



# MC112 - MC113





USER'S AND INSTALLER'S MANUAL



## 00. SAFETY INSTRUCTIONS

### STANDARDS TO FOLLOW

#### ATTENTION:

	This product is certified in accordance with European Community (EC) safety standards.
	This product complies with Directive 2011/65/EU of the European Parliament and of the Council, of 8 June 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
	(Applicable in countries with recycling systems). This marking on the product or literature indicates that the product and electronic accessories (eg. Charger, USB cable, electronic material, controls, etc.) should not be disposed of as other household waste at the end of its useful life. To avoid possible harm to the environment or human health resulting from the uncontrolled disposal of waste, separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Home users should contact the dealer where they purchased this product or the National Environment Agency for details on where and how they can take these items for environmentally safe recycling. Business users should contact their vendor and check the terms and conditions of the purchase agreement. This product and its electronic accessories should not be mixed with other commercial waste.
	This marking indicates that the product and electronic accessories (eg. charger, USB cable, electronic material, controls, etc.) are susceptible to electric shock by direct or indirect contact with electricity. Be cautious when handling the product and observe all safety procedures in this manual.

## 00. SAFETY INSTRUCTIONS

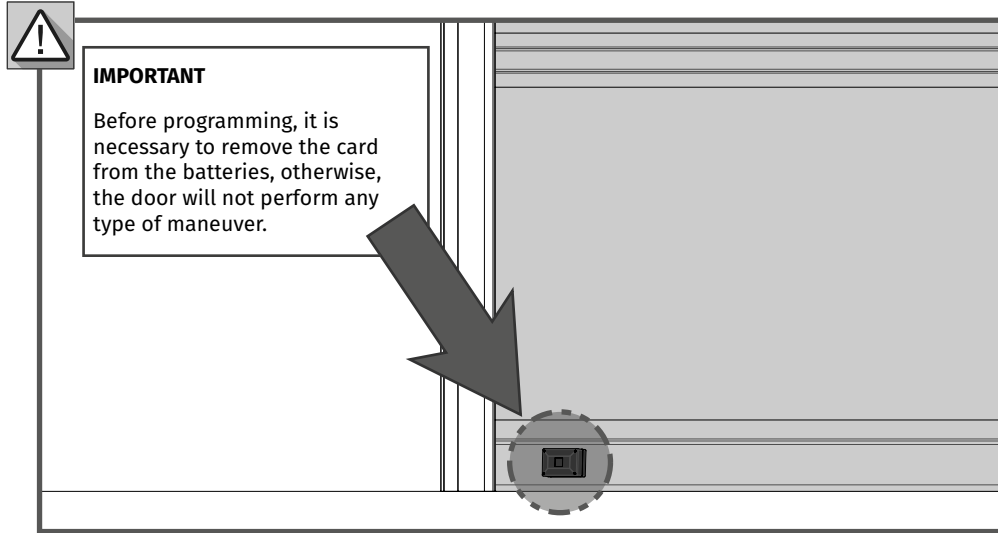
### STANDARDS TO FOLLOW

- It is important for your safety that these instructions are followed.
- Keep these instructions in a safe place for future reference.
- 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.
- This product was designed and manufactured strictly for the use indicated in this manual.
- This control board 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.
- Control board for indoor use with 110V/230V connection.
- Keep remote controls 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.
- The installer should inform the customer how to handle the product in an emergency and provide him the manual.
- 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.
- This device can be used by children 8 year old or older and persons whose physical, sensory or mental capacities are reduced, or by persons without experience or knowledge if they have received supervision or instructions on the use of the device in a safe manner and understood the hazards involved. Children should not play with the device. Cleaning and maintenance by the user must not be carried out by unsupervised children.
- Before installing, the installer must verify that the temperature range indicated on the automatism is appropriate to the location of the installation.

# 00. SAFETY INSTRUCTIONS

## STANDARDS TO FOLLOW

- When programming the control unit, pay particular attention to touching only the location intended for that purpose. Failure to do so may result in electric shock.



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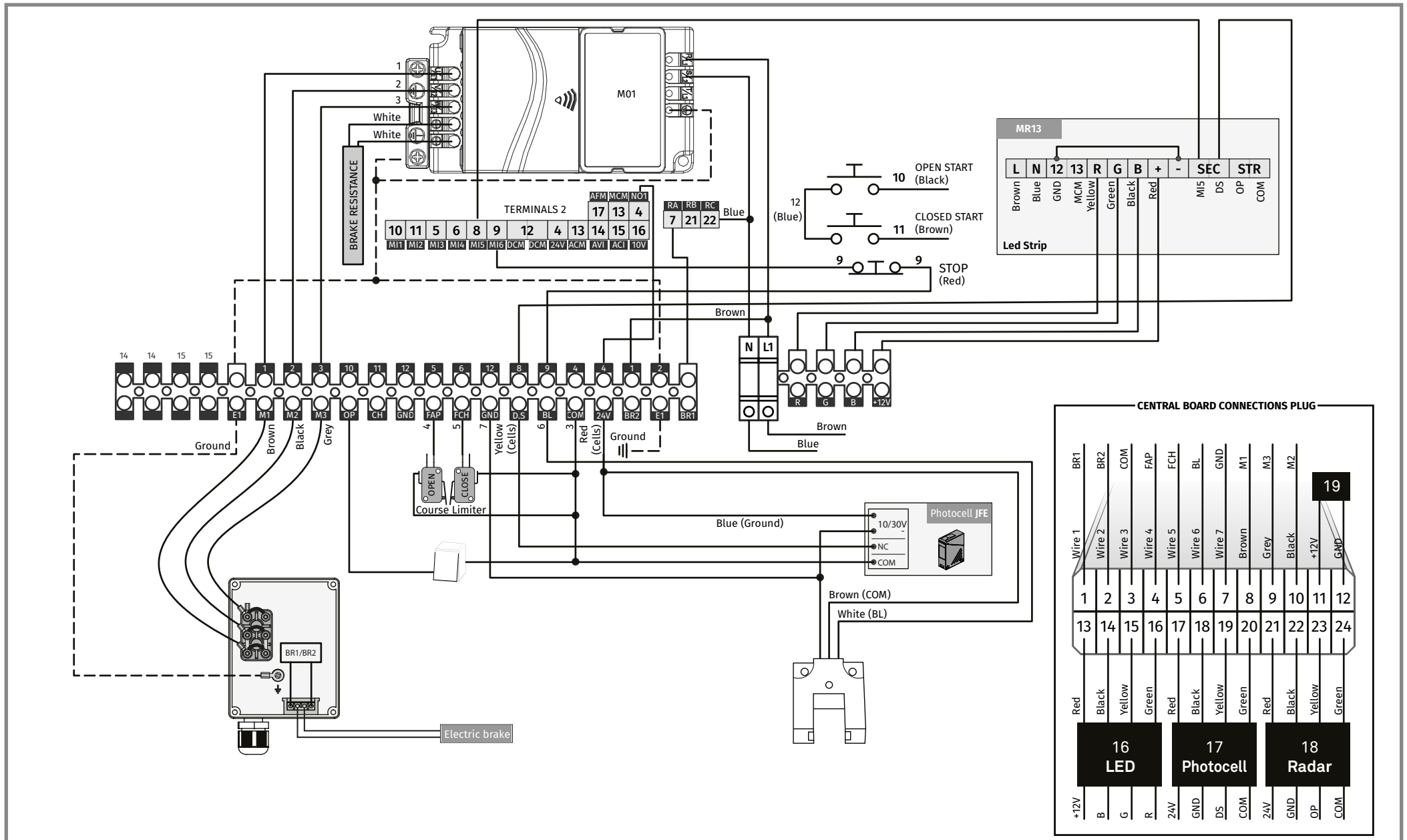
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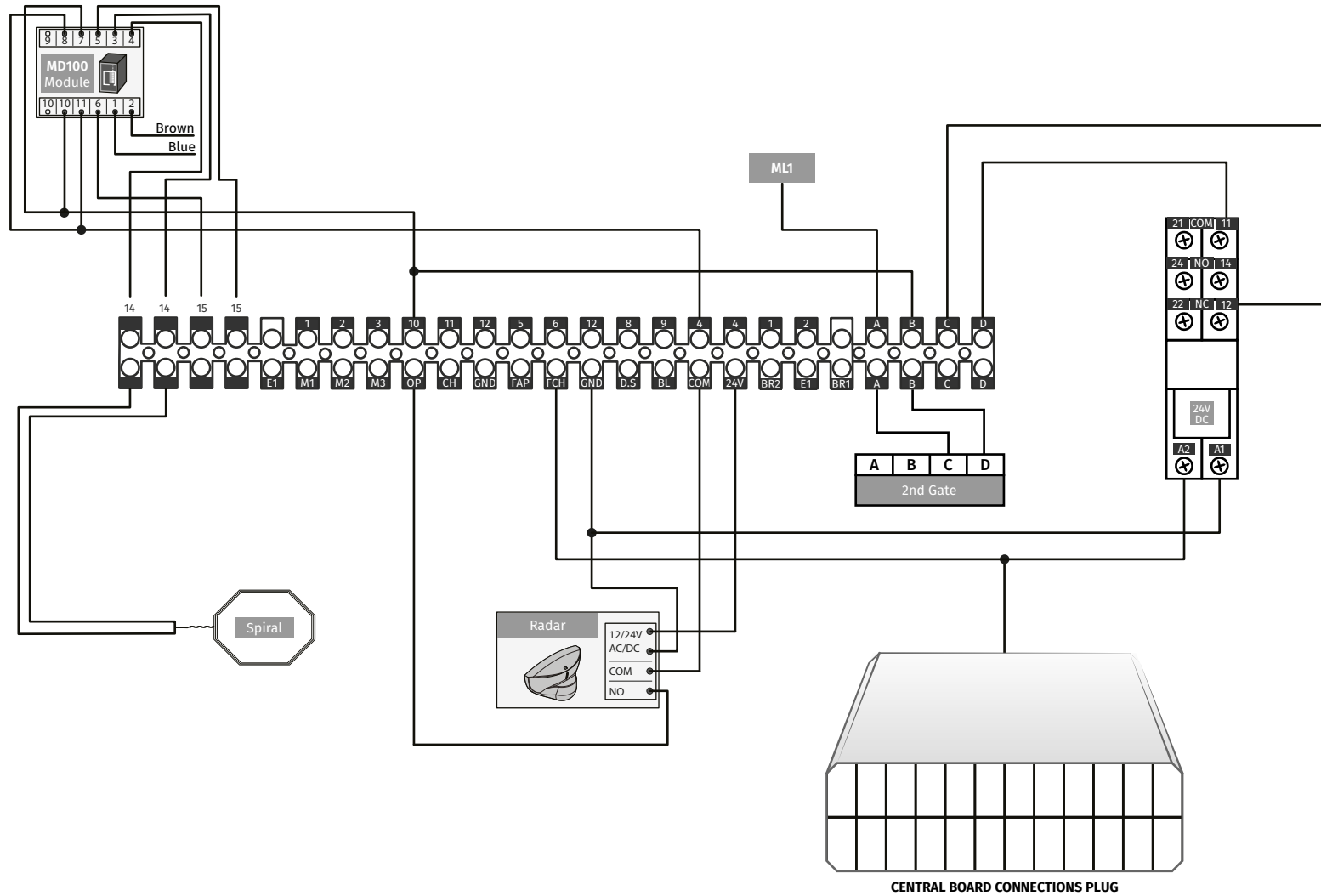
# 02. CONNECTION SCHEME

## COMPONENTS CONNECTION



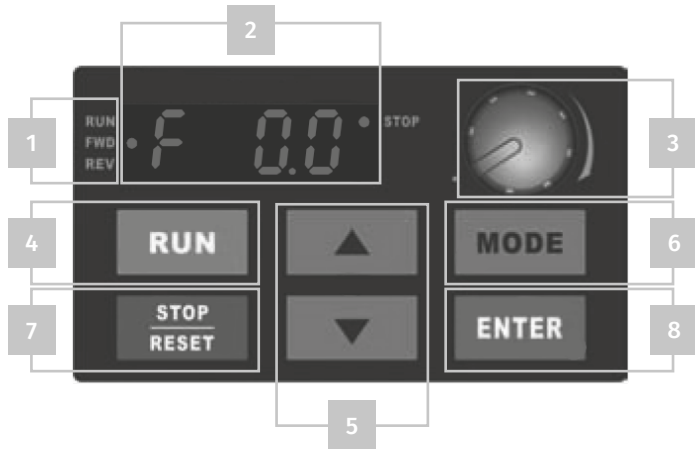
# 02. CONNECTION SCHEME

## CONNECTION OF EXTRA COMPONENTS



## 03. DESCRIPTIONS

### DIGITAL NUMBER KEYBOARD



1	<b>Status Display</b> Shows the current state of the control board
2	<b>LED Display</b> Indicates the frequency, voltage, current, user-defined units, etc.
5	<b>Up and Down arrows</b> Set the number of parameters and change the numeric data for main frequency
6	<b>MODE</b> Change in the different exhibition modes
7	<b>STOP/RESET</b> Restarts the device after a failure occurs
8	<b>ENTER</b> Used to enter / change programming parameters

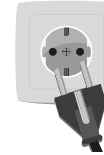


• 3 and 4 can not be used.

• Only the menus on page 5A can be set by the user. Any changes made in a menu other than those on page 5A will void the warranty. Motorline is not responsible for damage, if this statement is not respected.

## 03. DESCRIPTIONS

### MENU 5 ACCESS



1 Turn off the power. Display will turn off.



2 Click **MODE** until you find the H function.



3 Press **ENTER** to enter H.



4 Use the arrow keys to find the value **05**.



5 Press **ENTER** to enter **05**.



See page 6A for menu navigation.

## 03. DESCRIPTIONS

### MENU 5

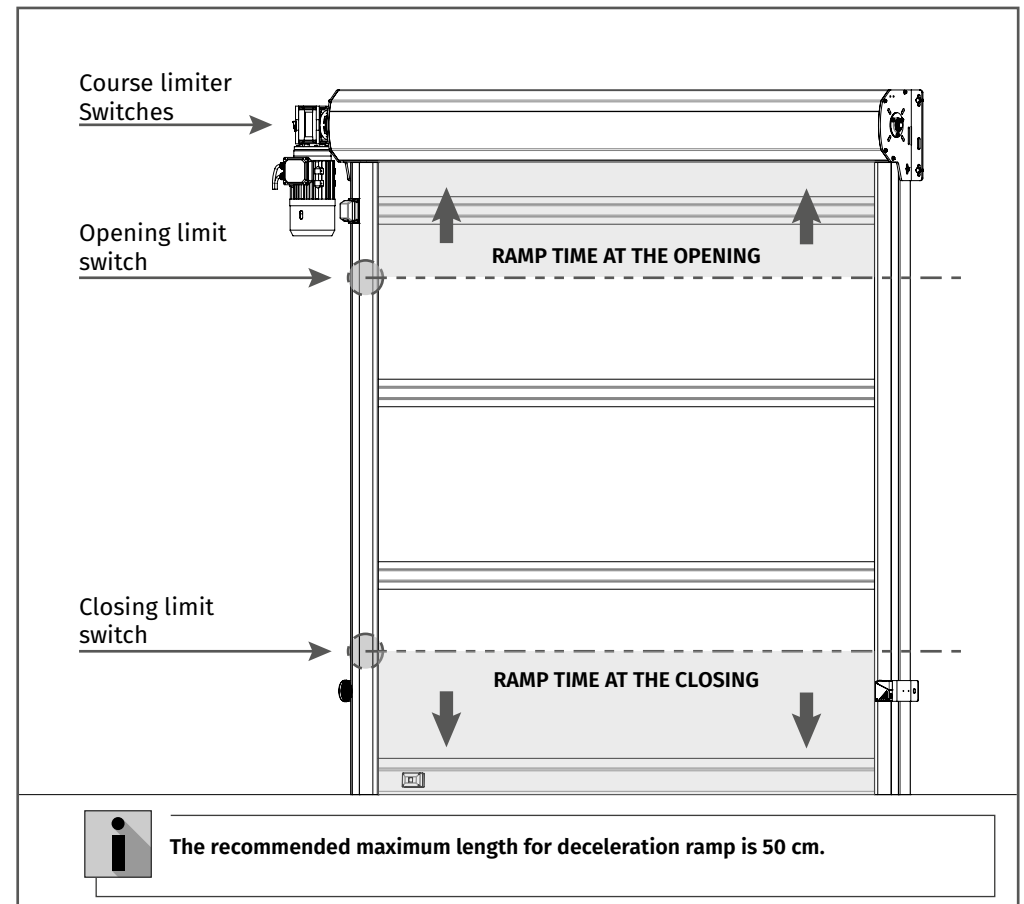
Parameter	Function	Settings	Factory setting
05.00	<b>OPENING SPEED</b> Allows you to set the door speed during opening.	00.00 to 90.00 Hz	50.00 to 70.00 Hz
05.01	<b>CLOSING SPEED</b> Lets you set the door speed during closing.	00.00 to 90.00 Hz	40.00 to 60.00 Hz
05.02	<b>SLOW DOWN TIME AT OPENING</b> Allow to set the relanty time after the end of the opening course limiter. <b>NOTE</b> • When changing the speed of the door it is necessary to readjust this parameter.	00.00 to 00.99 (ex: 00.99 = 9.9 sec.)	00.08 (0.8 seconds)
05.03	<b>DECELERATION RAMP TIME IN CLOSURE</b> Allow to set the deceleration time after the end of the closure course limiter. <b>NOTE</b> • When changing the speed of the door it is necessary to readjust this parameter.	00.00 to 00.99 (ex: 00.99=9.9 sec.)	00.08 (0.8 seconds)
05.04	<b>INVERSE DECELERATION RAMP TIME</b> Allow to set the deceleration time in the reverse direction.	00.00 to 00.99 (ex: 00.99=9 sec.)	00.08 (0.8 seconds)
05.05	<b>PAUSE TIME</b> Set the time that the door is paused when it is open. <b>NOTE</b> • When 0 seconds is set, the door will have no pause time.	00.00 to 00.99 (ex: 00.01=1 sec.)	00.01 (1 seconds)
05.06	<b>PRESENT MAN</b> This function is used for setting the limit switches. The door opens/closes while pressing the open / close button and stops when the limit switches are activated. <b>NOTE</b> • Once the limit switches have been set, the automatic mode is selected again (00.00).	00.00 = Automatic 00.01 = Present Man in closing/opening	00.00
05.07	<b>COUNTING MANEUVERS</b> This function serves only to show all completed maneuvers performed by the automatism.	<b>Note:</b> 1 Maneuver = 1 opening and closing cycle. <b>Example:</b>  Maneuvers totality = 20502	
05.08	The <b>05.07 menu</b> indicates the number of maneuvers performed up to the thousands, the <b>05.08 menu</b> indicates up to hundreds of thousands (see example).		
05.09	<b>SLOW DOWN SPEED AT OPENING</b> Allow to set the slow down speed after at opening. <b>NOTE</b> • Changes in the slow down speed at opening or closing will change the length of the slow down.	00.00 to 90.00 Hz	±40.00 Hz

## 04. PROGRAMMING

### OPERATION



- 01 • Activate the Present Man function (05.06).
  - 02 • Press MODE until you see C (check which message appears in C).
  - 03 • To find the opening course limiter, press the opening button continuously, until the aperture is complete.
  - 04 • To find the closure course limiter, press the closing button continuously, until the closure is complete.
  - 05 • If you wish, change the positioning of the course limiters. (ver pág. 5A)
- NOTE:** The course limiter defines the start of the ramp deceleration. When the door reaches the course limiter, the rapm deceleration starts for the set time. If you change the positioning of the course, slow down speed or closing speed, you must set the deceleration ramp time again at opening and closing (05.02 and 05.03).



## 04. PROGRAMMING

### NAVIGATION THROUGH THE MENUS



1 Press **ENTER** to enter the **MENU**.



2 Using the arrows, select one of the **SUBMENUS** referenced on page 5A.



3 Press **ENTER** to enter the SUBMENU.



4 Use the arrows to change the value.



5 Press **ENTER** to confirm.



6 **End** indicates the success of the operation.  
**Err** indicates operation.



To exit MENU press **(MODE)** until you reach C.

## 04. PROGRAMMING

### LED DISPLAY MESSAGES

Message displayed	Description
	Displays the master frequency of the CA variator.
	Displays the effective output frequency at the U/T1, V/T2, and W/T3 terminals.
	Displays the output current at the U/T1, V/T2, and W/T3 terminals.
	Door during opening - Displays the operation status during the opening maneuver, in the CA variator.
	Door during closure - Displays the operation status during the closing maneuver, in the CA variator.
	Input indications - Counter value (C).
	Mandatory mode for operation ( <b>do not change this menu</b> ).
	External failure.
	It displays "End" for approximately 1 second if the input is accepted by pressing the <b>ENTER</b> key. After a value is set in the parameter, the new value is automatically added to the memory. To modify an input, use the  and  keys.
	Displays "Err" if the input is invalid.
C111	Limit-switch activated and opening push button pressed.
C222	Limit-switch activated and closing push button pressed.
C333	Nothing activated.
C444	Opening limit-switch activated and down button pressed.
C555	Closing limit-switch activated and down button pressed.
C666	Opening limit-switch activated and up button pressed.
C777	Closing limit-switch activated and up button pressed.
C888	Photocells activated.
C999	STOP enabled.
C101	Ascend limit-switch activated.
C202	Descend limit-switch activated.



## 05. TROUBLESHOOTING

### INSTRUCTIONS FOR FINAL CONSUMERS / SPECIALIZED TECHNICIANS

Failure identification	Failure description	Corrections
<b>OC</b>	<b>OVERCURRENT</b> Abnormal increase of current.	<p><b>01</b> • Check that the motor power corresponds to the output power of the AC motor variator.</p> <p><b>02</b> • Check for possible short circuits on U/ T1, V / T2, W / T3 wiring connections.</p> <p><b>03</b> • Check for possible short circuits in the wire connections between the AC motor variator, the motor and ground wire.</p> <p><b>04</b> • Check for loose contacts between the AC motor variator and the motor.</p> <p><b>05</b> • Check possible overload conditions on the motor.</p> <p><b>06</b> • After a short circuit, if there are still anomalies in the operation of the AC motor variator, you must send the product to the manufacturer.</p>
<b>OU</b>	<b>OVERVOLTAGE</b> The DC voltage has exceeded the maximum allowable value.	<p><b>01</b> • Check if the input voltage of the AC motor drive is within the rated voltage class.</p> <p><b>02</b> • Check for possible voltage variations.</p> <p><b>03</b> • Check if the power required for the brake is within the specified limits.</p>
<b>LU</b>	<b>LOW VOLTAGE</b> The AC motor variator detects that the DC terminal voltage is below the minimum value.	<p><b>01</b> • Check that the input voltage of the AC motor variator is within the rated voltage class.</p> <p><b>02</b> • Check the motor for abnormal load.</p> <p><b>03</b> • Check that the input power connections are correct with R-S-T (for 3-phase models) without losing the phase.</p>
<b>OL</b>	<b>OVERLOAD</b> The AC variator detects excessive current at the control output.	<p><b>01</b> • Check if the motor is overloaded.</p> <p><b>02</b> • Use the following model with AC motor variator power.</p>
<b>ocA</b>	<b>OVERLOAD DURING ACCELERATION</b>	<p><b>01</b> • Short circuit at the motor output: check if the isolation on the output lines is in good condition.</p> <p><b>02</b> • Acceleration time too short: Increase the acceleration time.</p>
<b>ocd</b>	<b>OVERCURRENT DURING THE DECELERATION</b>	<p><b>01</b> • Short circuit at the motor output: check if the isolation on the output lines is in good condition.</p>