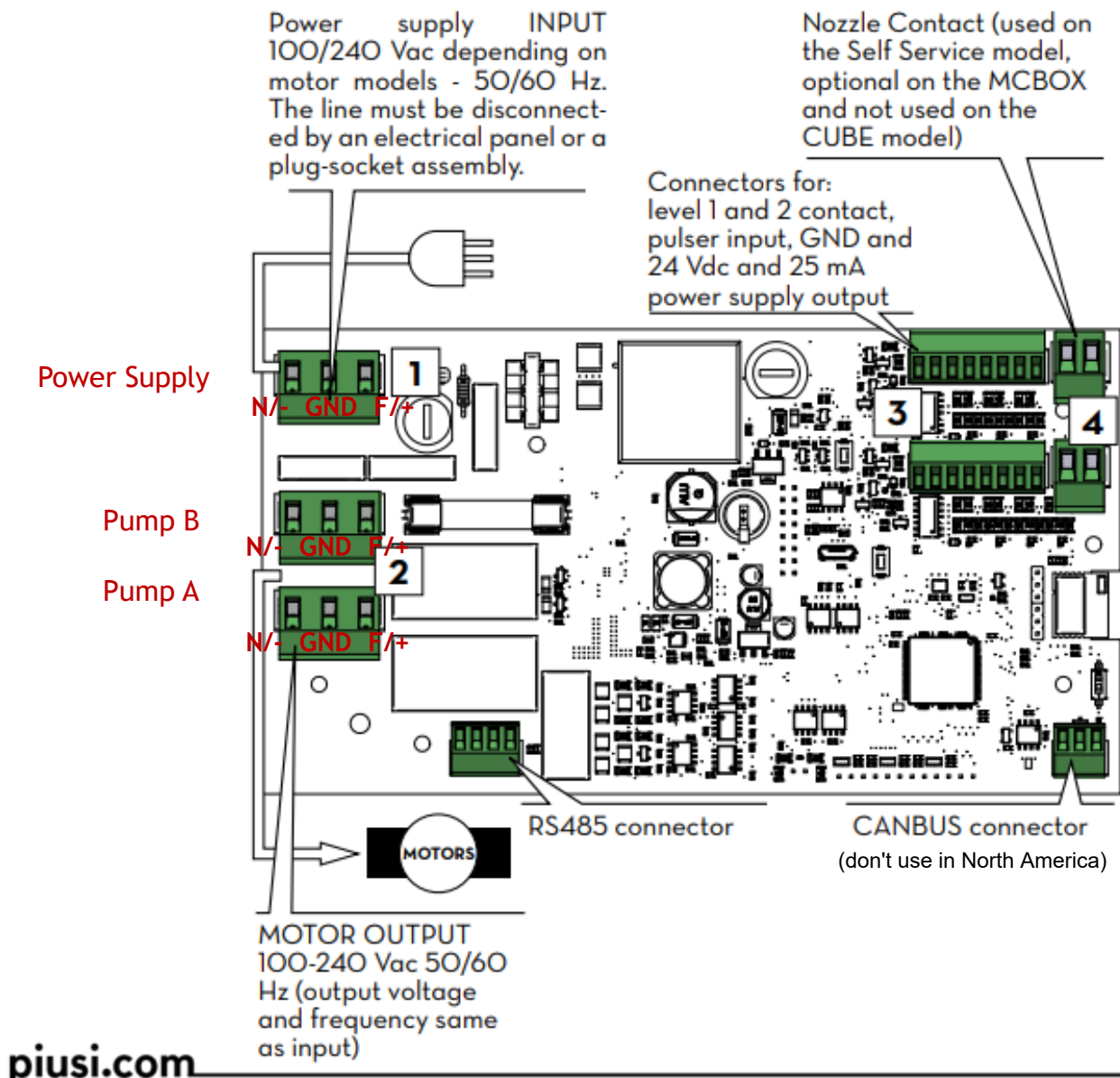
Main Board – Opening the Cover



Main Board – Opening the Cover



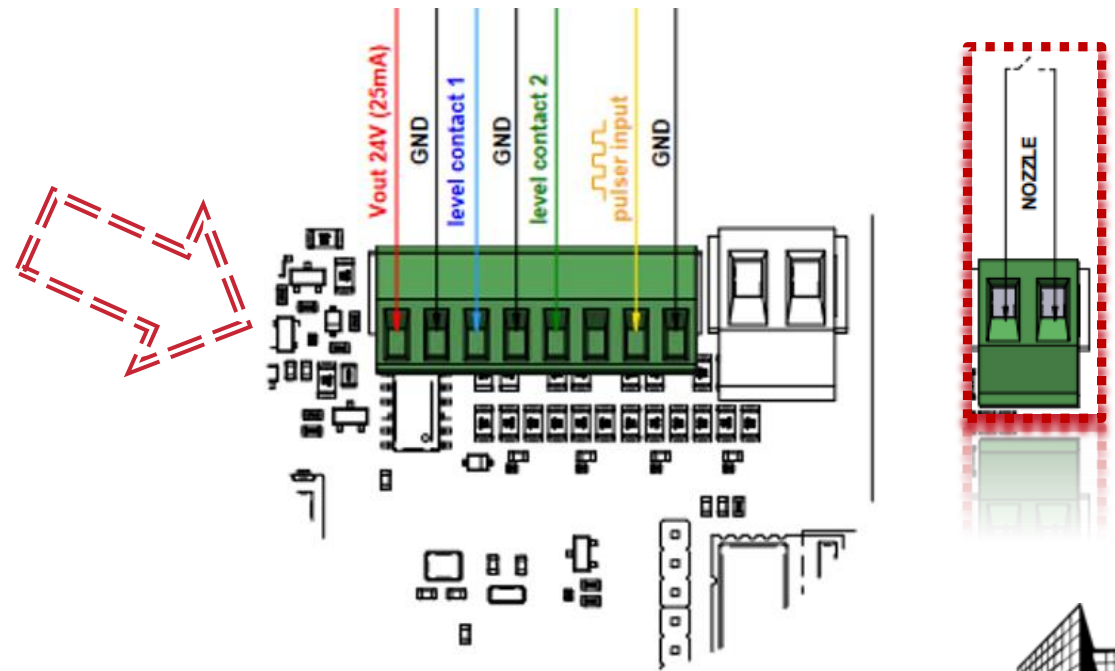
Main Board – Signal connector



SIGNAL CONNECTOR

Output 24 V dc, pulser, level 1 and 2 contact.
Tighten the screws on the top of the 8-hole terminal for:
Level 1 contact, level 2 contact and pulser.
With reference to the level 1 contact and level 2 contact, it is necessary to underline that these are configurable contacts which can be used to connect:

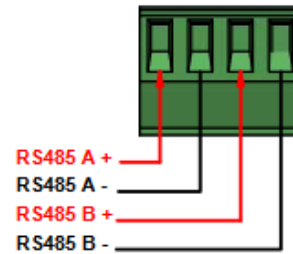
- Level sensor 4-20mA
- Level sensor 0-10V
- Clean contact (switch not necessarily connected to the level sensors inside the tank)



Electric cabling – Serial RS485

SERIAL CONNECTION

The B.Smart board has two RS485 serial communication channels. As well as the level contacts on the signals terminal board, it is possible to connect the OCIO 2.0 detection system to the B.Smart board.

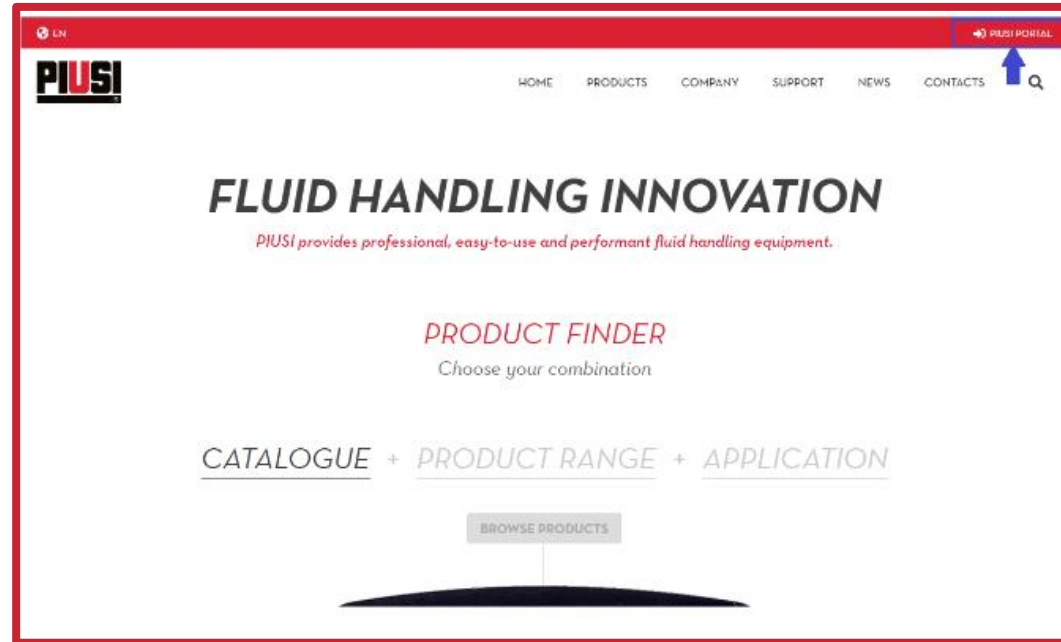


If using OCIO 2.0 connected with RS485 serial, DO NOT use the level 1 and level 2 contacts of the signal connector

Registration

Registering the B.Smart product on the PIUSI Portal.

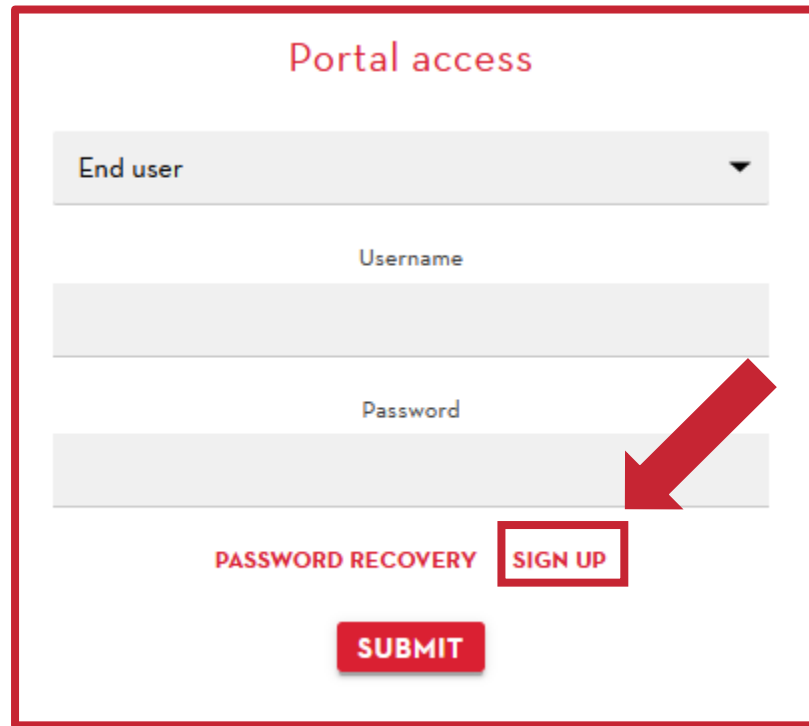
- Access the portal registration area via the website <https://www.piusi.com>



***IMPORTANT:** If the user has been already created on the PIUSI Portal, and it's necessary to add more Product Key (same Site), it's necessary to login on the PIUSI Portal and select from Software → "Add License".

Registration

Select **End user** account, and press the '**Sign up**' button to start registering the new user on the Portal.

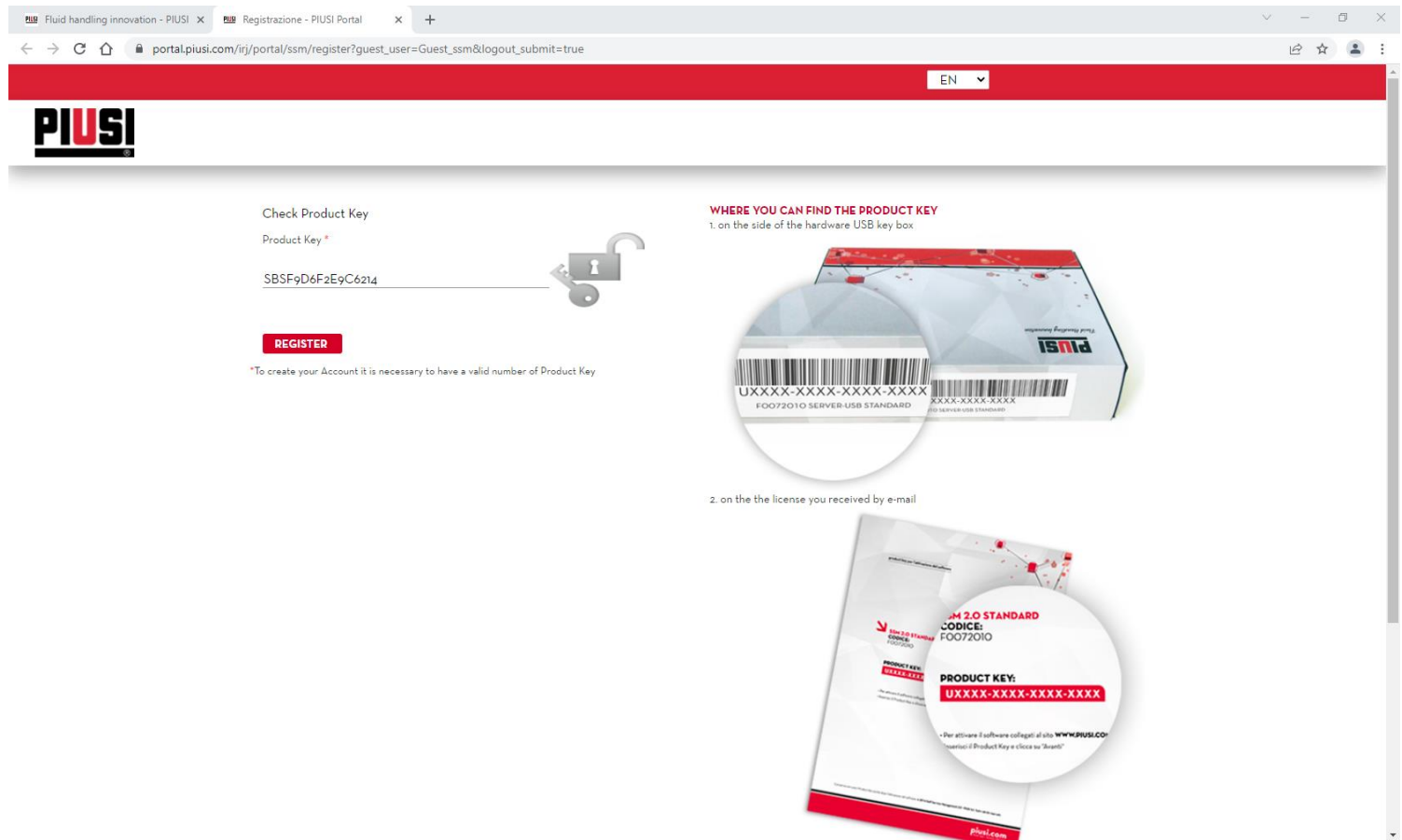


The image shows a registration form titled "Portal access" enclosed in a red border. It contains three input fields: "End user" (a dropdown menu), "Username", and "Password". Below the "Password" field, there are two links: "PASSWORD RECOVERY" and "SIGN UP". The "SIGN UP" link is highlighted with a red rectangular box, and a large red arrow points to it from the right. At the bottom of the form is a red "SUBMIT" button.



Registration

Enter the Product Key included in the B.Smart package at the purchase and press 'Register' to continue.



Registration

Enter the data requested, indicating the user portal credentials to be used for authentication in the B.Smart system. Press 'Register' to confirm the registration on the PIUSI Portal.

Fluid handling innovation - PIUSI

Registrazione - PIUSI Portal

portal.piusi.com/irj/portal/ssm/register?guest_user=Guest_ssm&logout_submit=true

EN



1. Account Information

Username

Customerroot1

First name

Mario

Last name

Rossi

Password

Confirm Password

E-Mail

customer.piusi001@gmail.com

Confirm email

customer.piusi001@gmail.com

2. Company data

Company name

Nation

City

Street

Fluid handling innovation - PIUSI

Registrazione - PIUSI Portal

portal.piusi.com/irj/portal/ssm/register?guest_user=Guest_ssm&logout_submit=true

Italy

Milano

City

Milano

Street

Via Garibaldi

Number

8

Postcode

20100

3. Privacy

Read the privacy policy for the processing of the personal data

Privacy policy

Accept ☒

I wish to subscribe to the newsletter service

Yes

No

REGISTER

For registration problems contact your retailer Sign in to customer care

Recorded IP address : 129.0.0.85



PIUSI S.p.A.

Via Pacinotti, 16/A

46029 Suzzara (MN)

ITALY

PIVA IT01869920205

Cap. Soc. € 614.454,00 i.r.

R.I. MN 01869920205

REA MN 204928

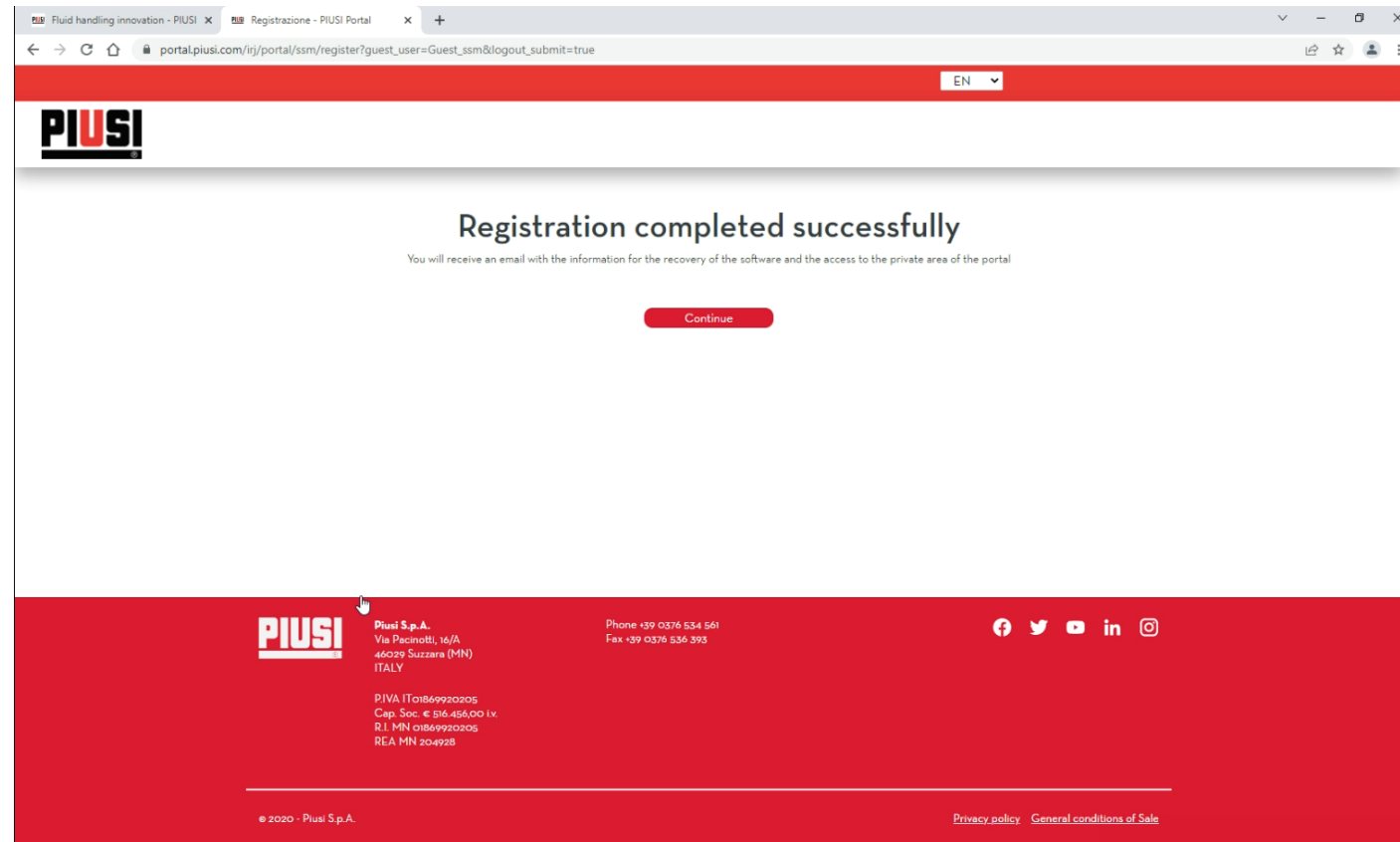
Phone +39 0376 534 541

Fax +39 0376 536 393



Registration

After registering, a confirmation email will be sent with the information required to access on the PIUSI Portal and an email with the SITE CODE associated with the product key registered.



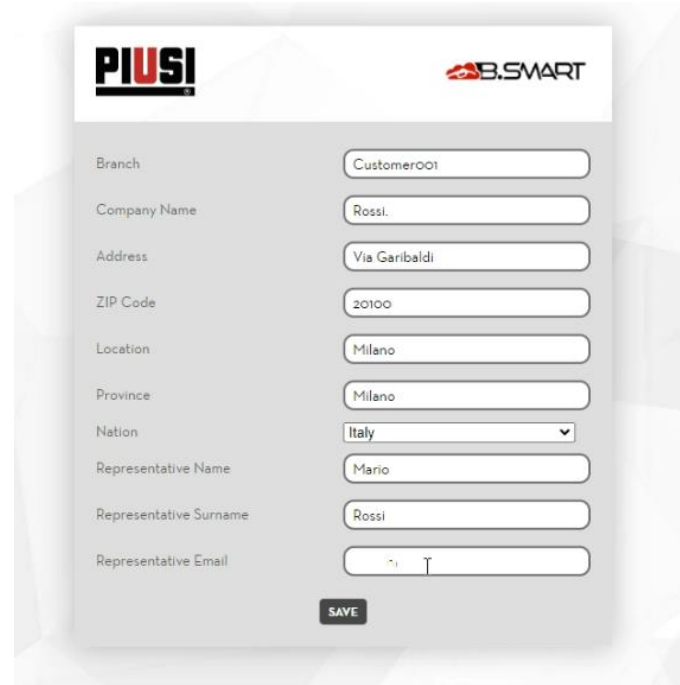
B.Smart - Website Access

In order to login at the B.Smart website, enter the credentials about Username, Password and Site Code at the following link:

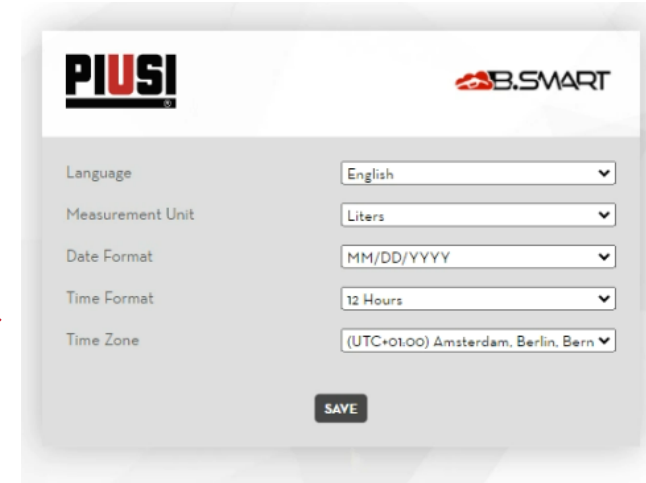
<https://bsmart.piusi.com/#/login>



The login form features the PIUSI and B.SMART logos at the top. It includes input fields for Username (filled with 'Customer001'), Password (masked with asterisks), and Site Code (filled with 'S1010250'). A 'Show password' checkbox is present below the password field. A 'LOGIN' button is located at the bottom right of the form.



The profile form contains various fields for user information: Branch (Customer001), Company Name (Rossi), Address (Via Garibaldi), ZIP Code (20100), Location (Milano), Province (Milano), Nation (Italy), Representative Name (Mario), Representative Surname (Rossi), and Representative Email. A 'SAVE' button is at the bottom right.

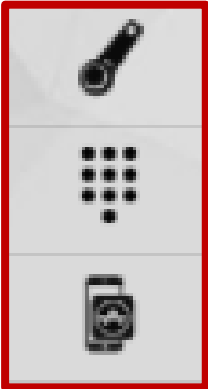


The settings form allows users to configure their preferences: Language (English), Measurement Unit (Liters), Date Format (MM/DD/YYYY), Time Format (12 Hours), and Time Zone ((UTC+01:00) Amsterdam, Berlin, Bern). A 'SAVE' button is at the bottom right.



Refilling options

	05:05 PM (UTC+01:00)		22020044	Luca Verdi	1	PUMP A	3.18 L	
	02:41 PM (UTC+01:00)		22020044	Luca Verdi	1	PUMP A	4.17 L	
	02:16 PM (UTC+01:00)		22020044	Luca Verdi	1	PUMP A	1.11 L	 



Refilling using iButton as authentication - No receipt

Refilling using Keypad as authentication - No receipt

Refilling by Smartphone - Receipt created

iButton Key (Yellow) – Code



EDIT DRIVER

Given Name *

Luca

Family Name *

Verdi

Pin Code *

101985

Email

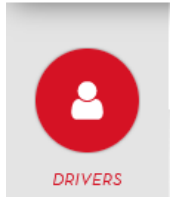
Ibutton Code

0135199

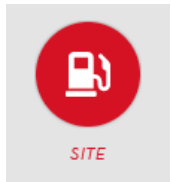
READ

SAVE

B.Smart - Website Overview



The **DRIVERS** is the section where the site drivers can be managed. From here, you can add, modify and remove drivers from the site.

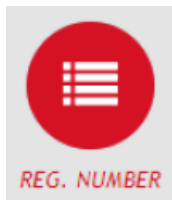


The **SITE** is the section where you can manage the devices in your site, configure the relevant pumps, and specify the drivers who are enabled to dispense.



The **TANK WATCHDOG** is the section, where you can administrate and manage the tanks present on the plant, their movements, and the cost tendency graphs of the fluids.

The TANK WATCHDOG section is available only after the Tank Watchdog ADD-ON activation.



The **REGISTRATION NUMBER** is the section where the site registration numbers can be managed.



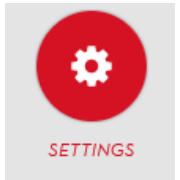
B.Smart - Website Overview



The **Fuel Economy section**, is available only when the Fuel Economy add-on is active and replaces the 'REGISTRATION NUMBER' section. This section provides advantage vehicle fleet management functions, allowing you to divide them into categories and enable consumption management.



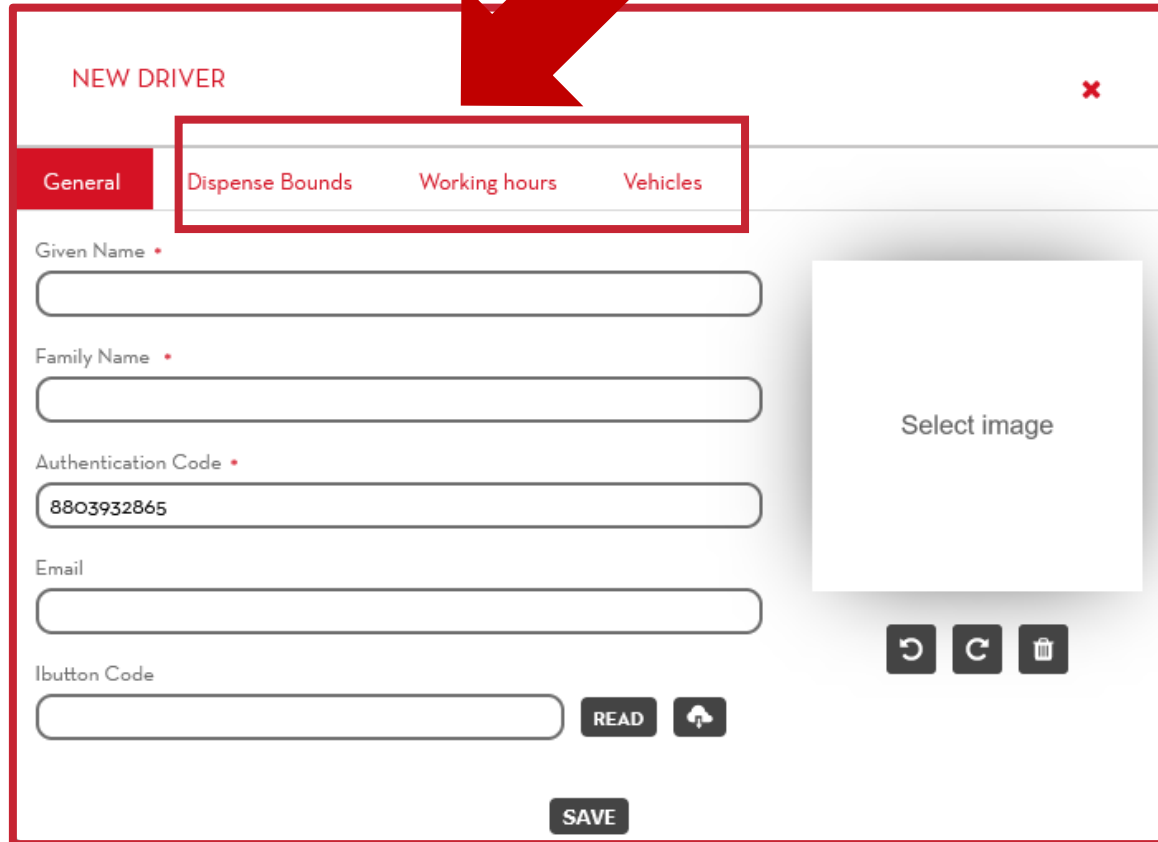
The **REPORT** section, is the section where the log of the site dispensing operations can be viewed.



The **SETTINGS** section, is the section where you can configure system preferences, manage users to access the Web Application, and activate new extensions for your site.



Fuel Economy Only



NEW DRIVER

General Dispense Bounds Working hours Vehicles

Given Name *

Family Name *

Authentication Code *

Email

Ibutton Code

READ

SAVE

Select image

↶ ↷ 🗑

Fill in the driver's registry fields:

- **Given Name** (mandatory) – Driver's name
- **Family Name** (mandatory) – Driver's surname
- **Authentication Code** (mandatory) – Personal code for every driver.

It is requested by the mobile application to authenticate the driver in the SITE and enable him to dispense.

- **Email** – Driver's email.
- **Ibutton code** – Code shown on the ibutton key.

It is used by the driver to authenticate on the fuel dispenser instead of using the phone.

*The Ibutton code can be entered manually reading the code on the key or automatically using the appropriate reader to be connected to the PC; in this case you must install the tool **PIUSI IBUTTON READER** and then press the button .*

*The tool **PIUSI IBUTTON READER** works exclusively on the Windows platform and can be downloaded from the following link:*

<https://wswebssm.piusi.com/ibuttonreaderpiusi/setup.exe> or by the button.

- **Image** (optional) – Driver recognition photo. To upload an image, press the box SELECT IMAGE.





NEW DRIVER

General

Dispense Bounds

Working hours

Vehicles

Type

Weekly

None

Monthly

Weekly

Daily

S

M

T

W

T

F

S

Alarm 80%

SAVE

In this section you can configure a limit on the quantity that can be dispensed by the driver in a given time period. Once the maximum quantity that can be dispensed within the period has been reached, the driver is blocked (can no longer refuel at the site pumps). At the end of the time period, the driver's residual quantities restored with the maximum quantity value that can be dispensed during the period.

Time type:

- **Daily** - Set the days ("Number of days") starting from a date of your choice ("Start date") after which the remaining quantity is restored.
- **Weekly** - Set the day of the week after which the remaining quantity is reset.
- **Monthly** - The remaining quantity is reset at the beginning of each month.
- **None** - no max. temporal dispensing limit is set. There is no limit to the max. amount the driver can dispense.

Note:
This section is available only if the add-on “Fuel Economy” is activated.
The remaining quantity count will be reinstated if the manager decides to change the defined period or the maximum quantity that can be dispensed within the period.

External dispensing operations are not included in the residual quantity count.
The residual quantity can be reset manually.



NEW DRIVERS – Working hours



NEW DRIVER

General

Dispense Bounds

Working hours

Vehicles

You can configure the driver's working time in this section.

 If no interval present, the driver is enabled to dispense

+

SAVE

In this section you can set the drivers' working hours to prevent them from refueling at the site pumps outside configured time limits.

The working hours can be defined using two different types of limits:

- **Day of the week** - Select the day of the week (by defining a working time slot within the day) on which the driver is allowed to refuel. Outside of the time set for the day indicated, the driver will not be allowed to refuel.
- **Closed period** - Select a time period in which the driver is not allowed to refuel. Outside the specified period, the driver is always allowed to refuel if there are no other limits set.

If no working time is defined, the driver can refuel at any time.

Note:

This section is available only if the add-on “Fuel Economy” is activated.



NEW DRIVER

General

Dispense Bounds

Working hours

Vehicles

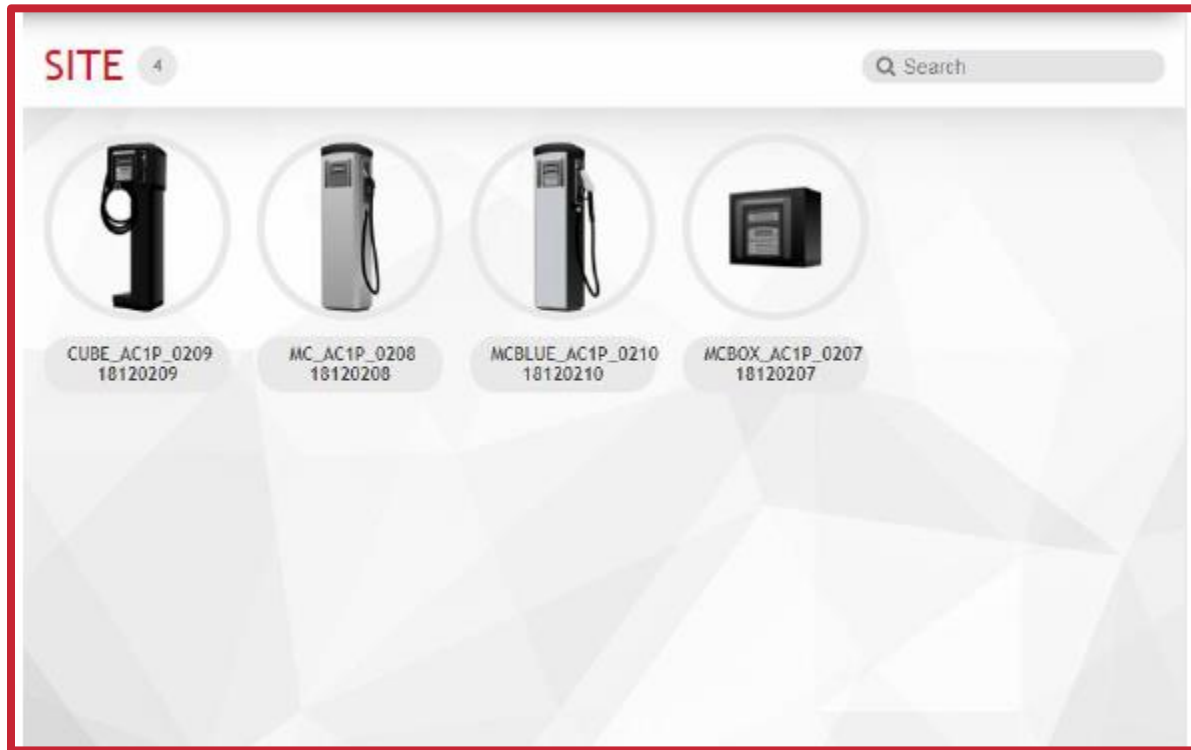
You have selected all categories

SHOW CATEGORIES

SAVE

In this section, you can set the vehicles or vehicle categories for the driver authorized to dispense.
As default setting, every driver is authorized to refuel all the vehicle on the site.

Note:
This section is available only if the add-on “Fuel Economy” is activated.



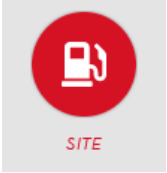
In this section where you can manage the devices in your site, configure the relevant pumps, and specify the drivers who are enabled to dispense.

Note:

Devices are detected by the smartphone application and cannot be added manually by the Web Application.

There is no limit to the number of devices that can be added to the site.





 **DEMOBSM 19070031**
19070031

General

Pumps

Drivers

Device Name

DemoBSm 19070031

S/N

19070031

Location

Hardware version

10

Manager Pincode

123456

Firmware version

1.4.18

Date Format

DDMMYYYY

RESET FOR NEXT DEMO

Time Format

24 Hours

☒ Use registration numbers

☒ Use odometer

Visualization Type

Only quantity

SAVE

Device Name – Unique device identifier within the site.
Location – Place where the fuel dispenser is located.
Manager Pincode – Authentication code that will be used by the site manager for the system configurations. (panel firmware update and calibration of the dispensers from mobile App).
Date Format – Date format displayed on the device.
Time Format – Time format shown on the device display.
Use registration numbers – Indication of whether the management of registration numbers is active. If it is active, the mobile application will ask you to enter a registration number before starting to dispense.

Use odometer – Indication of whether odometer management is active. If the registration numbers represent vehicles to be refilled, you can specify the odometer of the vehicle before starting to dispense.

Note: This option is only available if the *Use registration numbers* option is activated.


DEMOBSM 19070031
19070031
✕

General
Pumps
Drivers

A

Status
☒ Enabled
☐ Disabled

ADBLUE
☐ Enabled
☒ Disabled

Name

Total amount dispensed

Measurement Unit

Decimal numbers

Piusi Pulser meter

Nozzle Input

Type

Start Time Out

Stop Time Out

Tank

Level 1 alarm input
☐ Enabled
☒ Disabled

Level 2 alarm input
☐ Enabled
☒ Disabled

SAVE

- **Status** – Logical status of the pump. When the pump is disabled, it is not possible to refill.
- **ADBLUE (option available only with 'Fuel Economy' add-on active)** - Indicate whether Adblue is being dispensed from the selected pump.
- **Name** – Unique identifier of the pump.
- **Measurement Unit**– Unit of measurement with which the liquid is dispensed.
- **Decimals numbers**– Number of digits to be displayed on the fuel dispenser display after the decimal separator.
- **Piusi Pulser meter** – Type of meter with which the pump is equipped. It is possible to customize the value of the single pulse by setting the type of meter to *Customized*.
- **Nozzle Input** – Indication of the nozzle contact presence.
- **Type** – Indication of the management of the nozzle contact if normally open or closed.
- **Start Time Out** - Seconds running from when the dispensing operation is started by physically moving the nozzle from its position to when the trigger is pressed, in order to dispense the fluid. If the nozzle trigger is not released within this time period, the dispensing operation is cancelled;
- **Stop Time Out** – Seconds running from when the nozzle trigger is closed, and therefore cannot dispense, to when the nozzle is placed in the rest position. If the gun trigger is not pressed within this time period, the dispense is automatically stopped.
- **Tank** - When the tank Watchdog ADD-ON has been activated, it is possible to connect a tank to a pump
- **Level 1 alarm input** – Enables/disables the alarm no. 1 input.
- **Level 2 alarm input** – Enables/disables the alarm no. 2 input.





 CUBE_AC1P_0003
18110003

General Pumps Drivers

ASSOCIATED NOT ASSOCIATED

ALL NONE Search


CHRISTIAN BI...


JACK FREEMAN

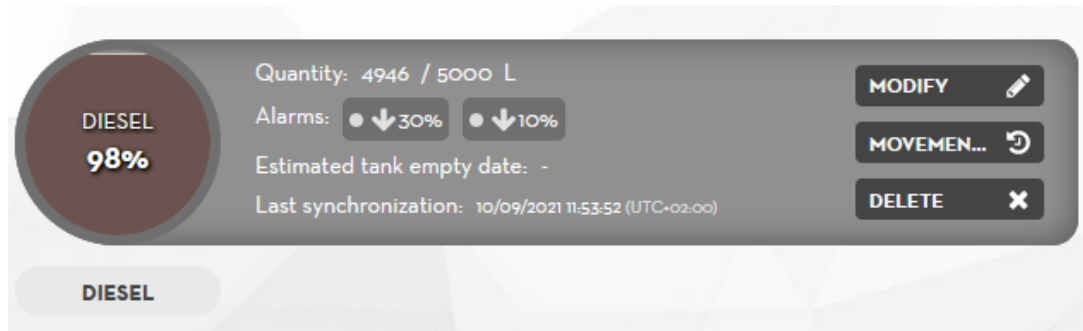

JOHN DOE


LUDOVICO BU...

SAVE

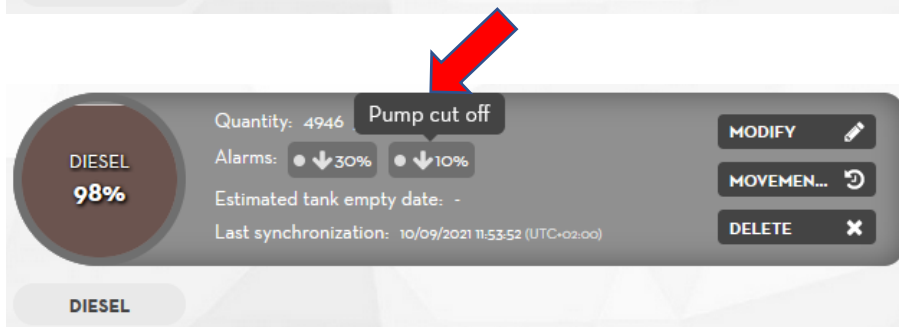
In this section you can indicate which drivers can be associated to the fuel dispenser. Only associated drivers can authenticate themselves on the fuel dispenser (via mobile application or Ibutton key) to dispense. A single driver can be associated with multiple fuel dispensers of the site.

Tank Details (Optional)



The following information can be visualized for every tank:

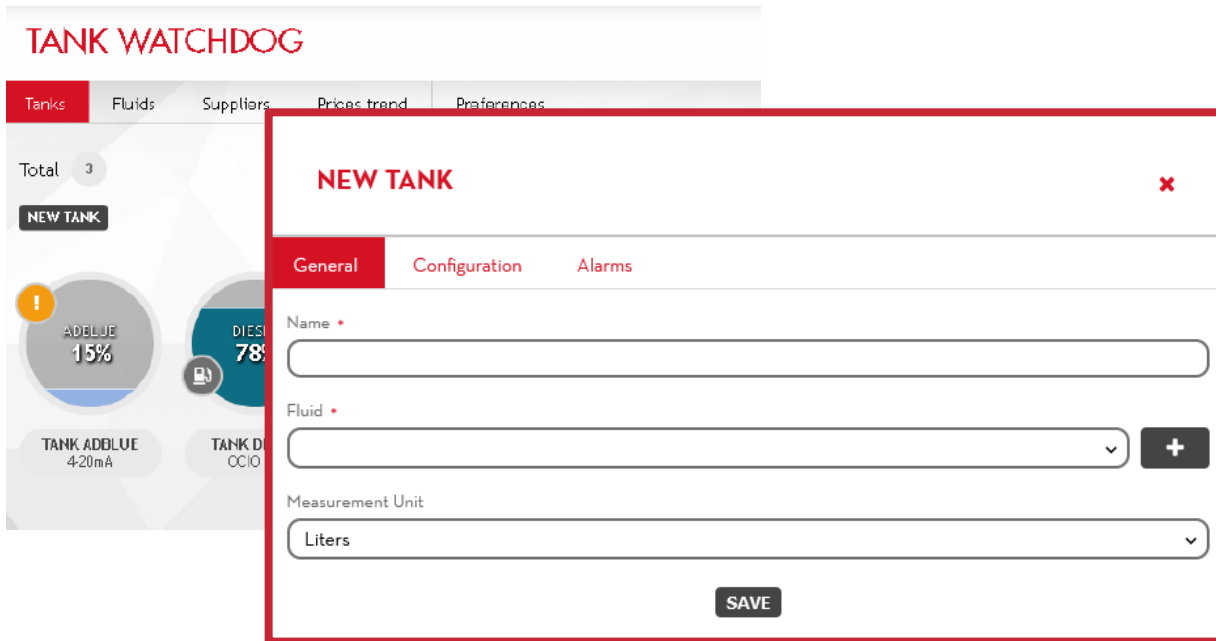
- Fluid quantity inside the tank
- The status and configuration of the alarm
- Estimated date until the tank becomes empty. This value is estimated based on the charges and discharges done on the tank.
- Last synchronization data. It represents the last date in which the APP was synchronized with the tank.



All the following information (quantity, status, movements) is based on this data

Pressing over the button, it is possible to visualize the list of dispensers connected to this tank. Pressing over the button (only seen when an alarm was triggered) it is possible to visualize detailed information on the tank and alarm status.





In GENERAL, it is possible to configure the following information:

- **Name:** Unique identification of every tank (16 characters maximum)
- **Fluid:** Fluid inside the tank. It is possible to assign a previously created fluid or to create one by pressing over the button.
- **Measurement Unit:** The measurement unit for expressing the following tank characteristics: capacity, information table values.

NOTE: The TANK WATCHDOG section is available only after the Tank Watchdog ADD-ON activation. In this section, it is possible to manage the fluids dispensed by the control units.



Tank Watchdog - Configuration



NEW TANK

General

Configuration

Alarms

Tank Watchdog

None (Virtual Tank)

Tank size (L)

0

SAVE

In this section it is possible to modify the following data:

- **Level Sensor:** The type of level sensor connected to the dispenser, the options are:
 - OCIO 2.0
 - 4-20 mA Analogic Sensor
 - 0-10 V Analogic Sensor
 - No Sensor (virtual tank)
- **Capacity:** (only when the tank is not virtual) It shows the tank's capacity expressed on the measurement unit chosen.
- **Shape:** (only when the tank is not virtual) It shows the tank's geometric shape. The options to choose from are the following:
 - Parallelepiped
 - Horizontal Cylinder
 - Vertical Cylinder
 - Custom

When the custom option is selected, it is possible to represent the geometric shape through an Information Table with different level values.



NEW TANK ✕

General Configuration **Alarms**

☐ Alarm 1

WarningWhen the level is Lowerthan 15 %

☐ Alarm 2

Pump cut offWhen the level is Lowerthan 10 %

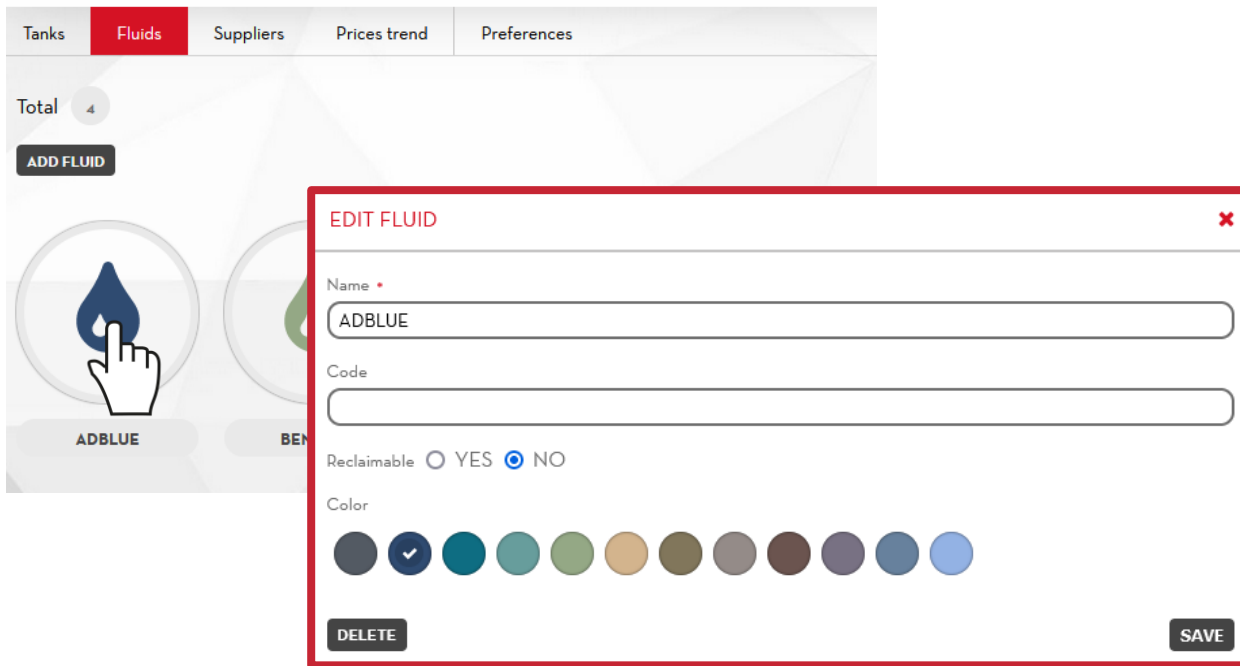
SAVE

In this section it is possible to configure two level alarms, with the following data for each one of them:

- **Status:** Whether the alarms is active or not
- **Behavior:** The immediate action after the alarm is triggered
 - Warning
 - Pump Cut off



TANK WATCHDOG



The screenshot shows the 'Fluids' management interface in the Tank Watchdog application. The 'Fluids' tab is selected in the top navigation bar. Below the navigation bar, there is a summary section showing 'Total 4' fluids and an 'ADD FLUID' button. A list of fluids is displayed, with 'ADBLUE' being the first one. An 'EDIT FLUID' modal is open for the 'ADBLUE' fluid. The modal contains the following fields:

- Name:** A text input field containing 'ADBLUE'.
- Code:** An empty text input field.
- Reclaimable:** Radio buttons for 'YES' and 'NO', with 'NO' selected.
- Color:** A row of 12 color swatches, with the first one (dark blue) selected.

At the bottom of the modal, there are 'DELETE' and 'SAVE' buttons.

Name: (mandatory) Unique identification of every fluid (16 characters maximum)

Code: Product identification code. The field is not mandatory and can be used and displayed in the export data paths.

Reclaimable: This indicates whether the product is eligible for tax relief from the tax agency. The field is not mandatory, it can be used to generate export data paths for specific uses.

Color: A color representation for the fluid
There are no limits on how many fluids a plant can have.





TANK WATCHDOG

Tanks

Fluids

Suppliers

Prices trend

Preferences

Total 2

ADD SUPPLIER

Business Name

Tax Code/SSN

Email

Phone number

VAT Number

Actions

Piusi

REPSOL

In this section, it is possible to manage the configuration of the fluid suppliers for the plant. There are no limits on the number of suppliers.

This section is optional and can be disabled from the **Preference Settings** of the Tank Watchdog Module.

Tanks

Fluids

Suppliers

Prices trend

Preferences

Enable suppliers

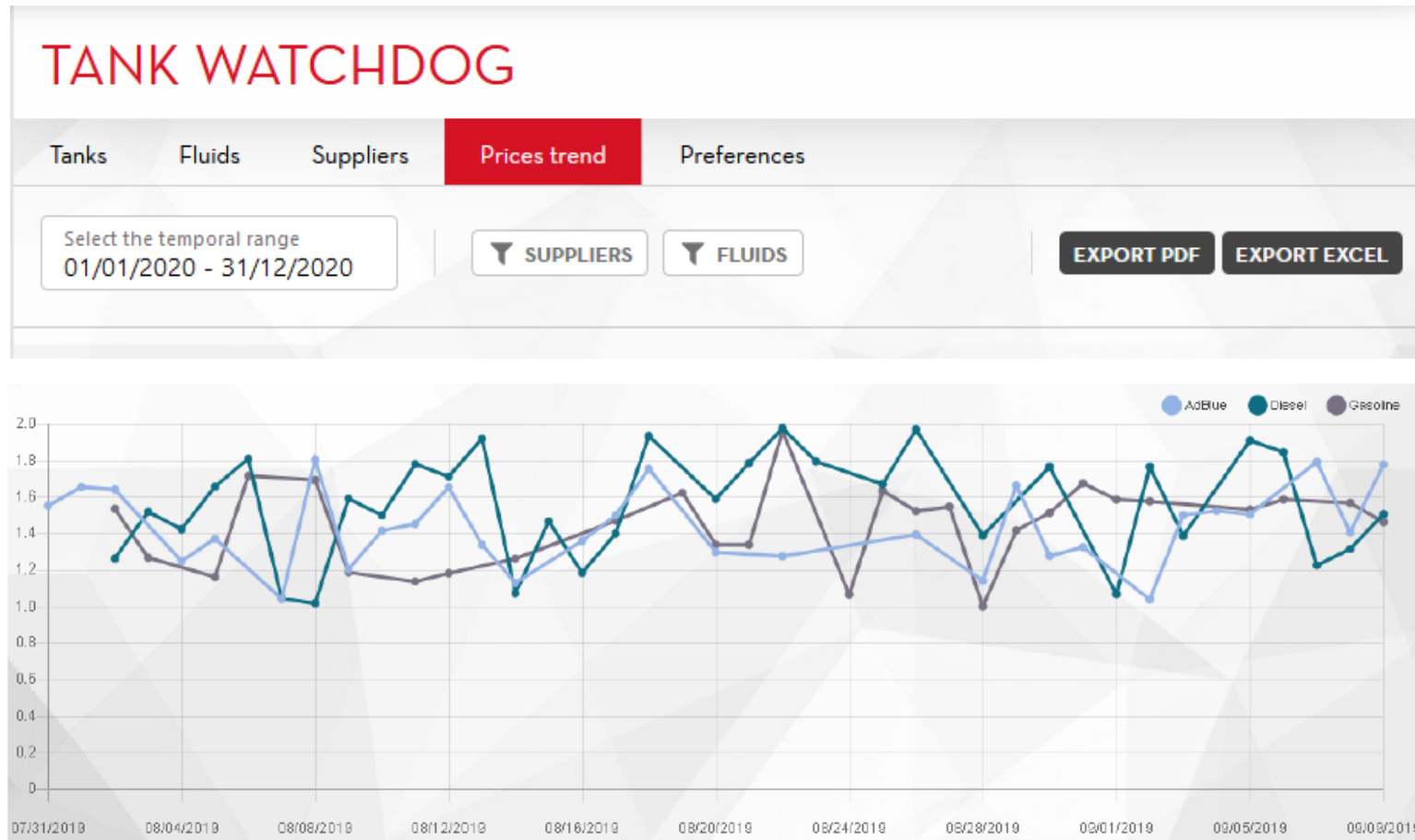
☒

 YES

☐

 NO

Tank Watchdog – Prices trend



In this section, it is possible to visualize price graphs based on the history of loads for every fluid.

The prices are calculated on the moment in which new load movements are created and a monetary value is assigned.



TANK WATCHDOG

TanksFluidsSuppliersPrices trendPreferences

Tanks' dimensions

Millimeters

Enable prices

☒ YES ☐ NO

Currency

EUR - Euro

Enable suppliers

☒ YES ☐ NO

Email

☒ YES ☐ NO

⚙️ CONFIGURE

SAVE

Tank Measurement Unit: The measurement unit for the geometric dimensions.

The options are the following:

- o Millimeters
- o Inches

Price Management: Enable or disable the price management section.

Currency: (only when price management is enabled) Currency to be used for the prices. N.B.: Whenever the currency value is changed, previous movements remain with the previous currency.

Enable suppliers: Enable or disable the suppliers management section.

Enable E-mail: Enable or disable emails sending notifying the tanks' status. When this option is enabled, every time a tank status goes from regular to alarm, an email is sent.

Tank Watchdog – Preferences Email



TANK WATCHDOG

Tanks' dimensions: Millimeters

Enable prices: ☒ YES ☐ NO

Currency: EUR - Euro

Enable suppliers: ☒ YES ☐ NO

Email: ☒ YES ☐ NO ⚙️ CONFIGURE

SAVE

EMAIL

Subject •
Tank alarm

Recipients •
eddy_serafni@piusi.com X

Custom Message
The tank[TANK_NAME] is in alarm:
Percentage: [TANK_PERCENTAGE][TANK_QUANTITY][ALARM_CODE]

TANK_NAME TANK_PERCENTAGE TANK_QUANTITY TANK_CAPACITY PRODUCT_NAME ALARM_TYPE
ALARM_DIRECTION ALARM_THRESHOLD ALARM_CODE

TEST E-mail sent successfully ✓ OK

In this section, is possible to specify the information that will be reported in the email:

- Email Subject
- Recipients
- Email body In this field, it is possible to use diverse tags that come substituted by real values of the tanks.

Fuel Economy – Vehicles/New Vehicles



This section provides advantage vehicle fleet management functions, allowing you to divide them into categories and enable consumption management.

As soon as the 'Fuel Economy' (add-on) is activated, all site registration numbers are converted to vehicles and assigned to a basic category, 'default'.

There are no restrictions on the number of vehicles that be entered into the site.

The screenshot shows the 'FUEL ECONOMY' interface. On the left, there's a 'Vehicles' tab with a 'Total 3' count and a 'NEW VEHICLE' button highlighted with a red box. A blue arrow points from this button to the 'New vehicle' form on the right. The form has a 'General' tab and an 'Enable Fuel Economy' toggle. It includes fields for 'Category' (set to 'car'), 'Number plate', 'QR Code' (W756611497), 'Model', 'Company', 'Odometer' (set to 'None'), and 'Description'. A 'SAVE' button is at the bottom.

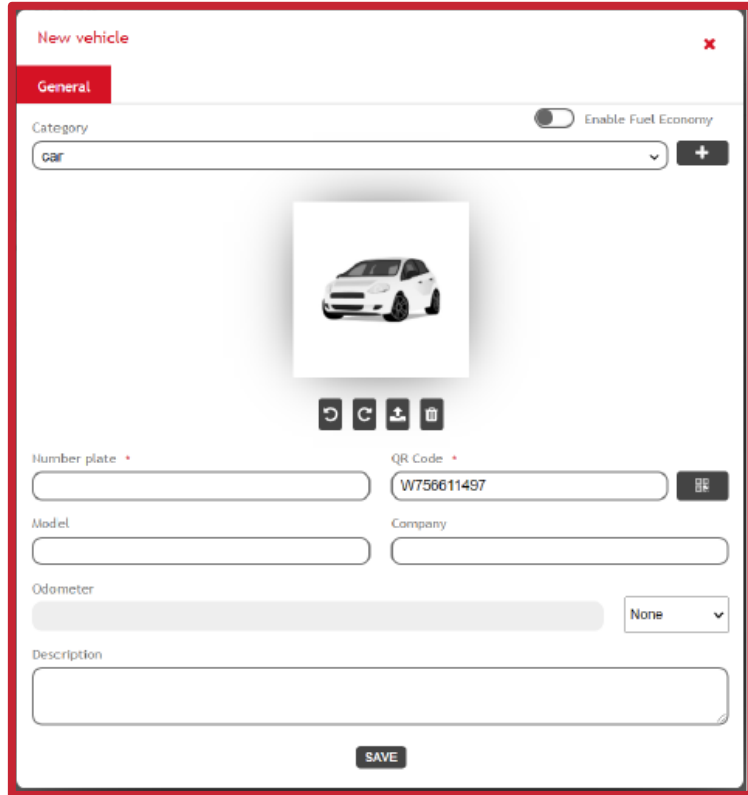
The vehicle fields are the following:

Category - Each vehicle must be grouped under a category to be easily found within the fleet.

Vehicle photo - You can assign a photo to your vehicle. By default, the photo associated with the selected category is used.

Enable FUEL ECONOMY - Enables the fuel consumption calculator for the vehicle. In this case, the vehicle registry must be completed with the vehicle tank information.





The vehicle fields:

- **Number plate**
- **Model**
- **Company**
- **QR code** - Enter a unique alphanumeric string identifying the vehicle (by default the field is pre-filled with a string automatically generated by the system). Press the button to generate a printable label with the entered string translated into a scannable QR code. The label can be scanned by a driver with the application from their phone to more quickly select the vehicle when creating a new refilling operation.
- **Odometer type** - Select which the unit of measure the vehicle odometer. Select 'None' to avoid tracking the vehicle odometer values over time.
- **Odometer** - The current odometer reading must be provided if you want to activate the advanced fuel economy management on the vehicle. In this way, the last vehicle odometer reading will be requested for each new refilling operation. The information will then be to calculate the fuel consumption of the vehicle.
- **Description** (optional) - Free text field that can be used to store additional information about the vehicle.

NOTE

Vehicles that have activated 'Fuel Economy' management, and don't have a configured Adblue tank it cannot dispense from Adblue pumps.
It is not possible to delete a vehicle if it has been refuelled at least once at the site, in which case it is recommended to disable it if you no longer wish to use it.



NEW CATEGORY

Name *

Heavy Truck

Tank size (L)

500

Select image







SAVE

Categories are used to organize vehicles into groups.

It is possible to filter vehicles by category and enable drivers to dispense for specific categories

There is no limit to the number of categories that can be entered.

Indicate:

Category name

Tank capacity - This value will be used as a suggestion for the main tank size of all new vehicles that are assigned to this category.

Image – This option can be used to upload custom picture. (.png, .jpg)

Caution

A category cannot be deleted if it is assigned to at least one vehicle at the site.

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B.Smart - Technical Training

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FUEL ECONOMY

VehiclesCategories**External stations**Preferences

Total 3

Q Search

NEW EXTERNAL STATION

Business Name	QUANTITY	PRICE	Address	Phone number	Actions
ENI	60.00 L	1622.64 €	Street 9		 
Ext. Station_1	107.00 L	1982.22 €			 
SHELL angels road	493.00 L	1980.64 €	angel		 

This section can be used to enter and manage the registry of the service stations where the vehicles can refill outside the site.

This section is only visible if the 'External Stations' option is enabled in the fuel economy preferences.

Note: There is no limit to the number of external stations you can enter.



FUEL ECONOMY

Vehicles

Categories

External stations

Preferences

Mandatory odometer photo

☒ YES ☐ NO

External stations

☒ YES ☐ NO

Mandatory QR Code

☐ YES ☒ NO

Enable consumption per single driver

☒ YES ☐ NO

Consumption

Km/L

Time Consumption

L/h

Currency

EUR - Euro

SAVE

In this section, you can edit the system configurations about the Fuel Economy add-on functions.
The configurations are:

- **Mandatory odometer photo** – If set to “YES”, the mobile application will always ask you to attach a photo of the vehicle odometer to the dispensing operation.
- **External stations** - If set to “YES”, the service stations registry management, where the filling operations is carried out off-site.
- **Mandatory QR code** - If set to “YES”, the driver is required to scan the QR CODE of the vehicle before starting the dispensing operation.
- **Enable consumption per individual driver** - If set to “YES”, the fuel consumption for individual drivers in the site is tracked (see Chapter).
- **Enable the association of vehicles to the fuel dispenser pumps** - If set to “YES”, the vehicles can be associated with the fuel dispenser. (by enabling this function, all vehicles are initially associated with all fuel dispensers)



This is the section where the log of the site dispensing operations can be viewed.



Select the report type to generate:

- Dispenses reports
- Consumptions report
This option is available only if the Fuel Economy add-on is active.
- Consumption report for each driver –
This option is available only if the 'Fuel Economy' add-on is active and the 'Enable consumption per individual driver' is enabled. (Fuel economy → Preferences)



DISPENSING OPERATION DETAILS

The following information is given in the individual dispensing operation:



15:56



MCBOX_AC1P_0006

Gianni Rossi

1

150000 Km

PUMP A

3.62 L

EX562GV





Status icon – Indicates whether the dispensing operation has been successfully completed or if there has been a problem while dispensing:



Indicates that there was a power failure at the pump while dispensing.

Type of authentication – Indicates how the driver is authenticated on the fuel dispenser:

-  Access was performed using an Ibutton key.
-  Access was performed using the smartphone application.

Date and time – Date and time (reported according to the time zone of the fuel dispenser) at which the dispensing operation was made.

Type of dispensing operation – Indicates whether the dispensing operation is a calibration or a refilling:

-  The dispensing operation is a refilling.
-  The dispensing operation is a calibration.
-  The dispensing operation was carried out at an external service station
-  View the odometer photo associated with the dispensing operation

Device – Name of the fuel dispenser from which the dispensing operation was made.

Driver – Name of the driver who performed the operation.

Optional field 1 - The value entered by the mobile application for the optional field 1 is shown (this is visible only if the system preference 'optional fields' is active).

Optional field 2 - The value entered by the mobile application for the optional field 2 is shown (this is visible only if the system preference 'optional fields' is active).

Calibration factor – The calibration factor of the dispenser at the time of dispensing operation.

Odometer – Value of the entered odometer, if the device is enabled to manage the odometer.

Pump – Name of the pump used to dispense.

Quantity – Quantity dispensed in the unit of measurement chosen in the configuration section.

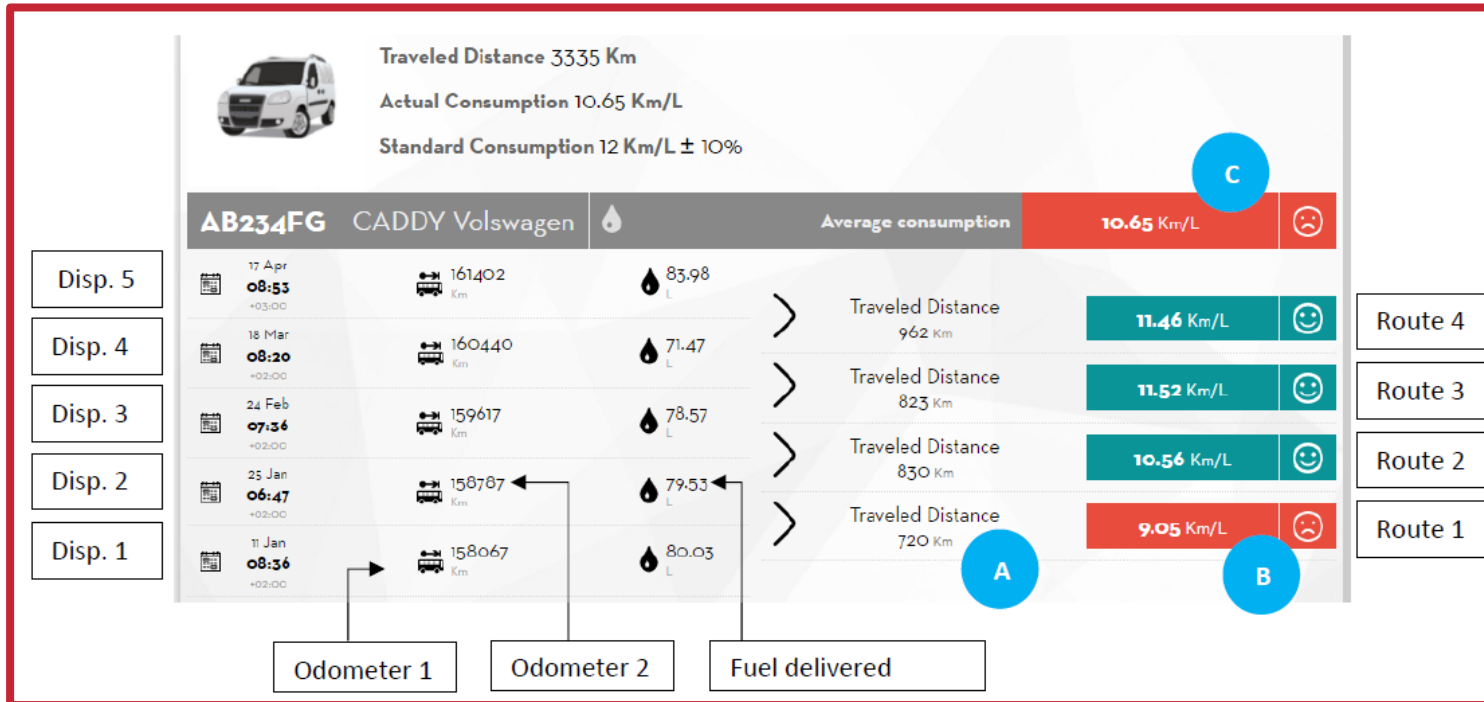
Number of registration – Number of registration entered at the time of the dispensing operation.

Fluid – Fluid dispensed (only available when the Tank Watchdog ADD-ON is activated).

It is also possible to generate a report on a PDF file of the dispensing operations done



Consumption Calculation



The consumption of the first route is calculated as follows:

The **distance travelled (A)** is obtained from the difference in the odometers of the two dispensing operations.

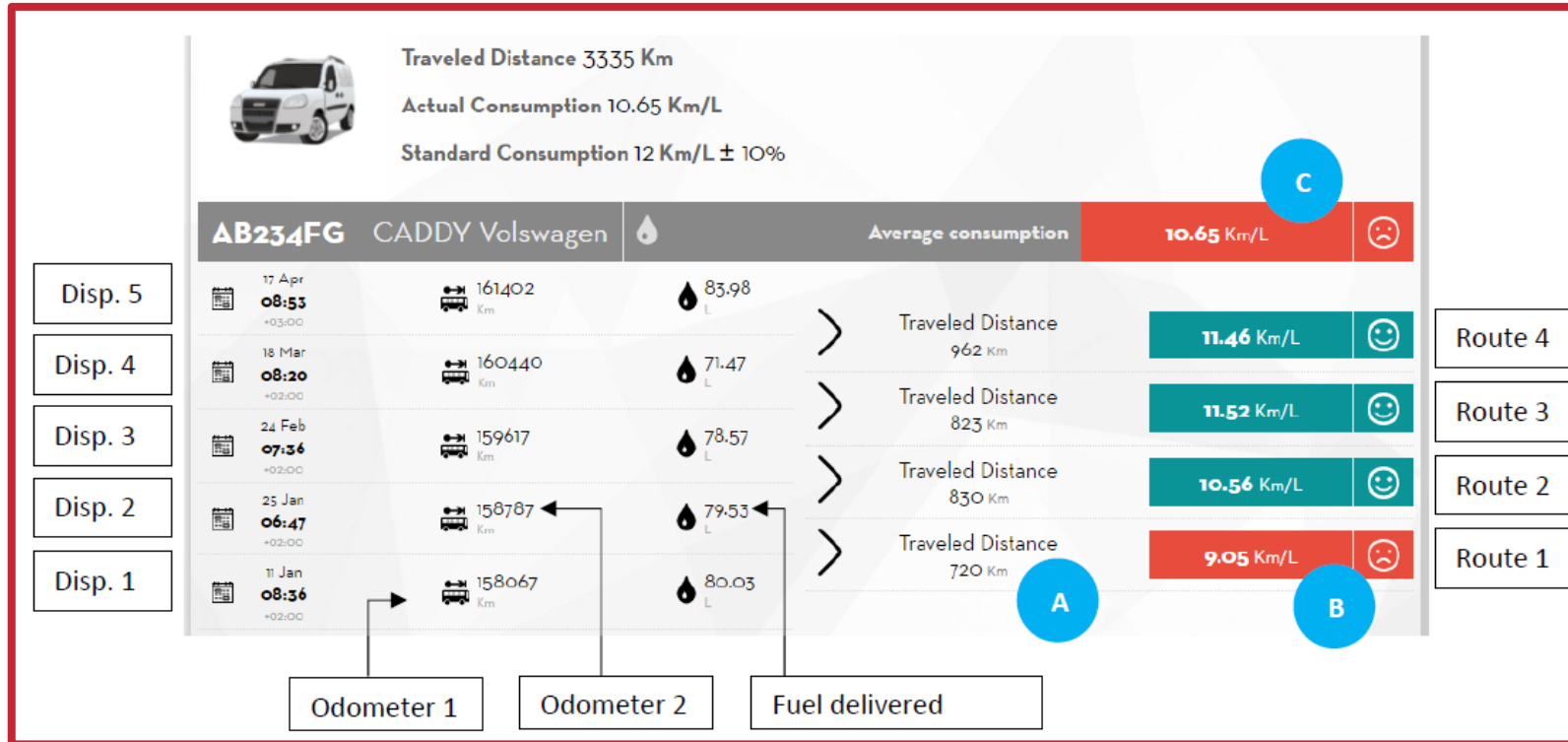
$$\text{distance travelled (A)} = (\text{odometer 2} - \text{odometer 1}) \text{ Km} = (15\,8787 - 15\,8067) \text{ Km} = 720 \text{ Km}$$

The **average consumption of the route (B)** is obtained from the ratio of the distance just calculated and the amount of fuel dispensed at the end of the route.

$$\text{average consumption of the route (B)} = \frac{\text{Traveled Distance}}{\text{Amount of fuel dispensed}} = \frac{720 \text{ Km}}{79.53 \text{ L}} = 9.05 \text{ Km/L}$$



Consumption Calculation



The **average consumption of a vehicle (C)** is therefore the average of the averages of the consumption of each route, in our case:

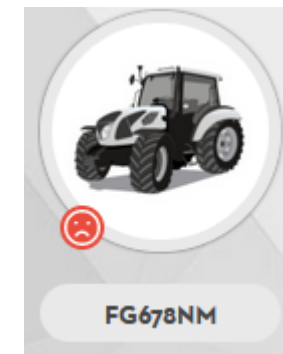
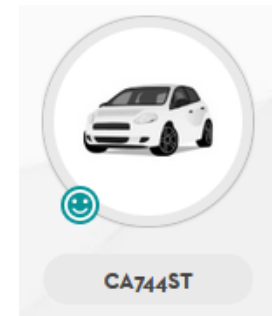
$$\begin{aligned}
 & \frac{(route\ consumption\ 1) + (route\ consumption\ 2) + \dots + (route\ consumption\ n)}{n} = \\
 & = \frac{9.05 + 10.56 + 11.52 + 11.46}{4} = 10.65\ Km/L
 \end{aligned}$$



Vehicle Consumption Calculation

The system uses the graphic rules defined in the following table to evaluate the vehicle consumption trend:

Vehicle odometer measuring unit	Current consumption < LI	LI ≤ Current consumption ≤ LS	Current consumption > LS
Kilometres or Miles	☹️	😊	😊
Hours	😊	😊	☹️



Key:



Consumption too high



Consumption within limits

LI (lower consumption limit) = Nominal consumption – (Tolerance % applied to the nominal consumption).

LS (upper consumption limit) = Nominal consumption + (Tolerance % applied to the nominal consumption).



SETTINGS

Preferences

Site Owner

Users

ADD-ON

Deleted devices

API

Export

Uploading data

USER

Language

English

Measurement Unit

Liters

Date Format

MM/DD/YYYY

Time Zone

(UTC+01:00) Amsterdam, Berlin, Bern, Rom

Time Format

12 Hours

SITE

Allow entering of Reg. Num. manually from APP?

YES

☒ NO

Optional fields

☒ YES ☐ NO

Optional field 1

Number between 0 and 65535

Optional field 2

Text with maximum length 16 characters

Enable receipt reception on mobile application?

☒ YES ☐ NO

button reader

Manual

SAVE

In this section you can configure the system preferences, manage users to access to the cloud environment, and perform customizations.

The configurations are:

- **Language** – The language in which the Web Application is displayed.
- **Unit of measurement** – Unit of measurement with which the dispensed quantities are to be displayed.
- **Date format** – Date display format (DD/MM/YYYY, MM/DD/YYYY).
- **Time format** – Time format display (12 hours, 24 hours).
- **Time Zone** - Time Zone Setting. This preference is used to identify the geographical area from which the web app is used
- **Manual registration numbers** – You can choose whether you want to manually enter the registration numbers from the mobile application or let them be created only by the web application. If the Fuel Economy add-on is active, this preference is automatically set to 'NO' and you cannot change it as long as the add-on is active.
- **Optional Fields** - Enable the preference if you want to manage two additional registries for dispensing. You can assign any name you like to identify the new fields. The additional fields are of two different types. The optional field 1 accepts only positive integers (the maximum allowed value is 65535) and the optional field 2 is alphanumeric (maximum 16 characters).
- **Enable receipt reception on mobile application?** – If this function is disabled, tickets will no longer be generated on the mobile app following a payment.



SETTINGS

Preferences

Site Owner

Users

ADD-ON

Deleted devices

API

Export

Uploading data

Business Name

Address

Tax Code/SSN

CAE

SAVE

In this section you can configure the site owner preferences.

The configurations are:

- Business Name
- Address
- Tax Code/SSN
- CAE*

*Unique Company Code – It used in some European countries.



SETTINGS

Preferences Site Owner **Users** ADD-ON Deleted devices API Export Uploading data

Total 1

NEW USER

	Username	Nickname	ACL	Actions
	admin.sat	admin.sat	Administrator	  

In this section you can add, edit, disable and delete users who have access to the B.Smart Webpage.

A disabled or deleted user will no longer be able to access the B.Smart Website.

-  **Administrator** user – Complete control
-  **Viewer** user – Data view only



SETTINGS

PreferencesSite OwnerUsers**ADD-ON**Deleted devicesAPIExportUploading data

Total 4

Insert new ADD-ON code **ACTIVATE**

Type	Code	Purchased	Expiration	Status
Drivers (+10)	P1oE9oAD52C6E5A4B3	27/11/2019	--/--/----	✓ Active
Drivers (+50)	P5o1FB3BCoB526A49F	13/09/2021	--/--/----	✓ Active
Level Indicator	LoP415o3o72ED8B439	21/07/2020	--/--/----	✓ Active
FEM	FMU86C382A8A597489	09/04/2021	--/--/----	✓ Active

On this section, you can view the list of active add-ons and activate new ones.

After purchasing a new add-on, you need to enter the code and press the “ACTIVATE” button to activate it.

The same procedure requires if you need to renew an expired add-on code.

Important Notes:

- It's not possible to activate the same add-on code on different sites.
- A reminder is sent to the portal user's e-mail when the add-on is nearing expiry date.
- One-time fee add-ons never expire.
- A message will be displayed when an add-on expires.
- When the “Tank watchdog” add-on expires, the tank levels are not synchronized. Therefore, if you decide to renew the add-on, you will need to adjust the correct quantity on all virtual tanks.



SETTINGS

PreferencesSite OwnerUsersADD-ONDeleted devicesAPIExportUploading data

Total 0

Search

S/N	Name	Model
No results found		

In this section you can see the list of devices deleted from the site.

If a device has been wrongly deleted, you can reactivate it.

To bring the panel back into operation site, you must:

1. Perform a hardware reset using the button on the controller panel
2. Connect to the controller panel the smartphone application and repeat the discovery procedure indicating the credentials of the current site.
3. When discovery is completed, start the recovery procedure.
4. If the recovery procedure is successful, the fuel dispenser is restored to factory default data in the same site, and the panel must be reconfigured.



SETTINGS

PreferencesSite OwnerUsersADD-ONDeleted devicesAPIExportUploading data

Enable API for Export

☒ YES ☐ NO

Client ID

PIUSI-o659-1VNWG

Client Secret

F91AB6F9EA33CB2803F94046BE15FBDB

Credentials

GENERATE

Address

<https://apibsmartexport-tst01.piusi.com>

Documentation

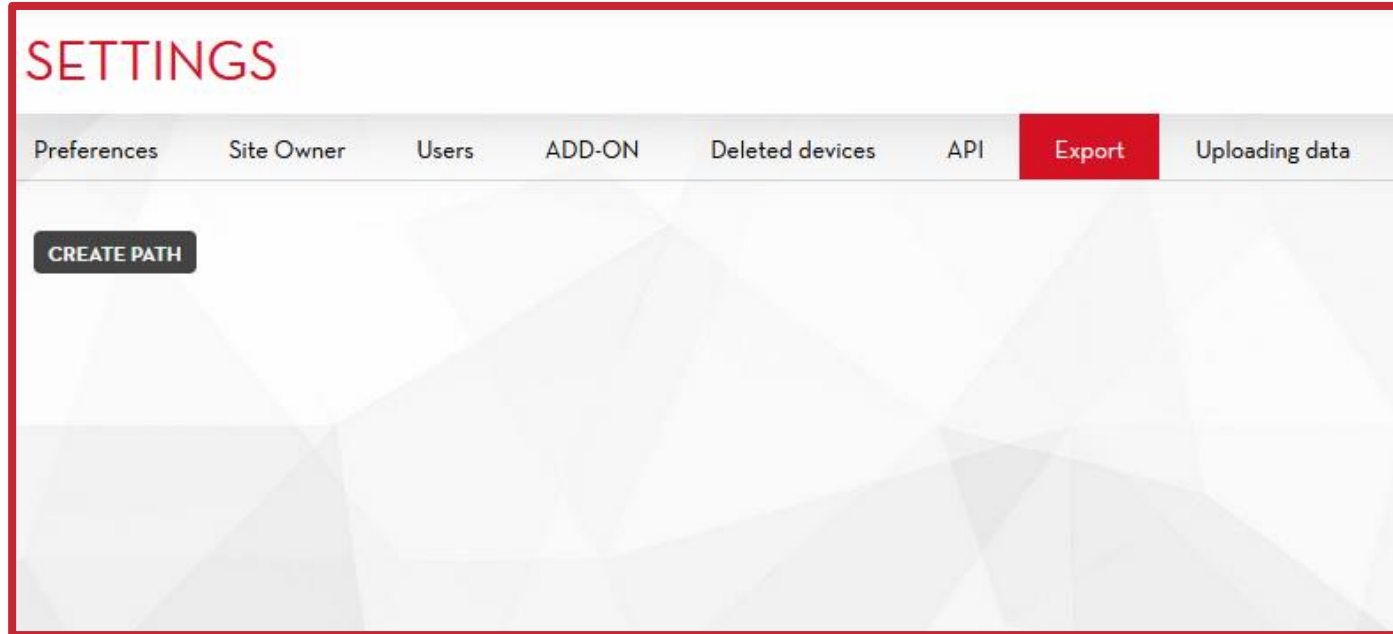
<https://apibsmartexport-tst01.piusi.com/docs>

In this section you can enable the Export data via API (Application Programming Interface).

In order to make requests by API, you need to use the credentials provided and generate automatically by token. (Client ID/Client Secret)

The procedure is described in detail on the documentation page, together with the list of data structures that can be obtained.





In this section you can create a custom report (TXT format) based on the data collected and the B.Smart website.

This option it can be usefull if the B.Smart is installed in conjunction to external software application, able to import TXT data.



SETTINGS

[Preferences](#)[Site Owner](#)[Users](#)[ADD-ON](#)[Deleted devices](#)[API](#)[Export](#)[Uploading data](#)

Drivers

More than one driver can be uploaded using the Excel document

 **UPLOAD EXCEL FILE**

Download the document to fill out



Registration Numbers

More than one registration number can be uploaded using the Excel document

 **UPLOAD EXCEL FILE**

Download the document to fill out



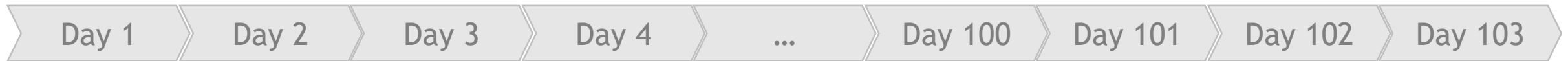
In this section you can upload a list of Drivers and Registrations numbers into the Site. Those lists, shall be uploaded using a specific template. (the Excel template to fill out)



Keypad and iButton available as AUTHENTICATION

SMARTPHONE MANDATORY FOR DATA SYNCH. (SETTINGS, LIMITS, DISPENSES...)

Problems: Example 1



Driver Dispenses
through MCBOX
Keypad PINCODE
or ibutton

Data not synch.



Driver Dispenses
through MCBOX
Keypad PINCODE
or ibutton

Data not synch.



Manager doesn't
see the dispense
in the webapp

What happened?

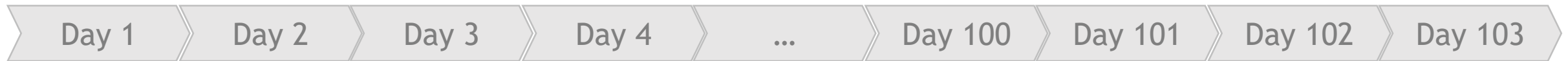
Data are not synchronized in the
cloud, the manager can't see the
dispenses. That's because nobody
is using a smartphone



Keypad and iButton available as AUTHENTICATION

SMARTPHONE MANDATORY FOR DATA SYNCH. (SETTINGS, LIMITS, DISPENSES...)

Problems: Example 2



MANY drivers
dispense
through MCBOX
Keypad PINCODE
or ibutton

Data not synch.



MANY drivers
dispense
through MCBOX
Keypad PINCODE
or ibutton

Data not synch.



The driver calls the
manager «I can't dispense.
It doesn't work»

What happened?

Data are not synchronized. The memory of the Mcbox is full and it is not possible to dispense until a synch. Is performed (500 dispenses max). That's because nobody is using a smartphone



Keypad and iButton available as AUTHENTICATION

SMARTPHONE MANDATORY FOR DATA SYNCH. (SETTINGS, LIMITS, DISPENSES...)

Problems: Example 3

