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# GUIDA DCONNECT BOX DCONNECT BOX GUIDE

## DCONNECT BOX



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## Technical characteristics

Power supply	12 V
Electrical current	1,5 A
Grade of protection	IP20
Wi-Fi	Support 802.11 b/g/n, WPA-PSK/WPA2-PSK encryptions
Ethernet	Conforming to standards IEEE802.3 10Base-T e 100Base-TX
Wireless	DAB Wireless Communication 2.4GHz FCC ID: 2ABCB-WLU6331 FCC ID: OA3MRF24J40MA

## KEY

In this document, the following symbols have been used:



Situation of general danger. Failure to respect the instructions that follow may cause harm to persons and property.



Notes and general information

## WARNINGS



**Read this document carefully before installing and always refer to the manuals of each product to be connected by means of the DConnect Box.**

Installation and operation must comply with the local safety regulations in force in the country in which the product is installed. Everything must be done in a workmanlike manner.

Failure to respect the safety regulations not only causes risk to personal safety and damage to the equipment, but invalidates every right to assistance under guarantee.



### Skilled personnel

It is advisable that installation be carried out by competent, skilled personnel in possession of the technical qualifications required by the specific legislation in force.

The term skilled personnel means persons whose training, experience and instruction, as well as their knowledge of the respective standards and requirements for accident prevention and working conditions, have been approved by the person in charge of plant safety, authorizing them to perform all the necessary activities, during which they are able to recognize and avoid all dangers. (IEC 60730).



### Safety

Use is allowed only if the electric system is in possession of safety precautions in accordance with the regulations in force in the country where the product is installed. Check that the DConnect Box has not been damaged.



It is indispensable to check that all the leads and accessory cables are correctly inserted in the respective clamps.

Failure to observe the warnings may create situations of risk for persons or property and will void the product guarantee.

## RESPONSIBILITY

**The Manufacturer does not vouch for correct operation of the electropumps or answer for any damage that they may cause if they have been tampered with, modified and/or run outside the recommended work range or in contrast with other indications given in this manual.**

The Manufacturer declines all responsibility for possible errors in this instructions manual, if due to misprints or errors in copying. The Manufacturer reserves the right to make any modifications to products that it may consider necessary or useful, without affecting their essential characteristics.

## Introduction

The DConnect BOX is designed for the remote control of DAB products compatible with the DConnect service and with the App DConnect.

The DConnect BOX is configured and installed with the App DConnect and controlled by the App itself or with a PC Browser.

## 1. System requirements:

### APP requirements:

Smartphone or Tablet:

- Android 4.2.2 “Jelly Bean” or higher.
- IOs 9 or higher.
- Internet access.

### PC requirements:

- A web browser that supports Java script (e.g. Internet Explorer version 8.0 or higher, or Firefox version 7.0 or higher or Google Chrome).
- Internet access.

### Network requirements:

- Active and permanent direct Internet connection on site.
- WiFi Modem/Router and/or LAN with active DHCP service.
- If used with Wi-Fi, good quality Wi-Fi signal and power in the area where the DConnect Box is installed.

***If the signal is deteriorated, we suggest using a Wi-Fi Extender.***

Where possible, it is recommended to use the LAN wired co.

1. Network cable UTP cat. 6. Remember that the network cable must not be longer than 100m.

### Important:

#### Firmware Update:

Before starting to use the DConnect, make sure that the product is updated to the latest version available. Updates ensure you of a better use of the services offered by the product.

To make the best use of the product, see also the online manual and watch the demonstration videos. You can find the necessary information on the site [dabpumps.com](http://dabpumps.com) or on:

**[www.dconnect.dabpumps.com/getstarted](http://www.dconnect.dabpumps.com/getstarted)**

### DAB product requirements:

The DAB products to be controlled by DConnect (where possible) must be updated to the latest firmware version available.

## 2. Content of the pack:

1. DConnect Box.
2. Wall-mounted power supply and plugin socket and ferrite core to be applied.
3. Screws and fixtures for fitting on the wall.
4. DIN bar mounting bracket.
5. Electric connectors for Modbus, Canbus connections, I/O, Relay
6. Instructions Manual
7. Quick Guide.

### 3. Panoramic View of the Product:

#### 3.1 View from Above:

Led Positions



##### 3.1.1 Buttons:

On the DConnect Box there are 2 buttons for interacting with the product.

- Hold down the 2 buttons simultaneously for 5 sec.: release the device.
- Hold down the 2 buttons simultaneously for 10 sec.: Passage indicated by the APP to allow the Connection of the DConnect Box to the network and to the DAB Service Centre and the search for the connected devices.
- **Note:** once this operation has been carried out, the current WiFi network saved in the system will be definitively removed and you will have to make a new connection following the App's indications.
- Hold down the left button for 5 sec: Associating the DConnect Box with a pump with wireless technology, for example e.sybox or a group of e.sybox units previously set in association mode.
- Hold down the left button for 10 sec: Manual update of pump software and e.sybox previously set in loader/programming mode.
- Hold down the right button for 5 sec: Dissociating the DConnect Box from an e.sybox or a group of E.sybox units.

##### 3.1.2 DConnect Led Bar:



There are 6 Leds on the top of the DConnect BOX which are lit with a fixed light or blink to indicate particular connection statuses or events. Specifically:

- **LAN Status Led:**

Indicates if it is connected to the LAN network.



- **Wireless Status Led:**

If lit with fixed light indicates when the DConnect Box communicates with the DAB devices connected via Wireless (e.g. E.syline).



If blinking, it indicates that it is being associated with the DAB devices connected via Wireless (e.g. E.syline). If off, it indicates that there is no association with the DAB devices connected via Wireless (e.g. E.syline).

- **Wi-Fi Status:**

If lit, it indicates that the DConnect Box is connected via WiFi to an Access Point. If blinking, it indicates that the DConnect Box is in Access Point mode, for example in the initial configuration phase or after having held down the 2 buttons of the DConnect Box for at least 10s. If it is off, it indicates that it is not connected to any Access Point or that the WiFi is disabled.



- **Globe Led Connection to DAB Service Centre:**

If lit, the DConnect Box is correctly connected to the DAB Service Centre. If off, the DConnect Box is unable to reach the DAB Service Centre. Check that there is regular Internet access



- **Warning/General Error Led:**

If lit there is an error in the system. If lit only temporarily, after pressing a button or a combination of buttons, it indicates the performance of a critical operation.



- **Message to Read Led:**

If lit, there is a message to be viewed through the APP of from the DAB Service Centre.



### 3.1.3 DConnect Drop Led:

Lights up gradually whenever data are sent to the DAB Service Centre.



### 3.1.4 Status LED of the connected products:

In the immediate vicinity of the specific ports to which DAB products are connected and also near the I/O port, there is a status led that may be:

#### 1. ON:

GREEN: Status OK.

RED: Communication error.

## 2. BLINKING:

GREEN: Communication in progress.

### 3.1.5 Rear View:

Note: For the connections of the products mentioned, see the dedicated section of this manual.



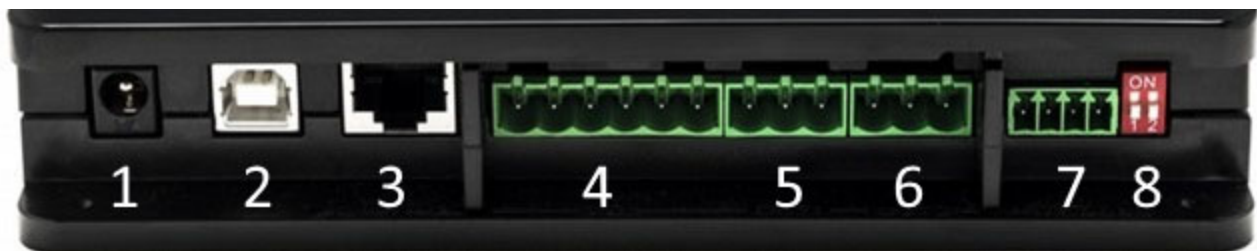
1. Serial Port.
2. Can Bus Port 1:  
A for **ADAC/MCE**.  
B for **ADAC/MCE**.  
C for **ACTIVE DRIVER PLUS**.
3. Can Bus Port 2:  
A for **ADAC/MCE**.  
B for **ADAC/MCE**.



Note: The ports 2A, 2B, 2C are in parallel and it is possible to connect only identical devices. The ports 3A, 3B, are in parallel and it is possible to connect only identical devices. If port 2C is used to connect an Active Driver Plus, it will not be possible to use ports 2A or 2B to connect ADAC/MCE. In this case use the ports 3A or 3B.

4. USB Ports: EBOX/Expansions.

### 3.1.6 Front View:



1. Power supply / Power Jack.
2. USB Host (power supply only).
3. Ethernet Port: LAN cable connection.
4. I/O.
5. Relay A.
6. Relay B.
7. Modbus: **Evoplus / Fire-fighting**.
8. Dip Switch: Modbus Configuration..

### 3.1.7 Rear View:

1. Housing for DIN bar mounting bracket.
2. Holes for wall mounting fixtures.
3. Rubber feet for mounting on flat surface.
4. Housing for technical data plate.

## 4. Wall Mounting:

Remove the front frame of the DConnect Box applying slight force.

On the four corners of the product you will see 4 cuts in the plastic.

Strike gently with a punch or other suitable pointed tool to free the hole.

Mark the wall with a pencil in the points corresponding to the four holes created.

Drill holes as usual and secure the DConnect Box to the wall fixtures.

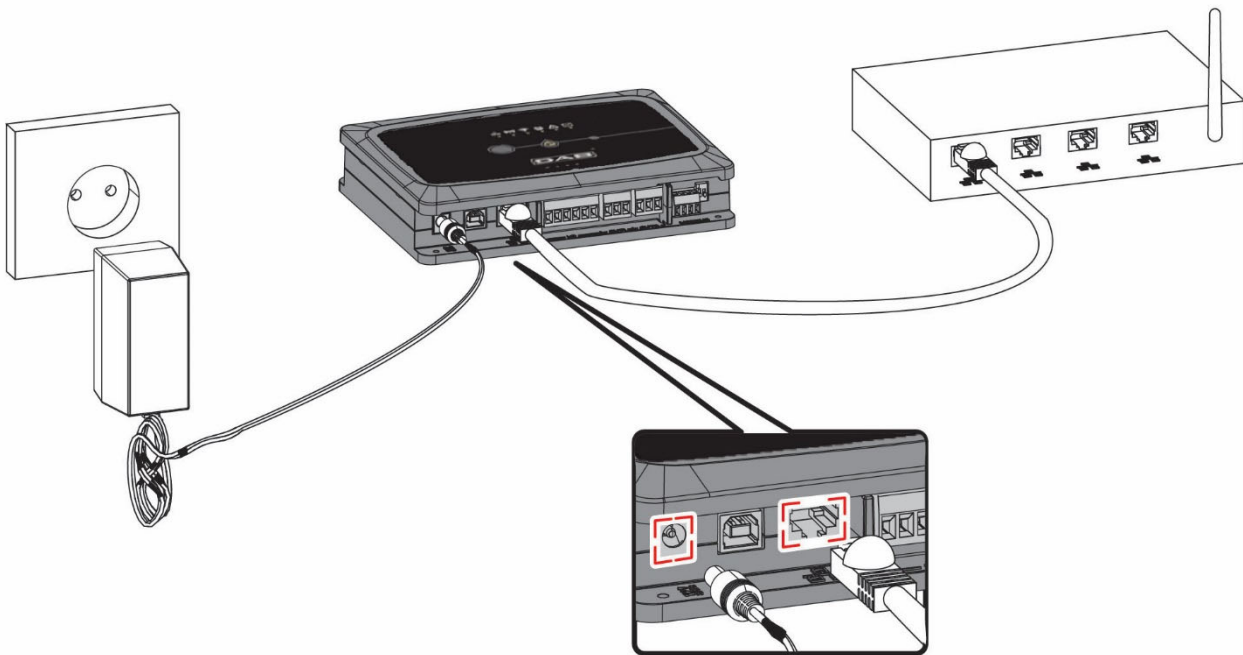
## 5. DIN Bar Panel Mounting:

Screw the bracket supplied onto the bottom of the DConnect Box to ensure an easy connection of the panel to the DIN bar.

## 6. Commissioning:

Select one of the connection options.

### 6.1 Connection by LAN network cable



**Note: It is recommended to use the wired connection via Ethernet.**

1. Connect a network cable to the DConnect Box in the LAN port located on the front and ensure that the other end is connected to a network socket with the following requirements:
  - Active Internet connection, with active DHCP service, port 10/100 Mbit/s.
2. Connect the DConnect Box to the power socket with the feeder supplied.



During starting, the Service Centre Connection led  blinks.

3. The DConnect Box is ready for use about 90 seconds after starting.






4. If correctly connected, the LAN Green Led and the DAB Service Centre Connection led will light up.
5. Download the Dconnect DAB App from Google PlayStore or App Store with your smartphone or tablet.
6. Follow the instructions provided in the Dconnect DAB App.

## 6.2 Connection via WLAN (Wi-Fi)

1. Connect the DConnect Box to the power socket with the feeder supplied.

During starting, the Service Centre Connection led  blinks.

2. The DConnect Box is ready for use about 90 seconds after starting and the.

WiFi status led blinks. At the first start, the DConnect Box automatically sets a Wi-Fi network called "DConnectbox-xxxxx". 

3. Download the DConnect DAB App from Google PlayStore or App Store.
4. Follow the instructions provided in the DConnect DAB App.



**Note:** The local Wi-Fi network "dconnectbox-xxxxx" generated during configuration by the DConnect Box does not have an Internet connection. Your device may therefore be disconnected by accident. If this happens, we advise deactivating the respective option on your device (smartphone / tablet).

## 6.3 Advice for Ideal Installation:

- If you want to establish a Wi-Fi connection between the DConnect Box and the Access Point/Antenna, position the DConnect Box in such a way that it can receive an excellent Wi-Fi signal near its installation; otherwise you can install Wireless repeaters to strengthen the signal arriving from the Access Point/Antenna, positioning them ideally in the centre between the DConnect Box and the nearest Access Point/Antenna.
- Be sure to respect a sufficient distance from potential sources of interference such as microwaves or electrical devices with large metal structures.

## 7. Downloading and Installing the App



Download the DAB DConnect App from Google PlayStore if the device is an android or from the App Store if the device is an Apple, or use your smartphone or tablet to visit the page:

**[www.dconnect.dabpumps.com/getstarted](http://www.dconnect.dabpumps.com/getstarted)**

Once it has been downloaded, a DConnect icon will appear on the Home page of your device.

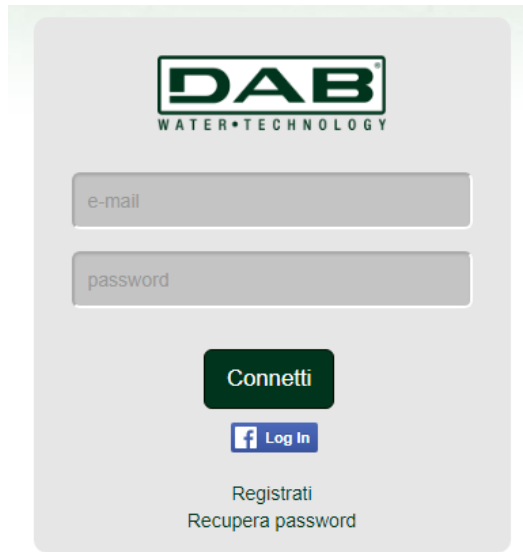
Accept the conditions of use and the required permits to interact with the device.

Follow the instructions provided in the DConnect DAB.

**To ensure the successful installation of the DConnect Box and of the products connected to it, it is necessary to read carefully and follow all the instructions given in the DConnect DAB App.**

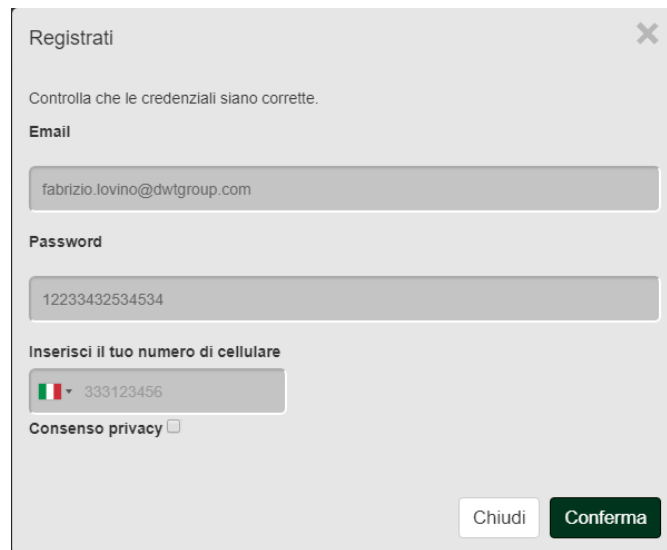
## 8. Registration with the DAB Service Centre

1. If you do not already have a DAB Service Centre account, register by entering your email and the password that you want to use and then click on “Sign up/ **Register**”.



The image shows a login and registration interface for DAB Water Technology. At the top is the DAB logo with the tagline 'WATER • TECHNOLOGY'. Below the logo are two input fields: 'e-mail' and 'password'. A dark green button labeled 'Connetti' is positioned below the password field. Underneath is a blue button with a Facebook icon and the text 'Log In'. At the bottom of the form, there are two links: 'Registrati' and 'Recupera password'.

2. Check that the data entered are correct and ensure that the email is valid and can be consulted because you will need to access it in the next step. Enter your valid telephone number to which a safety code may be sent in the future. **Tick the box** for privacy consent and click on **Confirm**.



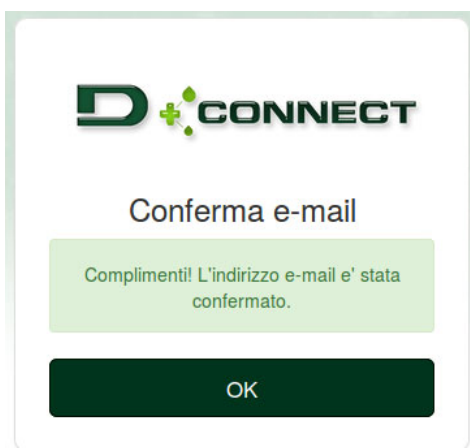
The image shows a registration confirmation dialog box titled 'Registrati'. It contains the following elements: a close button (X) in the top right corner; the instruction 'Controlla che le credenziali siano corrette.'; an 'Email' field containing 'fabrizio.lovino@dwtgroup.com'; a 'Password' field containing '12233432534534'; a field for 'Inserisci il tuo numero di cellulare' with a dropdown menu showing the Italian flag and the number '333123456'; a 'Consenso privacy' checkbox which is currently unchecked; and two buttons at the bottom: 'Chiudi' and 'Conferma'.

## ENGLISH

3. Check that you have received the activation mail entered previously. In that case, **click on the link** in the mail to confirm your registration.



**Note:** if you do not receive the activation mail within a few minutes, check that your spam filter has not put the mail among the unwanted messages or that it has not been incorrectly entered by the configuration App.



4. Log into the DAB Service Centre with the chosen credentials.

## 9. Use of the DAB DConnect APP

Before starting the APP, make sure that

- You have correctly connected the DConnect Box and the devices to be managed (see respective section).
- In the case of Wi-Fi connection of the DConnect Box, you have an excellent signal reception.
- You have Internet access.
- You have installed the DConnect APP on your smartphone/tablet and have registered with the service centre.



**Note:** The DConnect Box can be connected to one network at a time. In configuration mode the DConnect Box and the smartphone/tablet will not be connected to the Internet. So ignore any messages about this from your Android system or Apple iOS.

The DConnect DAB App allows you to configure the DConnect Box to connect it to the DAB Service Centre and to remote-control your installations connected to the DConnect Box..

### To configure the DConnect Box and create your own installations or add new devices:

1. Start the App and press **Configura** to associate the DConnect Box with the network and search for the devices connected to it.



2. In the case of first/new installation, press the  button.
3. The configuration wizard will start, which will guide you step-by-step in the network configuration.

### To monitor the installations already created:

1. Start the App and click on the **Installations** button.
2. Select the installation to be controlled from the list.



## 9.1 Updating the DConnect BOX

Before connecting a new product to the DConnect Box, check whether there are any new updates available. It is important and recommended to keep your DConnect Box always up to date.

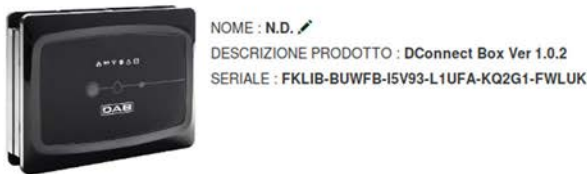
Updates are downloaded from the Internet, the device checks for a new update every time it is started and at least once a day.

The DConnect Box automatically checks for updates every time you reboot, and at least on a daily basis. If a compatible update is found, it will first be downloaded and then reported in the "Update" section of the menu of the DConnect Box in the DAB Service Centre. See photo.

To allow the update just click and confirm "Update Now".

Updating the DConnect box will take 3-4 minutes and you may hear some beeps.

Then, when the globe led  stops blinking, the DConnect will have finished the update and will be ready for use.

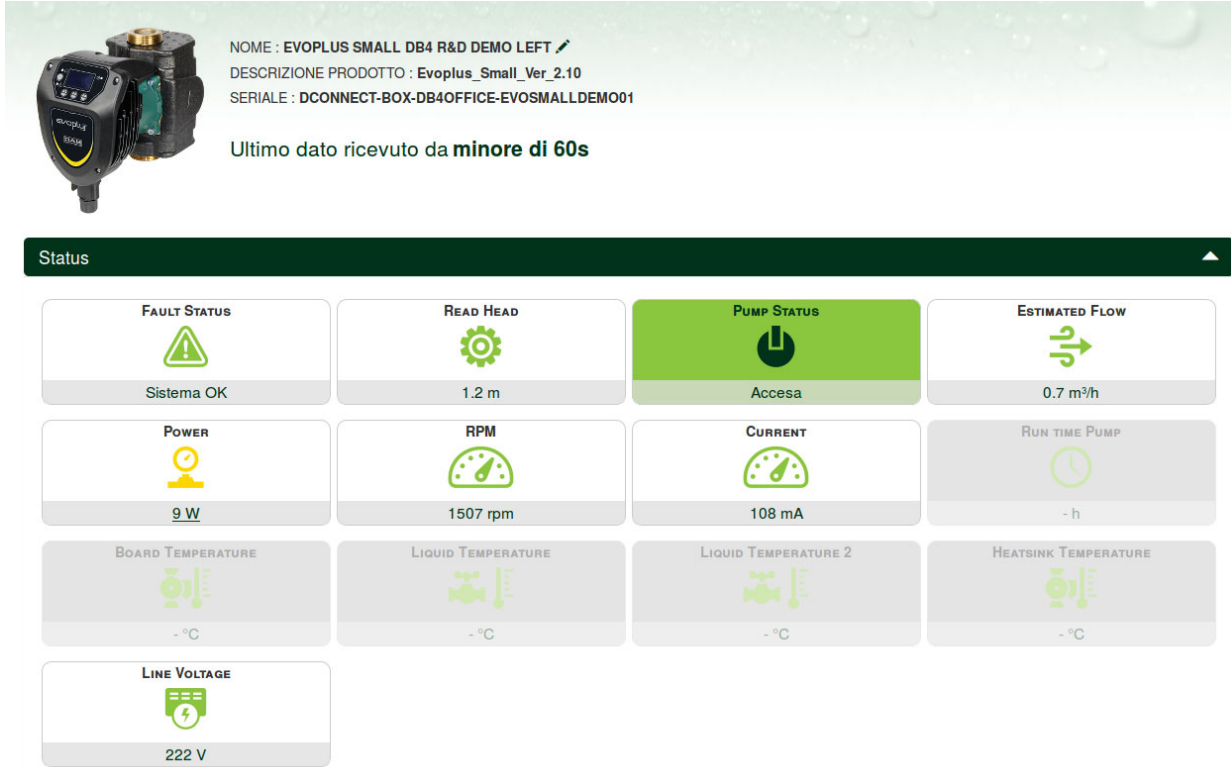


Once the update of the DConnect Box is complete, connect and update the pumps if necessary and repeat the configuration procedure to insert them in an installation.

## 10. Remote monitoring and control of a component:

To monitor the operating status of an installation component already entered:

1. Click on the desired Installation.
2. Click on the desired component.
3. Click on the STATUS menu bar to view the main parameters of the component.



NOME : EVOPLUS SMALL DB4 R&D DEMO LEFT  
 DESCRIZIONE PRODOTTO : Evoplus\_Small\_Ver\_2.10  
 SERIALE : DCONNECT-BOX-DB4OFFICE-EVOSMALLDEMO01

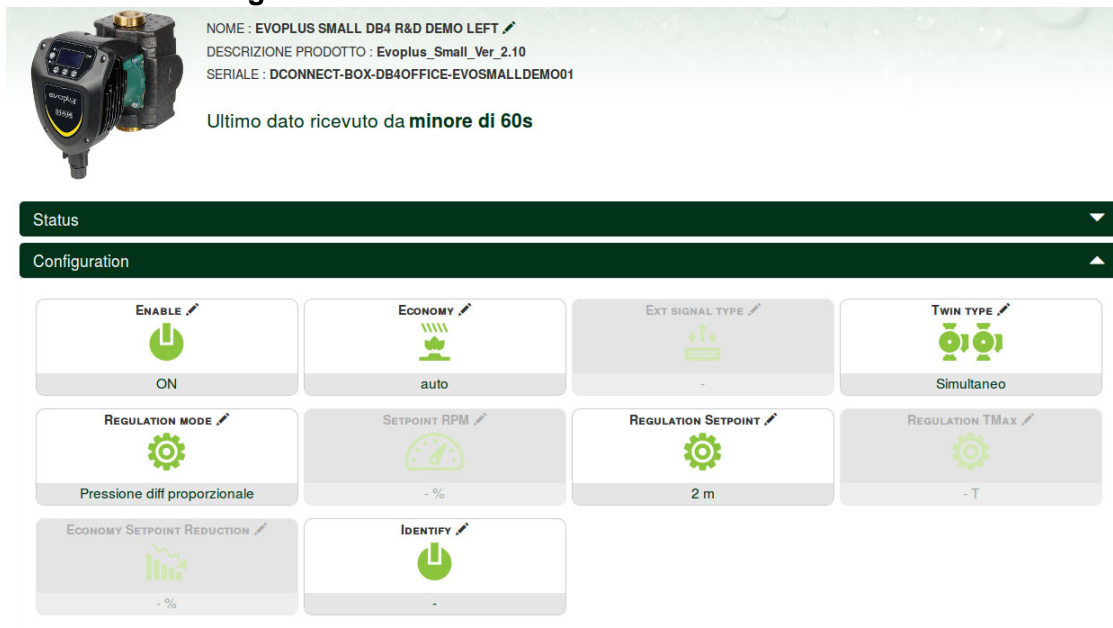
Ultimo dato ricevuto da **minore di 60s**

**Status**

<b>FAULT STATUS</b> Sistema OK	<b>READ HEAD</b> 1.2 m	<b>PUMP STATUS</b> Accesa	<b>ESTIMATED FLOW</b> 0.7 m³/h
<b>POWER</b> 9 W	<b>RPM</b> 1507 rpm	<b>CURRENT</b> 108 mA	<b>RUN TIME PUMP</b> - h
<b>BOARD TEMPERATURE</b> - °C	<b>LIQUID TEMPERATURE</b> - °C	<b>LIQUID TEMPERATURE 2</b> - °C	<b>HEATSINK TEMPERATURE</b> - °C
<b>LINE VOLTAGE</b> 222 V			

### 10.1 Remote editing of the parameters of the selected product:

1. Click on the **Configuration** menu bar.



NOME : EVOPLUS SMALL DB4 R&D DEMO LEFT  
 DESCRIZIONE PRODOTTO : Evoplus\_Small\_Ver\_2.10  
 SERIALE : DCONNECT-BOX-DB4OFFICE-EVOSMALLDEMO01

Ultimo dato ricevuto da **minore di 60s**

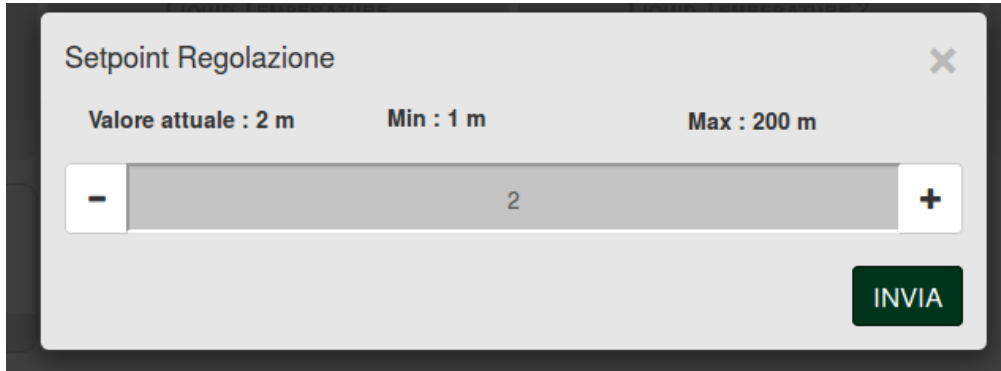
**Status**

**Configuration**

<b>ENABLE</b> ON	<b>ECONOMY</b> auto	<b>EXT SIGNAL TYPE</b> -	<b>TWIN TYPE</b> Simultaneo
<b>REGULATION MODE</b> Pressione diff proporzionale	<b>SETPOINT RPM</b> - %	<b>REGULATION SETPOINT</b> 2 m	<b>REGULATION TMAX</b> - T
<b>ECONOMY SETPOINT REDUCTION</b> - %	<b>IDENTIFY</b> -		

2. Click on the parameter to be edited and change its value by clicking:  
 + to increase the value,  
 - to decrease the value.

- Click on the parameter to be edited and change its value by clicking.



## 10.2 Viewing a graph of the installation:

It is possible to view the behaviour of the parameters of each product previously added to an installation:

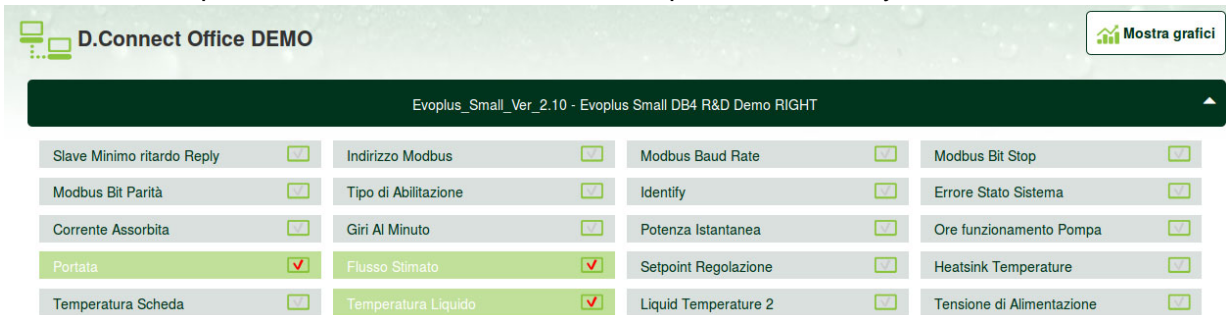
- Click on the **Options** Menu:



- Click:



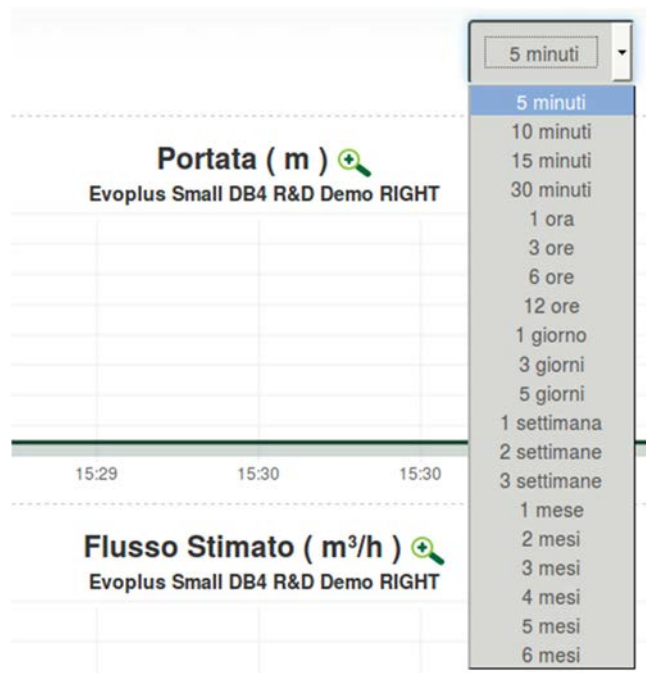
- For each Component of the installation, select the parameters that you want to view:



- Click on **Show Graphs**.



The updated graphs of the desired parameters will appear. You can change the time scale by clicking on the drop-down time menu and choosing the most suitable value.





## ENGLISH

By clicking on the arrows on the right or left of the graph, it is possible to move to the time before or after the point selected.



In this way it is also possible to indicate the exact time at which you want to analyse the behaviour of the component.

Click on the date/time field and select from the menu the day and the desired time range.

5 minuti


10/05/2017 | 15:43

Portata ( m ) 🔍  
Evoplus Small DB4 R&D Demo RIGHT

Sun	Mon	Tue	Wed	Thu	Fri	Sat	
30	1	2	3	4	5	6	15:45
7	8	9	10	11	12	13	16:00
14	15	16	17	18	19	20	16:15
21	22	23	24	25	26	27	16:30
28	29	30	31	1	2	3	16:45
							17:00

# 11. Connection and Configuration of DAB products

## 11.1 Example of DConnect Box connection with Evoplus Small

 Before starting work, disconnect the power from the supply line and use only the recommended cables and accessories.

ModBus communication with 2-wire RS485 contemplates the use of 3 cables (A, B and GND). Connect the 3 cables correctly. It is recommended to use a screened 2-pole cable, with a twisted pair.

See section "ModBus Cable Technical Specifications"

**Initial Requirements:**

- ModBus cable of a suitable length available as product accessory and respective connector supplied with the product.
- You have enabled the Modbus parameter from the Product Menu, see section "Evoplus and Evoplus Small Software Configuration".
- Only for Small Single Evoplus: Multifunction module fitted on the product.
- You have installed the DConnect APP on your smartphone/tablet and have registered with the service centre.

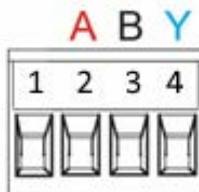


**Note:** On the Small Twin Evoplus, the module is already fitted.



Figure 1 ModBus Wire and Connector and Multifunction Module

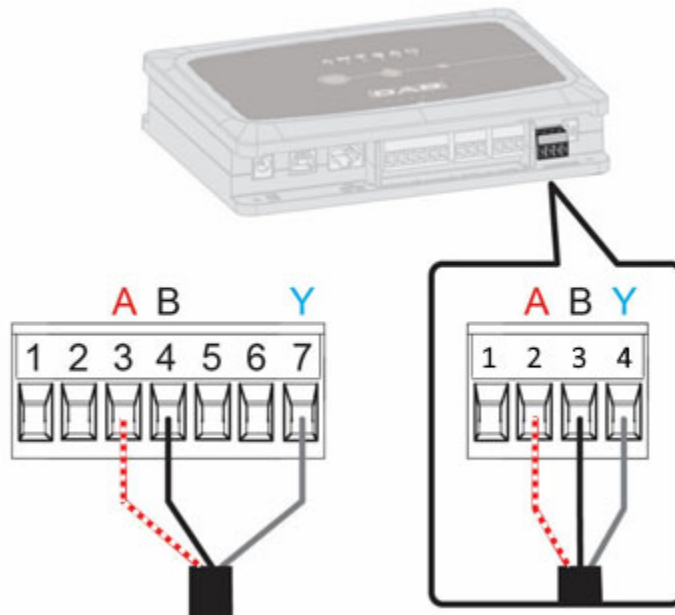
1. Connecting the wire and extractable ModBus terminal board of the DConnect Box:  
Prepare the respective 4-pole terminal supplied with the DConnect respecting the indicated polarities.



MODBUS Terminals	Description
A	Non-inverted terminal (+)
B	Inverted terminal (-)
Y	GDN

Figure 2: Extractable ModBus terminal board of the DConnect Box

- Connect the wire and the extractable terminal board of the multifunction module for Evoplus Small:



MODBUS Terminals	Terminal No.	Description
A	3	Non-inverted terminal (+)
B	4	Inverted terminal (-)
Y	7	GDN

Figure 3 Multifunction Module Extractable Terminal Board and DConnect Box Extractable Terminal Board

- Power the products.
- Start the DAB DConnect APP and configure the product.

## 11.2 Example of DConnect Box connection with Evoplus M/L



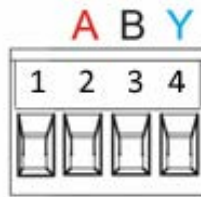
Before starting work, disconnect the power from the supply line and use only the recommended cables and accessories.

### Initial Requirements:

- ModBus cable of a suitable length available as product accessory and respective connector supplied with the product.
- You have enabled the Modbus parameter from the Product Menu, see section "Evoplus and Evoplus Small Software Configuration".
- You have installed the DConnect APP on your smartphone/tablet and have registered with the service centre.

ENGLISH

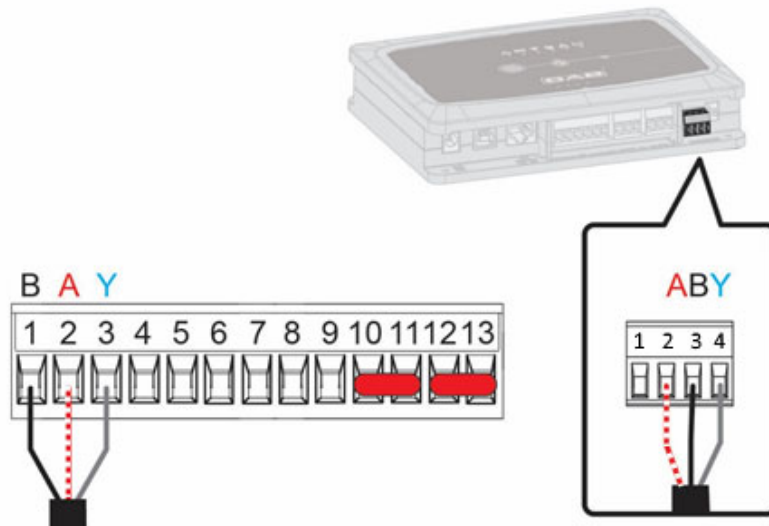
1. Connecting the wire and extractable ModBus terminal board of the DConnect Box: prepare the respective 4-pole terminal supplied with the DConnect respecting the indicated polarities.



MODBUS Terminals	Terminal No. DConnect Box	Description
A	2	Non-inverted terminal (+)
B	3	Inverted terminal (-)
Y	4	GND

Figure 4 Extractable ModBus terminal board of the DConnect Box

2. Connect the wire and extractable terminal board of the Evoplus M/L:



MODBUS Terminals	Terminal No. EVOPLUS	Description
A	2	Non-inverted terminal (+)
B	1	Inverted terminal (-)
Y	3	GND

Figure 5 - Evoplus M/L Extractable Terminal Board and DConnect Box Extractable Terminal Board

3. Power the products.
4. Start the DAB DConnect APP and configure the product.

## 11.3 Example of DConnect Box connection with EBOX



Before starting work, disconnect the power from the supply line and use only the recommended cables and accessories.

### Initial Requirements:

- *Special USB cable available as product accessory.*
- *Make sure that the product is set up for DConnect and that the appropriate symbol appears on the box.*
- *You have installed the DConnect APP on your smartphone/tablet and have registered with the service centre.*
- *Manual of the product to be connected.*

The connection between the EBOX and the DConnect Box requires the use of the special USB cable available as an accessory.

1. Insert one end in the appropriate connector inside the front panel of the EBox.
2. Fix the appropriate cable gland to the body of the EBox.
3. Insert the remaining connector in one of the 4 USB ports available on the rear of the DConnect Box.
4. Power the products.
5. Start the DAB DConnect APP and configure the product.

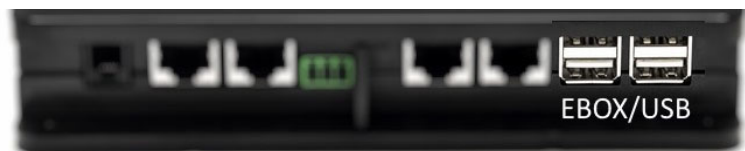
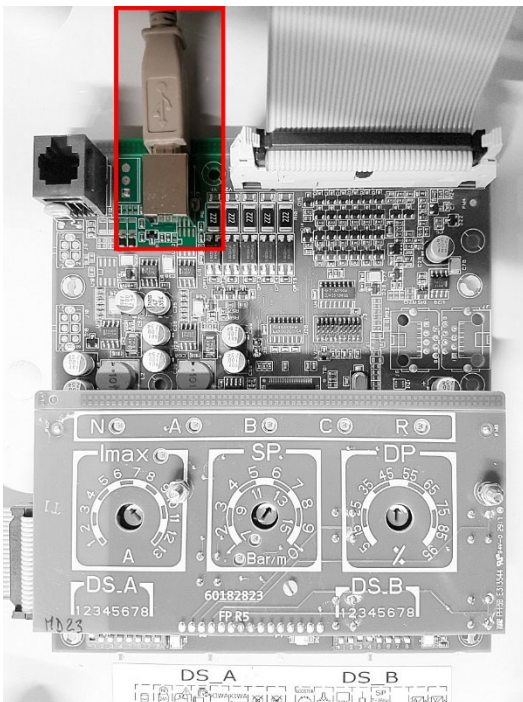


Figure 6 - USB connector in the EBox panel and in the DConnect Box

## 11.4 Example of DConnect Box connection with ADAC



Before starting work, disconnect the power from the supply line and use only the recommended cables and accessories.

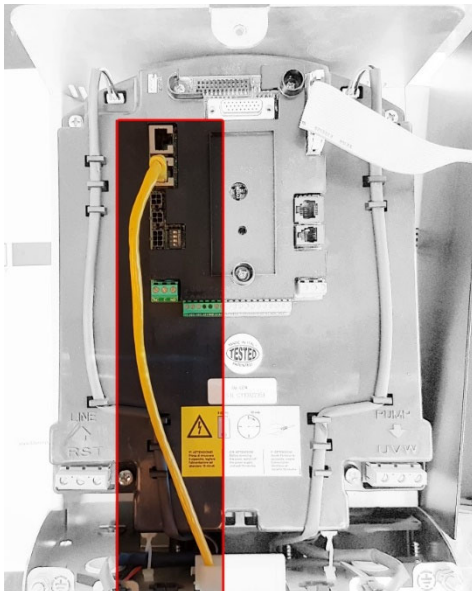
### Initial Requirements:

- Make sure that the product is set up for DConnect and that the appropriate symbol appears on the box.
- Manual of the product to be connected.
- You have installed the DConnect APP on your smartphone/tablet and have registered with the service centre.
- Special network cable available as product accessory.

- **Connect the cable between ADAC and DConnect Box:**

The connection between ADAC and the DConnect Box requires the use of the special cable available as an accessory.

1. Remove the front panel of the ADAC (refer to the product manual).
2. Insert one end of the connecting cable as in the figure.
3. Pass the cable through the cable guide provided in the lower part of the product.
4. Insert the other end of the connecting cable in one of the ports CANBUS 1 or CANBUS 2 in the rear panel of the DConnect Box. See photo and respective note.
5. Power the products.
6. Start the DAB DConnect APP and configure the product.



**Note:** The ports 1 and 2 indicated are in parallel and it is possible to connect only identical devices.

If the ports 1 are used to connect ADAC/MCE it will not be possible to connect the ACTIVE DRIVER PLUS.

Figure 7 – Example of connection of ADAC and DConnect Box to the ports CANBUS 1 and CANBUS 2.



## 11.5 Example of DConnect Box connection with MCE



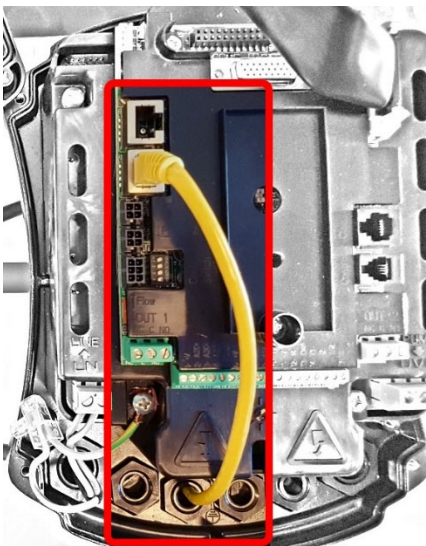
Before starting work, disconnect the power from the supply line and use only the recommended cables and accessories.

### **Initial Requirements:**

- *Make sure that the product is set up for DConnect and that the appropriate symbol appears on the box.*
- *Manual of the product to be connected.*
- *Special network cable available as product accessory.*

The connection between MCE and the DConnect Box requires the use of the special cable available as an accessory.

1. Make sure that the product is set up for DConnect and that the appropriate symbol appears on the box.
2. Remove the front panel of the MCE (refer to the product manual).
3. Fix the cable gland of the connecting cable to the body of the product.
4. Insert the other end of the connecting cable in one of the ports CANBUS1 or CANBUS2 in the rear panel of the DConnect Box. See photo and respective note.
5. Power the products.
6. Start the DAB DConnect APP and configure the product.



**Note:** The ports 1 and 2 indicated are in parallel and it is possible to connect only identical devices.

**If the ports 1 are used to connect ADAC/MCE it will not be possible to connect the ACTIVE DRIVER PLUS.**

*Figure 8 – Example of connection of MCE and DConnect Box to the ports CANBUS 1 and CANBUS 2.*

## 11.6 Example of DConnect Box connection with AD plus



Before starting work, disconnect the power from the supply line and use only the recommended cables and accessories.

*N.B. The update takes about 2-3 minutes.*

### **Initial Requirements:**

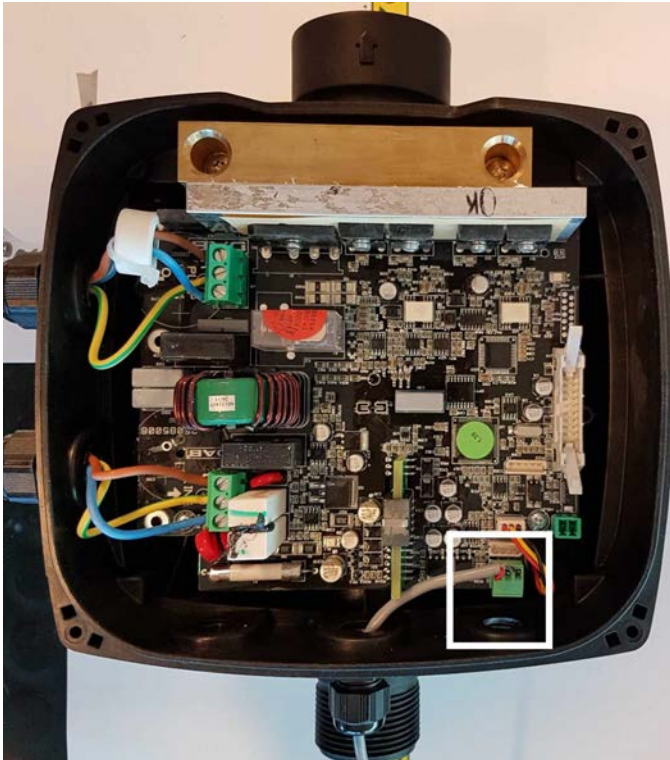
- *Make sure that the product has a software version (Sw) 2.X or higher (see VE parameter or technical label, in case of inconsistency consider VE); if it is lower, e.g. "1.X", a manual update is necessary, see section "Example Active Driver Plus Update (Sw 1.X versions)" of this manual..*
- *Manual of the product to be connected.*
- *Special communication cable available as an accessory to the product. For details see section 12.*

*Note: The connection cable for Active Driver Plus is a special accessory 5m long, which has a 120 ohm terminating resistor between terminals A and B of the connector to be inserted on the DConnect Box side.*

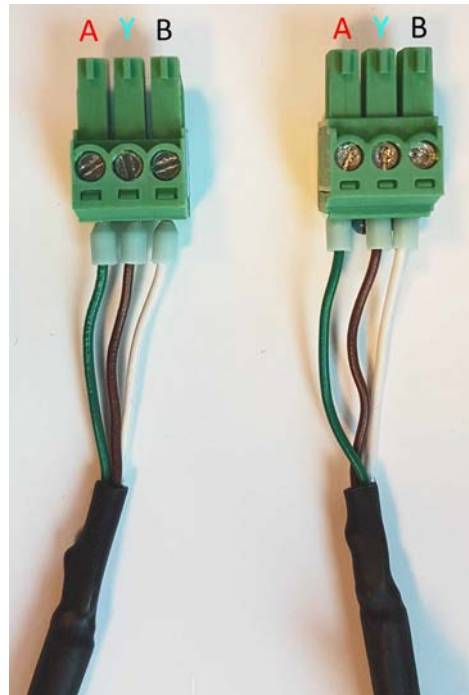
The connection between Active Driver Plus and the DConnect Box requires the use of the special cable available as an accessory.

1. Make sure that the product is set up for DConnect and that the appropriate symbol appears on the box.
2. Remove the front panel of the Active Driver Plus, remove the closing plug and fix the cable gland of the connecting cable to the body of the product as shown in Figure 9A (refer to the product manual).
3. Connect and tighten the wires of the connecting cable in the terminal board, ensuring that the GND screen (Y) is connected to the central pin of the connector.
4. Connect and tighten the wires at the other end of the cable to the mobile terminal board of the DConnect Box as in the photo, ensuring that each wire repeats the same position as the other terminal inserted in the Active Driver Plus. See Figure 9A.
5. The terminal can now be inserted as indicated in the figure on the port present in the panel on the rear of the DConnect Box. See Figure 9A.
6. Power the products.
7. Start the DAB DConnect APP and configure the product.





**Note:** depending on the Active Driver Plus model, the 3-pole connector used for communication to other Active Driver Plus and/or the DConnect Box units may be in a different position, refer to the manual of the specific model. The (Y) screen is always connected to the central pin of the connector.



*Figure 9A - Connector position in the AD plus and DConnect box, e.g. can-bus straight cable connection, connector name DConnect box for connection with AD plus*



**Note:** If you connect an ACTIVE DRIVER PLUS to the DConnect Box, you will not be able to connect ADAC/MCE on the CANBUS1 port indicated, so use CANBUS2 or the special RJ45-3pole adapter cable.

## 11.7 Example of Updating Active Driver Plus (SW versions 1.X)

*This Update is required to allow Active Driver Plus units with older software to be regularly recognised by the DConnect Box.*

***This is a special software update, therefore we recommend that you perform the steps indicated individually on each Active Driver Plus, keeping the remaining units in any group switched off during operation.***

*Note: The update will take about 2-3 minutes for each Active Driver Plus.*



### **Initial Requirements:**

- *Check if the Active Driver Plus has a software version (Sw) 1.X (check the VE parameter or the technical product label, If the versions are different, please consider only the VE parameter). If the Sw version is 2.X or above, this procedure is not required.*
- *Manual of the product to be connected.*
- *Special communication cable network available as product accessory.*
- *DConnect Box already updated and powered, see section Updating the DConnect BOX of this manual.*

The connection between Active Driver Plus and the DConnect Box requires the use of the special cable available as an accessory.

1. Verify that the Active Driver Plus is turned off.
2. Turn on the DConnect and wait 90 secs.
3. Remove the front panel of the Active Driver Plus, remove the closing plug and fix the cable gland of the connecting cable to the body of the product as shown in Figure 9A (refer to the product manual).
4. Connect and tighten the wires of the connecting cable in the terminal board, ensuring that the GND screen (Y) is connected to the central pin of the connector.
5. Connect and tighten the wires at the other end of the cable to the mobile terminal board of the DConnect Box as in the photo, ensuring that each wire repeats the same position as the other terminal inserted in the Active Driver Plus. See Figure 9A.
6. Connect to the DConnect Box the special communication cable available as an accessory.



7. Hold down the buttons  and  and turn on the AD plus.
8. The message: "Loader LV" appears on the Active Driver Plus display. Release the buttons and, if necessary, the product will be updated. A progress bar visually indicates the current level of progress of the updating task. See Figure 9B.
9. Once the update is successful, the pump will restart automatically.
10. When updating multiple Active Driver Plus units, perform steps 1-10 on each of the other products.
11. For the connection to the DConnect Box refer to section "11.6 Example of DConnect Box connection with AD plus".

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Figure 9B – Updating Active Driver Plus Sw 1.X

## 11.8 Example of DConnect Box Connection with e.sybox (Sw versions 5.X)

### Initial Requirements:

- Make sure that the product has a software version (Sw) 5.X or higher (see page VE of the pump menu); if it is lower, e.g. "4.X", a manual update is necessary, see section "Example e.sybox Update (Sw 4.X or previous versions)" of this manual.
- DConnect Box already updated and powered, see section Updating the DConnect BOX of this manual.
- Manual of the product to be connected.
- If you want to connect multiple e.sybox pumps to the DConnect Box, be sure to **first** create the group among the pumps (see pump manual) and then associate any of them to the DConnect Box as explained below.

The connection between the e.sybox and the DConnect Box does not require any cable. Proceed in the same way as when associating two e.sybox units.

1. Make sure that the e.sybox and the DConnect BOX are powered.
2. Access the Installer menu,    for 5 sec, and scroll to the page. AS
3. Press the  button for 5 seconds until the blue LED under the e.sybox display starts flashing.
4. Press the left button of the DConnect Box for 5 sec until you hear a beep and the wireless connection icon  starts flashing.
5. As soon as the connection is established, the same LED will remain on and the "DBox" symbol will appear on the "AS" page of the e.sybox.  
*Note: DConnect Box and e.sybox are dissociated by holding down the right button of the DConnect Box for 5 seconds, a beep sounds and the wireless connection icon  flashes once. This will delete all wireless connections in the DConnect BOX.*
6. Start the DConnect DAB APP and proceed to configure the product.

## 11.9 Example e.sybox Update (Sw 4.X versions)

*This Update is required to allow e.sybox units with older software to be regularly recognised by the DConnect Box.*

***This is a special software update, therefore we recommend that you perform the steps indicated individually on each pump, keeping the other pumps in any group switched off during the update operation. The update takes about 2-3 minutes.***

### **Initial Requirements:**

- *Make sure that the product has a software version (Sw) 4.X or lower (see page VE of the pump menu); if it is higher, e.g. "5.X", the update is not necessary, so see section "Example e.sybox Connection (Sw 5.X versions)" of this manual.*
- *Manual of the product to be connected.*
- *DConnect Box already updated and powered, see section Updating the DConnect BOX of this manual.*

The connection between the e.sybox and the DConnect Box does not require any cable.





1. Make sure that the e.sybox is not powered.
2. Power the DConnect Box (already updated, see section *Updating the DConnect BOX* ) and wait about 90 sec.
3. Press and hold the left button of the DConnect Box for 10 seconds until you hear 2 beeps and the wireless link LED  flashes twice.
4. Within 45 seconds from the previous operation, press and hold the buttons   and power the e.sybox product until the message "LV LOADER X.X" appears on the display.
5. The LED of the wireless connection  will remain lit once the connection between the DConnect Box and the pump to be updated has been established.
6. On the display of the e.sybox, a progress bar will show the status of the update. It consists of two steps and takes 2-3 minutes.
7. Once the update is successful, the e.sybox will restart automatically.
8. To continue the connection to the DConnect box, refer to section "*Example e.sybox Connection (Sw 5.X versions)*" of this manual.










Figure 9C - Loader access for e.sybox

## 11.10 Example of DConnect Box Connection with e.sybox mini3 (Sw 2.X versions)

### Initial Requirements:

- Make sure that the product has a software version (Sw) 2.X or higher (see page VE of the pump menu); if it is lower, e.g. "1.X", a manual update is necessary, see section "Example e.sybox mini3 Update (Sw 1.X or previous versions)" of this manual.
- DConnect Box already updated and powered, see section Updating the DConnect BOX of this manual.
- Manual of the product to be connected.

The connection between the e.sybox mini3 and the DConnect Box does not require any cable.

1. Make sure that the e.sybox mini3 and the DConnect BOX are powered.
2. Access the Installer menu,    for 5 sec, and scroll to the page. AS
3. Press the  button for 5 seconds until the blue LED under the e.sybox mini3 display starts flashing.
4. Press the left button of the DConnect Box for 5 sec until you hear a beep and the wireless connection icon  starts flashing.
5. As soon as the connection is established, the same LED will remain on and the "DBox" symbol will appear on the "AS" page of the e.sybox.  
*Note: DConnect Box and e.sybox mini3 are dissociated by holding down the right button  of the DConnect Box for 5 seconds, a beep sounds and the wireless connection icon  flashes once. This will delete all wireless connections in the DConnect BOX.*
6. Start the DConnect DAB APP and proceed to configure the product.



## 11.11 Example e.sybox mini3 Update (Sw 1.X versions)

*This Update is required to allow e.sybox units with older software to be regularly recognised by the DConnect Box. The update takes about 2-3 minutes.*

### **Initial Requirements:**

- *Make sure that the product has a software version (Sw) 1.X or lower (see page VE of the pump menu); if it is higher, e.g. "2.X", the update is not necessary, so see section "Example e.sybox Connection (Sw 2.X versions)" of this manual.*
- *Manual of the product to be connected.*
- *DConnect Box already updated and powered, see section Updating the DConnect BOX of this manual.*

The connection between the e.sybox mini3 and the DConnect Box does not require any cable.





1. Make sure that the e.sybox mini3 is not powered.
2. Power the DConnect Box (already updated, see section *Updating the DConnect BOX*) and wait about 90 sec.
3. Press and hold the left button of the DConnect Box for 10 seconds until you hear 2 beeps and the wireless link LED  flashes twice.
4. Within 45 seconds from the previous operation, press and hold the buttons   and power the e.sybox mini3 product until the message "LV LOADER X.X" appears on the display.
5. The LED of the wireless connection  will remain lit once the connection between the DConnect Box and the pump to be updated has been established.
6. On the display of the e.sybox, a progress bar will show the status of the update. It consists of two steps and takes 2-3 minutes.
7. Once the update is successful, the e.sybox mini3 will restart automatically.
8. To continue the connection to the DConnect box, refer to section "*Example e.sybox mini3 Connection (Sw 2.X versions)*" of this manual.



Figure 9D - Loader access for e.sybox mini3 Sw 1.X update

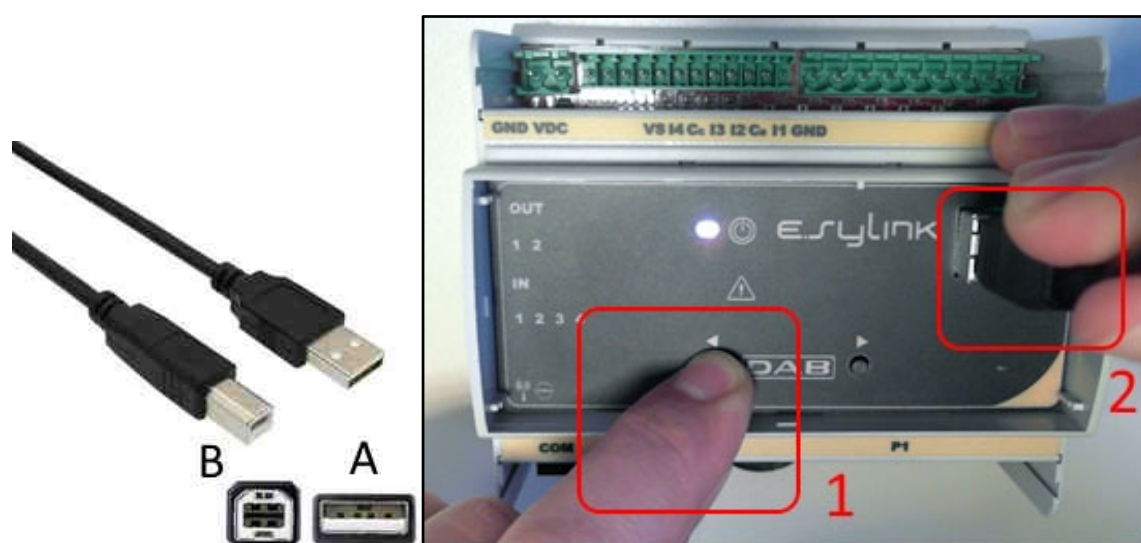
## 11.12 Example of updating e.sylink



This Update is necessary to allow the e.sylink accessory with older software to be regularly recognised by the DConnect Box. The update will take 1 minute.

### Initial requirements:

- Manual of the product to be connected.
- DConnect Box already updated and powered, see sec. Updating the DConnect BOX in this manual.

The connection between DConnect Box and e.sylink requires the use of a USB cable male A - male B. See photo.



1. Make sure that the E.sylink is not powered.
2. Power the DConnect Box (already updated, see sec. Updating the DConnect BOX) and wait about 90 sec.
3. Insert the type A connector of the USB cable into one of the 4 USB ports available on the back of the DConnect Box.
4. Hold down the left button  on the E.sylink and insert the remaining connector (type B) of the USB cable into the port on the top of the e.sylink.
5. Press and hold the left button of the DConnect Box for 10 seconds until you hear 2 beeps and the wireless link LED  flashes twice.
6. Wait 60 sec and remove the USB cable.
7. Power and use the e.sylink as usual.



**NOTE:** Remember that before associating the e.sybox pumps and the e.sylink accessory with the DConnect Box it is necessary first to create the association between the pumps and the e.sylink accessory (page AS) and then to associate any pump of the above-mentioned group with the DConnect Box



## 11.13 DConnect Box Inputs and Outputs

Inputs I/O: I1, I2, I3, I4

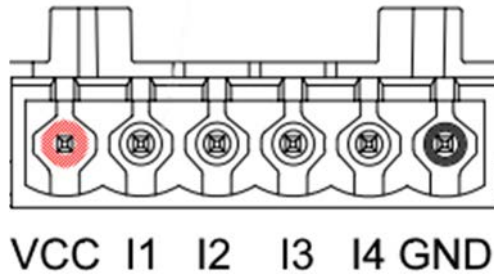


Figure 9E – DConnect BOX I/O 6-pole terminal board

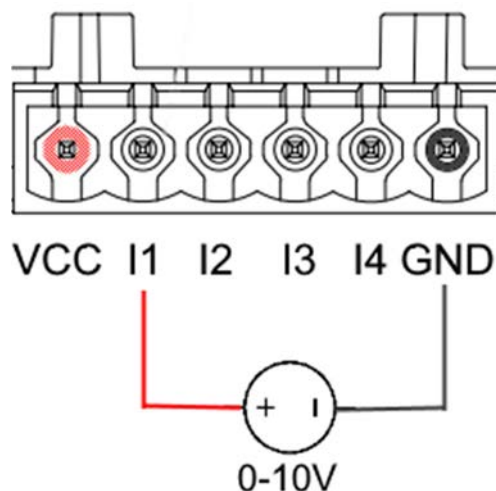
The DConnect Box is equipped with 4 **non-optoinsulated** voltage-controlled inputs. They can be energised with positive DC voltages. The Table describes the characteristics and the limits of the digital inputs:

Characteristics of the inputs (4 contacts)	
Minimum switch-on voltage [V]	2
Maximum switch-off voltage [V]	0.5
Maximum admissible voltage [V]	10
Current absorbed at 12V [mA]	0.5
Accepted cable section	0.205-3.31 [mm <sup>2</sup> ] 24-12 [AWG]

An example of connection of the input terminals is:

- Applying a 0-10V voltage between input I1 and GND.

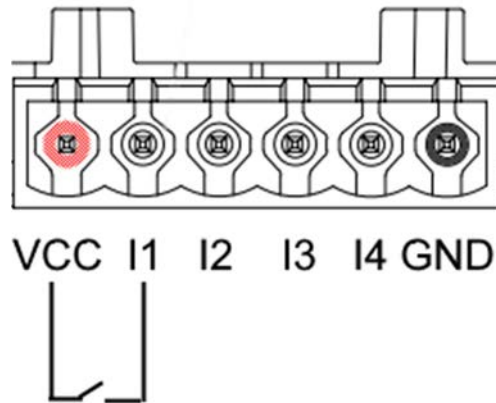
If the voltage is higher than 2V the input I1 will be active, if less than 0.5V it will be deactivated.



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- Connecting the VCC contact and the input I1 to a clean contact (e.g. float, pressure switch, etc.).

When the clean contact (e.g. float) closes, input I1 of the DConnect Box will be active.



**Output Contacts OUT1, OUT2:**

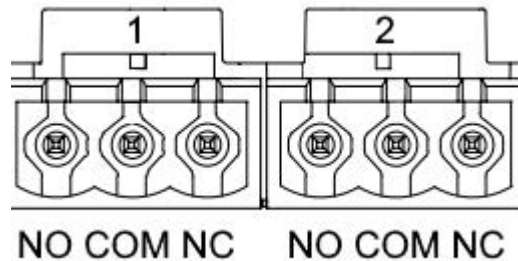


Figure 9F – OUT 1 3-pole and OUT2 3-pole terminal board

The DConnect Box is equipped with two relay outputs OUT1 and OUT2

The Table describes the characteristics and the limits of the output contacts:

<b>Characteristics of the output contacts (OUT1,OUT2)</b>	
Type of contact	NO, NC
Max. bearable voltage	230 VAC
Max. bearable current	3 A
Accepted cable section	0.205-3.31 [mm <sup>2</sup> ] 24-12 [AWG]

## 12. Modbus cable and Active Driver Plus Specifications

Multi-pair twisted cable 0.22 mm<sup>2</sup>, 250 V, F/UTP screening, PVC sheath.

## 13. Evoplus and Evoplus Small Software Configuration

### Initial requirements:

- Make sure you have correctly connected the ModBus cable to the DConnect Box.
- In the case of an Evoplus Small connection, make sure that the Multifunction module has been installed correctly; for any doubt, consult the respective manual.

1. Switch on the Evoplus or Evoplus Small.
2. From the main menu, hold down the **Menu** button for 5 seconds until the “Evoplus” logo appears on the screen.
3. Scroll through the menu to the item “En”. By default, this parameter is set on Disable.
4. Change it to **Enable** to allow operation.



Figure 10- Software configuration of the multifunction module



**NOTE:** In the ModBus configuration menu there are other important parameters of the ModBus configuration: Address, Baudrate, Parity may differ according to the installation.

**IMPORTANT:** In the case of several devices, manually set a unique “Ad” address for each of them. For example, Installation with 4 set Ad:1 for the first, Ad:2 for the second, Ad:3 for the third and so on.

Make sure that the Baud Rate and Parity value is common to all and that the “En” parameter is “Enable” on all the connected products.

## 14. Attaching the ferrite Core



*Figure 11 - Position of the Ferrite Core*

Before turning the power on, in order to reduce electromagnetic interference conducted and irradiated by power and data cables, attach the supplied ferrite cores.

Ferrite cores on the power-output cable, as shown in the illustration. Make 2 turns of cable through the Ferrite core.

## **License:**

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