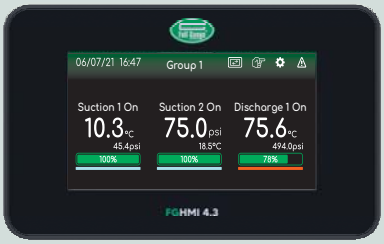
# FG-HMI 4.3 RCK-862 *plus* Ver.01

**DIGITAL DISPLAY AND CONFIGURATION INTERFACE COMPATIBLE WITH THE RCK-862 *plus* ELECTRONIC CONTROLLER**

Have this manual in the palm of your hand through the FG Finder app.

Color display | Economy mode | Touch screen | Serial communication | USB | Alarm sound | Alarms




18898 - MANUAL FG-HMI4.3RCK862/01-02T

## 1. DESCRIPTION

The **FG-HMI 4.3** is a digital display and configuration interface, compatible with **RCK-862 *plus***, version 2 or higher. It provides convenient and safe remote access to the settings of the **RCK-862 *plus*** electronic controller.

Whit the **FG-HMI 4.3** users can remotely access controller information quickly and easily through the color display and touchscreen interface. The interface is designed to be highly intuitive allowing the user to access the controller's resources in a complete and simplified way. It also allows the visualization and configuration of settings and sending commands to the controller.

The **FG-HMI 4.3** communicates with the electronic controller via an RS-485 connection. The touch display has 4.3 inches, and settings can be adjusted for brightness and economy mode.

## 2. ELECTRICAL PRECAUTIONS

**BEFORE INSTALLING THE CONTROLLER, WE RECOMMEND THAT YOU READ THE ENTIRE INSTRUCTION MANUAL IN ORDER TO AVOID POSSIBLE DAMAGE TO THE PRODUCT.**

**CAUTION WHEN INSTALLING THE PRODUCT:**

-Before performing any procedure on this instrument, disconnect it from the power supply;

-Ensure that the instrument has proper ventilation, avoiding installing it on panels that contain other devices that can cause it to operate outside the specified temperature limits;

-Install the product away from sources that may generate electromagnetic disturbances, such as: motors, contactor, relays, electrovalves etc.

**AUTHORIZED SERVICE:**

-The installation or maintenance of the product must only be carried out by qualified professionals.

**ACCESSORIES:**

-Use only original Full Gauge Controls accessories;
-If in doubt, contact technical support.

**AS IT IS CONSTANTLY EVOLVING, FULL GAUGE CONTROLS RESERVES THE RIGHT TO CHANGE THE INFORMATION CONTAINED IN THE MANUAL AT ANY TIME WITHOUT PRIOR NOTICE.**

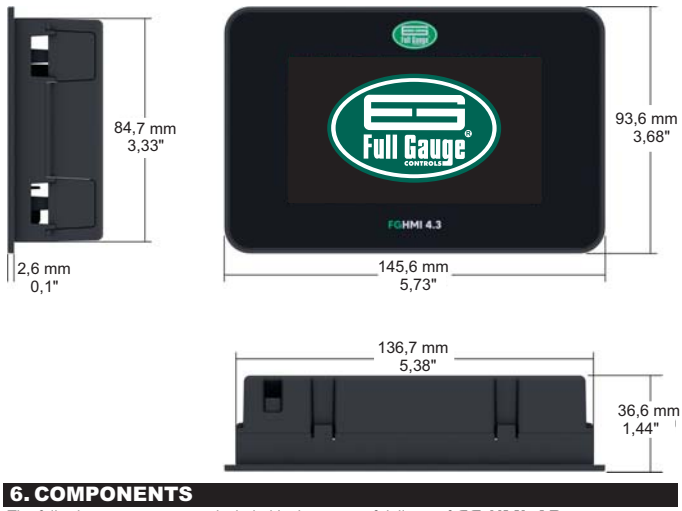
## 3. APPLICATIONS

- Graphical interface for **RCK-862 *plus*** controller.

## 4. TECHNICAL SPECIFICATIONS

| | |
|---|---|
| **Power** | 24Vac 50/60Hz ou 24Vdc ± 10% |
| **Consumption** | 6 VA |
| **Controller operating temperature** | 32 to 122°F |
| **Operating humidity** | 10 to 90% RH (without condensation) |
| **Pollution degree** | II |
| **Protection degree** | IP65 |
| **USB Interface** | Compatible with USB 2.0 Full-SpeedModule (USBFS)<br>Standard Data Format for Thumbdrives: FAT32<br>Maximum Thumbdrive Size: 32GB |
| **RS-485 communication interface** | RS-485 Isolated |
| **Product Dimensions (WxHxD)** | 93,6 x 145,6 x 36,6 mm (3,68" x 5,73" x 1,44") |
| **Cutout dimensions (mm)** | 138 x 86 mm (5,43" x 3,38") |

## 5. STRUCTURE

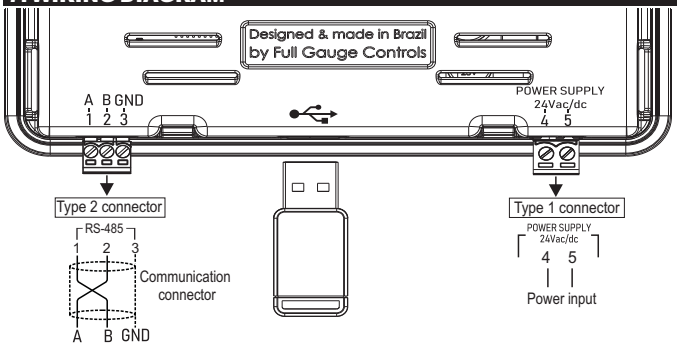



## 6. COMPONENTS

The following components are included in the scope of delivery of **FG-HMI 4.3**:

- **FG-HMI 4.3** digital interface;
- Clamps and fastening screws;
- Instruction manual;
- Full Gauge adhesive;
- Connectors.

## 7. WIRING DIAGRAM




**Type 1 connector:** For Type 1 (5.0mm) connectors use a #1 Phillips screwdriver or 3.0mm Screwdriver. Do not exceed the maximum torque of 0.5 Nm.

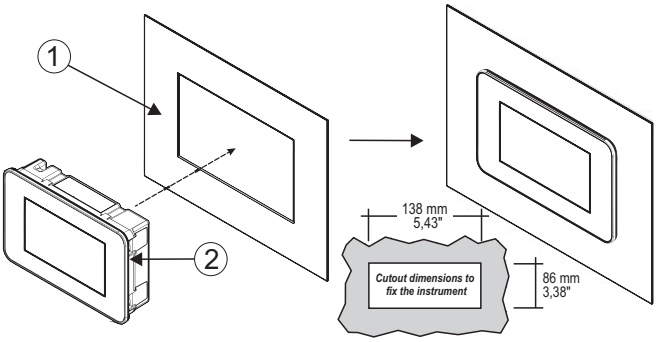
**Type 2 connector:** For Type 2 (3.5mm) connectors use #0 Phillips screwdriver or 2.4mm Slit. Do not exceed the maximum torque of 0.2 Nm.

**Cable:** The maximum cable length is 1000 meters. The minimum specification of the cable should be 24AWG braided, in order to protect the communication line from outside interference.

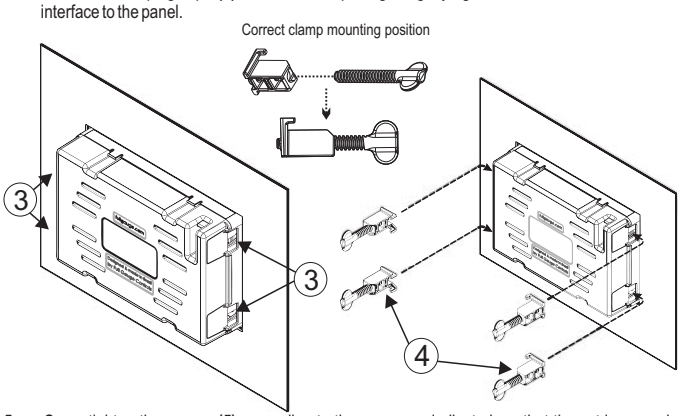
## 8. FIXATION PROCEDURE

To perform the **FG-HMI 4.3** installation follow the instructions below:

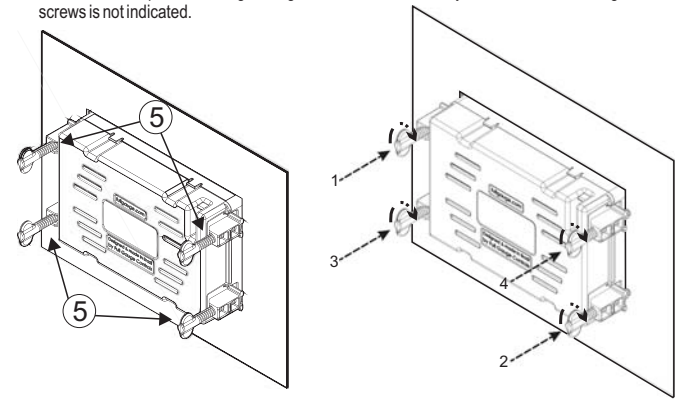
1. Cut out the panel plate **(1)** where the digital interface will be fixed, with dimensions 138 x 86 mm (5,43" x 3,38").
2. Position the **FG-HMI 4.3** in the panel opening together with the seal **(2)**.




3. Locate the side openings **(3)** for securing the clamps at the rear of the part.
4. Insert the clamping clips **(4)** into the side openings. Lightly tighten the screws to secure the interface to the panel.




5. Cross-tighten the screws **(5)**, according to the sequence indicated, so that the set is securely fastened to the panel. This tightening must be done manually, the use of tools to tighten the screws is not indicated.

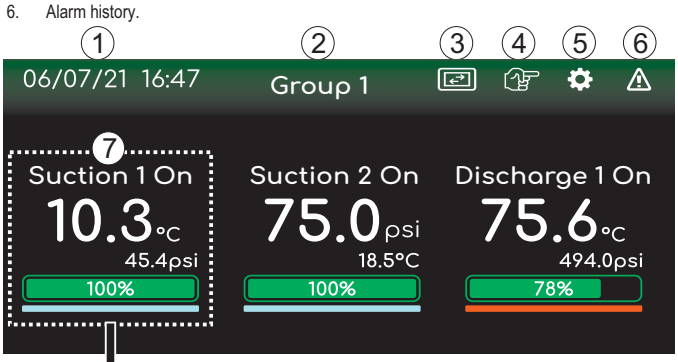


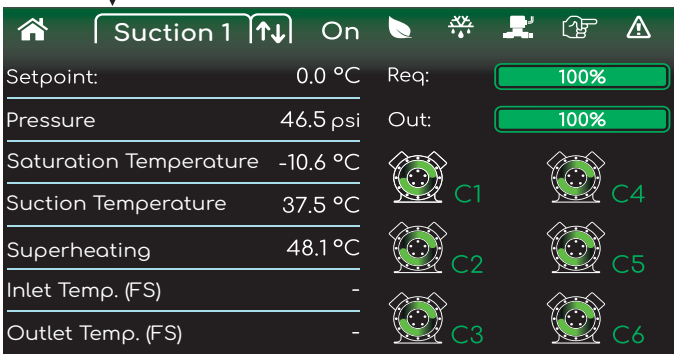
## 9. OPERATIONS

### 9.1 Home screen

The **FG-HMI 4.3** Home Screen is basically divided into two areas: header and group information **(7)**. Group information provides an overview of group parameters linked to the electronic controller. The header has the following information:

1. Date and time;
2. Group;
3. Auxiliary navigation;
4. Commands;
5. Main menu;
6. Alarm history.




### 9.2 General navigation icons

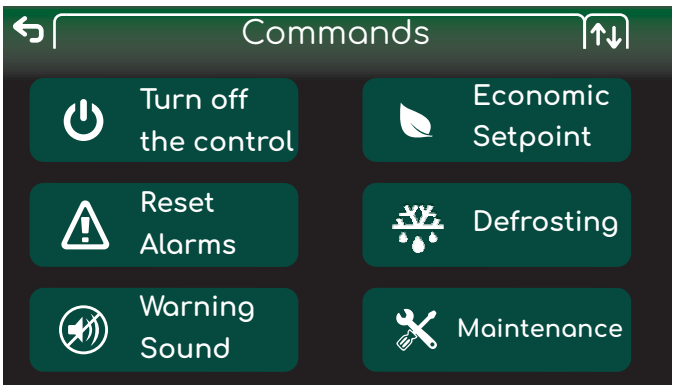
Return to previous screen | Return to Home screen | Toggle element list

### 9.3 Auxiliary navigation

Auxiliary navigation allows you to switch the view between different groups. Press it to navigate between the different configured groups.

### 9.4 Sending commands

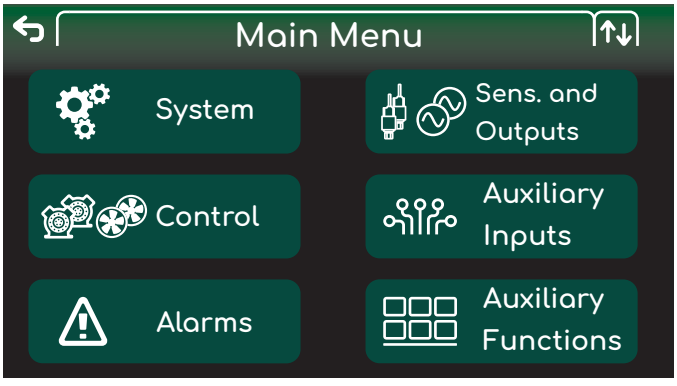
The **FG-HMI 4.3** allows sending commands directly to the electronic controller, safely and conveniently. To access the command sending menu, press the icon. Use the arrow icon to navigate between different configuration options.




### 9.5 Main menu

Press the icon on the home screen to access the **FG-HMI 4.3** Main Menu. On this tab you can access the electronic controller settings. Use the arrow icon to navigate between different configuration options.

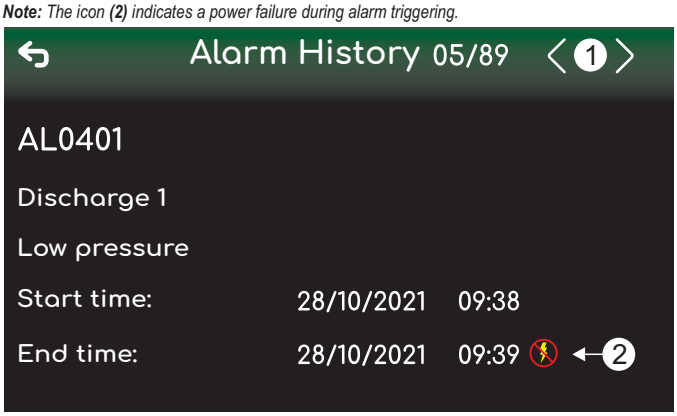
***Note:*** *The configuration options may vary depending on the model of electronic controller used.*




### 9.6 Alarm History

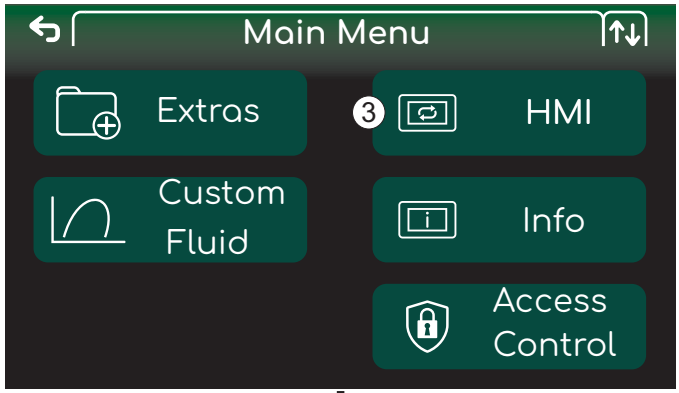
To view the alarm history press the home screen icon . The alarm history shows in detail all alarms activated by the electronic controller. Use the arrows **(1)** in the upper right corner to navigate between the different recorded alarms.

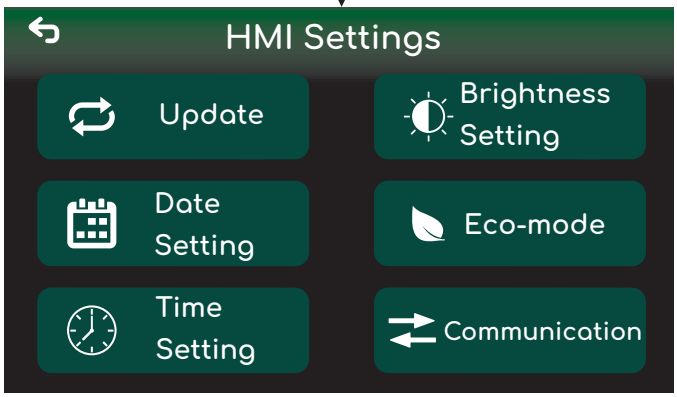
***Note:*** *The icon **(2)** indicates a power failure during alarm triggering.*




### 9.7 HMI Settings

The specific settings of the **FG-HMI 4.3** digital interface are present in the HMI tab **(3)** in the Main Menu.



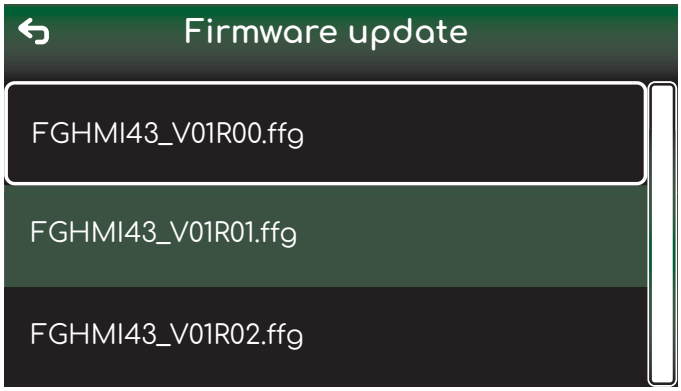

#### 9.7.1 Firmware Update

The interface firmware update is done through the USB port, using a flash drive. Update files are provided by Full Gauge in binary format with the .ffg extension, and must be placed inside a directory called **FG-HMI 4.3** located at the root of the flash drive file system.

***Note 1:*** *The file name must be a maximum of 32 characters.*
***Note 2:*** *The folder must contain a maximum of 32 firmware files.*
***Note 3:*** *The flash drive must be formatted in FAT32.*

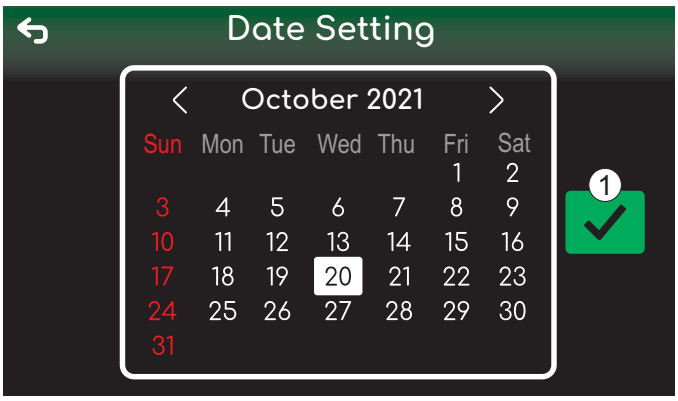
To update, follow these steps:

1. Insert the flash drive with the update file into the USB port of **FG-HMI 4.3**;
2. Access the **Update** tab in the HMI Settings menu;
3. Select the installation file and confirm.



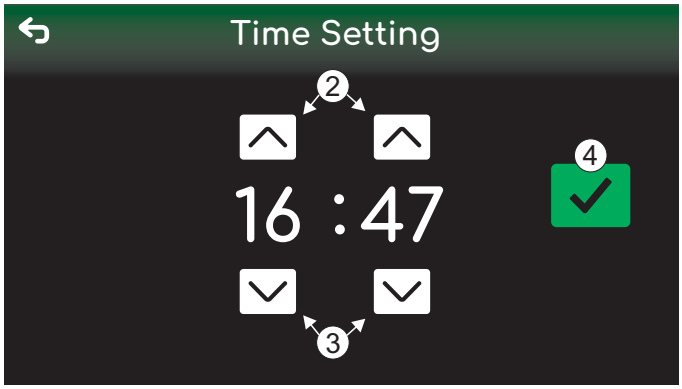
### 9.7.2 Date Setting

To adjust the controller's date, select **Date Setting** from the HMI settings menu. Select the desired day, month and year and confirm **(1)**.



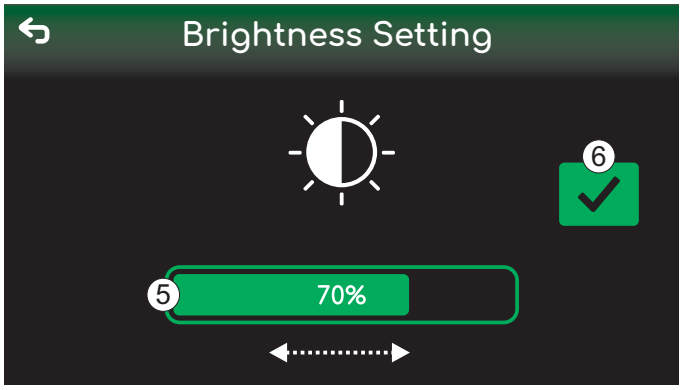

### 9.7.3 Time Setting

To adjust the controller time select **Time Setting** from the HMI settings menu. Use button **(2)** to increase and **(3)** to decrease clock values. After adjustment, press **(4)** to confirm the change.




### 9.7.4 Brightness Setting

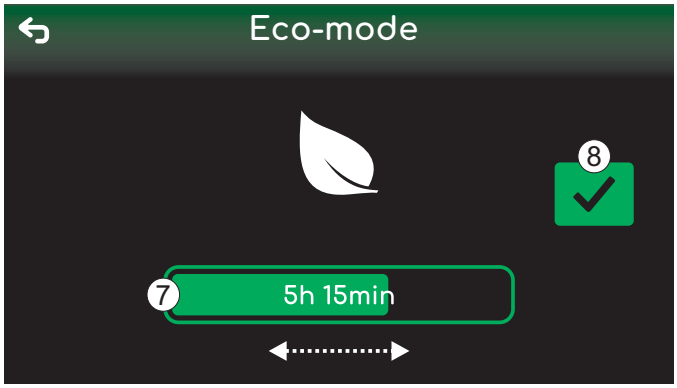
To adjust the screen brightness select **Brightness Setting** from the HMI settings menu. To increase the screen brightness drag the bar **(5)** to the right, to decrease the brightness drag the bar to the left. After adjustment, press **(6)** to confirm the change.




### 9.7.5 Eco-mode

The economy mode has the function of automatically decreasing the screen brightness after a certain period of inactivity using the touch display.

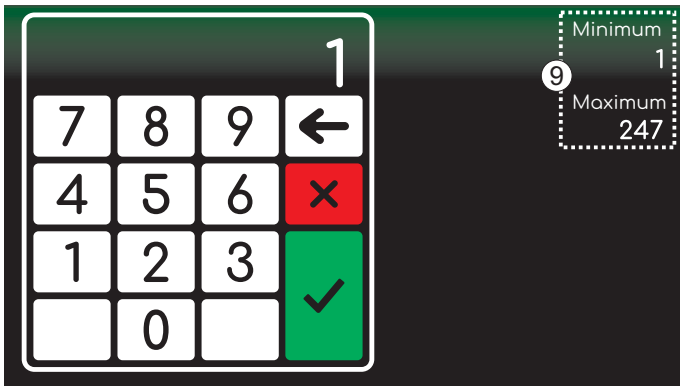
To configure the economy mode activation time interval, select **Eco-mode** from the HMI Settings menu. To increase the activation time, drag the bar **(7)** to the right, to decrease the time, drag the bar to the left. After adjustment, press **(8)** to confirm the change.




### 9.7.6 Communication

The communication tab allows configuration of the instrument's address code on the RS-485 network. For effective communication to occur between the electronic controller and the digital interface, both devices must be configured with the same address. The communication port protocol of the **RCK-862** *plus* must be configured as Sitrad and the address must be the same as in the **FG-HMI 4.3**.

***Note**: The instrument address code on the RS-485 network is made up of numbers that vary between the minimum and maximum allowed by the electronic controller, as indicated in **(9)**.*



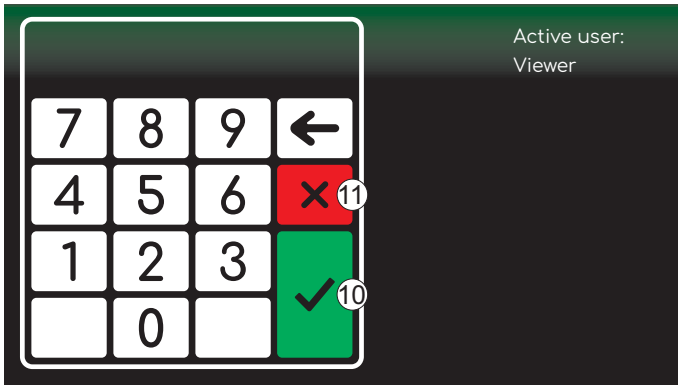

## 10. ACCESS CONTROL

Access control is a feature present in the Main Menu settings list that has the function of changing the device user type through a specific code. The user type delimits which parameters and settings can be changed by the operator. In this way, the **FG-HMI 4.3** guarantees greater safety of use. To change the user, enter the desired code and press confirm **(10)**. To return to the previous screen press cancel **(11)**.

To access as:

- Technician, use code 123;
- Administrator, use code 717.

***Note**: If any invalid code is entered or the **FG-HMI 4.3** is idle for 15 minutes, it automatically returns to **Viewer**.*




## 11. WARRANTY AGREEMENT

**ENVIRONMENTAL INFORMATION**

**Packing:**
The materials used in the packaging of Full Gauge products are 100% recyclable. Try to dispose of it through specialized recycling agents.

**Product:**
The components used in Full Gauge controllers can be recycled and reused if disassembled by specialized companies.

**Disposal:**
Do not burn or dispose of controllers that reach the end of their life span in household trash. Observe the existing effective legislation in your region regarding the disposal of electronic waste. In case of any doubts, contact Full Gauge Controls.

**WARRANTY TERM - FULL GAUGE CONTROLS**

The products manufactured by Full Gauge Controls, from May 2005, have a warranty period of 02 (two) years directly with the factory and 01 (one) year with accredited resellers/dealers, from the date of the consigned sale on the invoice. After this year with resellers, the warranty will continue to be effective if the instrument is sent directly to Full Gauge Controls. This period is valid for the Brazilian market. Other countries have a 2 (two) year warranty. The products are guaranteed in case of manufacturing failure that makes them improper or unsuitable for the applications for which they are intended. The warranty is limited to the maintenance of instruments manufactured by Full Gauge Controls, disregarding other types of expenses, such as indemnification due to damages caused to other equipment.

**EXCEPTIONS TO WARRANTY**

The Warranty does not cover transport and / or insurance costs for sending products with indications of defect or malfunction to Technical Assistance. The following events are also not covered: natural wear of parts, external damage caused by falls or improper packaging of products.

**LOSS OF WARRANTY**

The product will automatically lose its warranty if:
- The instructions for use and assembly in the technical description and the installation procedures present in Standard NBR5410 are not observed ;
- It is subjected to conditions beyond the limits specified in its technical description;
- It is violated or repaired by a person who is not part of Full Gauge's technical team;
- The damage is caused by a fall, blow and / or impact, water infiltration, overload and / or atmospheric discharge.

**WARRANTY USE**

To be covered and benefit from the guarantee, the customer must send the product properly packed, together with the corresponding purchase invoice, to Full Gauge Controls. Shipping costs for products are at customer's costs. It is also necessary to send as much information as possible regarding the detected defect, thus making it possible to streamline the analysis, testing and service.

These processes and eventual product maintenance will only be carried out by Full Gauge Controls' Technical Assistance, at the Company's headquarters- Rua Júlio de Castilhos, 250, CEP 92120-030 - Canoas - Rio Grande do Sul - Brazil.