APPLICATION USER MANUAL

INDICE

Version: 1.11.0

1. INSTALLATION

Connect to the respective stores using the following links to install the application:

- Play store - https://play.google.com/store/apps/details?id=com.piusi.sssa
- App-store - https://apps.apple.com/om/app/piusi-b-smart/id1440012334

The following minimum requirements are needed for correct operation:

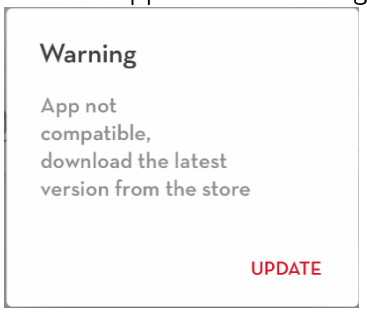
Use a smartphone with Android (up to version 6) or iOS (up to version 12.0) operating system and Bluetooth module that can connect to the Internet (via a data network or WI-FI).

Important note

- If the application is uninstalled, all locally saved data that has not been synchronised with the cloud will be lost.

1.1. UPDATE

If the application is not updated to the latest compatible software version, it is not allowed to dispense from the dispensers of your site. If there are new updates, a message is always shown. that refers to the relevant 'app store' and 'Google play store' to download and install the latest update:



We recommend that you periodically check for new updates from the official stores

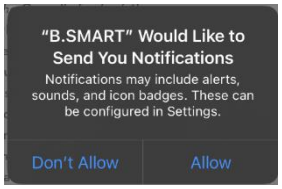
2. FIRST ACTIVATION

Start the application by pressing the icon. Read and accept the software licence terms upon the first activation.

Important note:

- The licence terms may change over time and must be accepted again.

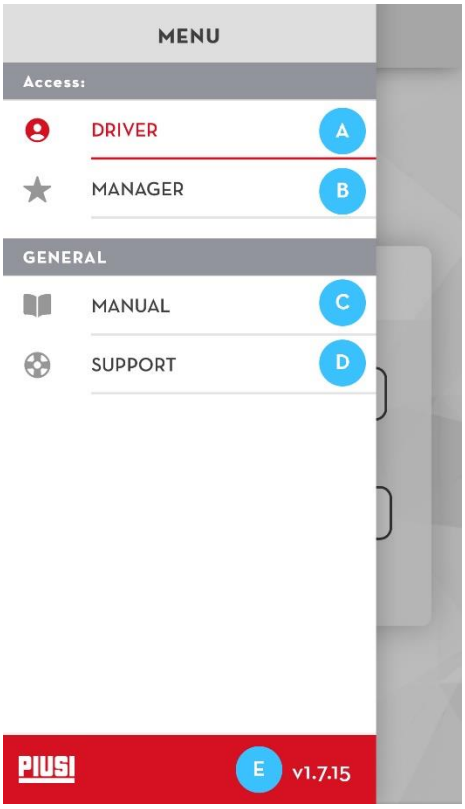
Press "I AGREE" to continue.



(iOS only) Allow the application to receive notifications.

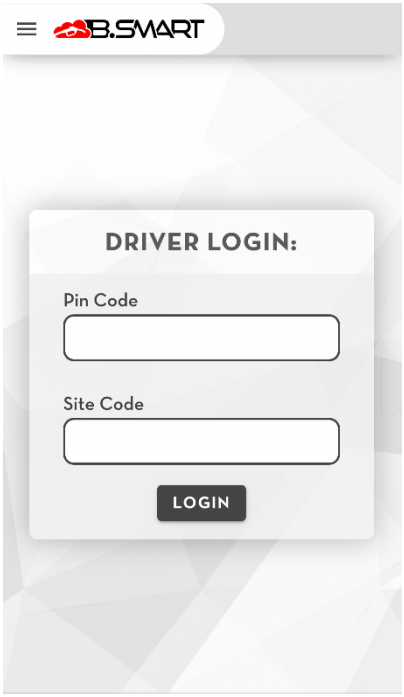
The driver login screen as soon as the app starts (see Chapter 3).

Press the button to open the navigation menu.



a) **DRIVER** - To open the driver login page (see Chapter 3).
b) **MANAGER** - To open the manager login page (see Chapter 4).
c) **MANUAL** - the MANUAL button starts the downloading of the following manual that can be viewed directly from the phone. To view the manual you need to be connected to the internet.
d) **SUPPORT** - The REPORT button opens the section where the user of the APP (manager or driver) can send reports to PIUSI customer service for any problem related to the APP
e) Version
f) Offline status bar - This bar appears when no Internet connection available and some functions may not be available.

3. Driver login

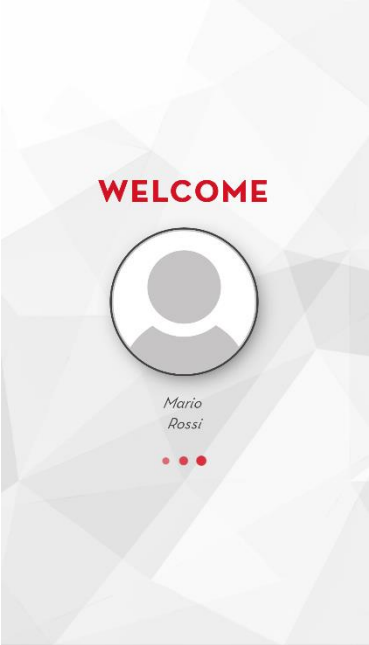


Press the “DRIVER” menu item in the navigation menu to go to this section.

The driver must fill in the form with the following data to log into the site:

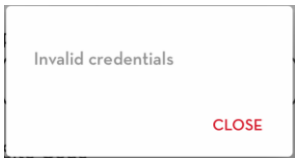
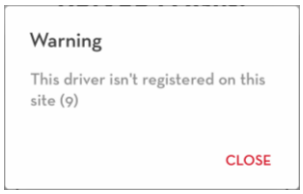
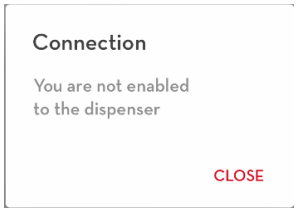
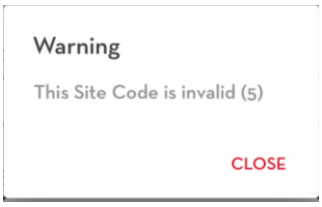
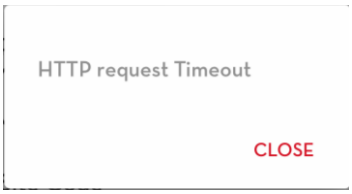
a) **PIN code** - Numeric code that identifies the driver. This is assigned to the driver by the site manager while creating the registry (see B.Smart web-app manual).
b) **Site code** - 8-digit alphanumeric code identifying the site. This is sent by e-mail to the operator after activating B.Smart on the PIUSI portal.

Press the “LOGIN” button to log in and wait for the result:



The screen shown by the side will appear if the login was successful and you will be shortly redirected to the “new refuelling” page (see Chapter 3.1.1).

- If authentication fails, check the error:

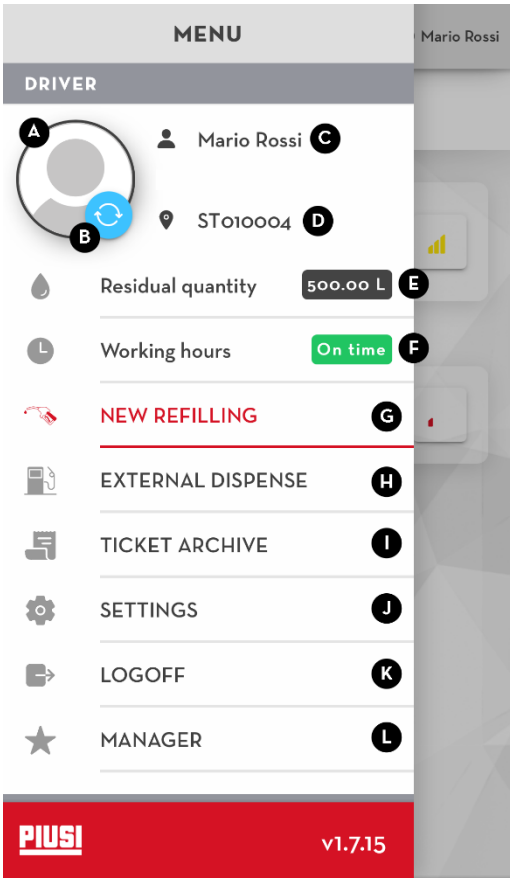
	The driver's credentials have changed from the last access. Connect to the internet and authenticate again.
	Incorrect PIN code, the driver does not exist in the site.
	The driver has been disabled by the operator and can no longer dispense.
	The entered site code does not exist.
 	No internet connection.

Important note

- You must be connected to the internet to view the manual.
- Only one driver can be logged in on any one telephone at a time.
- The same driver can log in using different telephones.

3.1. Driver menu

After the driver has logged in, the following information is displayed in the navigation menu:



A. **Driver image**

B. **Data synchronisation button** - Press to force data synchronisation with the cloud.

C. **Name and surname**

D. **Code of the site** where the driver is authorised to dispense

E. **Residual quantity***(function only available with "fuel economy" add-on active)* - See Chapter 3.1.3.2

F. **Working hours** *(function only available with "fuel economy" add-on active)* - See Chapter 3.1.3.3

G. **New refilling** - This opens the tank scan page, where you can connect and start refuelling from a chosen fuel dispenser (see Chapter 3.1.1 and Chapter 3.1.3.1 if the *"fuel economy" add-on* is active)

H. **External dispense** *(function only available with the "fuel economy" add-on active)* - This opens the page for creating a new external dispensing (see Chapter 3.1.3.4).

I. **Ticket archive** - Enter the section to view the ticket history (see Chapter 3.1.2).

J. **Settings** *(function only available with the "fuel economy" add-on active)* - Section for configuring data display settings (see Chapter 3.1.3.5).

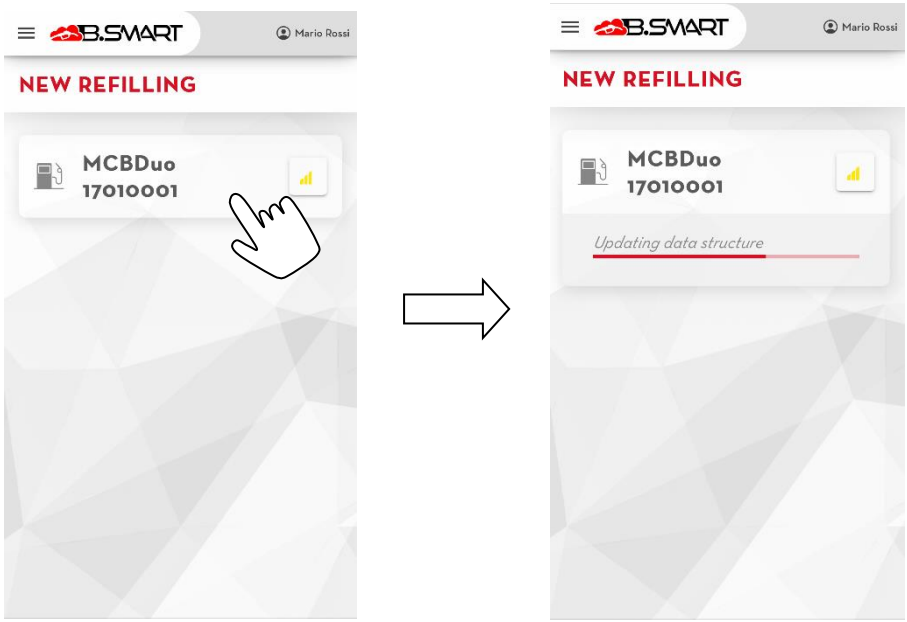
K. **Log off** - The driver is logged off and must log in again to dispense (see Chapter 3).

L. **Manager** - This opens the controller scan section for connecting and logging into a controller as a site manager (see Chapter 4).

3.1.1. New refilling

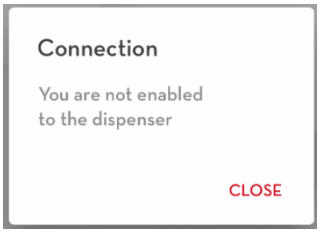
A BLE scan of the controllers is run as soon as this section is opened (see Chapter 3.1).

Press the controller from which you want to dispense and wait for the end of the connection procedure.

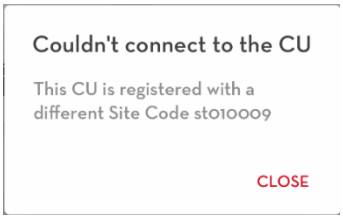


Caution: The connection procedure to the controller may fail in the following cases:

- The driver is not authorised to dispense from the selected controller - The site operator must authorise the driver to dispense from this controller (see web-app manual).

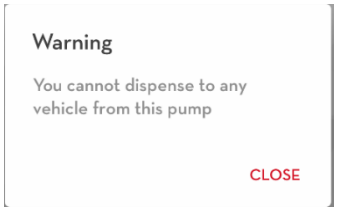


- The controller is not registered in the same site as the current driver - Drivers can only connect to controllers registered in their respective site.

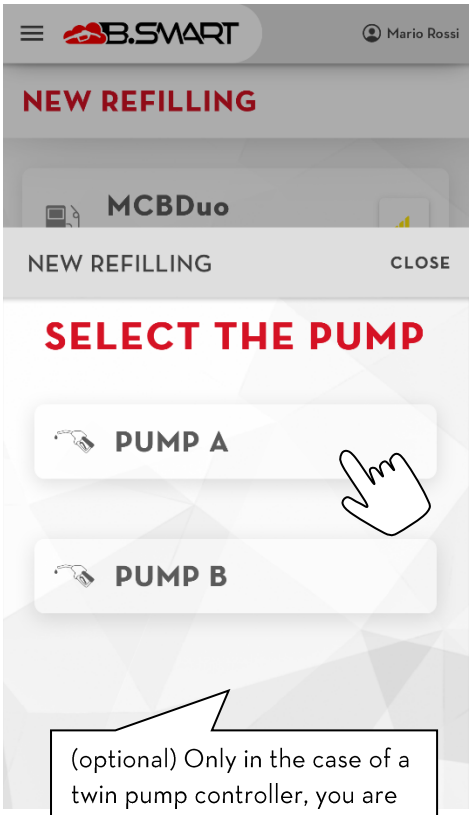


- The controller is not updated to the latest available firmware version - The controller firmware is not compatible with the application version. It is necessary to connect to the panel as a manager to update the firmware (see Chapter 3.4.2).
- The app must be updated to the latest version available (see Chapter 1.1).
- Generic connection error - due to a BLE communication problem, the connection cannot be completed. Make sure not to turn off the smartphone monitor, close the application during the procedure and stay near the fuel dispenser.

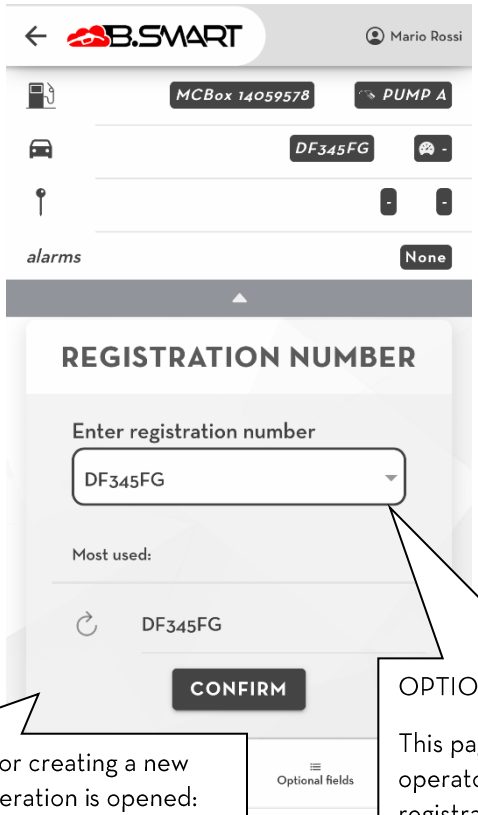
- There are no vehicles available to dispense. This could have various causes:
    - The telephone cannot contact the CLOUD to download the updated list of vehicles (check internet connection).
    - (only if the “fuel economy” add-on is active) The current driver is not enabled to dispense to any vehicle in the site (check driver settings).
    - (only if the “fuel economy” add-on is active) There are no vehicles associated with the current controller (check vehicle/controller associations from B.smart web-app).
    - There are no vehicles registered in the site.



If the telephone is correctly connected to the controller:



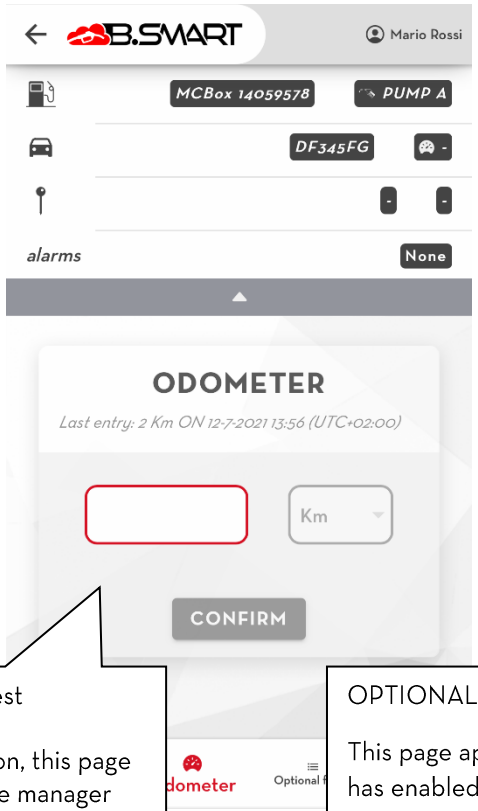
(optional) Only in the case of a twin pump controller, you are asked to select which pump you want to dispense.



The page for creating a new refilling operation is opened:

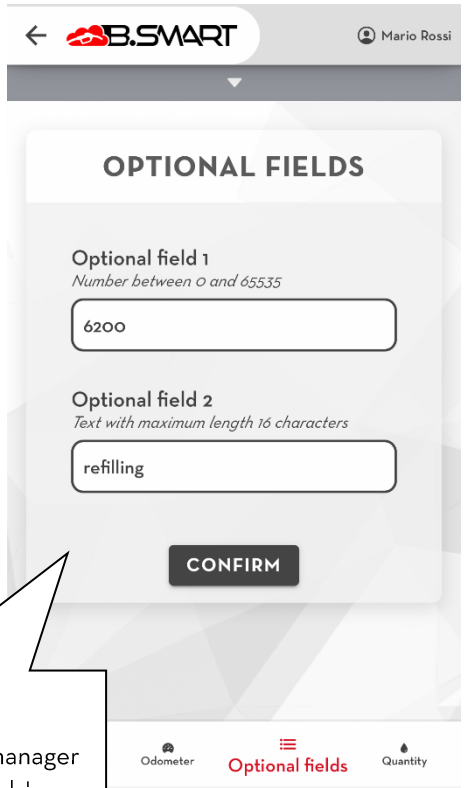
OPTIONAL request

This page appears if the operator has enabled the 'Use registration number' option on the control unit. A registration number must be selected before continuing.



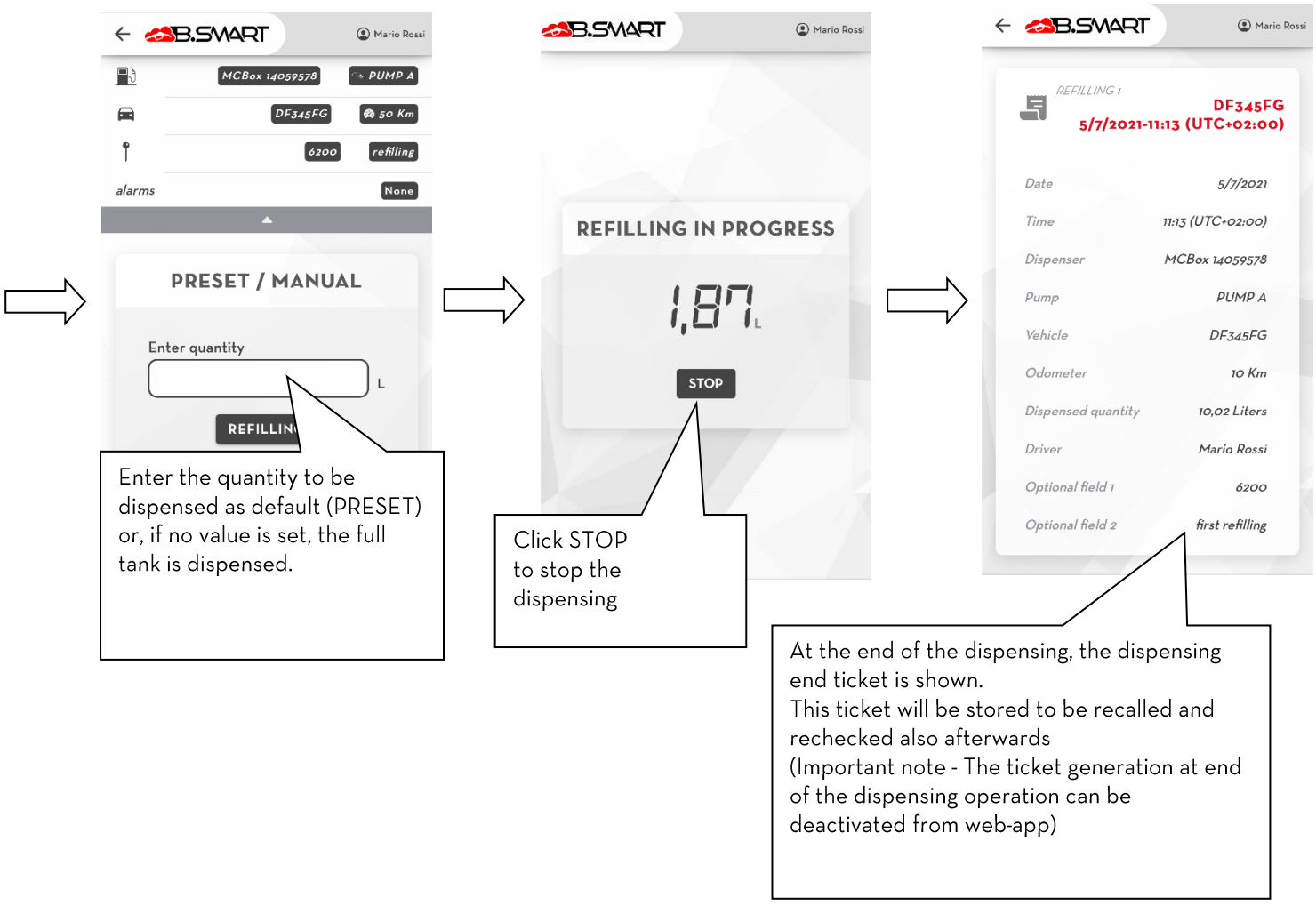
OPTIONAL request

Odometer insertion, this page is shown only if the manager has enabled the use of the odometer from WebApp.



OPTIONAL request

This page appears if the site manager has enabled the 'Optional Fields' option on the webApp. Two additional non-mandatory fields are activated to enter additional information on the refilling operation.

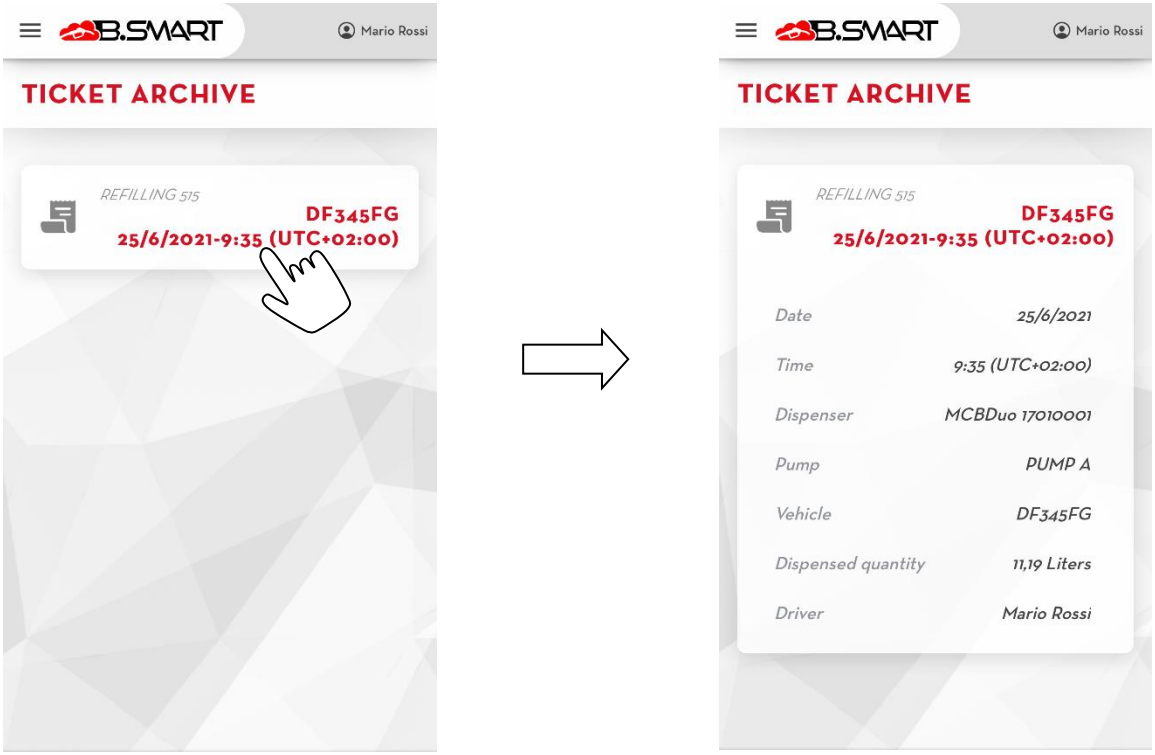


CAUTION

- Do not move away from the controller during the new refilling procedure creation to avoid losing the BLE connection.
- If the phone loses the Bluetooth communication and disconnects from the controller before the end of the dispensing then the ticket is not generated.
- In order to download and use the 'registration numbers' uploaded into the system, it is mandatory that the phone is connected to the internet while it is connected to the dispenser.

3.1.2. Ticket archive

This displays a list of all receipts generated at the end of each dispensing operation made by the telephone. Press the ticket to read the dispensing details.



3.1.3. Fuel economy module

Fuel Economy is an add-on (that can be purchased separately) for the advanced management of the fleet of vehicles of your site (calculating fuel consumption) and for monitoring each driver by limiting the quantity that can be delivered, the working time and vehicles that can refuel.

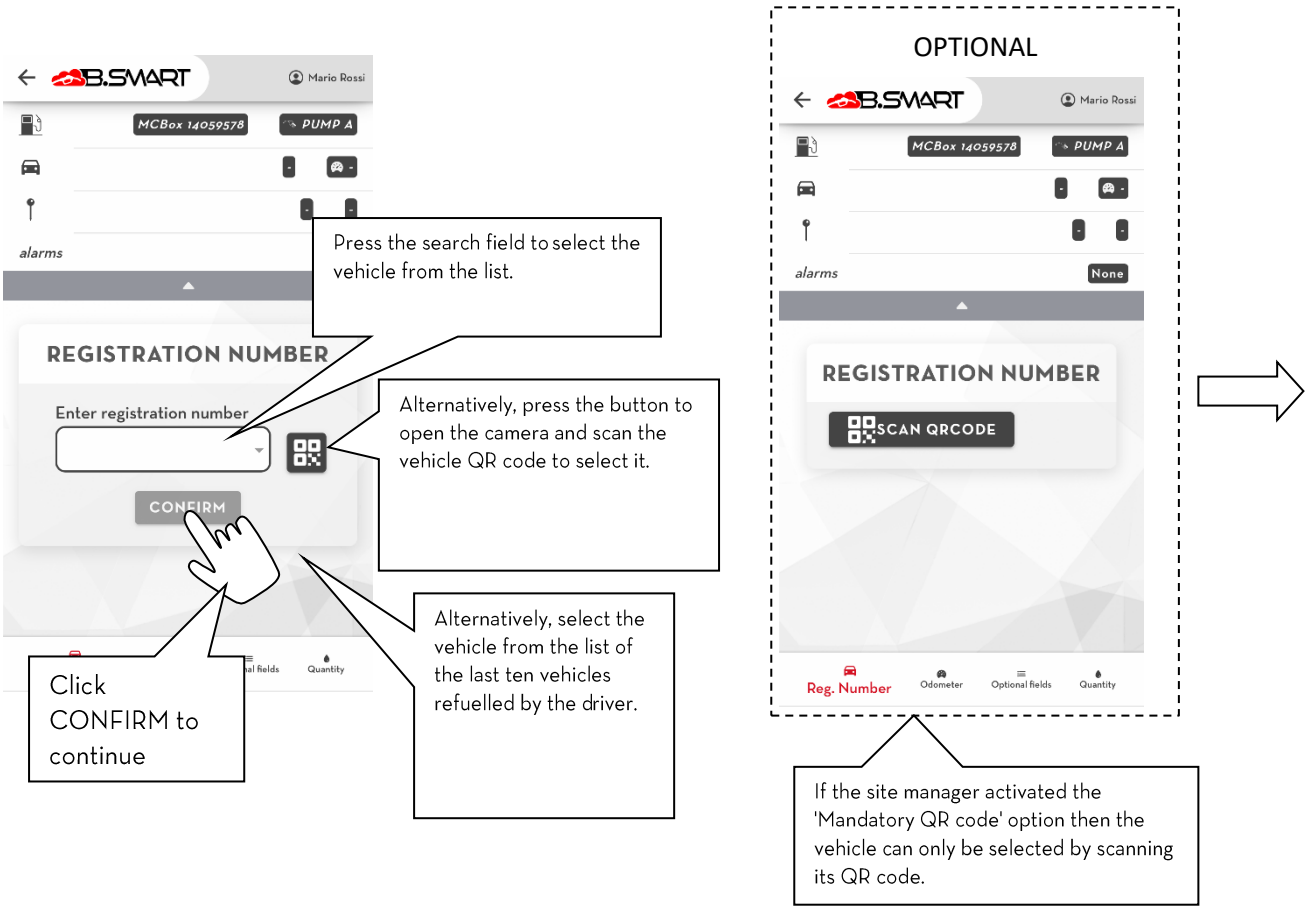
The following limits are applied to the application after activating the add-on (from B.Smart web application):

- It is no longer possible to add new vehicles (Registration Numbers) via a phone. The fleet is managed by the B.smart web application.
- Whenever you want to start a new dispensing operation, you must always select the vehicle you want to refuel (by manually selecting it from a list or scanning its QR code).

The new features are illustrated in the following chapters.

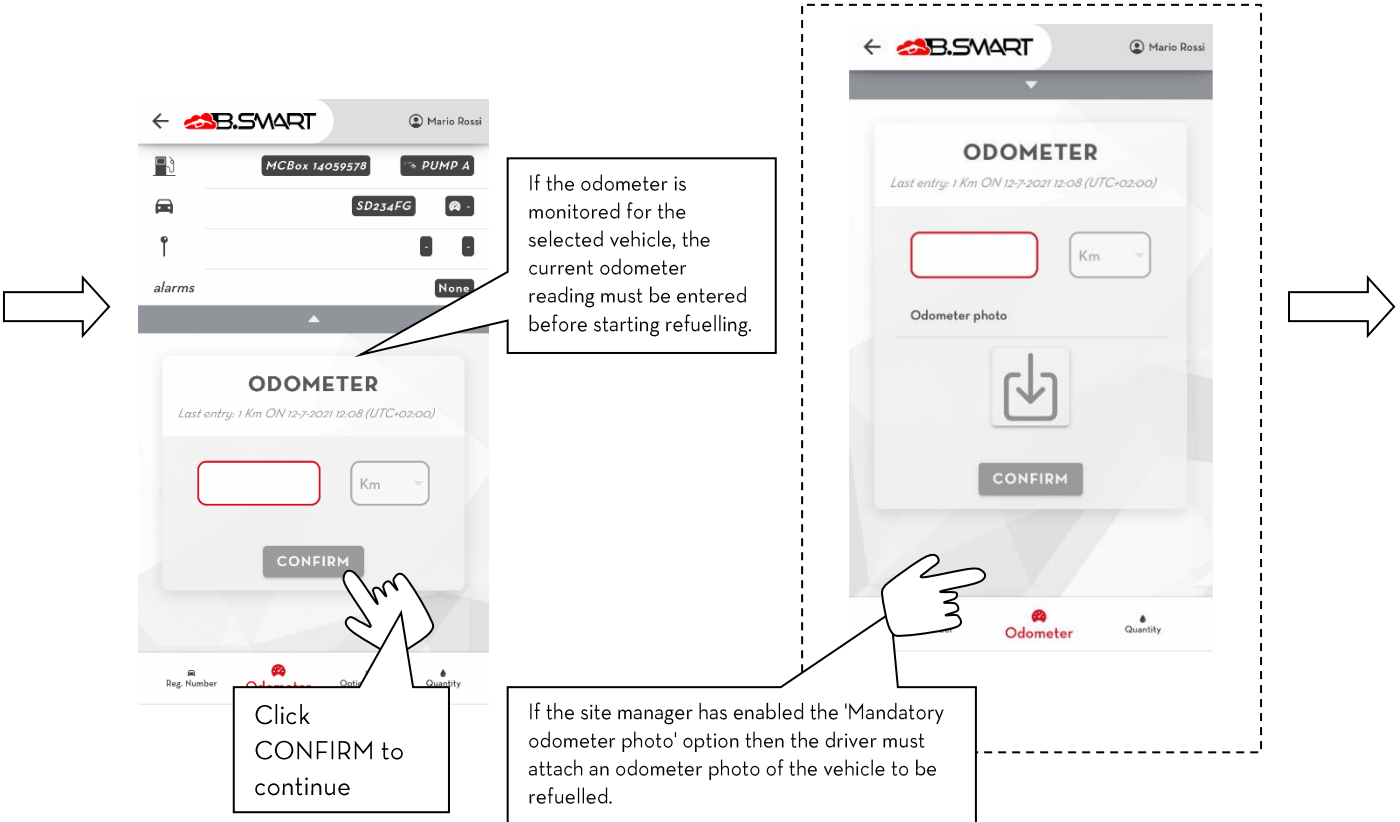
3.1.3.1. **Dispensing**

The changes in the new dispensing operation creation flow after activating the add-on are illustrated below. The procedure for searching and connecting to the fuel dispenser is the same as before and described in Chapter 4.1.



Important note

- The site manager can limit the driver to refuel a limited number of vehicles of choice (see the B.smart web app manual) so drivers can only select the vehicles for which they are enabled (by default each driver can refuel all vehicles of the site).
- You need to permit the app to use the camera of your phone to scan the QR code.
- It is not possible to dispense Adblue from pumps enabled to dispense on vehicles with the 'Fuel Economy' option active but without a configured Adblue tank

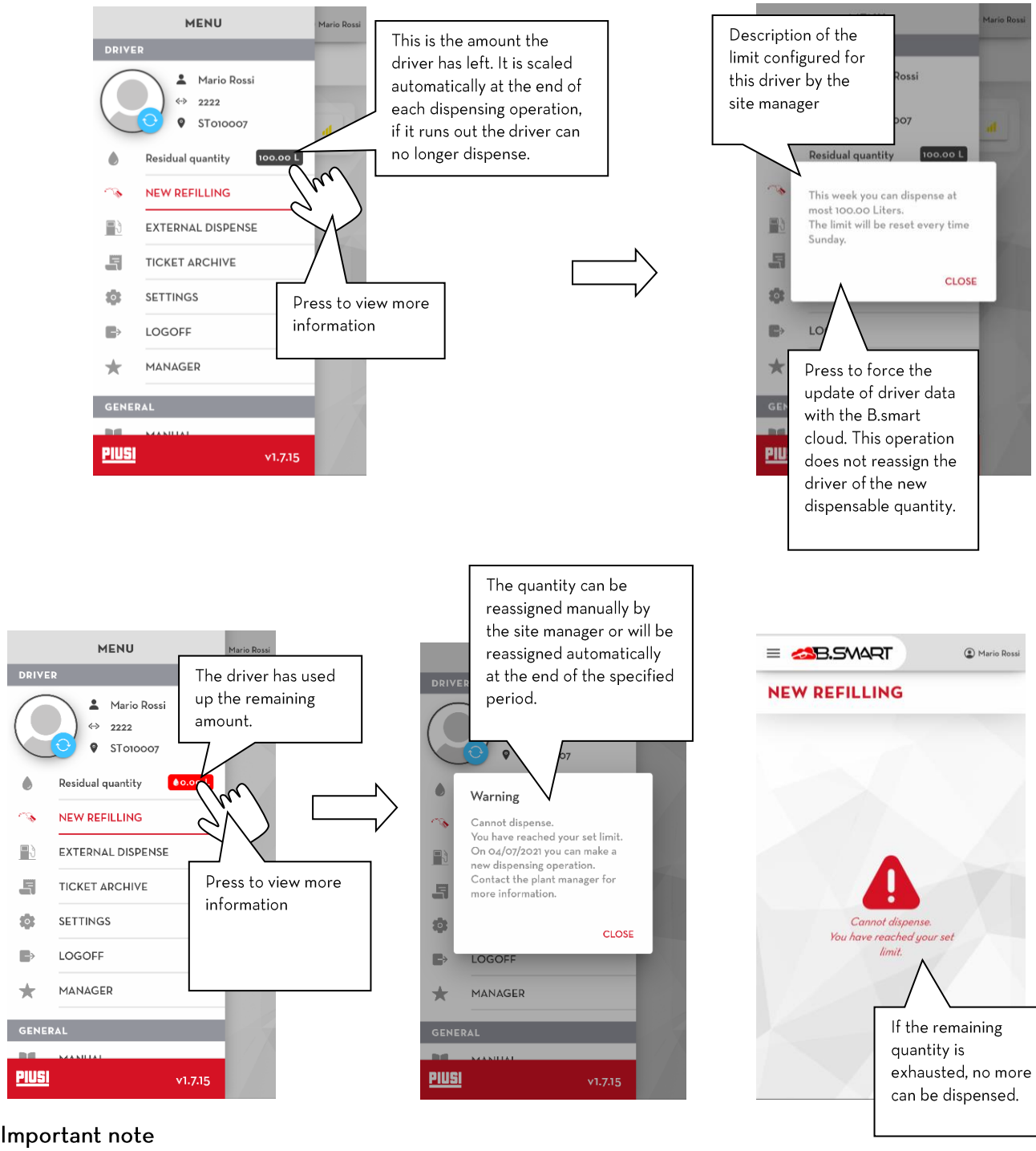


Important note

- It is always recommended to enter the real odometer reading for correctly calculating the vehicle consumption.
- If the 'Mandatory odometer photo' option has been enabled, the odometer photo must be taken before connecting to the controller.

3.1.3.2. Dispensable quantity limit

The manager (using the B.smart web app) can configure a maximum limit of the quantity that the driver can dispense from the site pumps over a predefined time. When the time expires, an additional dispensable amount is reassigned to the driver. If the quantity is exhausted, the driver will no longer be able to refuel at any of the site fuel dispensers. The driver's home page contains the following information:

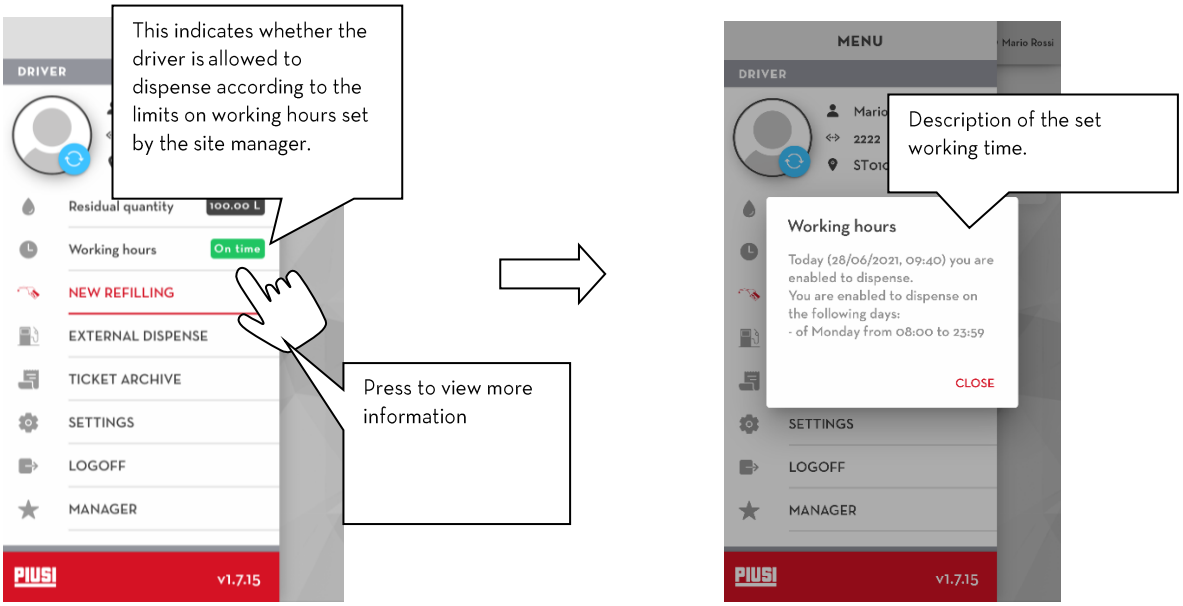


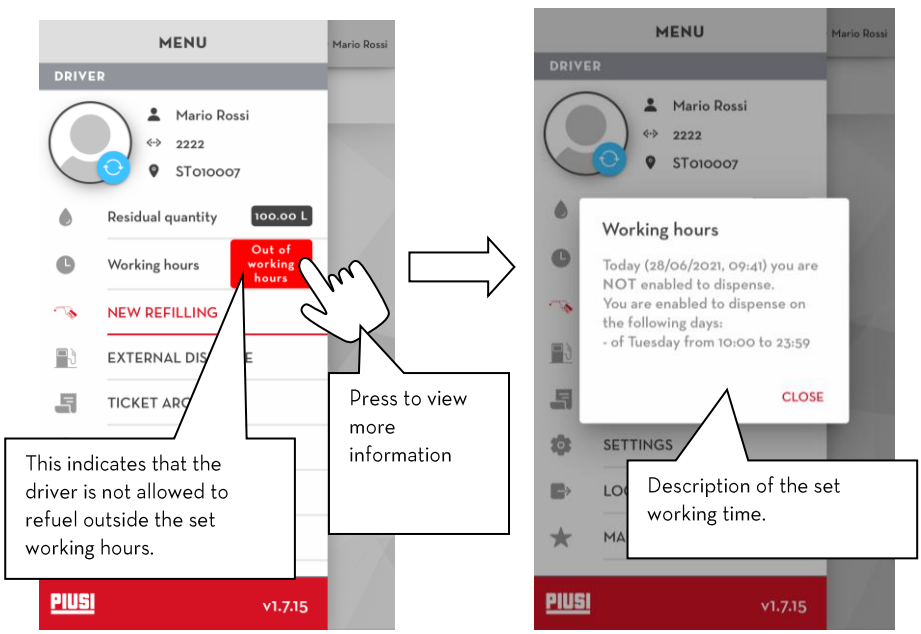
Important note

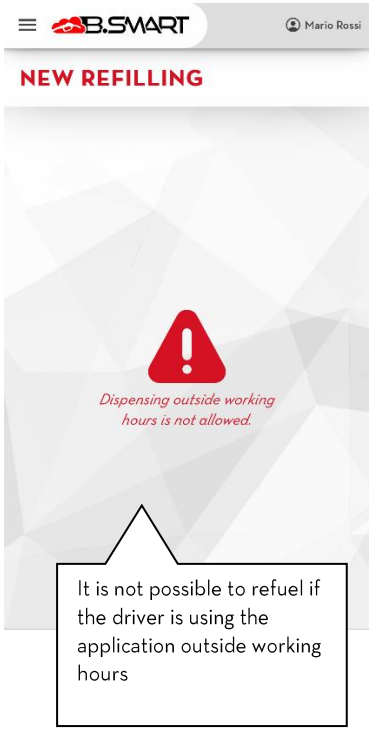
- The remaining quantity is correctly synchronised with the cloud only when there is a stable connection to the Internet

3.1.3.3.c. Working time

The site manager (using the B.smart web app) can set a working time for each driver to limit refuelling to certain times of the day or specific periods of the year.





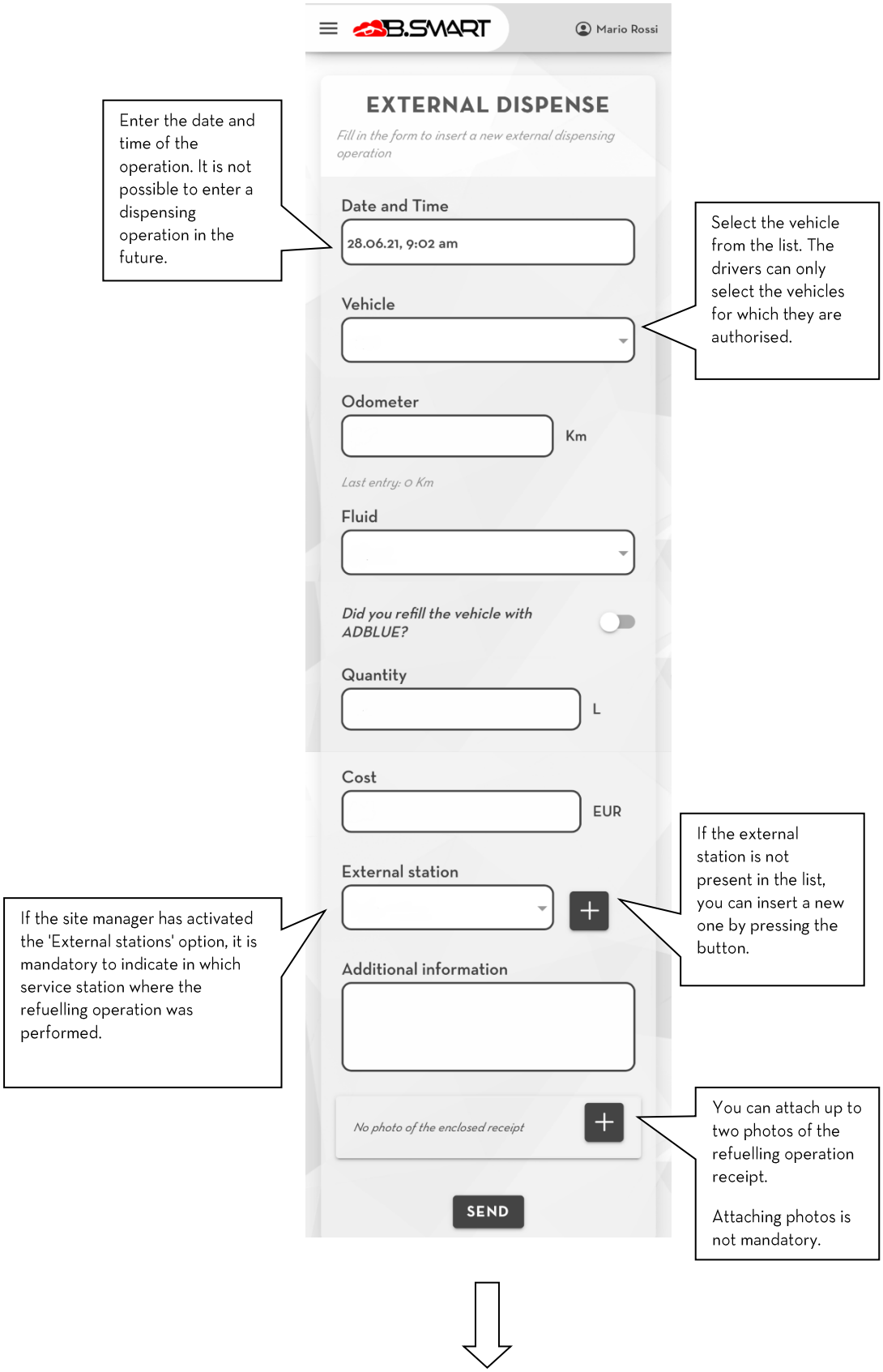


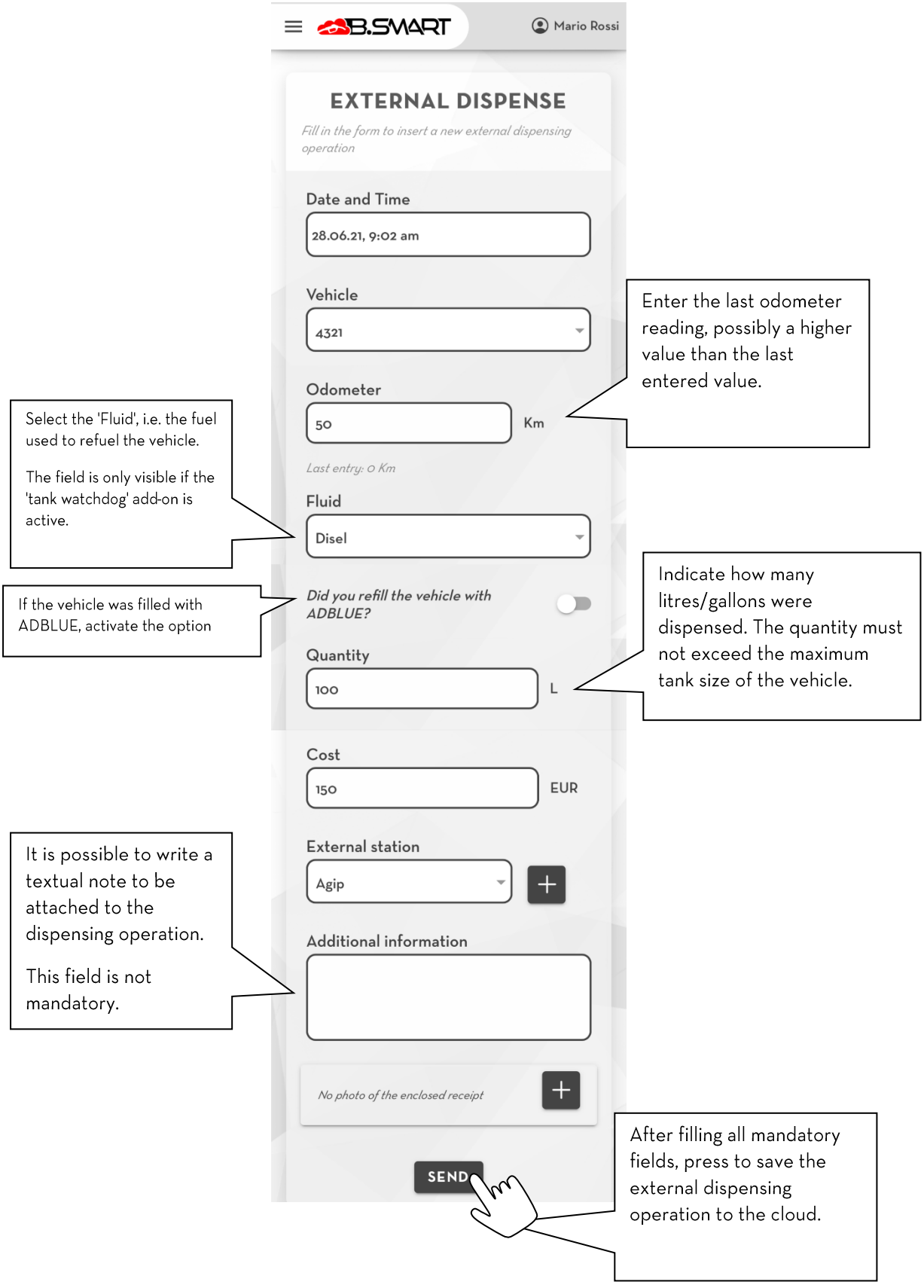
Important note

- Working time information is updated whenever the driver opens the application and has a stable Internet connection.

3.1.3.4. External Dispensing

Each driver can record refuelling operations made in fuel stations off the B.smart site using the appropriate form. Follow the instructions on the driver main page:



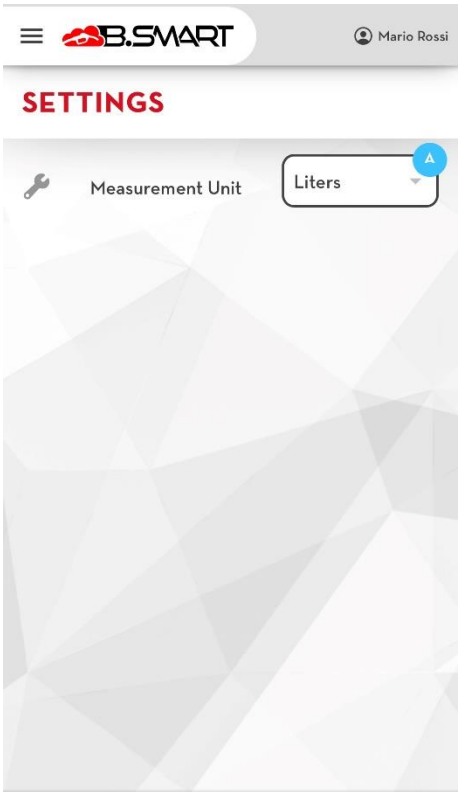


Caution

- The phone must be connected to the Internet to add a new external dispensing (refuelling) operation.
- The phone must be connected to the Internet to add a new external service station.

3.1.3.5. Configuration

In this section (visible only if the “fuel economy” add-on is active) it is possible to change the settings of the user using the B.smart app.
In detail:

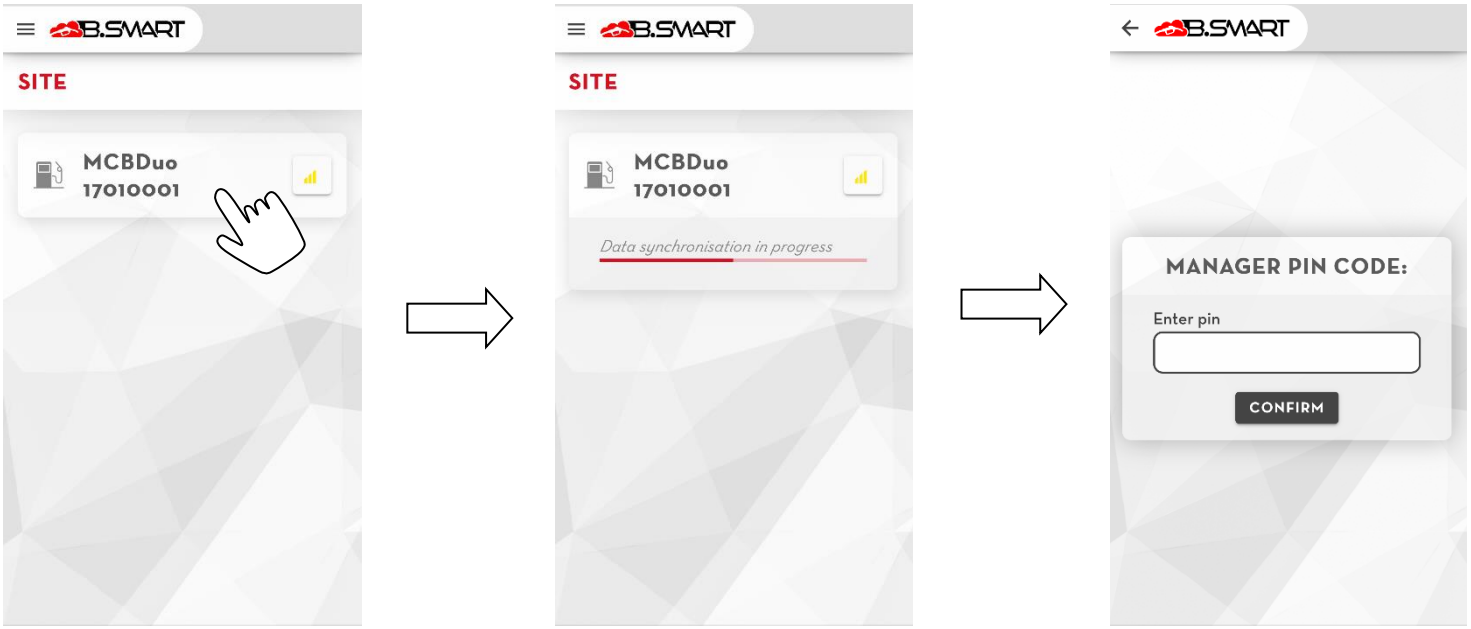


a) **Unit of measurement** with which you want to display the remaining quantity and the maximum dispensable amount.

4. Manager login

Press the “MANAGER” menu item in the navigation menu to go to this section.

A BLE scan of the controllers is run as soon as this section is opened (see Chapter 4.1).



Press the desired controller to connect. The site manager can connect to the controllers by logging in with a special PIN code (the code can be different for each controller and is configured by web-app; default code: 123456) and can perform site management operations through advanced privileges (see Chapter 4.4).

If the manager connects to a controller that:

- has not yet been associated with an site: the discovery procedure is run (see Chapter 4.2).
- has the corrupted memory and either or both error codes A32 or A33 are present: the recovery procedure is automatically started (see Chapter 4.2.1).

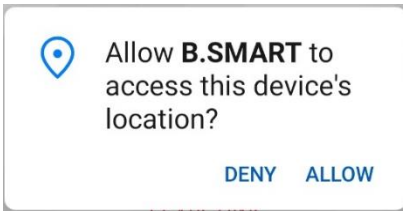
4.1. Controller scan

A BLE scan is automatically performed to detect the controllers near the telephone as soon as you open "New Refilling" section (see Chapter 3.1.1) or the "Manager Login" section (see Chapter 4).

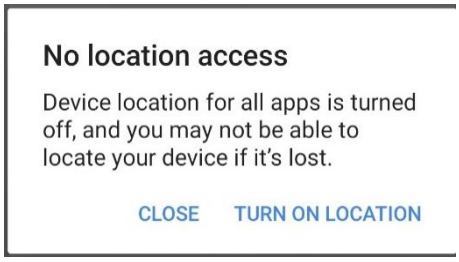
Caution: The following prerequisites must be met to scan and connect to the B.Smart controllers:

- Switch on the Bluetooth module of the telephone.

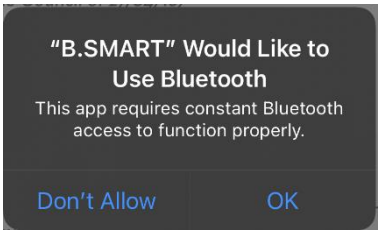
- (Android only) Allow location access



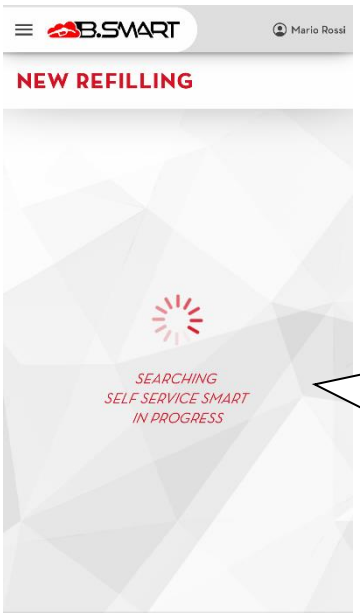
- (Android only) Activate geolocation service



- (iOS only) Allow the application to use the Bluetooth function of the telephone.



If all prerequisites are met, an automatic scan is started:



scanning in progress.

If the scan continues for several minutes, no controller is present in the vicinity.

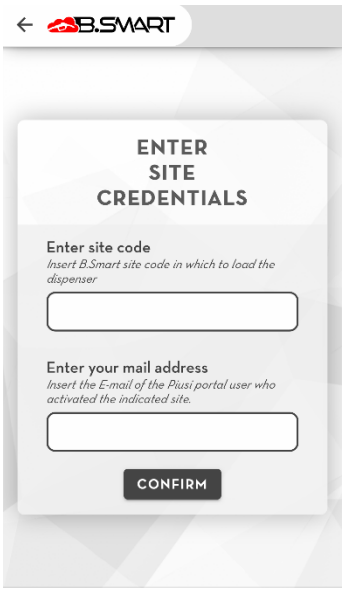
The controllers detected during the scan are added to the list and appear as follows:

A. Controller name
B. Signal quality

IMPORTANT NOTE

- A fuel dispenser is not detectable if a telephone is connected at that time

4.2.Controller discovery

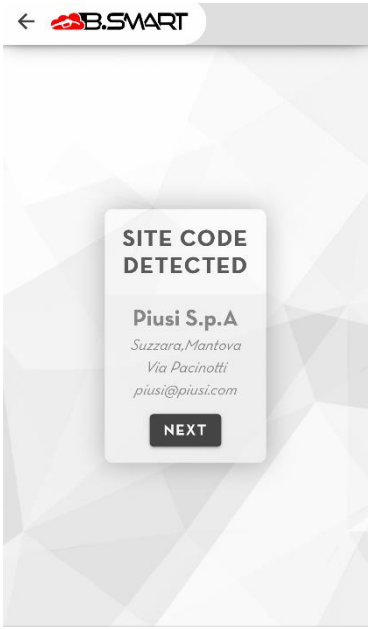


The procedure can be used to register a newly purchased controller in the B.smart cloud site.

As soon as a connection to an unregistered controller is established, the Manager will be asked to:

a) Enter the **code** of the destination site where the controller will be used.
b) **Enter the e-mail address** of the portal user who registered the product code of the controller on the PIUSI portal.

The site will be recognised if the entered data are correct:



Press NEXT to end the procedure and register the controller in the site. The controller data description page is loaded (see Chapter 4.3).

It is always recommended to calibrate the pump(s) of the controller before starting to dispense (see Chapter 4.4.1).

CAUTION:

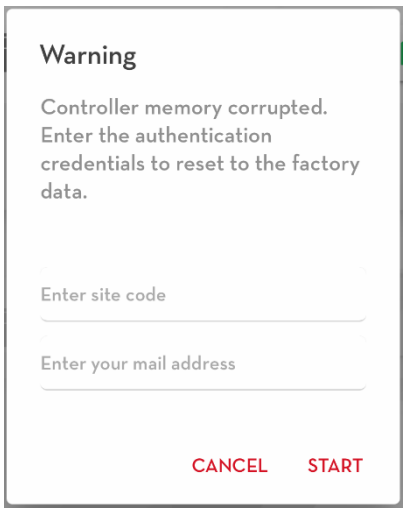
- To upload a fuel dispenser in the cloud it is mandatory to ensure an internet connection for the entire duration of the discovery process;
- It is not possible to upload the same controller on different sites;

4.2.1. Data recovery

The data recovery procedure allows you to return a controller to its operating status (i.e. to the last configuration available in the cloud) following the appearance of one of the following faults:

- The controller memory is corrupted (error code: A32 or A33):

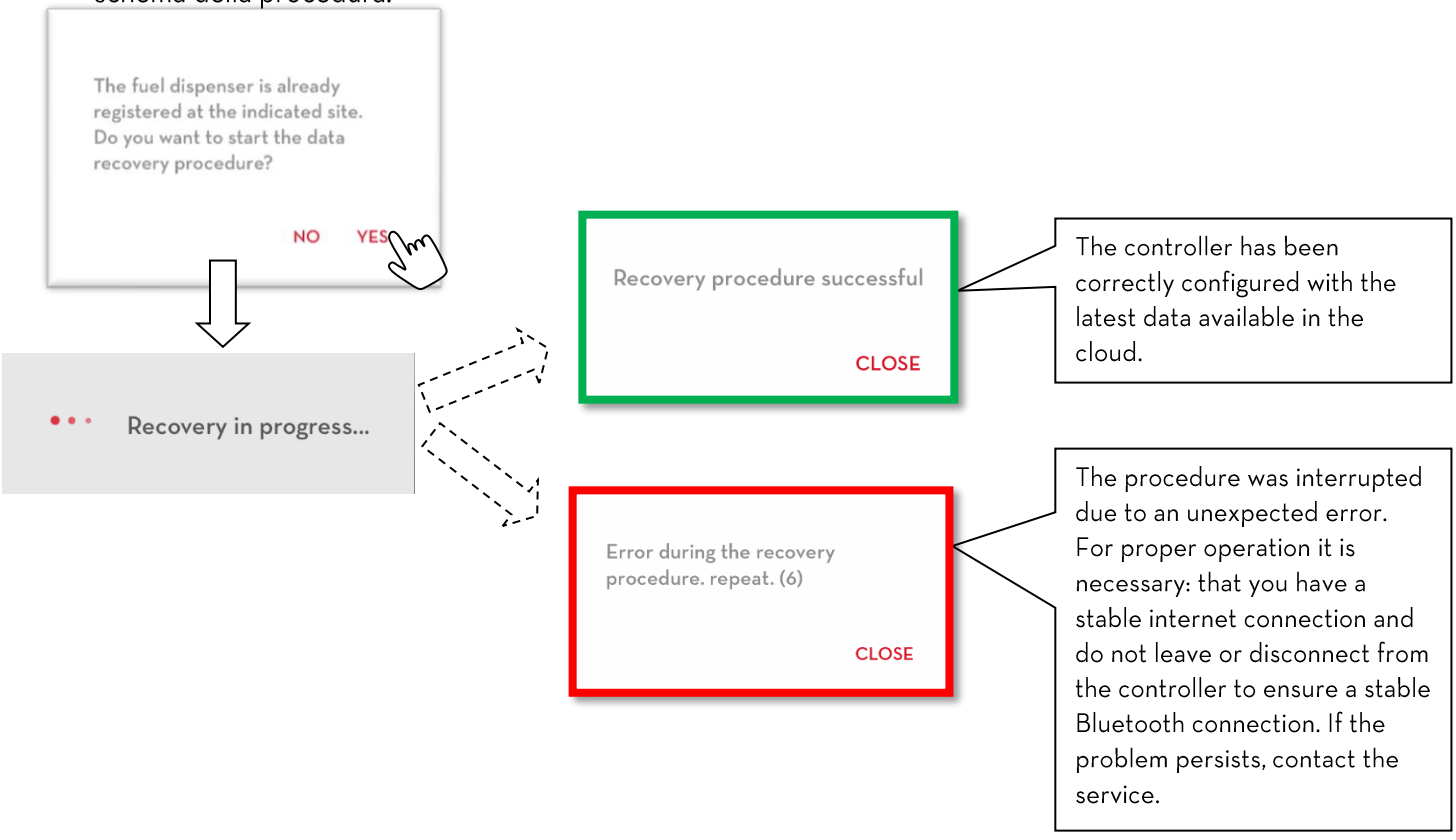
You must restore the factory configuration of the controller before proceeding with the recovery. When connecting as manager to the controller, you are prompted to perform a reset to the factory data:



Once the controller data are reset, reconnect to the panel as manager, repeat the discovery procedure and when the system automatically detects that the controller is already present in the indicated site you are prompted to start the recovery procedure.

- The panel discovery procedure failed or was suddenly interrupted:

Repeat the discovery procedure (see chapter 2a), when the system automatically detects that the controller is already present in the indicated site you are prompted to start the recovery procedure.
schema della procedura:

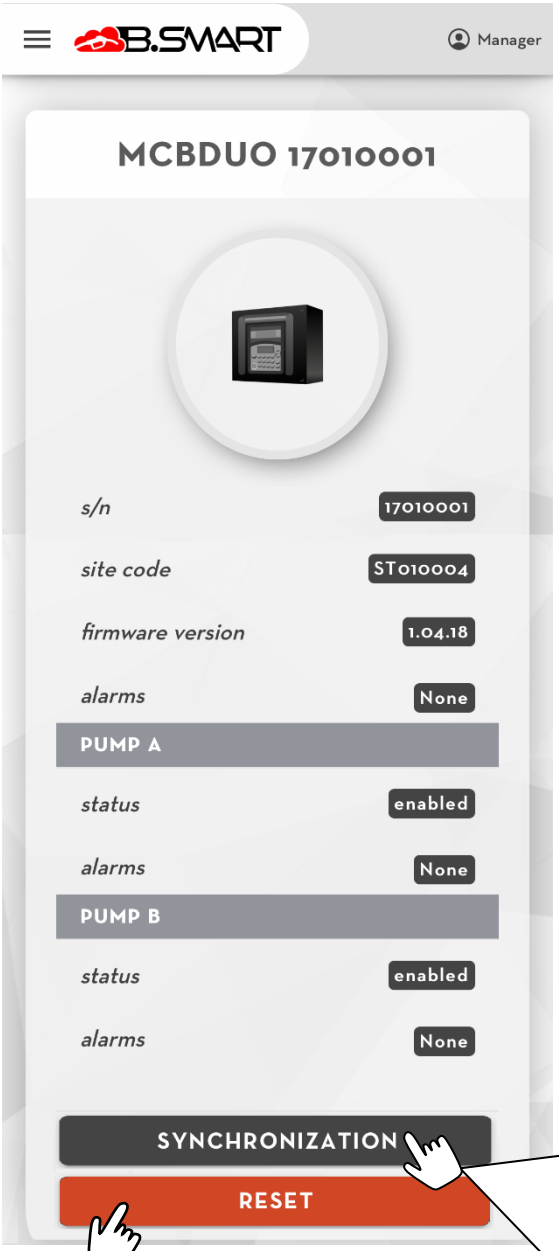


CAUTION:

- Only the site manager is allowed to recover a controller;
- A stable Internet connection must be guaranteed for the duration of the recovery process;
- Do not leave the panel after starting the procedure;
- Do not turn off the phone or close the application during the procedure;
- At the end of the procedure, for the proper functioning of the system you need to:
    - Repeat the OCIO detection procedure (if present and connected);
    - Perform a quantity adjustment on the virtual tanks (if any).

4.3. Summary screen

Once the connection has been established, a page opens showing the general information on the controller and its operating status:



Synchronization (forced): Data synchronization between the PIUSI cloud and the phone is always active in the background. During normal use, if the internet connection is always guaranteed, it is not necessary to force the data uploading. The following procedure forces the execution of a normal data synchronization and must be used to test the correct communication between the phone and the controller and between the phone and the PIUSI cloud services.

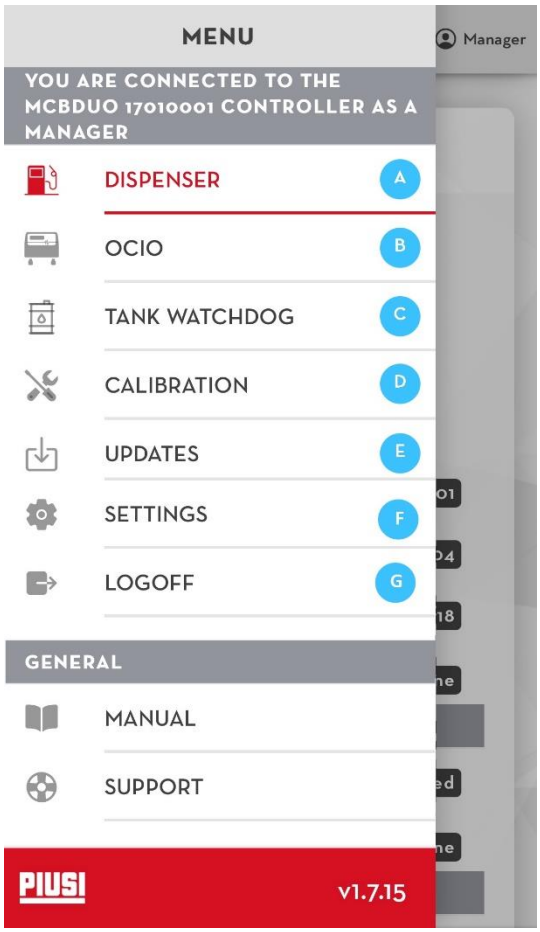
RESET

It is possible to ask the system manager to be able to reset the control unit.

See chap. 7

4.4. Menu manager

Connect to the controller as manager (see Chapter 3) and press the button to open the navigation menu.

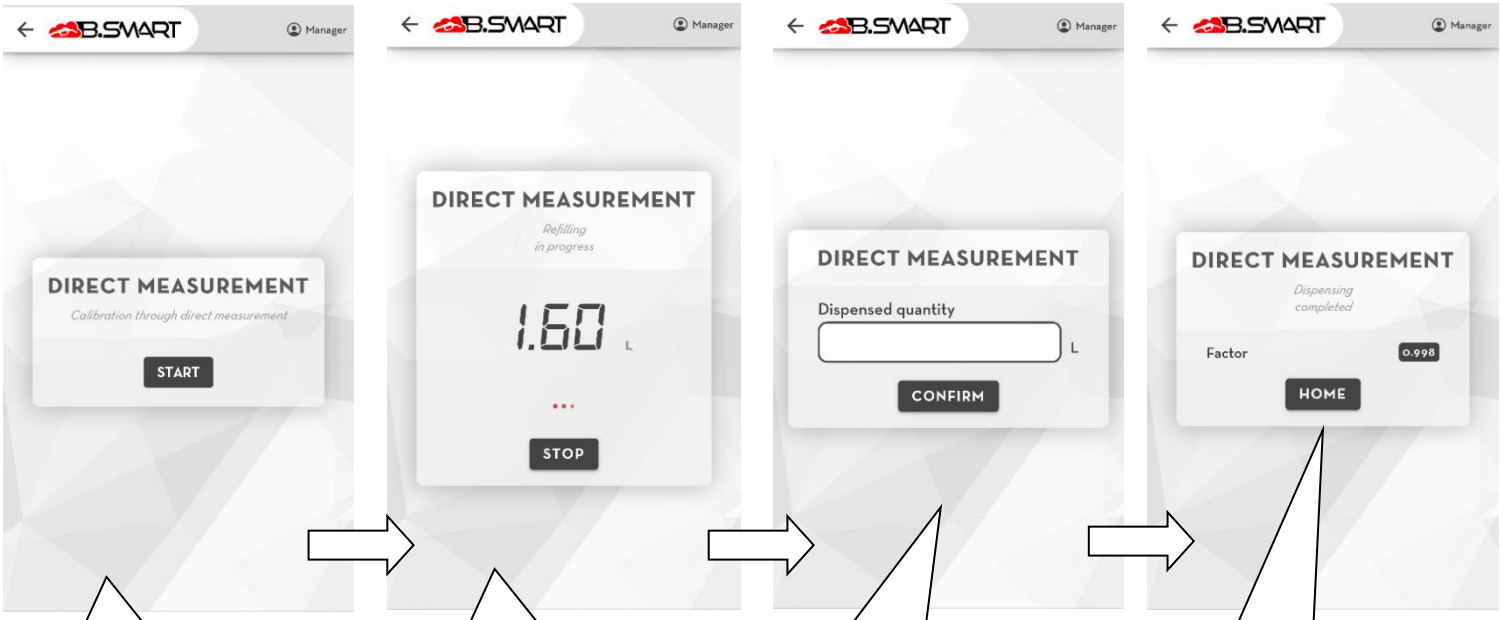


A. FUEL DISPENSER - Go to the page summarising the controller status (see Chapter 4.3)
B. OCIO - Section dedicated to the OCIO level sensors (see Chapter 4.4.4)
C. TANKS - Section dedicated to real-time monitoring of configured tanks (see Chapter 4.4.5)
D. CALIBRATION - Section for calibrating the pumps of the controller (see Chapter 4.4.1)
E. FIRMWARE UPDATES - Section for downloading and installing the latest firmware updates available for the controllers (see Chapter 4.4.2).
F. SETTINGS – section to configure manager settings
G. LOG OFF - This interrupts the BLE connection between the controller and the telephone.

4.4.1. Calibration

The manager can calibrate the fuel dispenser pump(s) in this section. Calibration is used to correct dispensing errors. There are two ways to calibrate:

A. By direct measurement:



Press START to start the dispensing

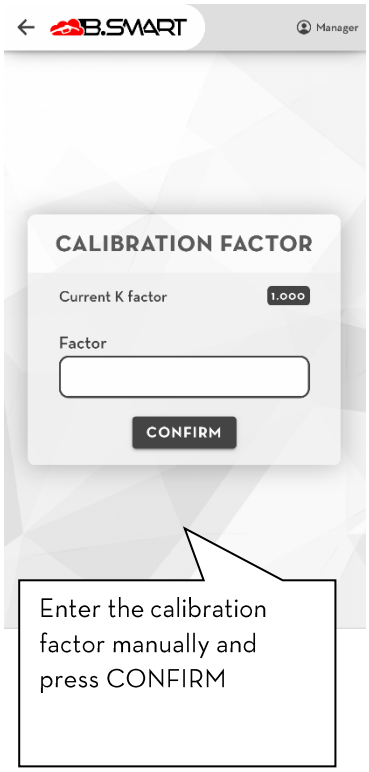
Press STOP to finish dispensing

Enter the quantity actually dispensed, measured by your measuring instrument (capacity meter or other)

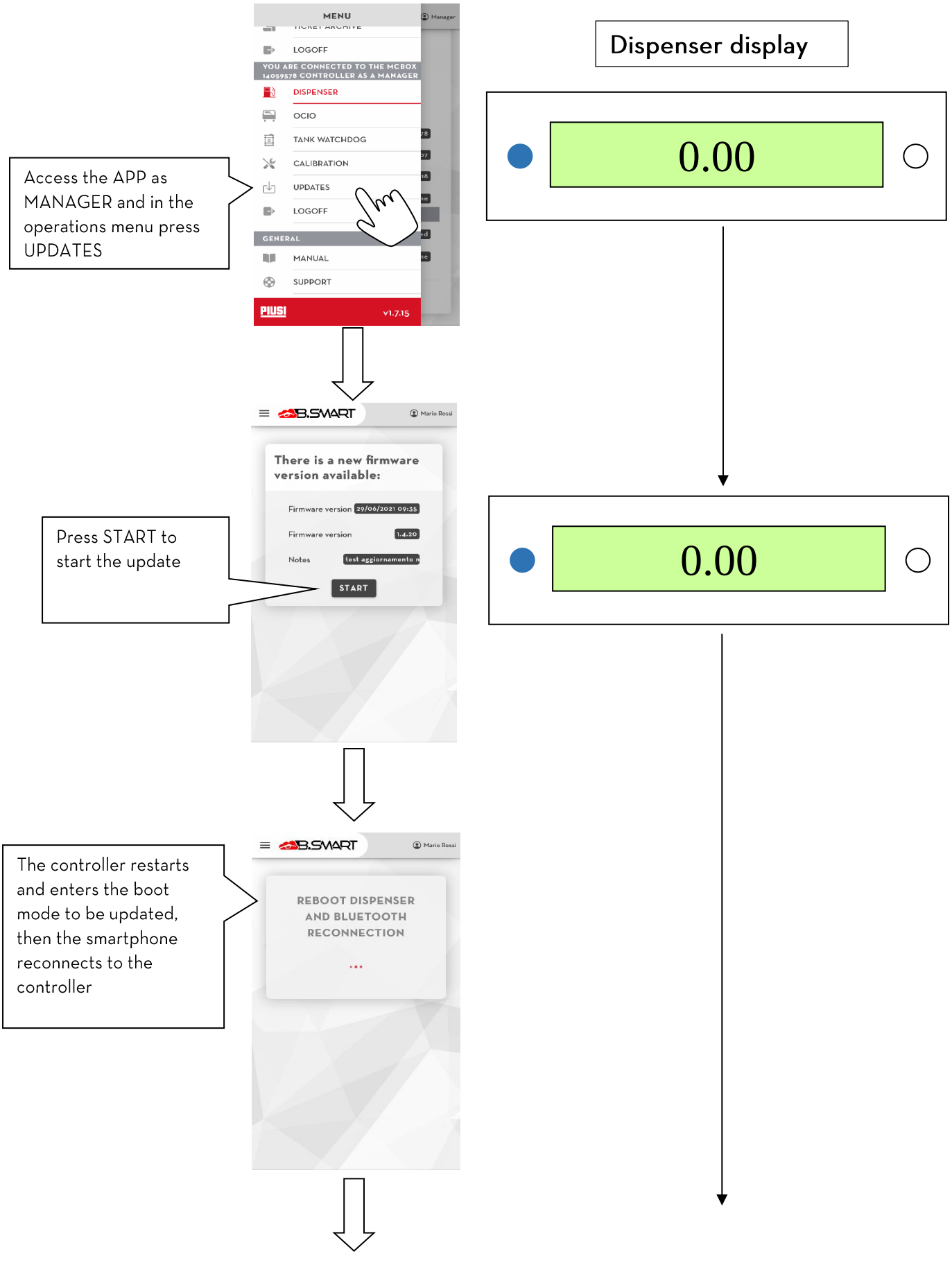
The calibration factor calculated by the controller is displayed.

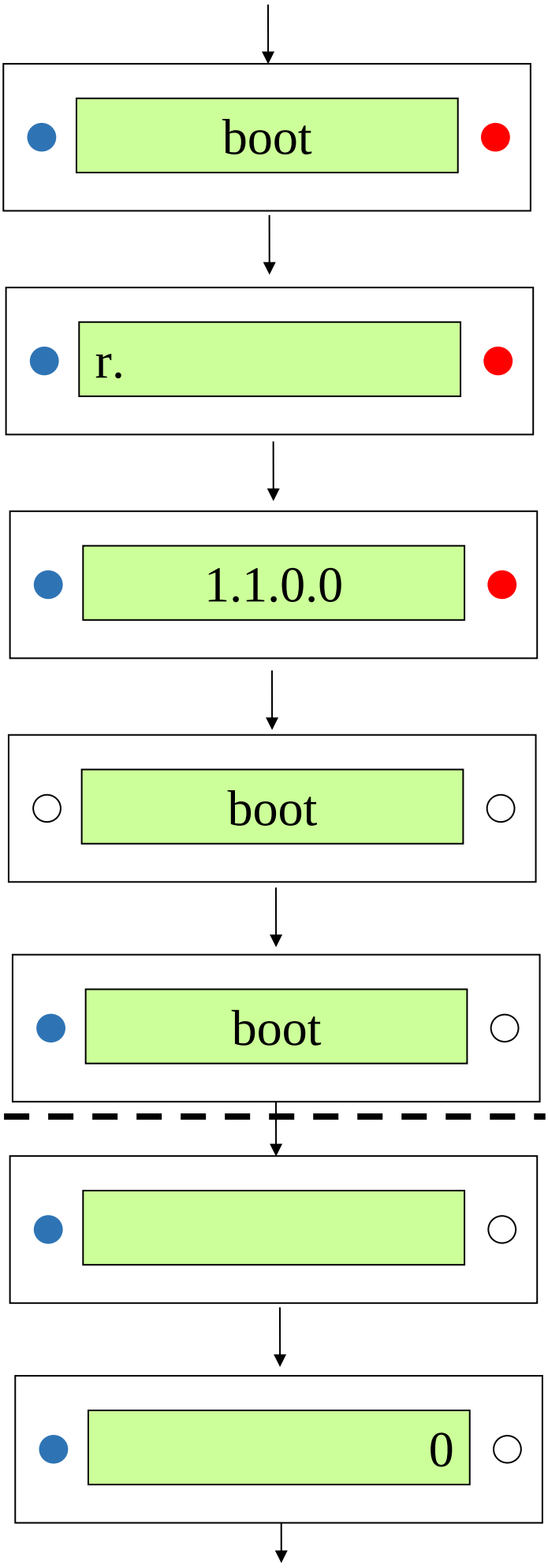
Press HOME to continue.

B. By manual input of the calibration factor:

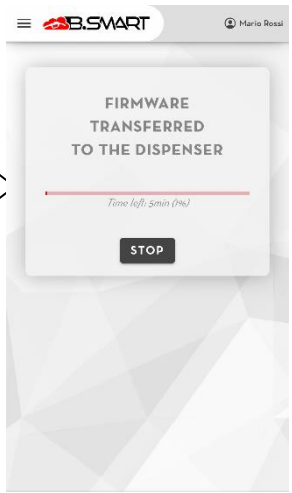


4.4.2. Firmware update





Now the controller is in boot mode, which allows you to receive firmware from your smartphone



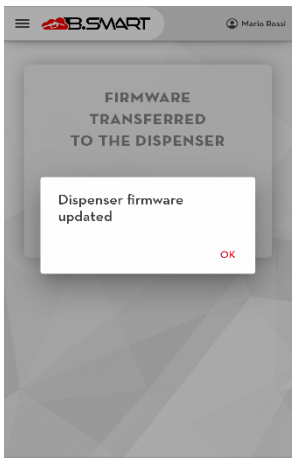
Data transfer starts: the percentage of firmware that is loaded from APP to controller is shown both on the APP and on the display of the controller

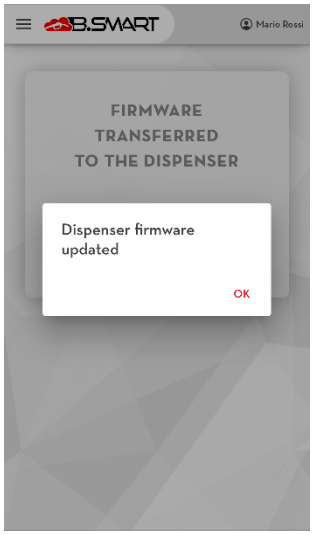
The percentage shown by the APP is also shown on the display of the controller

The firmware transfer can be interrupted at any time by pressing STOP

Firmware transfer from APP to controller completed

After all data has been transferred, the controller installs the firmware, restarts and connects to the smartphone

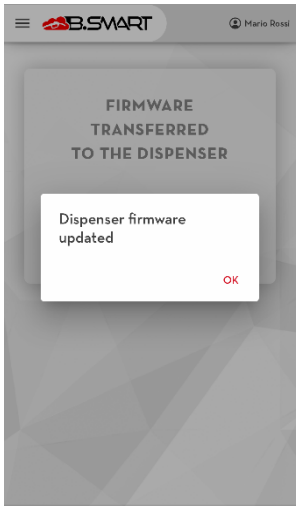


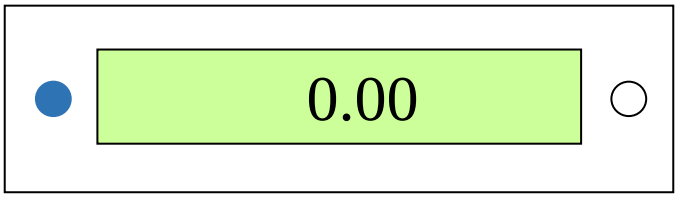

B.SMART
Mario Rossi
FIRMWARE
TRANSFERRED
TO THE DISPENSER
Dispenser firmware
updated
OK

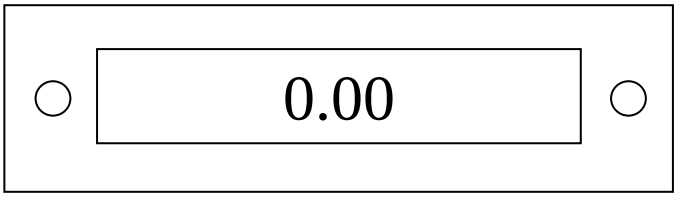
Firmware update completed

The firmware is installed, the control unit is restarted, and finally the smartphone reconnects to the controller.

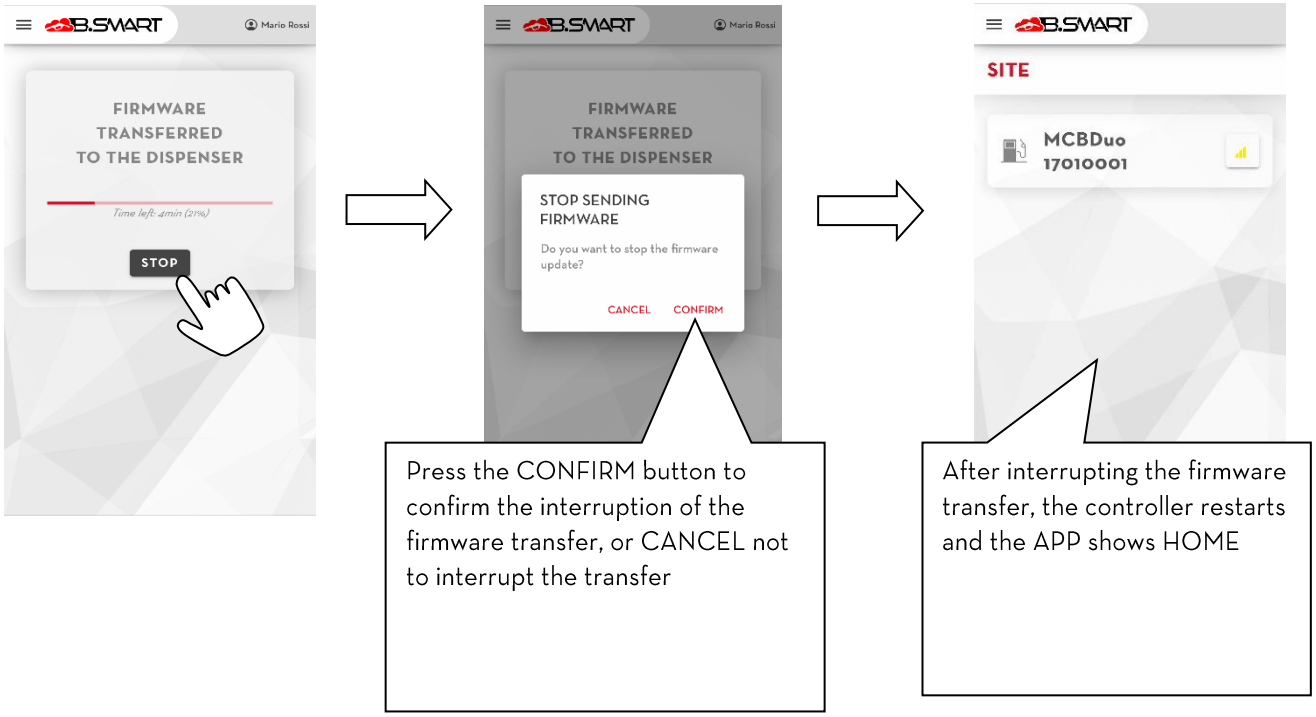
Press **OK** to go back to the Manager login section (see Chapter 4).







The firmware update can be interrupted at any time by pressing the STOP button



CAUTION:

- do not turn the controller off during the update;
- do not turn the phone off during the update;
- do not turn the Bluetooth off on your phone during the update;
- keep your phone as close to the controller as possible and do not move away during the update;
- the update could take several minutes;
- you need an internet connection to download the latest firmware version;
- some updates may be mandatory in order to ensure the proper functioning of the system;
- it is not possible to dispense from the fuel dispenser during the update;

4.4.3. Tank watchdog

Tank management is automatically activated after the activation of the ADDON 'Tank watchdog' by the B.Smart web application (see user manual). With this integration it is possible to monitor the level of liquid contained in the tanks and manage different types of level probes connected to the controller.

For proper operation make sure you:

- Have purchased and activated the 'Tank watchdog' addon;
- Have configured and assigned the relevant tanks to the respective pumps (see web-app manual);
- Connect to the site controller and make sure you are connected to the internet to download and apply the new configurations applied by web-app.

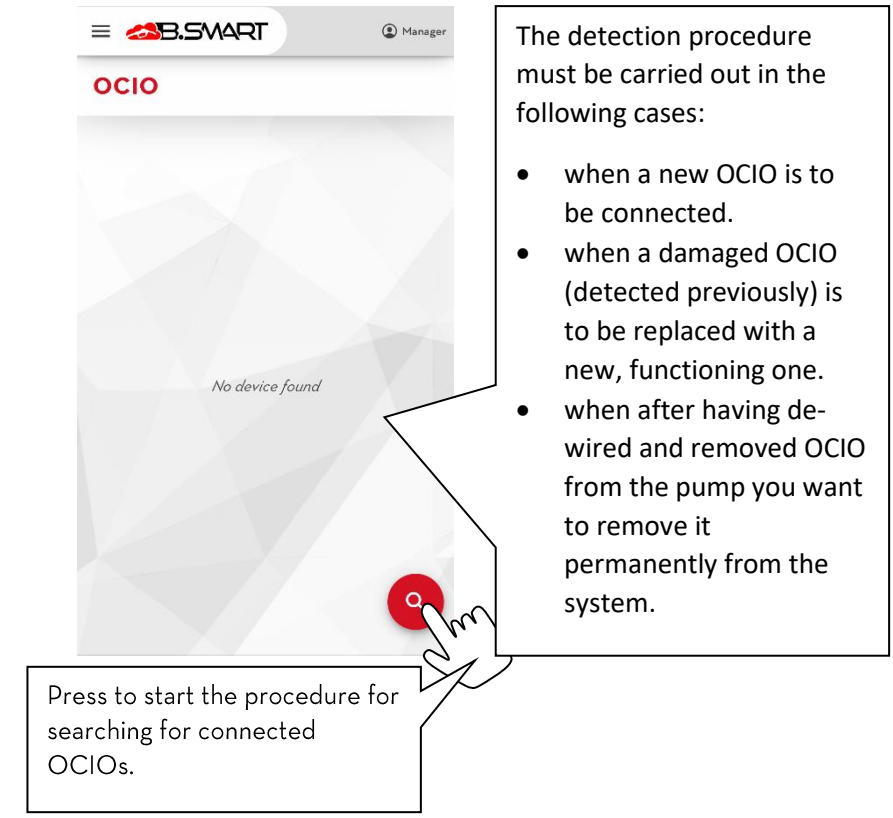
The following chapters describe the new menus of the manager section (follow the steps of chapter 2A to access the section) that can be used for managing and displaying the system tanks.

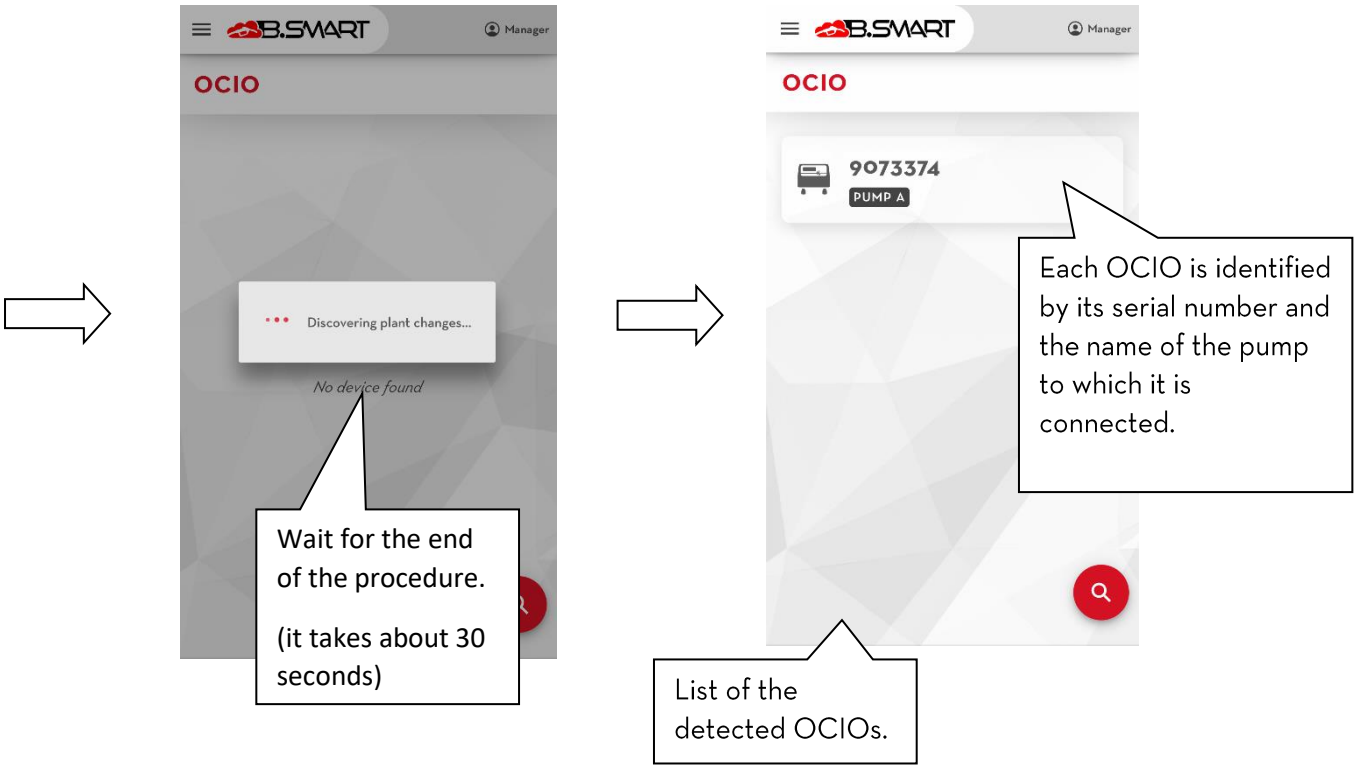
CAUTION

- When the 'Tank watchdog' ADDON expires (if it is not renewed) it will no longer be possible to manage the tanks in the system: it will not be possible to display the residual product levels and calibrate any level probes;
- It is not possible to configure tank parameters via phone (system configurations are centralized and managed by web-app);
- It is not possible to create loading and unloading movements of the product from the tanks via phone (system operations are centralized and managed by web-app);
- Data on product levels and monitored tank alarms are only synchronized in the cloud when a phone connects to the relevant controller (either as driver or manager). Since real-time synchronization cannot be guaranteed, the data displayed on web-apps may deviate from reality.

4.4.4. OCIO

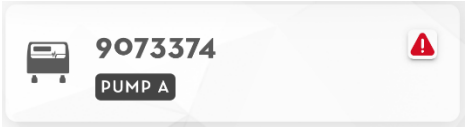
After configuring your tank (by web-app) to be monitored with the OCIO level sensor, wire the sensor to the fuel dispenser pump and enter as manager in this section to start the search procedure for connected OCIOs. The detected OCIOs are automatically connected to the tank configured on the respective pump (after correct synchronization of the data with the cloud).





CAUTION

- If no OCIO is found at the end of the detection procedure, then check that the device is correctly switched on and wired to the fuel dispenser (please refer to the fuel dispenser manual for more information).
- If an OCIO is disconnected, or switched off, or incorrectly connected to the pump, then an error of failed communication with the sensor is displayed:



4.4.5. Tank monitoring

In this section you can view the status of the tanks in the system in real time and perform calibrations of the connected sensors.

Press on the tank to access the detail sheet.

List of the tanks connected to the fuel dispensers and monitored in real time.

Identification panel of the monitored tank, with the following information:

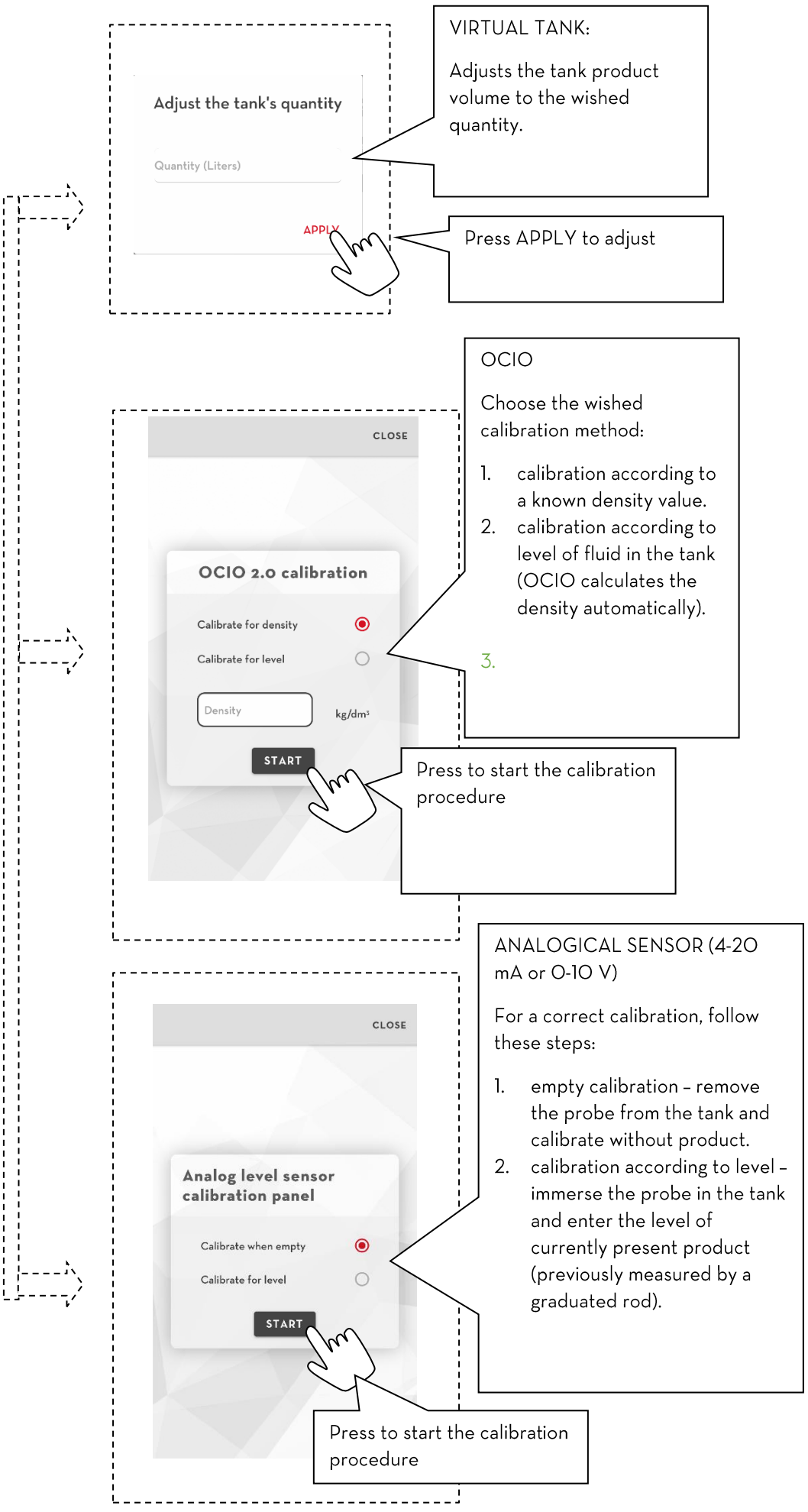
- Name of the tank;
- Identification of the product contained;
- Quantity of the current fluid;
- Name of the pump to which it is connected;
- Percentage of the product contained;
- Level alarms:
  - Alarm 1, "notification" type, active
  - Alarm 1, "pump cut-off" type, active
  - Alarm 2, "notification" type, active
  - Alarm 2, "pump cut-off" type, active

The level/volume of the product and the alarm status are monitored in real time.

Press CALIBRATE to adjust the level (in case of virtual tank) or to start a specific calibration procedure.

Tank description sheet.

The calibration methods vary depending on how the tank level is monitored.


Adjust the tank's quantity
Quantity (Liters)
APPLY
VIRTUAL TANK:
Adjusts the tank product volume to the wished quantity.
Press APPLY to adjust
CLOSE
OCIO 2.0 calibration
Calibrate for density
Calibrate for level
Density
kg/dm³
START
OCIO
Choose the wished calibration method:
1. calibration according to a known density value.
2. calibration according to level of fluid in the tank (OCIO calculates the density automatically).
3.
Press to start the calibration procedure
CLOSE
Analog level sensor calibration panel
Calibrate when empty
Calibrate for level
START
ANALOGICAL SENSOR (4-20 mA or 0-10 V)
For a correct calibration, follow these steps:
1. empty calibration – remove the probe from the tank and calibrate without product.
2. calibration according to level – immerse the probe in the tank and enter the level of currently present product (previously measured by a graduated rod).
Press to start the calibration procedure

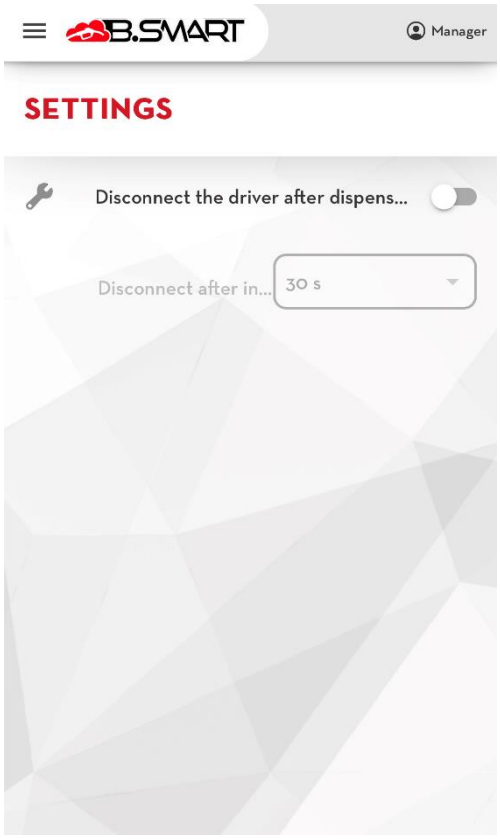
CAUTION

- For a correct operation it is recommended to periodically repeat the calibration of the sensors or the adjustment of the tanks;
- It is not possible to calibrate the sensors or make adjustments if, in a network of fuel dispensers, the current fuel dispenser delivers from a tank managed by another fuel dispenser of the site (the sensor is not physically connected to a pump of the current fuel dispenser but the measurement is managed and sent on the canbus network from another fuel dispenser of the site);
- whenever the configuration of a shared tank is changed between several fuel dispensers of the same network, go to each fuel dispenser to apply the new configuration;

4.4.6. SETTINGS

In this section it is possible to change the settings of the manager who uses the B.smart application.

In detail:



A. **Disconnect the driver after dispensing,** by enabling this setting, the driver will be disconnected from the application after each dispensing, useful if a single device is used to dispense.

B. **Disconnect after inactivity time**, active only if the previous setting is activated, allows you to set the inactivity timer, in seconds, before the driver is automatically disconnected.

5. Table of critical system alarms

Below is the table of critical alarms of the controller that block the dispenser pump and the actions to follow:

CONTROLLER CODE	DESCRIPTION
A28	Dispensing operation buffer full. Connect to the controller with a phone with an internet connection to download all the dispensing operations of the panel in the cloud.
A29	No pump enabled for dispensing. Check from web-app that there is at least one pump enabled for this fuel dispenser.
A31	RTC module damaged. Contact support.
A32, A33, A34	Controller memory corrupted. See chapter 5d.
A34	The controller is seriously damaged. Contact support.

In the presence of the following alarms the application always shows a notification message and does not allow dispensing from the fuel dispenser.

6. Migration of the controller to a different site

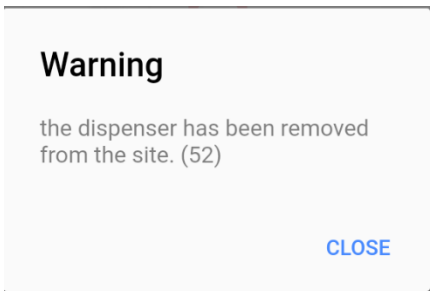
The following procedure is to be used if you want to move a fuel dispenser to a different site so as to bring it back to its initial configuration to be detected again.

Follow these steps in sequence:

1. Delete the fuels dispenser from the site via web-app b.smart (see web-app b.smart manual);
2. Perform a hardware reset using the button on the controller panel (see the controller manual);
3. Connect to the controller by the phone application and repeat the discovery procedure (see chapter 2a) indicating the credentials of the new target site. If you return the controller to a site where it was previously deleted, then the recovery procedure that returns the controller to its operating status is also started.

CAUTION

- The hardware reset procedure is not reversible and any data on the panel will be deleted.
- If you connect with the application to a controller deleted from the site, the following error message is displayed:



in this case it is always possible to dispense and use the controller but it is advisable to restore the situation as soon as possible following the correct procedure.

7. Resetting a device

Using the following procedure, you can perform a hardware reset using your phone.

Perform the steps in order:

1. Connect to the device as manager (see chap. 4)

2. In the summary screen, it is possible to request, using the appropriate button, a hardware reset of the device (see chap. 4.3).

3. The system administrator from the web app can confirm or reject the request (see web app manual)

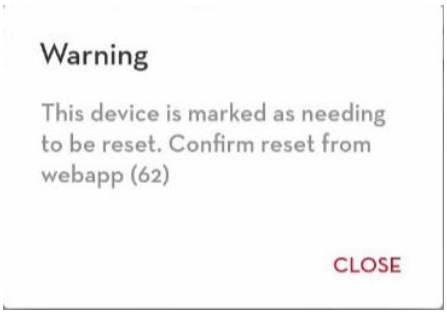
4. If the request is accepted, the next time the manager logs in, the following warning is displayed:

After logging in as manager, the device will be reset automatically.

ATTENTION

• The hardware reset procedure from the mobile application requires an internet connection.

• If you connect the application to a device with a reset request in progress, the following error message is shown:



in this case it is always possible to dispense and use the control unit.