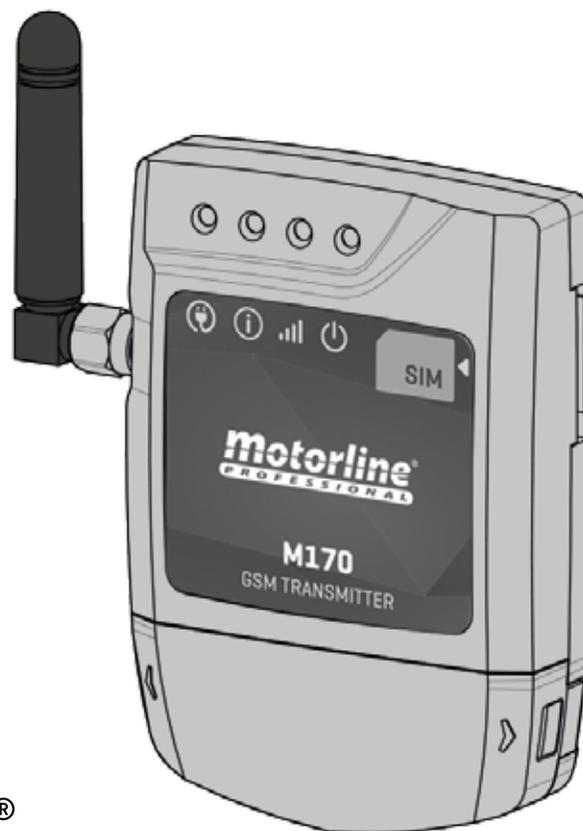




M170

USER'S / INSTALLER'S MANUAL



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01. SAFETY INSTRUCTIONS

STANDARDS TO FOLLOW

ATTENTION:

Importance of the Manual:

- It is important for your safety that these instructions are followed.
- Keep these instructions in a safe place for future reference.

Responsibility:

- The **ELECTROCELOS S.A.** is not responsible for the improper use of the product, or other use than that for which it was designed.
- The **ELECTROCELOS S.A.** is not responsible if safety standards were not taken into account when installing the equipment, or for any deformation that may occur.
- The **ELECTROCELOS S.A.** is not responsible for insecurity and malfunction of the product when used with components that were not sold by the them.

Mechanism use:

- This product was designed and manufactured strictly for the use indicated in this manual. This GSM is not appropriate for inflammable or explosive environments.
- Any other use not expressly indicated may damage the product and / or can cause physical and property damages, and will void the warranty.
- Do not make any changes to the automation components and / or their accessories.
- Keep GSM away from children, to prevent the automated system from being activated involuntarily.
- The customer shall not, under any circumstances, attempt to repair or tune the automatism. Must call qualified technician only.

To Installer:

- The installer must have certified professional knowledge at the level of mechanical assemblies in doors and gates and control board programming. He should also be able to perform electrical connections in compliance with all applicable regulations.
- The installer should inform the customer how to handle the product in an emergency and provide him the manual.

02. THE DEVICE

DEVICE FUNCTIONS

- **Output activation via bluetooth or voice call.**
- **Configuration via android application (bluetooth) or sms.**
- **Allows the configuration of 509 numbers/users.**
- **Users control by time limit.**
- **Configuration by sms:** Add and delete users, change administrator or user password, change the relay's impulse time (Max 99 sec), Enable and disable user control by time limit, Synchronize the device's clock with the date and time of the GSM network.
- **Configuration by Android application (Bluetooth):** configure up to four devices, allows you to activate the output, view, insert, delete, and change users, change and view administrator and user password, view and change the relay's impulse time (Max 99 sec), change the Bluetooth device's name, synchronize the device's clock with the mobile phone's clock, enable and disable control for time limit, check the GSM signal quality and allows you to load a list of users previously prepared.

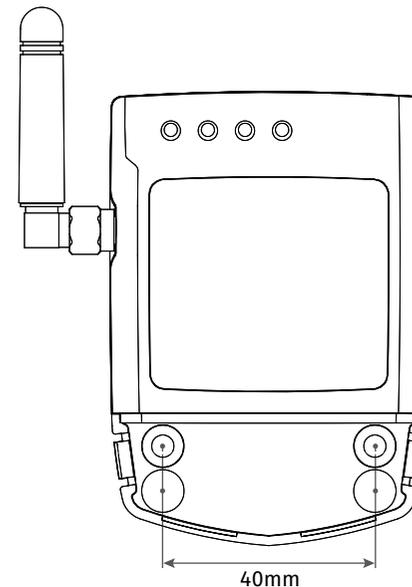
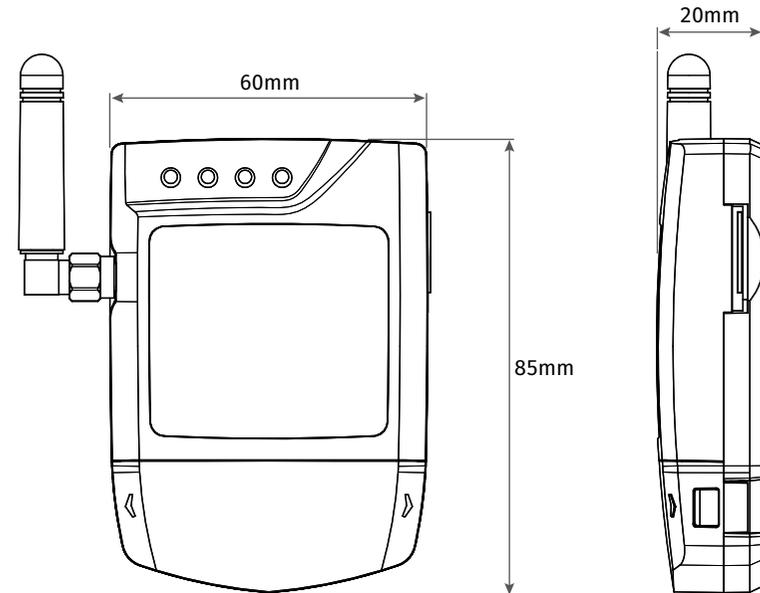
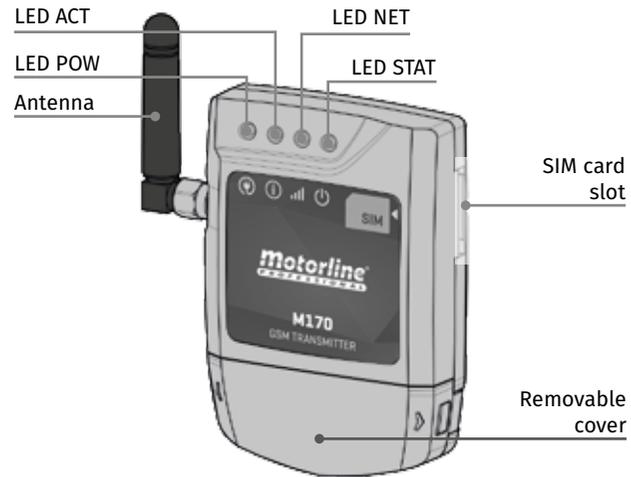
TECHNICAL CHARACTERISTICS

The M170 device was designed to operate equipment remotely (via GSM) via phone call or Bluetooth command.

• Power supply	9-32V DC / 7-24V AC
• Switching max. Capacity	0.5 A to 125 VAC; 1 A to 24 VDC
• Operating Temperature	-40°C~ +85°C
GSM	
• Frequency	Quad-band 850/900/1800/1900MHz
• Power transmission	Compatible with GSM phase 2/2+ Class 4 (2W) to GSM 850 & EGSM 900 Class 1 (1W) to DCS 1800 & PCS 1900
BLUETOOTH	
• Bluetooth Version	3.0 + EDR
• Power Class	1.5
• Frequency Range	2402 – 2480MHz
• Output power	7.5dBm (typical)
• Communication distance	<30m
• Maximum number of simultaneous users	1

02. THE DEVICE

VISUAL APPEARANCE



LED POW

LED OFF	Without power
LED ON	With power

LED ACT

Flashes 1 time	Normal functioning
Flashes 3 times	User control by time limit is active
Flashes 5 times	There is a Bluetooth connection active
Flashes 7 times	User control by time limit and Bluetooth connection active
It remains lit for 3 sec.	An operation was successfully performed
Blinks fast for 3 sec.	An operation was not successfully performed

LED NET

Flashes every 1 sec.	No GSM network
Flashes every 3 sec.	With GSM network

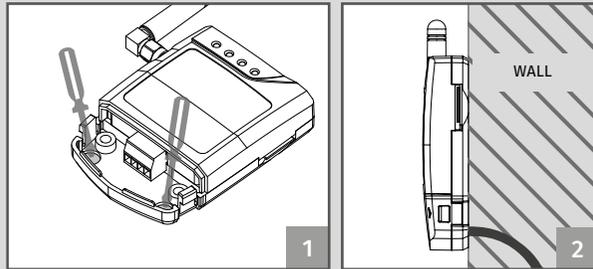
LED STAT

LED OFF	The module is inactive
LED ON	The module is active and functioning

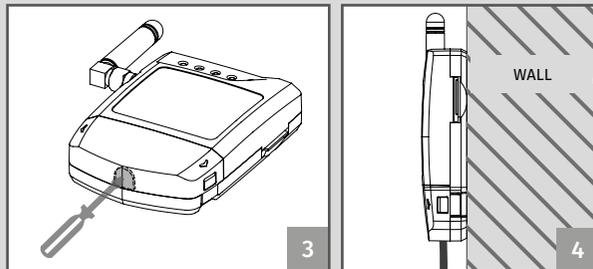
03. INSTALLATION

CABLING

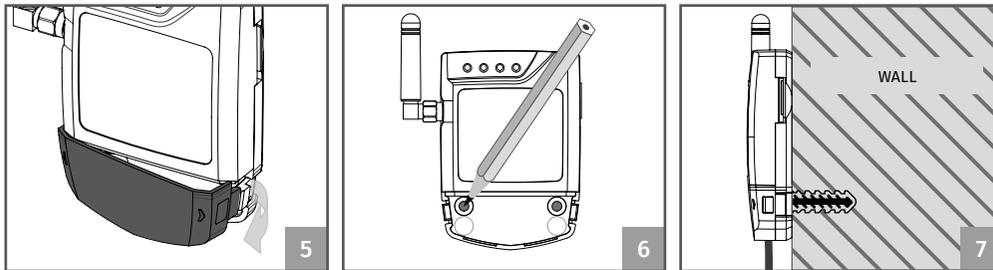
OPTION 1 • Cable exits from behind, into the wall. Use a screwdriver to open one of the marked holes for cable's back passage.



OPTION 2 • Cable comes out from underneath. In this case, the cable is visible from the front, and you should open the passage for the cable on the cover as shown in the image.



FIXATION



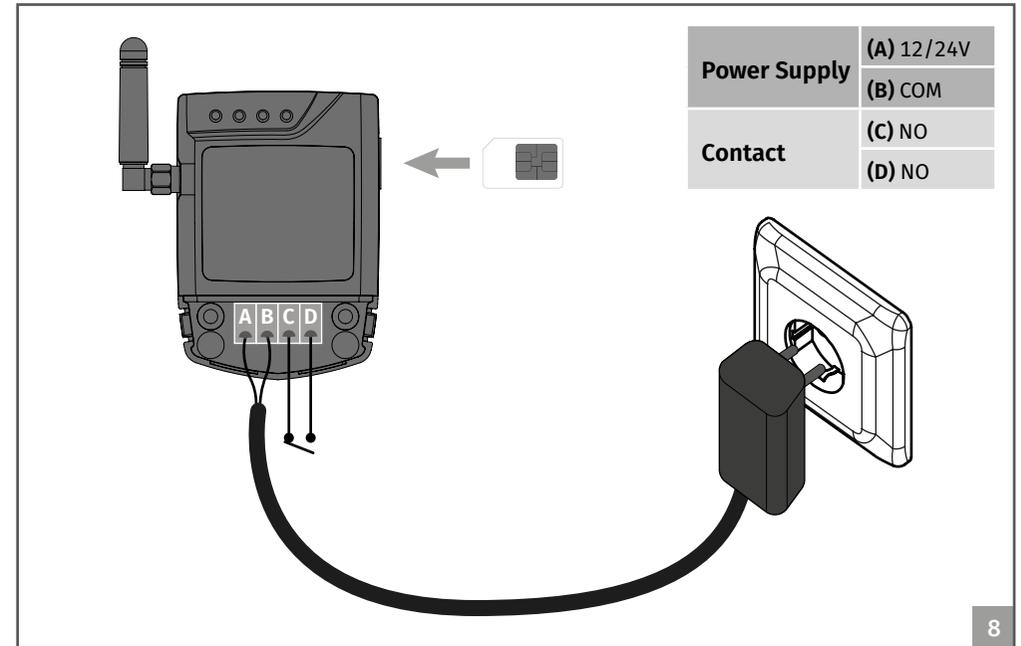
01 • Remove the equipment cover by pulling the side hooks.

02 • Mark the two fixing holes. **03** • Make the holes.

04 • Secure the equipment used suitable dowels and screws.

03. INSTALLATION

CONNECTIONS



01 • Delete the SIM card PIN (Refer to the mobile phone manual you use for this purpose).

02 • Insert the SIM card into the M170 until you hear a click.

03 • Connect the device to the power supply.

The device will act as follows:

04 • LED POW and LED ACT turn on.

04a • A second later, the **STAT LED** and the **NET LED** will start blinking with intervals of 1 second.

04b • The **LED NET** captures GSM network and blinks with intervals of 3 seconds.

04c • Wait for the **ACT LED** to flash with intervals of 3 seconds (approximately 10 seconds after turning on the power).

05 • You can start programming the device.



This process should last approximately 10 seconds.



The GSM card must have a minimum balance (at least the necessary to send 3 messages).

04. CONFIGURATION THROUGH SMS

PARAMETERS DESCRIPTION

SA	Change Administrator Password
SU	Change User Password
AU	Add User
DU	Remove User
CL	Remove All Users
ST	Change Relay's Impulse Time
SO	Configure The Phone Number Associated To The Device's Card
TE	Activate Time Limit
TD	Deactivate Time Limit
SC	Force the clock's update with the GSM network

CHANGE ADMINISTRATOR PASSWORD

The administrator can perform any operation on the device. The default administrator password (**SA**) is 9999. The **ACT LED** lights for 3 sec to confirm the operation.

- | | |
|--|---------------------------------|
| 1 ^o Admin. Password (9999) | 5 ^o New password |
| 2 ^o Space | 6 ^o Space |
| 3 ^o Option Parameter (SA) | 7 ^o Confirm password |
| 4 ^o Space | 8 ^o Send SMS |



9

CHANGE BLUETOOTH USER PASSWORD

The user only uses the password to activate the output via bluetooth. You can not therefore perform any configuration. The default user password is 1111.

- | | |
|--|---------------------------------|
| 1 ^o Admin. Password (9999) | 5 ^o New password |
| 2 ^o Space | 6 ^o Space |
| 3 ^o Option Parameter (SU) | 7 ^o Confirm password |
| 4 ^o Space | 8 ^o Send SMS |



10

ADD USER WITHOUT TIME LIMIT INDICATION

You can add up to 8 users in a single message.

- | | |
|--|---------------------------|
| 1 ^o Admin. Password (9999) | to be memorized, |
| 2 ^o Space | separated by a space (see |
| 3 ^o Option Parameter (AU) | example image). |
| 4 ^o Space | 6 ^o Send SMS |
| 5 ^o After this, add the numbers | |



11

04. CONFIGURATION THROUGH SMS

ADD USER WITH TIME LIMIT INDICATION



Before setting parameters where time is applied (24h format), you must update the device's clock with the network's clock. Send message with: **9999 SC**.



It is possible to add users with time limit, up to a maximum of 8 users. Whenever a time limit is used, the time must be preceded by a H.

- | | |
|--|------------------------------|
| 1 ^o Admin. Password (9999) | 9 ^o Colon |
| 2 ^o Space | 10 ^o Entry Minute |
| 3 ^o Option Parameter (AU) | 11 ^o Dash |
| 4 ^o Space | 12 ^o Exit Hour |
| 5 ^o Cellphone Number | 13 ^o Colon |
| 6 ^o Space | 14 ^o Exit Minute |
| 7 ^o Option Parameter (H) | 15 ^o Send SMS |
| 8 ^o Entry Hour | |



12

ADD USER WITH AND WITHOUT TIME LIMIT

It is possible to add users with or without time limit, up to a maximum of 8 users.

- | |
|--|
| 1 ^o Admin. Password (9999) |
| 2 ^o Space |
| 3 ^o Option Parameter (AU) |
| 4 ^o Space |
| 5 ^o From here, add the numbers you want (up to the total of 8). You can add numbers with and without time indication (see example image). |
| 6 ^o Send SMS |

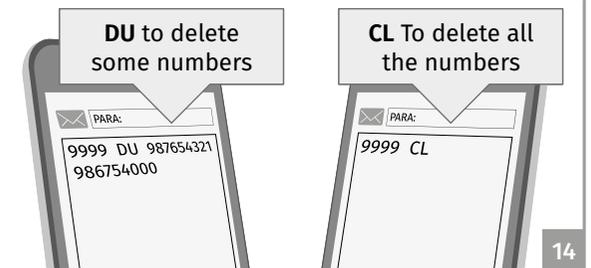


13

REMOVE USER(S)

You can delete up to 8 users in a single message, or delete them all at once.

- | |
|---|
| 1 ^o Admin. Password (9999) |
| 2 ^o Space |
| 3 ^o Option Parameter (DU) |
| 4 ^o Space |
| 5 ^o From here, add the numbers you want to delete, separated from each other by a space (see example image). |
| 6 ^o Send SMS |



14

04. CONFIGURATION THROUGH SMS

CHANGE RELAY IMPULSE TIME

The maximum impulse time is 99 seconds.
The default time is 1 second.

- | | |
|---------------------------|---------------------------|
| 1º Admin. Password (9999) | 5º Impulse Time (in sec.) |
| 2º Space | 6º Send SMS |
| 3º Option Parameter (ST) | |
| 4º Space | |



15

INDICATE THE PHONE NUMBER ASSOCIATED TO THE DEVICE'S CARD

The configuration of this phone number is essential so that the device can synchronize the internal date and time. It is also essential for the proper operation of "User's control by time limit" mode.

- | | |
|---------------------------|---------------------------|
| 1º Admin. Password (9999) | 4º Space |
| 2º Space | 5º Card associated number |
| 3º Option Parameter (SO) | 6º Send SMS |



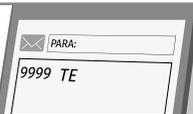
16

 If you change SIM cards, you must reset the number associated with the device and associate the new number. To reset, use #.



ENABLE OR DISABLE THE USER'S CONTROL BY TIME LIMIT

Enable
time
limit



Disable
time
limit



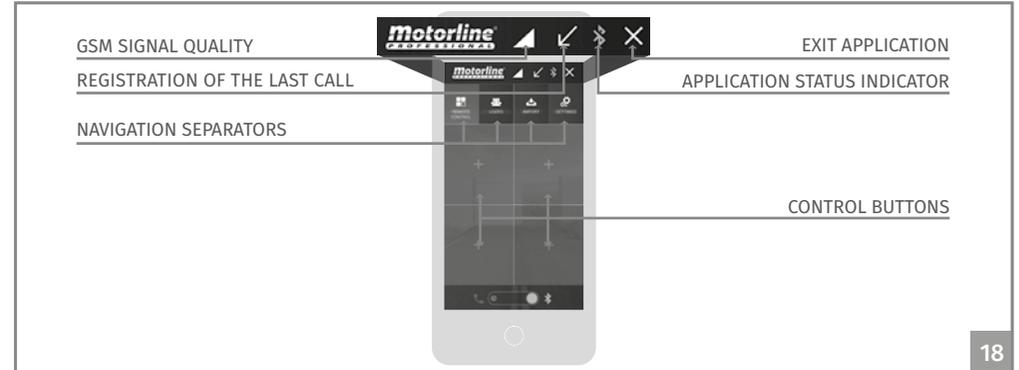
17

OUTPUT ACTIVATION THROUGH VOICE CALL

To activate the device output contact, you need to make a voice call device's card number. Only users added to the device memory are allowed to activate relay output. NIn the case of users with time limit (assuming synchronized the internal clock), you can only activate the output if you call within this same limit set to that number. **The same number with and without calling code is understood by the device as a different number. Therefore, it is necessary to ensure that the stored memory number is exactly the same as the voice call.**

05. CONFIGURATION THROUGH APP

INITIAL GRAPHIC INTERFACE



18

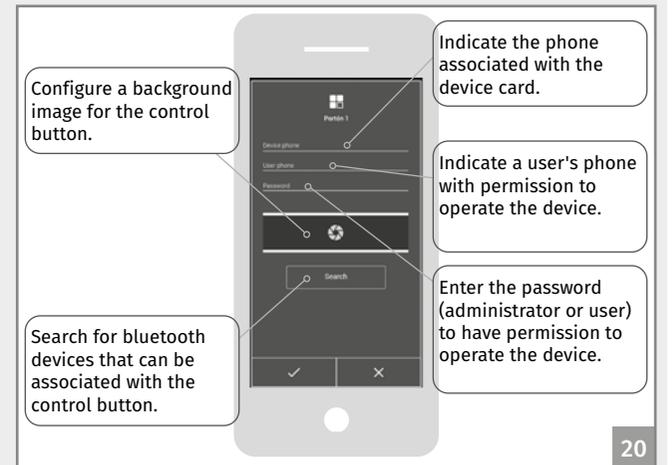


- **Android 4.1 (Jelly Bean)**, is the minimum version to use the application.
- After **60 seconds** without pressing any buttons in the app, the phone is no longer connected to the device.

CONTROL BUTTON CONFIGURATION



19

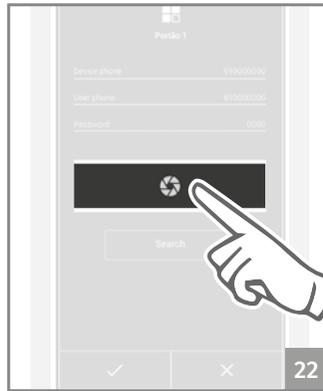


20

- 1 • Press the control button for 2 seconds.
- 2 • The dialog box for configuring this control button appears.

05. CONFIGURATION THROUGH APP

CONTROL BUTTON CONFIGURATION

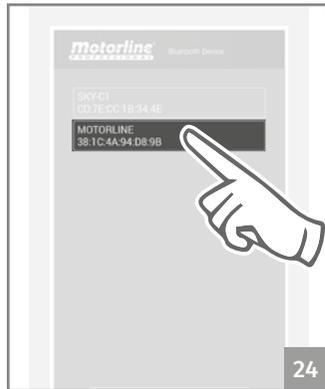


3 • Fill in the requested data.

4 • Click the icon to change the control button's identifying image.

Short click - Enters the camera;
Long click - Enter the image gallery.

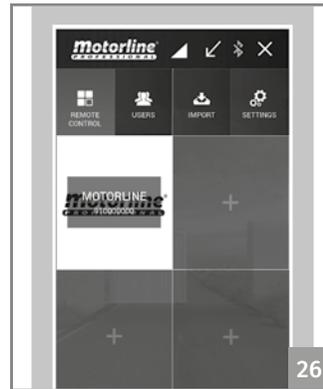
5 • Press search to associate a bluetooth device with the control button.



6 • Select one of the detected devices.



7 • Press ✓ to complete.



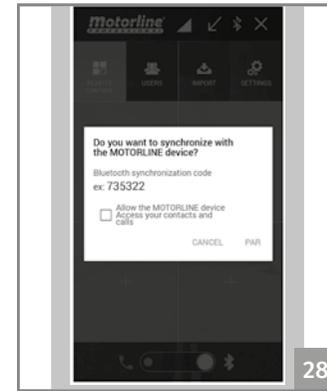
8 • A description with the name and number of the connected device will appear on the button area.

05. CONFIGURATION THROUGH APP

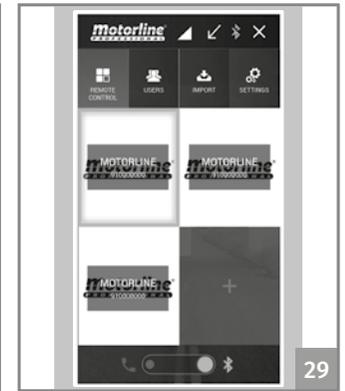
ADD A USER



1 • Short press the command button for the device on which you want to add the new user.



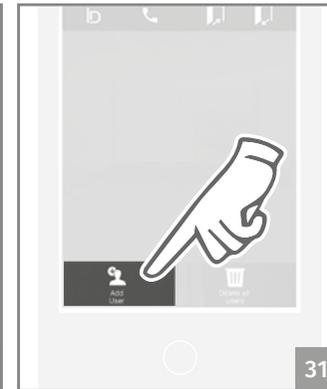
2 • When you use the command button for the first time, you will receive a notification to pair with the device. Press **PAR**.



3 • The command button's image frame turns blue, confirming the success of the operation.



4 • Select the **Users** tab.



5 • Press in the indicated area.



6 • Enter the phone number of the user to add and the daily time limit. Press ✓ to confirm.

05. CONFIGURATION THROUGH APP

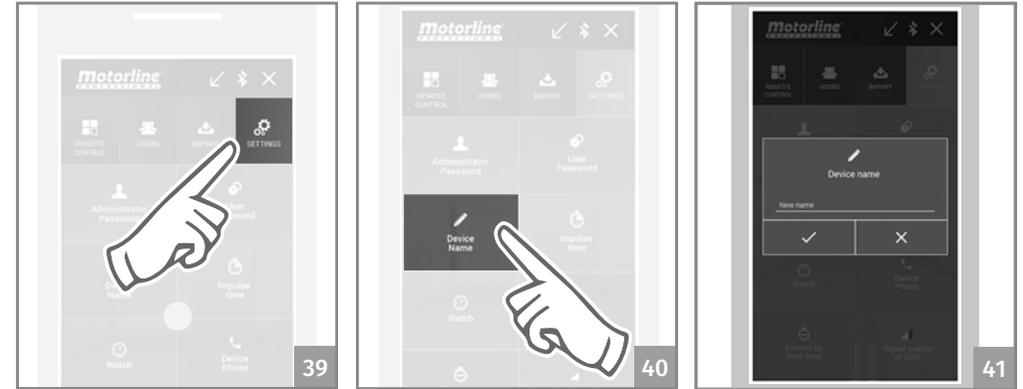
ADMINISTRATOR'S PASSWORD CONFIGURATION



- 1 • Select the **Settings** tab.
- 2 • Continuously click the button associated with the administrator password.
- 3 • Enter the new password 2 times and press ✓ to confirm.

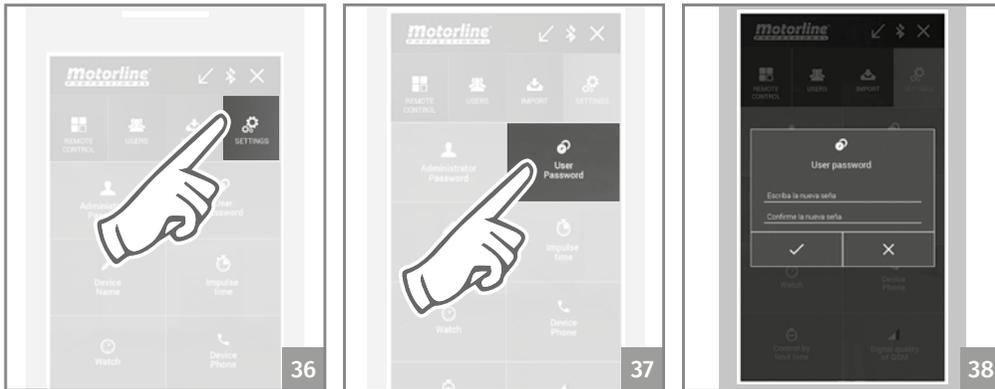
05. CONFIGURATION THROUGH APP

DEVICE'S NAME CONFIGURATION



- 1 • Select the **Settings** tab.
- 2 • Click and hold the button associated with the device name.
- 3 • Enter a new name and press ✓ to confirm.

USER'S PASSWORD CONFIGURATION



- 1 • Select the **Settings** tab.
- 2 • Continuously click the button associated with the user password.
- 3 • Enter the new password 2 times and press ✓ to confirm.

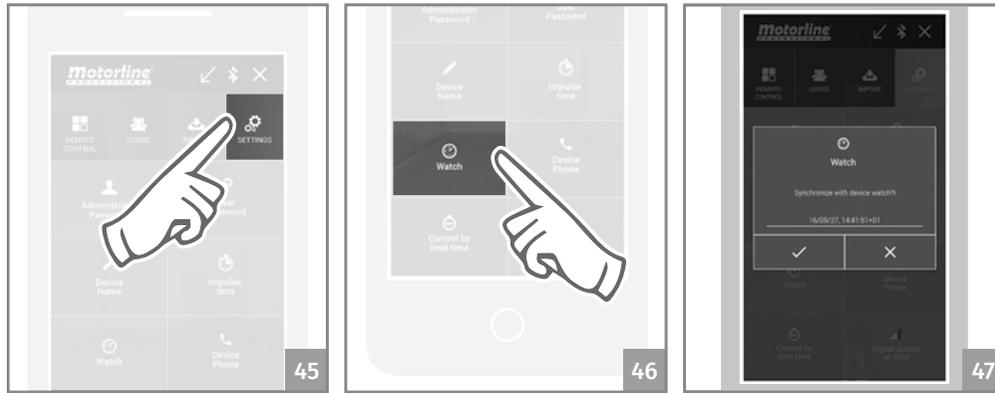
IMPULSE TIME CONFIGURATION



- 1 • Select the **Settings** tab.
- 2 • Press and hold the button associated with the impulse time.
- 3 • Select the desired pulse time and press ✓ to confirm.

05. CONFIGURATION THROUGH APP

SYNCHRONIZING DEVICE'S WATCH WITH PHONE WATCH

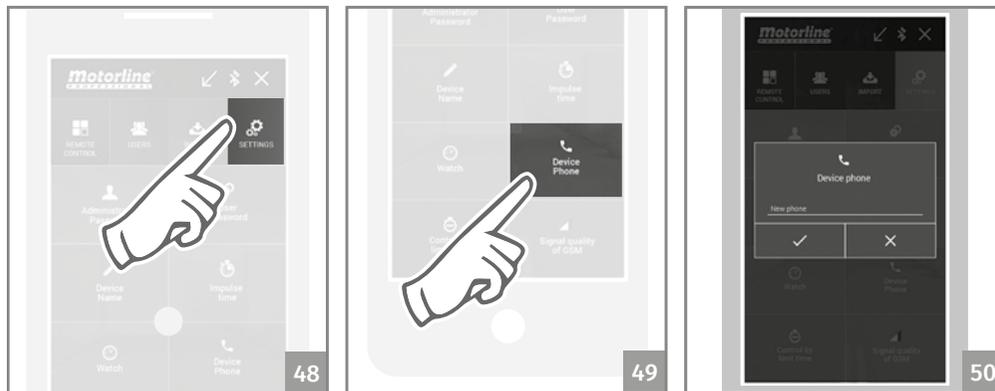


- 1 • Select the **Settings** tab.
- 2 • Continuously press the button associated clock.
- 3 • Press ✓ to synchronize the device clock.



If the clock synchronization is not successful try again until it is correct. This is the only way to ensure correct operation when there is a scheduled time limit.

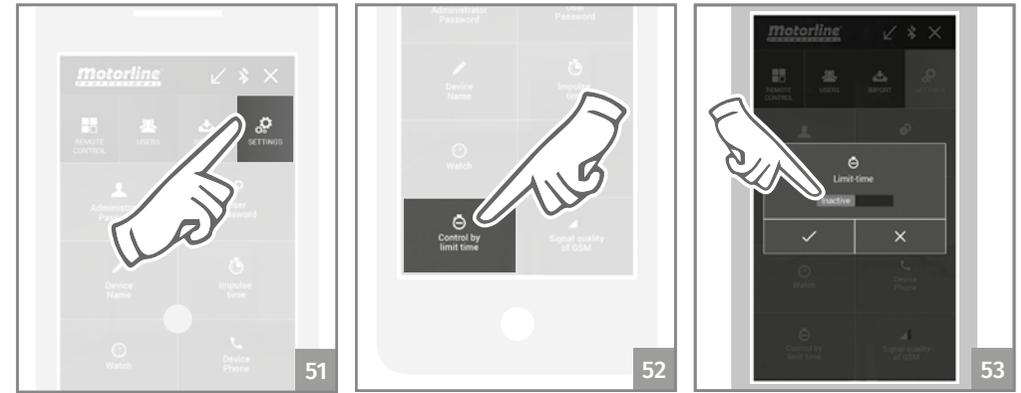
DEVICE'S PHONE CONFIGURATION



- 1 • Select the **Settings** tab.
- 2 • Continuously click the device's phone button.
- 3 • Enter the new phone and press ✓ to confirm.

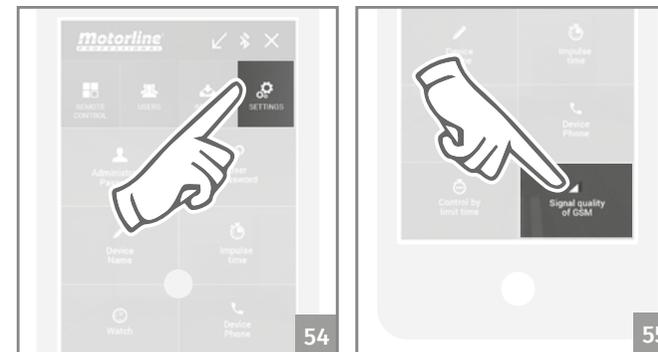
05. CONFIGURATION THROUGH APP

TIME LIMIT CONTROL CONFIGURATION



- 1 • Select the **Settings** tab.
- 2 • Continuously click the time limit control button.
- 3 • Select the desired option and press ✓ to confirm.

CHECK DEVICE'S GSM NETWORK STATUS



- 1 • Select the **Settings** tab.
- 2 • Select the GSM signal quality button.

3 • It is presented with a warning on the signal quality GSM device.

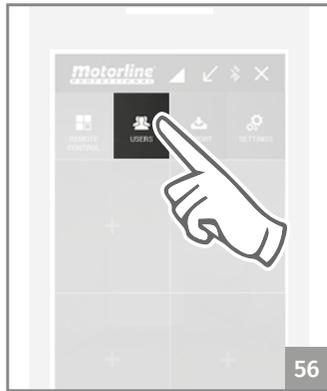
VERIFY DEVICE'S SETTINGS



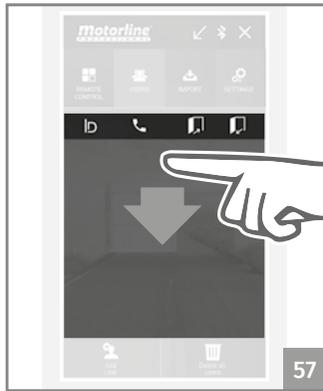
Press (short) one of the indicated options to see the current device configuration. The administrator password and device name can not be queried.

05. CONFIGURATION THROUGH APP

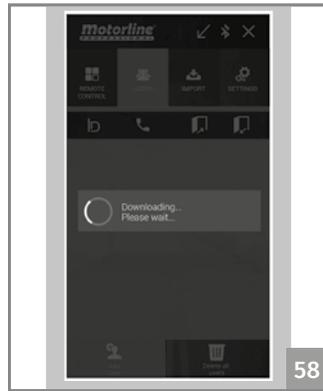
VIEW ALL USERS



1 • Select the **User's** tab.



2 • Click on the indicated area.



3 • The following dialog box will appear. Wait until the operation is complete.

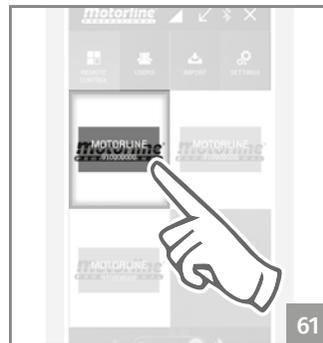
ENABLE DEVICE OUTPUT



1 • Press, with a short-click, the control button for the device you want to activate the exit.



2 • The image of the command button gets a blue frame around it, confirming the success of the operation.



3 • With a new click, the device output will be activated. After 60 seconds without performing any operation the connection will be terminated.



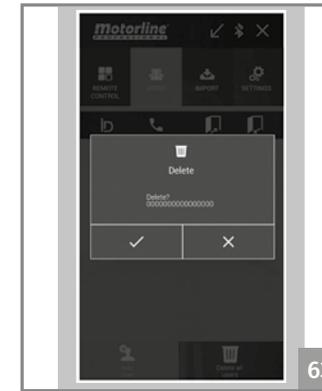
When you give an order in the set button, the device **ACT LED** will light up for 3 seconds.

05. CONFIGURATION THROUGH APP

REMOVE USERS



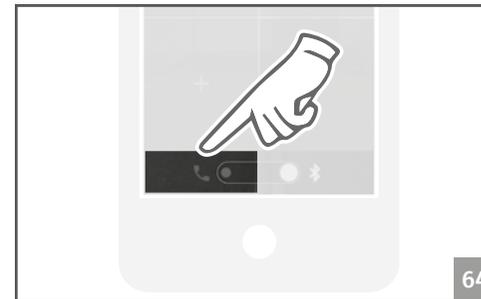
1 • On the **Users** tab, go to the list of all users.



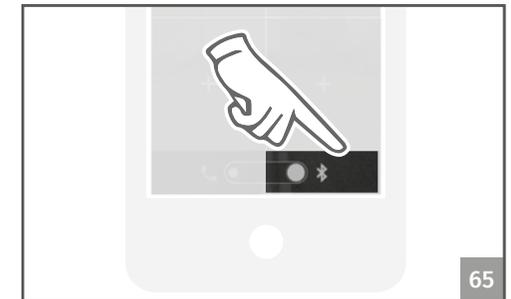
2 • Click (short) the user you want to delete. Press ✓ to delete.



SWITCH BETWEEN BLUETOOTH AND CALL / SMS



• When this function is enabled, a telephone call will be used (clicking on the button) to activate the relay output and for any configuration operation, an SMS will be sent.



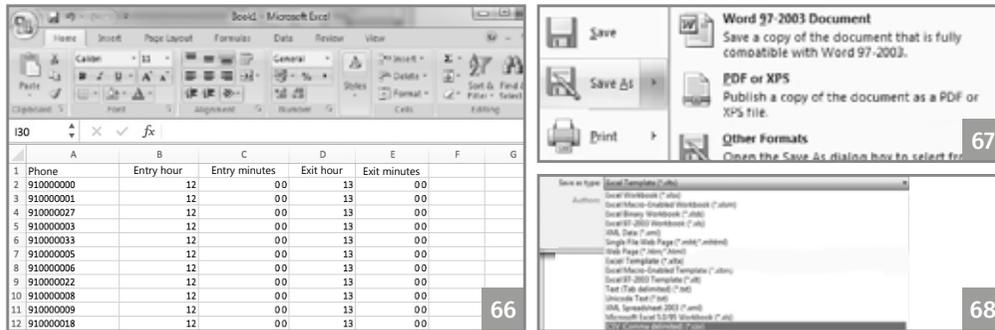
• When you activate this function, bluetooth connection will be used to perform any operation.



It is recommended to activate the output via a telephone call because communication is less susceptible to environmental interference. Bluetooth communication, under adverse environmental conditions, may have a reduced range (GSM behind walls, inside boxes or in a high electromagnetic noise environment).

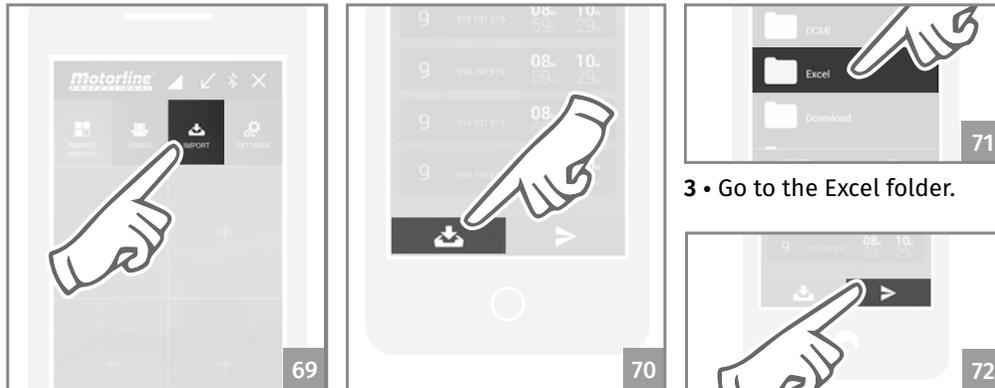
06. IMPORT USERS

CREATE A LIST OF USERS THROUGH EXCEL



- 1 • Create a list in the Excel program taking (exactly) into account the template shown in the image.
- 2 • In the first line, place (obligatorily) the headers.
- 3 • Format all cells for text and fill in the data.
- 4 • Save the file in the "CSV (Comma Separated)" format.
- 5 • Transfer this file to your phone and place it where you have the application installed.

LOAD THE LIST AND SEND TO THE DEVICE



- 1 • Select the **Import** tab.
- 2 • Click on the indicated area.
- 3 • Go to the Excel folder.
- 4 • Press the indicated area and wait until the operation is complete.



Loading the list of users through excel can take up to 4 minutes.

07. TROUBLESHOOTING

FINAL CONSUMERS INSTRUCTIONS

INSTRUCTIONS FOR SPECIALIZED TECHNICIANS

Anomaly	Procedure	Behavior	Discovering the origin of the problem
I added a number but I can not activate the GSM output via phone call.	Connect through the bluetooth application to the device and list the users. Check if the number is listed and appears exactly as you entered.	It does not appear in the list.	Try to add the number again. Check if: <ol style="list-style-type: none"> 1 • The number consists only of digits (without any space or other character). 2 • The phone number does not exceed 15 digits. 3 • The password is correct. 4 • The option parameter symbol is the correct one. 5 • You did not enter two spaces instead of one.
		The number appears in the list and is as entered.	<ol style="list-style-type: none"> 1 • You did not enter two spaces instead of one. 2 • Check the number that made the last call. 3 • Compare this number with that added to the device.
I can not connect through the bluetooth application.	<ol style="list-style-type: none"> 1 • Check how often the ACT LED flashes. 	Blinks 5 or 7 times.	<ol style="list-style-type: none"> 1 • There is an active Bluetooth connection on the device. 2 • Ensure that no other user is performing operations on the device. 3 • If no one else is connected, wait 30 seconds for it to be automatically turned off.
		Blinks 1 or 3 times.	<ol style="list-style-type: none"> 1 • Make sure you can find the device by searching for devices in the bluetooth application. 2 • Check the strength of the bluetooth signal from where you are trying to connect through in-app search. 3 • Check if the distance to the device is within range and that there are no environmental barriers (eg walls) that could degrade communication with the device.
The control by time limit is not as defined schedule.	<ol style="list-style-type: none"> 1 • Connect via bluetooth and check the date and time set on the device. 2 • Set the time and date in case of an error. 3 • Turn off the power. 4 • Turn the power back on. 5 • Test the limit control. 	If you restart the device (power off and on again) the time limit control stops working.	<ol style="list-style-type: none"> 1 • Check your SIM card balance.