MATE-XT4.0

Sensorized exoscheleton

Annex to MATE-XT instruction manual

XT 4.0

Instruction manual

Ed. 01/2022.09

TRANSLATION FROM ORIGINAL INSTRUCTIONS

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MODIFICATION HISTORY

The following table shows the release history of the Manual, with relative modifications / improvements made.

Date	Manual Edition	Contents
2022-09	01/2022.09	First release of the Manual

Translation from the original instructions drafted in compliance with the essential health and safety requirement 1.7.4 of Annex I of Directive 2006/42/EC.

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SUMMARY

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1. INTRODUCTION

This chapter contains the following topics:

– **Simbologia adottata nel manuale**;
– **Esonero di responsabilità**.

1.1. Symbols used in the manual

Below are the symbols that represent **DANGERS**, **WARNINGS**, **ATTENTION** and **NOTES** and their meaning.

DANGER

It indicates a situation in which there is immediate danger which, if not avoided, will result in injury or death to the operator.

It identifies operations that are absolutely prohibited and procedures to be compulsorily adopted to avoid serious injury or death to the operator.

WARNING

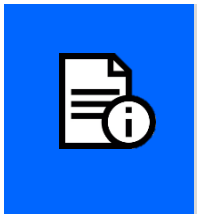
It indicates a situation in which a potential hazard exists which, if not avoided, could result in serious injury or death to the operator.

It describes operations that require particular attention to avoid serious injury or death for the operator.

ATTENTION

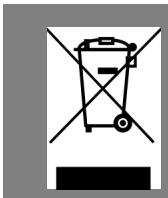
It indicates a situation in which there is a non-immediate or potential danger which, if not avoided, could result in minor or moderate injury or damage to the health of the operator.

It describes operations that require particular attention in order to avoid injury to the operator.



NOTA

Indica informazioni importanti e/o descrive quelle procedure la cui la cui mancata o parziale osservanza può produrre danni alla macchina o alle apparecchiature ad essa collegate.



NOTE

The symbol indicates that the product must not be disposed as unsorted waste but it must be sent to separate collection facilities for collection and recycling. The WEEE marking appears on the MATE-XT4.0 as electronic equipment placed on the EU market.

NOTE:

The SAR-Tick label is part of the Mobile & Wireless Forum's effort to help consumers learn more about national and international exposure standards for their mobile phones or wireless devices.

1.2. Disclaimer

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1.3. Product labeling and declaration of conformity

NOTE

The following plate and declaration of conformity refer to the MATE-XT4.0 machine as a whole.

For the sole purpose of simplifying the consultation, the following are indicated:

- Facsimile of the CE marking on the MATE-XT4.0 (see Fig. 1).
- Facsimile of the CE declaration (type II A) according to Machinery Directive 2006/42/CE. (see Fig. 2).

In any case, please refer to the CE marking exposed on the product and to the CE Declaration of Conformity provided in original.

ATTENTION

Any modification made to the product by the customer or by whoever uses it, immediately invalidates the CE Declaration of Conformity.
In this case, COMAU declines any type of responsibility.

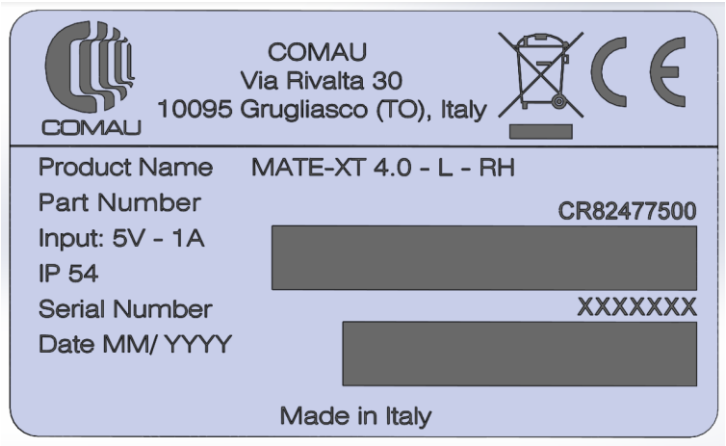

Fig. 1 - Facsimile of Identification Plate with CE Marking

This plate is applied to MATE-XT4.0 as shown in the following figure.

Fig. 2 - Plate position on MATE-XT4.0

COMAU

Ref. : Decl.an. IIA CE-2021

DICHIARAZIONE CE DI CONFORMITÀ — EC DECLARATION OF CONFORMITY

IL FABBRICANTE		THE MANUFACTURER	
COMAU S.p.A.			
Indirizzo	Address	Telefono	Phone
Via RIVALTA, 30 – 10095 Grugliasco (Torino) ITALIA		+39 011 0049 111	

dichiara sotto la propria responsabilità che la macchina nuova:	declares under his own responsibility that the new machinery:
Modello e Tipo	Model and Type
MATE-XT4.0	
Numero di serie / Serial number	Anno di costruzione / Year of construction
XXXXYYZZZ	2022

è conforme ai requisiti essenziali di sicurezza applicabili della Direttiva e Norme:	is in conformity also with the applicable essential safety requirements of the Directive and Norms:
CE DIRETTIVA 2006/42/CE relativa alle macchine	CE DIRECTIVE 2006/42/CE on machinery

EN ISO 13482:2014: Robots and robotic devices - Safety requirements for personal care robots
EN 300 328 V2.2.2: Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
EN 301 489-1 V2.2.3: ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility
EN 301 489-17 V3.2.4: ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission System; Harmonised Standard for ElectroMagnetic Compatibility
EN 50566:2017: Product standard to demonstrate the compliance of wireless communication devices with the basic restrictions and exposure limit values related to human exposure to electromagnetic fields in the frequency range from 30 MHz to 6 GHz: hand-held and body mounted devices in close proximity to the human body
EN 62368-1:2020 + A11:2020: Audio/video, information and communication technology equipment – Part 1: Safety requirements
EN 60529:1991 + AC:1993 + A1:2000 + A2:2013: Degrees of protection provided by enclosures (IP Code)
EN 62262:2008 + A1:2021: Degrees of protection provided by enclosures for electrical equipment against external mechanical impact (IK Code)
EN 60068-2-6:2008: Environmental testing Tests. Test Fc. Vibration (sinusoidal)
EN 60068-2-27:2009: Tests - Test Ea and guidance: Shock
EN 60068-2-64:2008: Tests Fh: Vibration, broad-band random (digital control) and guidance

Il fabbricante proibisce l'uso di questa macchina, oggetto della presente dichiarazione, in modo difforme da quanto riportato sul manuale istruzioni. Le norme tecniche applicate sono elencate nel manuale istruzioni.	The manufacturer prohibits the use of this part of machine, object of this declaration, in a different way from what is stated in the instruction handbooks. The list of reference norms is included in the instruction handbook.

Persona giuridica autorizzata a costituire il fascicolo tecnico e stabilita nella Comunità Europea.	Legal person authorized to compile the technical file and established within UE community.
Nome	Name
COMAU S.p.A. – Via RIVALTA, 30 – 10095 Grugliasco (Torino) ITALIA	

Persona autorizzata a redigere la dichiarazione.		Person empowered to draw up the declaration.	
Nome	Name	Posizione	Position
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Luogo e data	Place and date	Firma	Signature
Grugliasco (TO), 29/11/2022			

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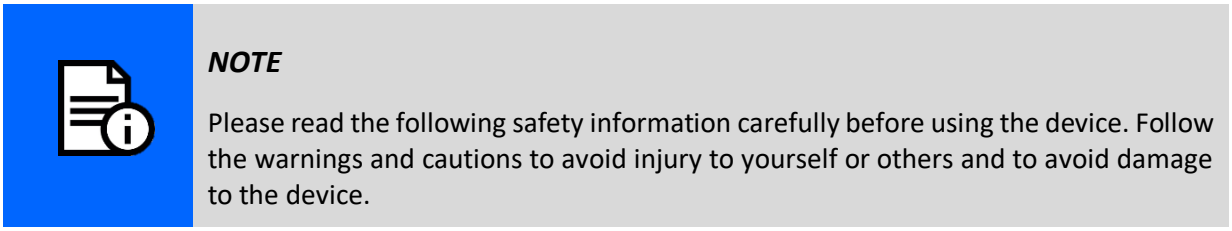
Fig. 3 - Facsimile of CE Declaration of Conformity

2. SAFETY INFORMATION

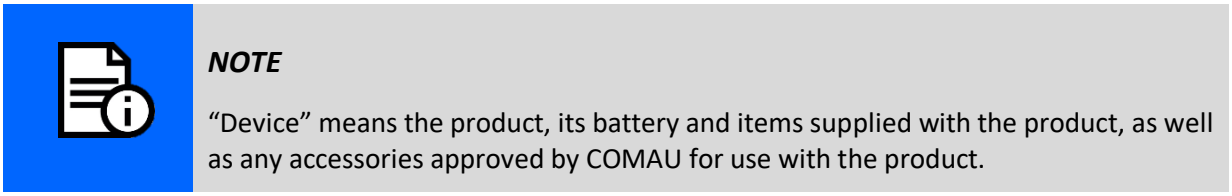
This chapter contains the following topics:

- **Directives and main reference Technical Standards**;
- **Manufacturer approved chargers and accessories**;
- **Use in potentially explosive environments (ATEX)**;
- **Preserve maximum battery life**;
- Information **about SAR certification**;
- **Correct disposal of the product**;
- **Residual risks**.



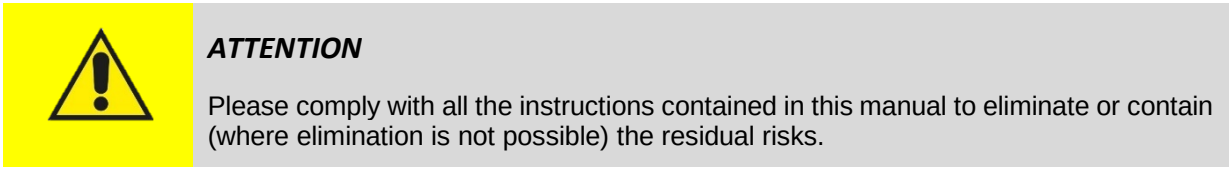
NOTE

Please read the following safety information carefully before using the device. Follow the warnings and cautions to avoid injury to yourself or others and to avoid damage to the device.



NOTE

"Device" means the product, its battery and items supplied with the product, as well as any accessories approved by COMAU for use with the product.



ATTENTION

Please comply with all the instructions contained in this manual to eliminate or contain (where elimination is not possible) the residual risks.

Do not use damaged power cords, plugs, or loose outlets.

Do not touch power cords, plugs and sockets with wet hands or other parts of the body.

Do not pull the power cord excessively when unplugging it to avoid electric shock or fire.

Do not bend or damage the power cord to avoid electric shock or fire

2.1. Directives and main reference Technical Standards

The MATE-XT4.0 object of this instruction manual has been manufactured in compliance with the relevant European Union harmonization legislation:

- **EN ISO 13482:2014** Robots and robotic devices - Safety requirements for personal care robots
- **2014/53/EU** on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment.
- **1999/519/EC** on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz).

References to the relevant harmonized standards used or references to the other technical specifications in relation to which the conformity of the device is declared:

- **EN 300 328 V2.2.2** Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
- **EN 301 489-1 V2.2.3** ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility
- **EN 301 489-17 V3.2.4** ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission System; Harmonised Standard for ElectroMagnetic Compatibility
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- **EN 62368-1:2020 + A11:2020** Audio/video, information and communication technology equipment – Part 1: Safety requirements
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- **EN 62262:2008 + A1:2021** Degrees of protection provided by enclosures for electrical equipment against external mechanical impact (IK Code)
- **EN 60068-2-6:2008** Environmental testing Tests. Test Fc. Vibration (sinusoidal)
- **EN 60068-2-27:2009** Tests - Test Ea and guidance: Shock
- **EN 60068-2-64:2008** Tests Fh: Vibration, broad-band random (digital control) and guidance

2.2. Manufacturer approved chargers and accessories

- COMAU is not responsible for the user's safety when using accessories or products not approved by COMAU.
- Handle and dispose of the device and the charging cable with care.
- Do not throw the battery or the device into fire. Do not expose the MATE-XT4.0 to excessive heat sources. If it overheats, the battery it contains may explode. Follow all local regulations to dispose of the device.
- The product is not intended for continuous use outdoors: avoid exposing the device and battery to very cold or very hot temperatures for prolonged periods.
- Extreme temperatures can damage your device and reduce the charging capacity and life of your device and battery.
- Keep the protective cap on the USB port of your devices when not charging to prevent them from coming into contact with metal objects, dirt or liquids. This may cause battery and device malfunction
- Do not use cables whose coatings are worn or damaged, and do not use damaged or malfunctioning chargers or batteries. Do not touch the multifunction connector with sharp objects and do not subject the multifunction connector to shock. Conductive materials may short-circuit or corrode the pins, resulting in an explosion or fire.

2.3. Use in potentially explosive environments (ATEX)

MATE-XT4.0 is not designed for usage in an ATEX environment. In particular, COMAU invites you to follow the following recommendations:

- Turn off the device in potentially explosive environments.
- Always respect the rules, instructions and indications when you are in potentially explosive environments.
- Do not use the device at petrol stations or near fuels or chemicals and in areas where there is a risk of explosion.
- Do not leave or carry flammable liquids, gases or explosives in the same compartment as the device, its components or accessories. If any part of the device breaks, emits smoke or smells of burning, stop using the device immediately. Only use the device again after having it repaired by COMAU Technical Assistance.

The device can be used in places with an ambient temperature between 0°C and 45°C. You can store the device at an ambient temperature between -20°C and 60°C. Using or storing the device outside the recommended temperature ranges could cause damage to the device or reduce battery life.

2.4. Preserve maximum battery life

- Not using the batteries for a long time could cause them to malfunction.
- Over time, unused device will discharge and must be recharged before use.
- Unplug the charger from the outlet when not in use.
- Follow all instructions in this manual to ensure maximum device and battery life. Damage or poor performance due to failure to follow warnings and instructions may void the manufacturer's warranty.
- The device may wear out over time. Some parts and repairs are covered by the warranty within the validity period, but damage and deterioration caused by unapproved accessories are not.
- Do not disassemble, modify or attempt to repair the device
- Any changes or modifications to the device could void the manufacturer's warranty. For assistance, consult the appropriate section of this manual
- Have maintenance operations carried out on the device only by qualified personnel
- If the device is serviced by unqualified personnel, the device could be damaged and void the warranty.

2.5. Information about SAR certification

THIS DEVICE MEETS INTERNATIONAL GUIDELINES FOR EXPOSURE TO RADIO WAVES

This wearable device includes a radio transmitter and receiver. It is designed not to exceed the limits for exposure to radio waves (radio frequency electromagnetic fields) recommended by international guidelines (COUNCIL RECOMMENDATION 1999/519/EC relating to the limitation of exposure of the population to electromagnetic fields from 0 Hz to 300 GHZ). These guidelines include a substantial margin of safety intended to ensure the safety of people, regardless of age and health condition.

Radio wave exposure guidelines use a unit of measurement called SAR (Specific Absorption Rate). The SAR limit for mobile devices is 2 W/kg.

Testing for SAR is conducted using standard operating positions in which the device transmits at its highest certified power level in all tested frequency bands. The highest SAR values foreseen in the guidelines for this device model are: Body SAR: 0.003 W/Kg, determined at the frequency of 2437 MHz in Wi-Fi mode.

During the MATE-XT4.0 use, the actual SAR values for this device are generally well below the reported values. This is because, for purposes of system efficiency and to minimize network interference, the operating power of the mobile device is automatically reduced when full power is not needed for the call. The lower the power output of the device, the lower its SAR value will be.

Testing for body SAR was performed at a separation distance of 0.0 cm.

2.6. Correct disposal of the product

This marking on the product, accessories or product literature indicates that the product and its electronic accessories (such as USB cable) should not be disposed of with other traditional waste. To prevent possible harm to the environment or human health caused by inappropriate waste disposal, the user is requested to separate the product and the aforementioned accessories from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Users are invited to contact their supplier and check the terms and conditions of the purchase contract or to contact the local office in charge for all information relating to separate collection and recycling for this type of material. This product and its electronic accessories must not be disposed of together with other commercial waste, as it falls under the category WEEE - Waste Electrical and Electronic Equipment during disposal.

Fig. 4 - Symbol for the correct disposal of WEEE waste

2.7. Residual risks

After having carefully considered all the possible risks associated with the device, all the necessary solutions have been adopted to eliminate the risks and limit the dangers for exposed people.

Even though the device is equipped with all the systems necessary to guarantee its safe use, there are still some risks which can be eliminated or reduced by the corresponding precaution.

This manual contains all the necessary precautions to resolve some circumstances with residual risk.

In addition to the warnings and precautions in the manual, the following residual risks are noted:

RESIDUAL RISK - INJURY FROM BATTERY BURNING DUE TO A MALFUNCTIONING OF THE CHARGING SYSTEM

Where/when: When charging the battery of the device there is a residual risk of serious injury due to its combustion for a possible malfunction of the charging system.

What not to do: Do not recharge the MATE-XT4.0 while wearing it.

What to do: Make sure that the device is charging correctly and, in case of excessive heating, stop charging.

3. DEVICE DESCRIPTION

This chapter contains the following topics:

- **Description**;
- **Device operating architecture**;
- **User hardware interface**;
- **Battery**.

3.1. Description

MATE-XT4.0 is the new COMAU exoskeleton that combines the functionality of the MateXT with advanced sensors to enable innovative IoT applications and extend the "MATE" family.

The MATE-XT4.0 is available in right and left versions which differ in the side on which the sensors are positioned.

The relevant product codes are shown below:

Tab. 1 - Product codes

PRODUCT	CODE	DESCRIPTION
MATE-XT4.0 L-RH	CR82477500	MATE-XT4.0 Right hand Large size
MATE-XT4.0 L-LH	CR82477600	MATE-XT4.0 Left hand Large size
MATE-XT4.0 S-RH	CR82477700	MATE-XT4.0 Right hand Small size
MATE-XT4.0 S-LH	CR82477800	MATE-XT4.0 Left hand Small size

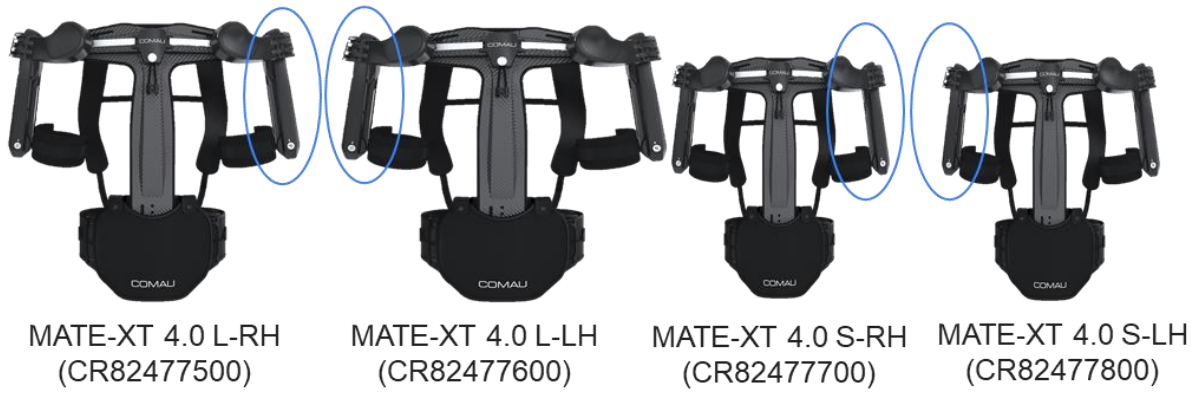


Fig. 5 - Product Versions MATE-XT4.0

3.2. Device operating architecture

The operating architecture of the device is shown below:

- The MATE-XT4.0 device communicates with the management platform (device manager)
- The device manager interacts with the cloud database
- The web-based dashboard receives information from the cloud database

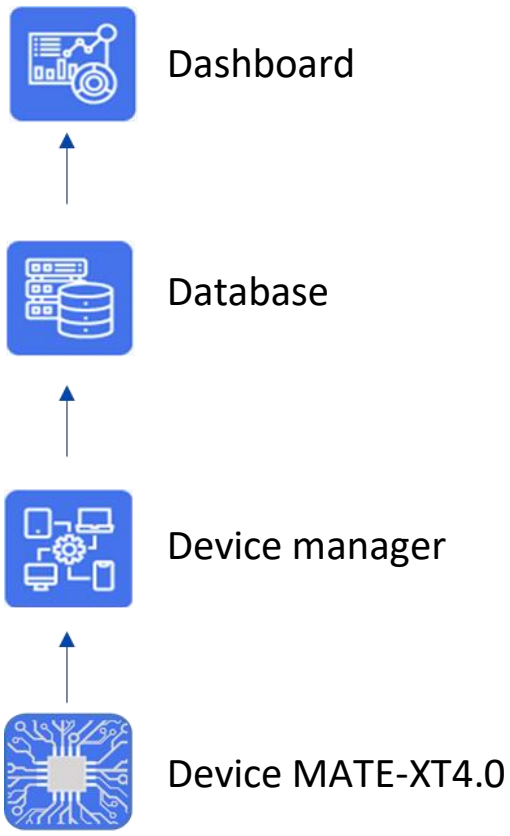


Fig. 6 - MATE-XT4.0 Architecture

3.3. User hardware interface

The MATE-XT4.0 hardware user interface consists of 2 parts, as shown in the figure below:

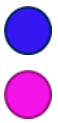
Led side

Push button/charging port side

Fig. 7 - User hardware interface

- The purpose of the button is to allow the device to be switched on and off by pressing it.
- The 2 leds indicate the information as shown in the following table:

Tab. 2 - Leds description

LED	STATUS	COLOR	DESCRIPTION
Battery status	Power on		Flashing green: Battery charge level high Flashing yellow: Battery charge level medium Flashing red: Battery charge level low
Info		OFF	
Info	First maintenance threshold cycles reached		Single red flash: request for first maintenance intervention
Info	Second maintenance threshold cycles reached		Double red flash: request for second maintenance intervention
Info	Third maintenance threshold cycles reached		Steady red light: request for third maintenance intervention
Info	Connection status		Blinking blue: attempting to connect to Wi-Fi Blinking magenta: Attempting to connect to the device manager
Info	Firmware update in progress		Steady yellow: Firmware download in progress
Info	Normal operation		Flashing green

3.4. Battery

3.4.1. Technical data of the battery

The device contains a 3.7V lithium battery with a capacity of 1800 mAh.

The battery lasts more than 20 hours (approximately 3 work shifts).

The battery has an estimated life of over 500 recharge cycles.

NOTE

Duration and life of the battery are indicative values that may vary according to the use and the temperature of the environment in which the device is located. To preserve maximum battery life, refer to the following section.

3.4.2. Device Charging

To recharge the device, use the supplied USB-C type cable.

Recommended charger: 5Vdc 1A.

The charging port of the device is located next to the power button and is covered by a cap that guarantees the resistance to liquids of the device.

NOTE

Always keep the charging port covered with the special cap when the device is not charging to prevent the entry of dirt or liquids that could damage the device.

The following image shows the location of the charging port on the device.

Fig. 8 - USB-C charging port

4. USE

This chapter contains the following topics:

- **Turning on and off**;
- **Procedure for the first configuration of the device;**
- **Web Interface**.

4.1. Turning on and off

To switch the device on and off, press the button shown in the following figure:

Fig. 9 - Power button

When turned on, the device will perform the following operations:

- Leds autotest;
- Search for Wi-Fi network, if set and attempt to authenticate;
- Connection to the device fleet management platform.

To turn off, press the button shown in Fig. 9.

4.2. Procedure for the first configuration of the device

Following, is provided the procedure for the first configuration of the Wi-Fi network on the MATE-XT 4.0 and the activation procedure:

1. Create a 2.5Ghz Wi-Fi network with internet access on a router, access point, or mobile device with hot-spot function, using the following default credentials:
   SSID : "MATE-XT4.0",
   PASSWORD : "12345678

2. Power on the MATE-XT 4.0 device and check that it connects to the cloud platform (as per the LED legend)

3. Access the web interface with user login credentials provided

4. Click on "Add device" (A), enter the activation code (B) found in the box with the device and click ok (C)

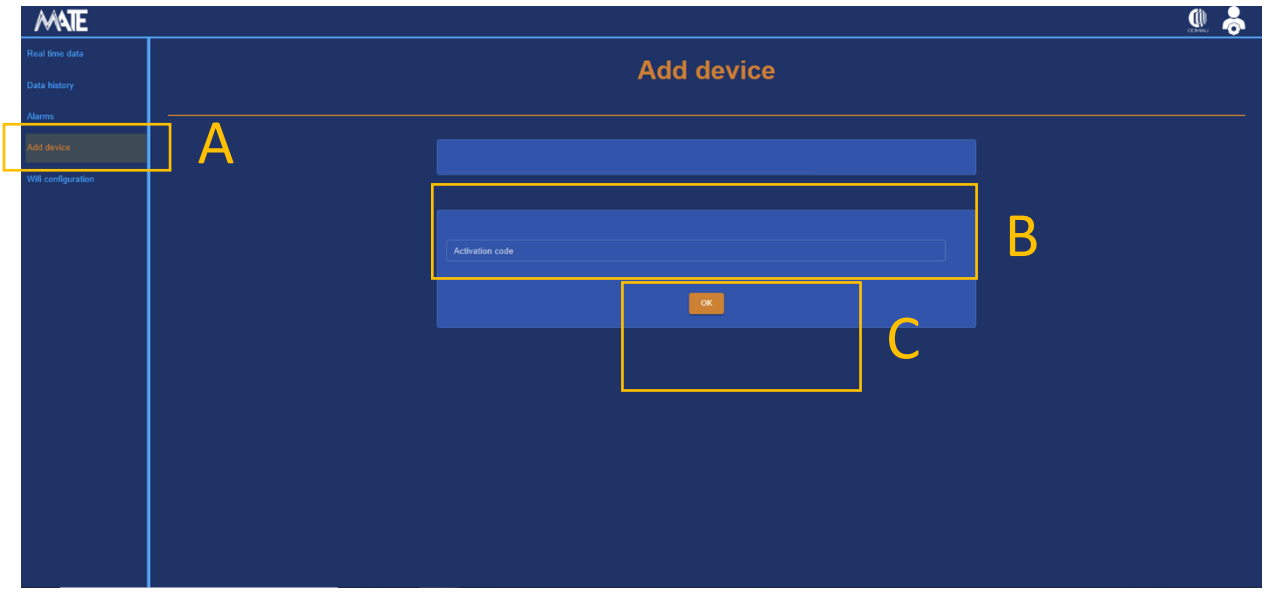


Fig. 10 – MATE-XT 4.0 Activation page

5. On the next page (Wi-Fi configuration) enter the desired Wi-Fi credentials to allow the device access to the internet on your standard network and click ok

6. Remove the access point created in point 1, switch the device off and on again and check that the device connects to the cloud platform (as per the LED legend)

If the device does not connect, check that you have entered the correct credentials / that the network allows the device to reach the cloud platform. If necessary, repeat steps 1-2 and 5-6 again.

4.3. Web Interface

The web interface can be accessed by typing the following address from the browser of any computer or mobile device connected to the Internet: **https://app.comau.zerynth.com/**.

The main pages on the web interface are described in the following paragraphs.

4.3.1. Login

The web interface is protected by login with username and password. Credentials are sent directly by email to the email address provided when the MATE-XT4.0 is ordered, once the user profile is created on the web portal.

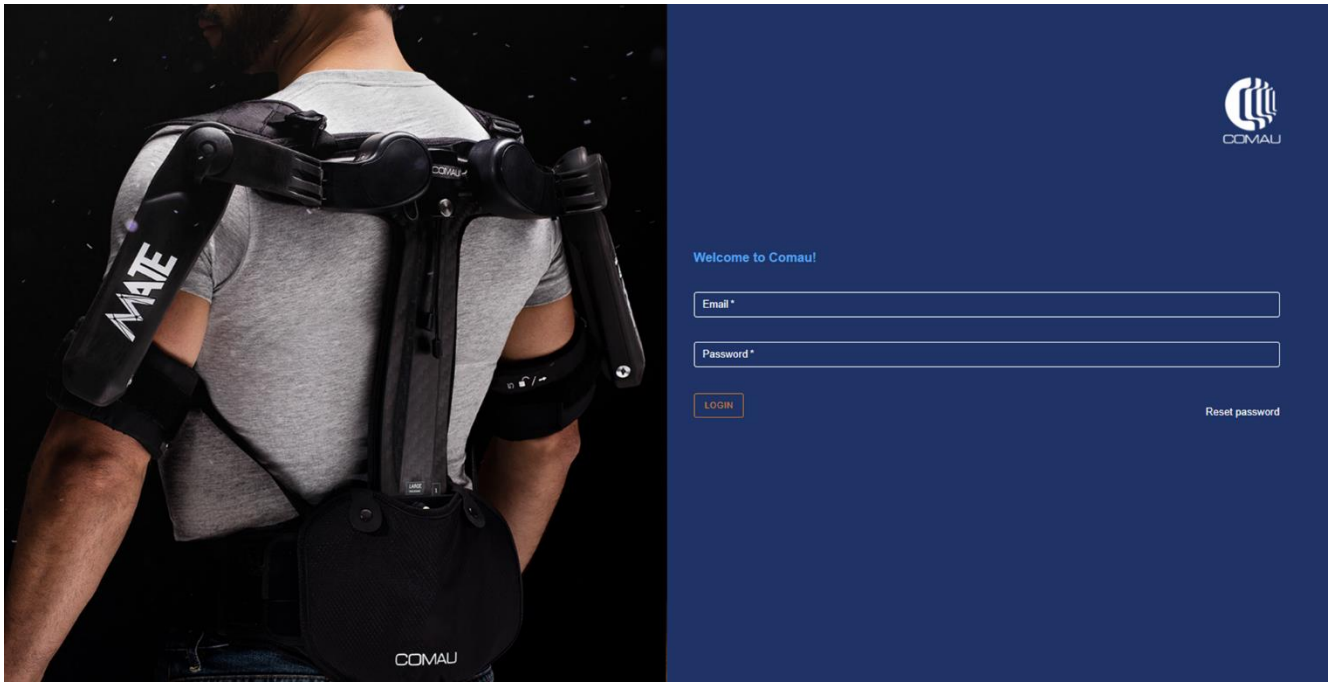


Fig. 11 - Login page

4.3.2. Homepage

Once logged in, you reach the main page which allows you to choose 4 sub-categories:

A. Realtime data: for accessing the data produced by the device
B. Data history: or access to previously acquired data
C. Alarms: for displaying alarm messages
D. Wi-Fi setup: for configuring the credentials of the Wi-Fi network to which the MATE-XT4.0 will have to connect.

These categories are also accessible from the left menu (E). Moreover, there is the “User” button (F) at the top right which allows the selection of the language, the management of the profile and the disconnection from the web portal.

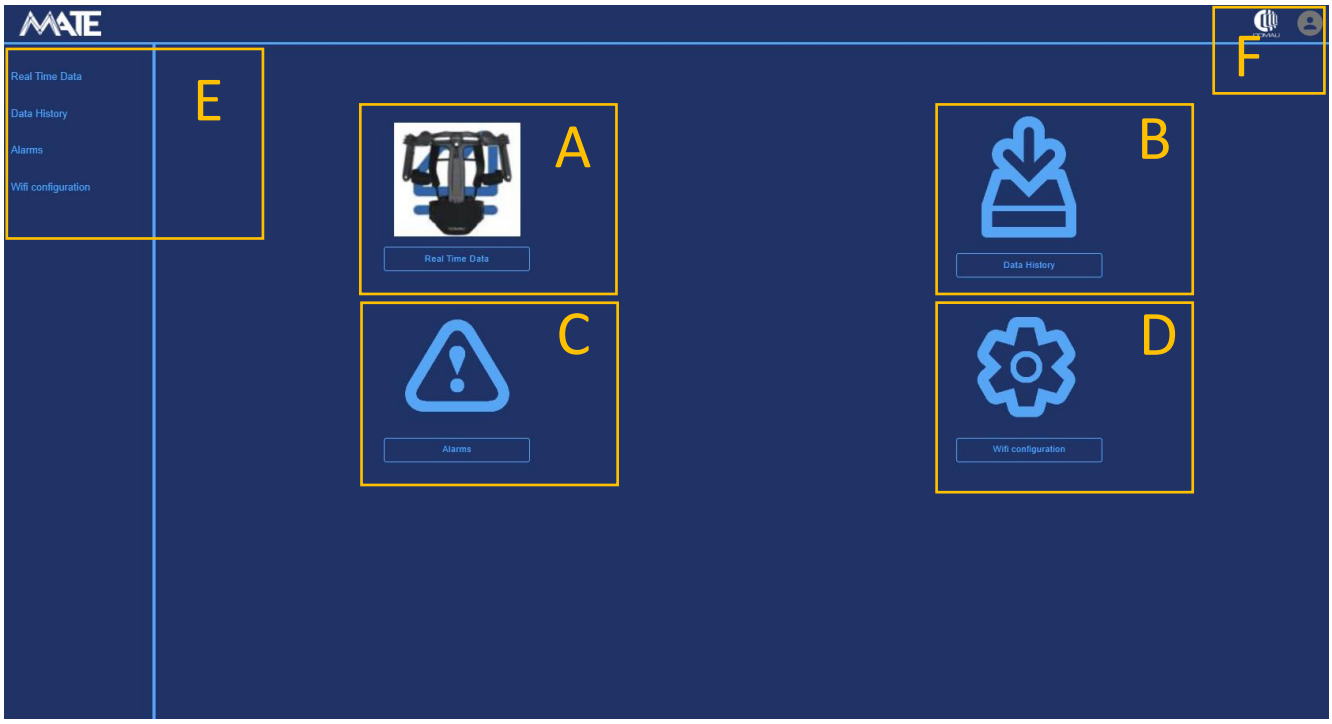


Fig. 12 - Homepage

4.3.3.User profile

The "User profile" page shows the details of the user currently logged: in particular, in addition to the personal data, it is also possible to check the creation date and the user's role.

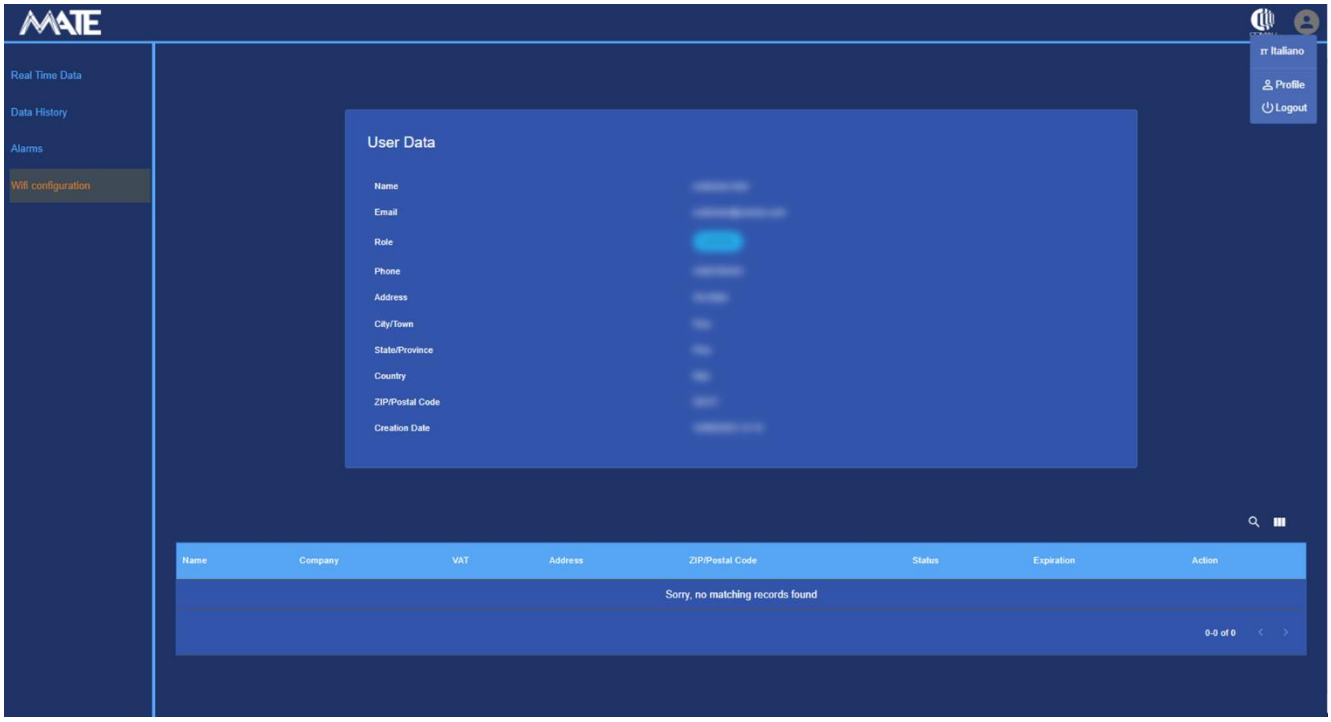


Fig. 13 - User profile page

4.3.4. Realtime data

In this section it is possible to access the real-time data of the devices managed through hierarchical navigation menus: Fleet → Device → Data.

n the following sections, a detail of these levels will be presented.

4.3.4.1. Fleets list

On this page it is possible to navigate among the managed fleets. To view fleet details, select the "i" next to the name (A), to access a fleet select the name (B).

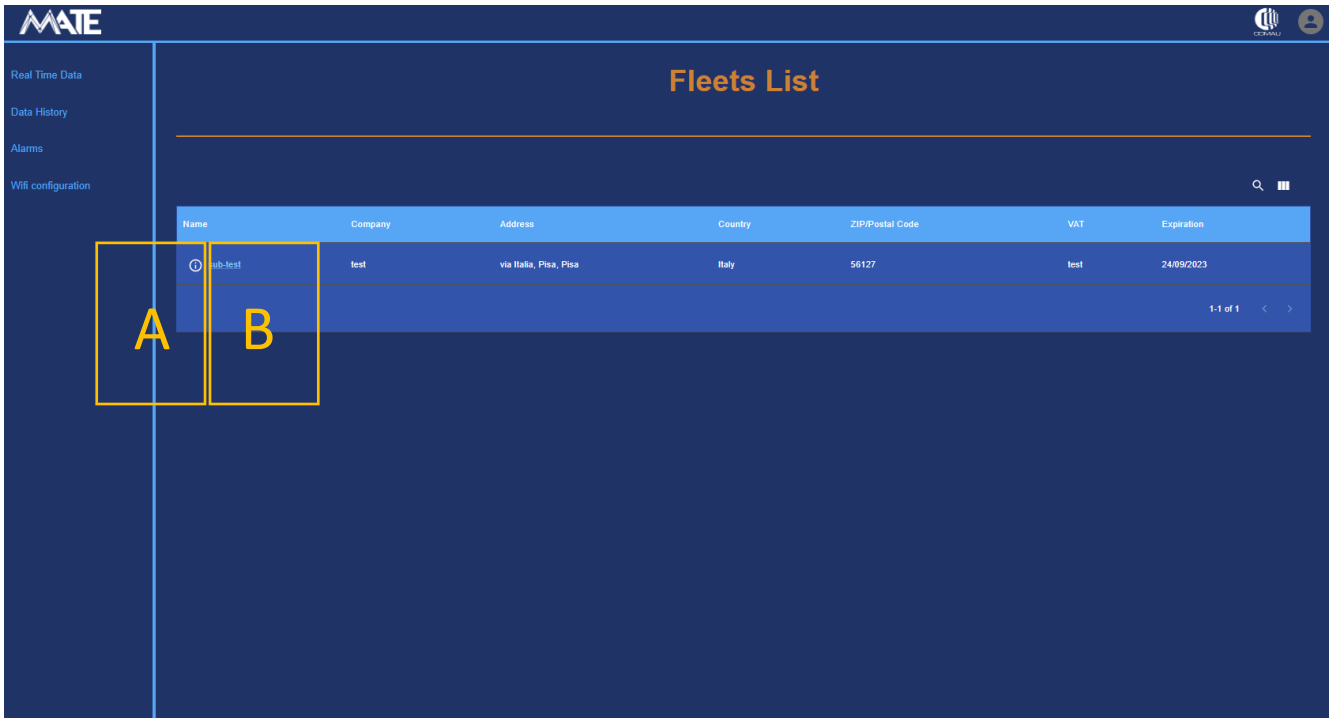


Fig. 14 - Fleets list

4.3.4.2. Device selection in the fleet

On this page it is possible to navigate among the devices present in the fleet. To view device details, select the "i" next to the name (A), to access a device select the name (B). On this page it is also possible to see if the device is currently connected (online) or not reachable by the platform (offline) (C).

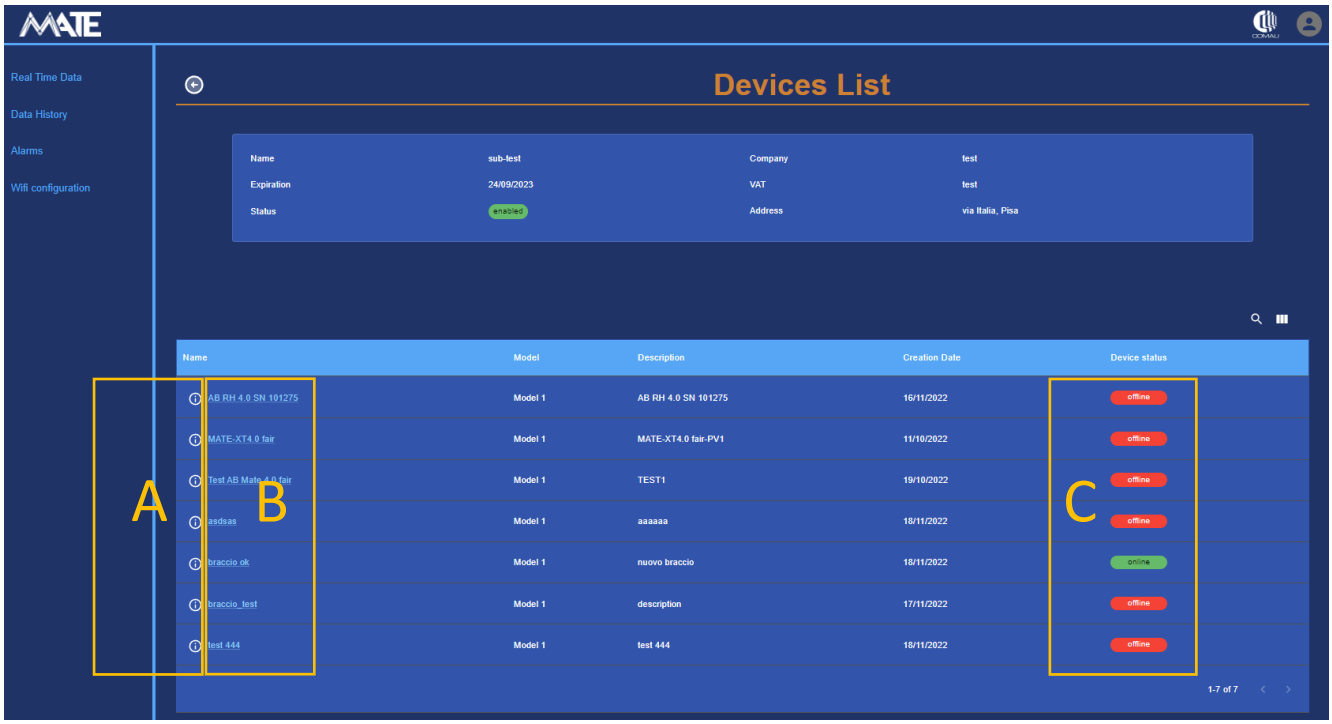


Fig. 15 - Devices List page

4.3.4.3. Device detail – Real time Data

This page shows:

A. Device details;
B. Connection status information;
C. The alarms of the last 24 hours;
D. Graphs with real-time information.

The graphs will be detailed in the next section.

Fig. 16 - Real time Data page

4.3.4.4. Graphic detail

In this section the following information is provided:

A. Number of flexion/extensions performed
B. Battery charge status
C. Temperature
D. Humidity
E. Wi-Fi signal strength
F. Indicator of number of cycles of flexion/extension performed in real time
G. Battery charge status indicator
H. Firmware status (last connection, Fw verstion, etc.)
I. Flexion/extensions log
J. Filter for changing the time interval of the data to be displayed

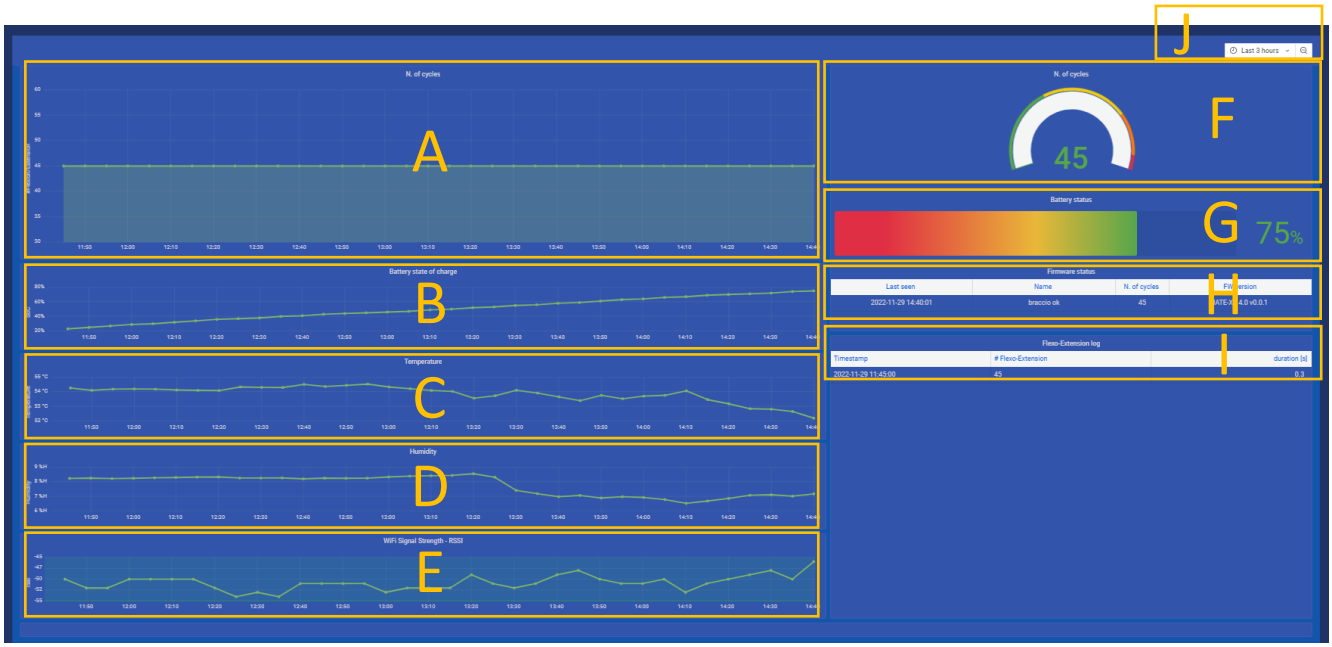


Fig. 17 - Detail of real time graphs

4.3.4.5. Graphs filter

The filter is common to all graphs and allows you to select a specific time interval.

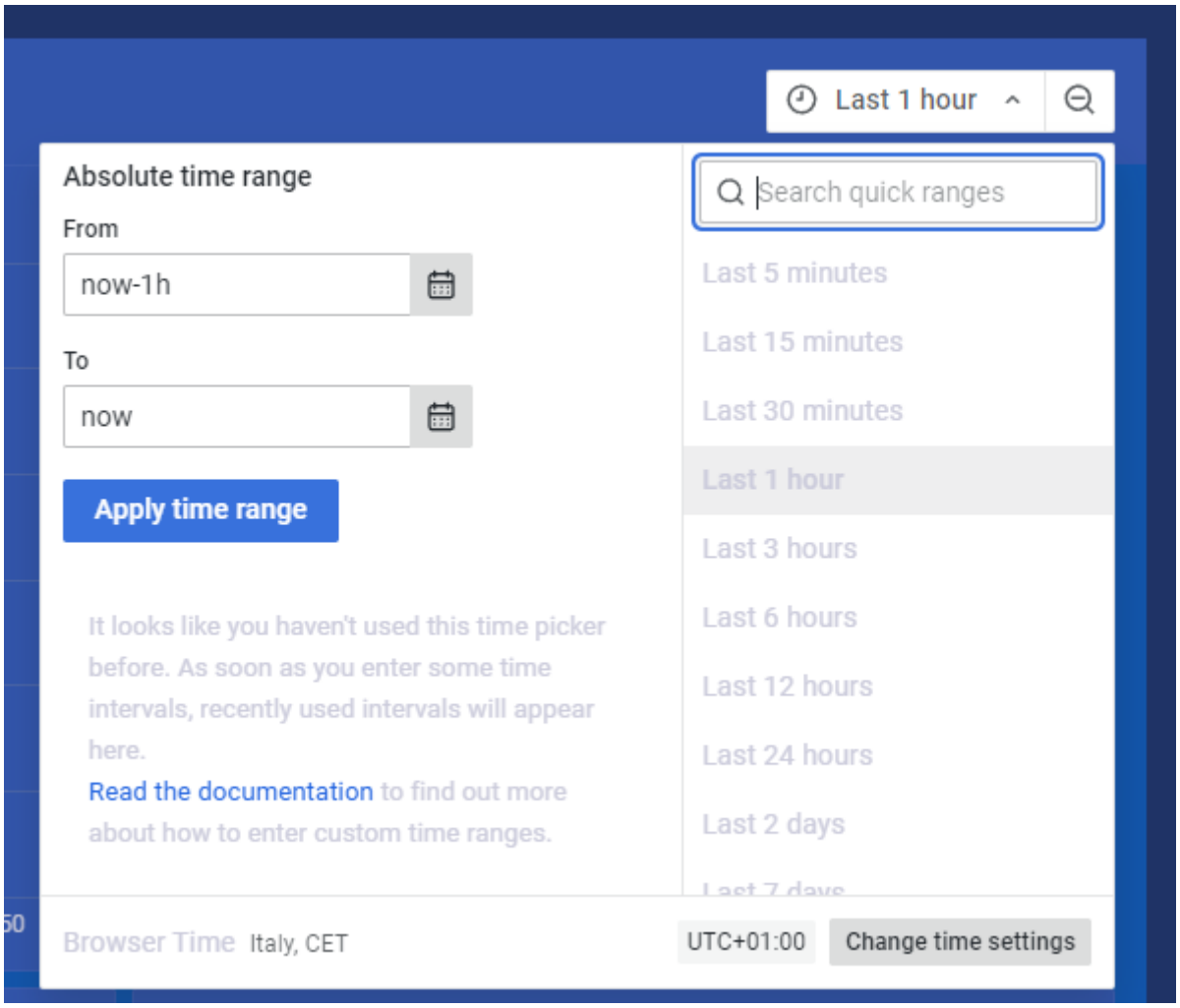


Fig. 18 - Realtime graphics filter detail

4.3.5.Data History

In this section it is possible to download the historical data of a specific device for a specific time frame. Navigation is the same as in the previous sections. For details, refer to what was described above.

4.3.5.1. Data History time frame selection

In this section it is possible to select the start date (A) and end date (B) of the Data Log to be created. The file is generated in CSV format.

NOTE

The maximum time frame that can be selected is 7 days, selecting a longer time generates an error message.

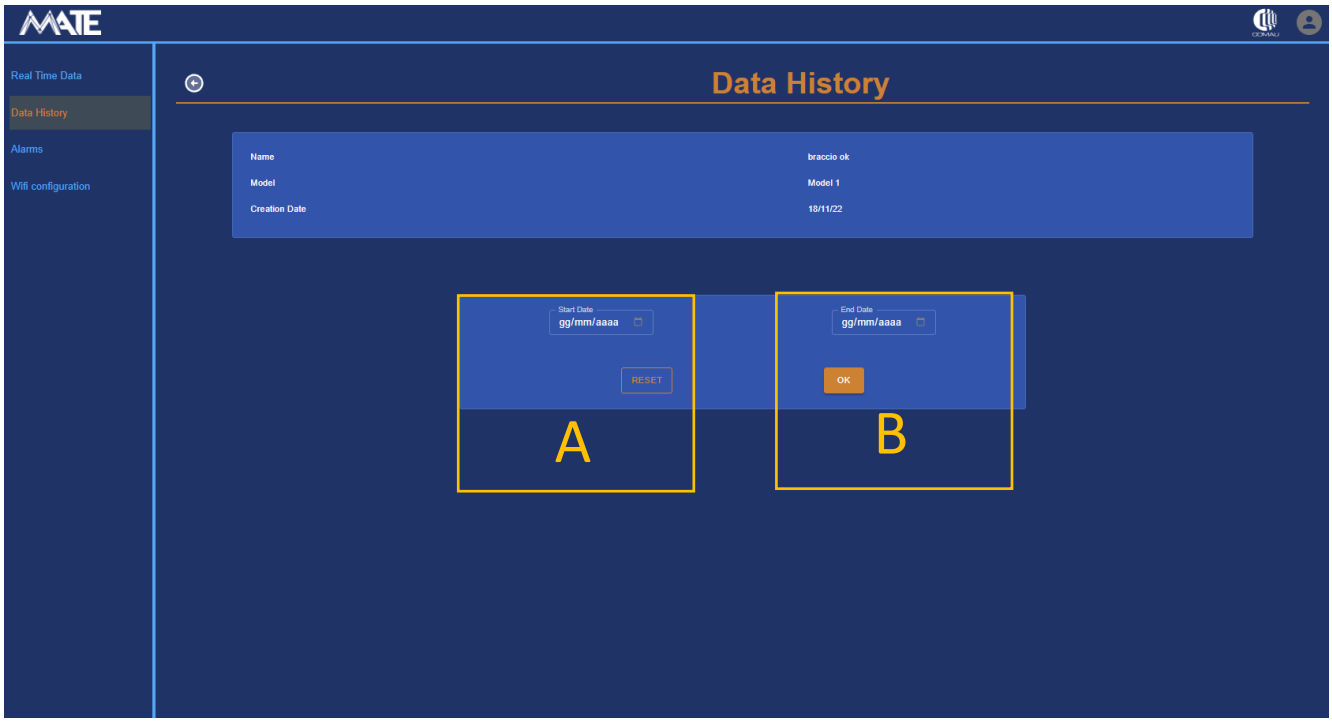


Fig. 19 - Historical data time frame selection page

4.3.6.Alarms

This page shows the alarm history of the selected device.

The alarms that can be generated by the device are:

Tab. 3 - Alarms description

ALARM	TYPE	DESCRIPTION
BATTERY	Warning	Battery level under 20 %
TEMPERATURE HIGH	Warning	MATE-XT 4. 0 temperature over 40 °C
TEMPERATURE LOW	Warning	MATE-XT 4. 0 temperature under -5 °C
FIRST MAINTENANCE	Warning	First maintenance threshold cycles reached
SECOND MAINTENANCE	Warning	Second maintenance threshold cycles reached
THIRD MAINTENANCE	Warning	Third maintenance threshold cycles reached
OFFLINE	Warning	MATE-XT 4.0 not connected to the platform

Fig. 20 - Alarms page

4.3.7.Wi-Fi Configuration

In this section it is possible to configure the Wi-Fi connection parameters of a specific device. Navigation is the same as in the previous sections. For details, refer to what was described above.

4.3.7.1. Wi-Fi Parameters configuration

In this section it is possible to configure the Wi-Fi parameters of the selected MATE-XT4.0. In particular, it is possible to enter the network name (SSID), password and IP parameters (IP address, Subnet mask, Gateway and DNS). The currently supported protocol is IPv4.

Once the parameters have been entered and the OK button has been selected, the MATE-XT4.0 will restart and attempt to connect to the newly configured network.

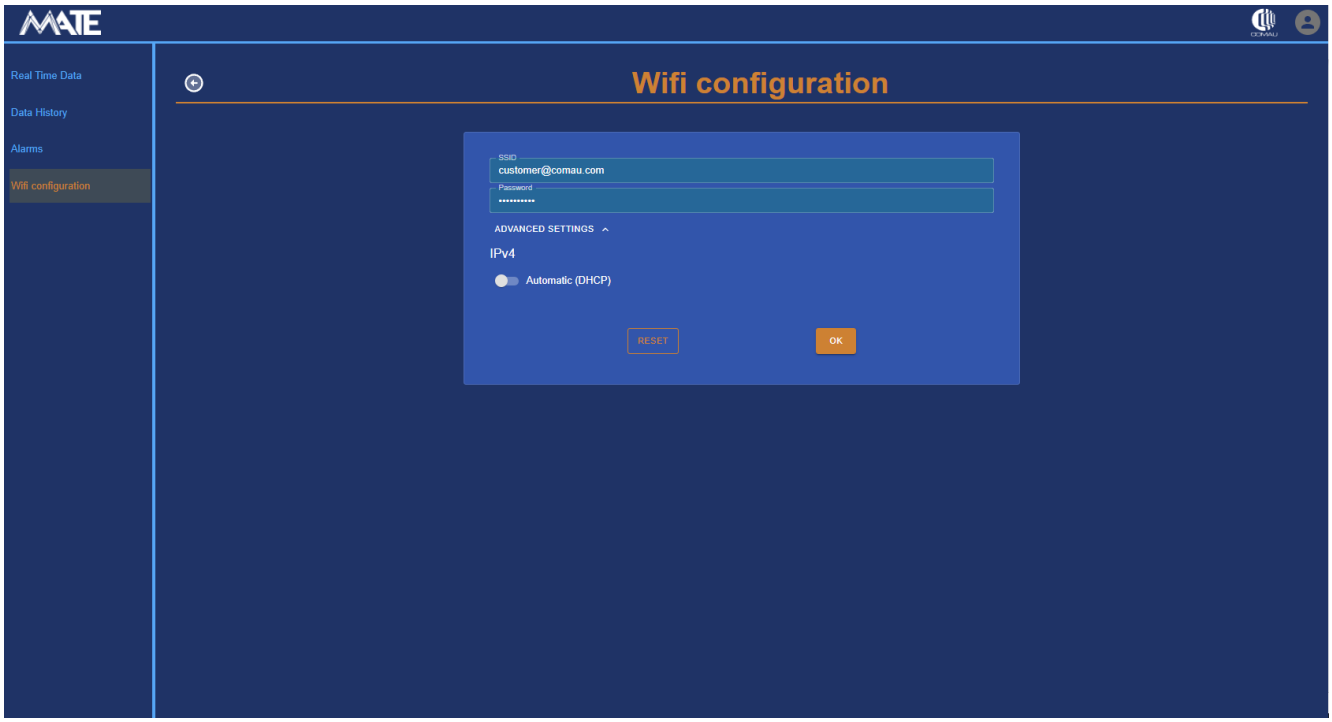


Fig. 21 - Wi-Fi parameters configuration page

NOTE

In case of connection problems, refer to the LEDs legend, to the first configuration procedure and to the "Resolution of the most common problems" section.

4.3.8.Firmware update

If a new firmware update becomes available, the update starts automatically as soon as the MATE-XT 4.0 is connected to the internet. No interventions are required by the user and, once the update is complete, the MATE-XT 4.0 connects again to the Wi-Fi and all the data starts again to real time update the web platform.

NOTE

The firmware update does not involve loss of data or configurations. However, if the MATE-XT 4.0 is no longer connected to Wi-Fi after the update, repeat the connection procedure, as explained in the "First time setup" section.

5. TROUBLESHOOTING AND ASSISTANCE

This chapter contains the following topics:

- **Solving the most common problems;**
- **Instructions for requesting interventions and ordering spare parts**.

5.1. Solving the most common problems

The following table presents the solutions to the most common problems that may occur when using the MATE-XT4.0.

Tab. 4 - Most common problems

PROBLEM	POSSIBILE CAUSES	SOLUTION
Failure to turn on MATE-XT4.0	Push button: • The button was not pressed completely • The button does not work properly	• Press the push button completely • Contact the after-sales service for repair
	Battery: • The battery is completely discharged • The battery is not working properly	• Recharge the MATE-XT4.0 before use • Contact the after-sales service for repair
	LEDs: • Data is displayed correctly on the portal, but the LEDs don't work	• Contact the after-sales service for repair
Failure to turn on LEDs (RGB LED cycle)	LEDs: • Data is displayed correctly on the portal, but the LEDs don't work	• Contact the after-sales service for repair

No charging	Cable: • The cable is not properly connected in the charging port or in the charger • The cable is damaged	• Verify that the power supply is turned on (refer to the documentation provided by the power supply manufacturer) • Insert the cable all the way into the charging port and into the power supply • Replace the charging cable
No Wi-Fi connection (blue LED)	Wi-Fi: • The MatXT4.0 is too far from the Wi-Fi network • The credentials provided are incorrect	• Check Wi-Fi coverage and connect again • Check the credentials provided and repeat the Wi-Fi network configuration procedure
No connection to device manager (led magenta)	Wi-Fi: • The server is not reachable from your Wi-Fi network	• Check that the Wi-Fi network (if any firewalls are present) does not block outbound traffic to the server and does not block hostname resolution via dns protocol (details in the dedicated section)
	Server: • The server is not available	• Turn off the device, wait 5 minutes and turn on again • Contact the after-sales service
Data in the dashboard is not refreshing	Server: • No connection to the server • Server not available	• Turn off the device, wait 5 minutes and turn on again • Contact the after-sales service
Firmware update failure (yellow LED)	Communication: • emporary communication error (The device has NOT started the FW update procedure)	• To force the firmware update procedure: switch off the device, wait 5 minutes and switch on again
	Wi-Fi: • No Wi-Fi or Wi-Fi instability	• Check the coverage of the Wi-Fi network and the routing/firewall rules of the network (see resolution of no connection to the device manager and details in the dedicated section) • Make sure that the MATE-XT4.0 is not moved during the update procedure to avoid any Wi-Fi connection disconnection / reset issues

5.2. Instructions for requesting interventions and ordering spare parts

If the problem encountered is not in the list previously mentioned or in cases where the anomalies and/or improper situations cannot be resolved by the customer, it is advisable to request the intervention of the COMAU Assistance Service personnel.

Ordering spare parts or requesting repairs must be made through the Office:

COMAU S.p.A.
Customer Service
Via Rivalta, 30
10095 Grugliasco (TO) – ITALY
www.comau.com/it/contact-us/customer-service/