PORTUGAL

EN

MC112PR | MC113PR | MC114PR

USER'S AND INSTALLER'S MANUAL



Motorline® PROFESSIONAL

V3.6
REV. 11/2024

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01. SAFETY INSTRUCTIONS

CE	This product is certified in accordance with European Community (EC) safety standards.
RoHS	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 and with Delegated Directive (EU) 2015/863 from Commission.
	(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 batteries should not be discarded like other household waste at the end of their useful life. Batteries must be delivered to selective collection points for recycling.
	The different types of packaging (cardboard, plastic, etc.) must be subject to selective collection for recycling. Separate packaging and recycle it responsibly.
	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.

01. SAFETY INSTRUCTIONS

GENERAL WARNINGS

- This manual contains very important safety and usage information. Read all instructions carefully before beginning the installation/ usage procedures and keep this manual in a safe place that it can be consulted whenever necessary.
- This product is intended for use only as described in this manual. Any other enforcement or operation that is not mentioned is expressly prohibited, as it may damage the product and put people at risk causing serious injuries.
- This manual is intended firstly for specialized technicians, and does not invalidate the user's responsibility to read the "User Norms" section in order to ensure the correct functioning of the product.
- The installation and repair of this product may be done by qualified and specialized technicians, to assure every procedure are carried out in accordance with applicable rules and norms. Nonprofessional and inexperienced users are expressly prohibited of taking any action, unless explicitly requested by specialized technicians to do so.
- Installations must be frequently inspected for unbalance and the wear signals of the cables, springs, hinges, wheels, supports and other mechanical assembly parts.
- Do not use the product if it is necessary repair or adjustment is required.
- When performing maintenance, cleaning and replacement of parts, the product must be disconnected from power supply. Also including any operation that requires opening the product cover.
- The use, cleaning and maintenance of this product may be carried out by any persons aged eight years old and over and persons whose physical, sensorial or mental capacities are lower, or by persons without any knowledge of the product, provided that these are supervision and instructions given by persons with experienced in terms of usage of the product in a safe manner and who understands the risks and dangers involved.
- Children shouldn't play with the product or opening devices to avoid the motorized door or gate from being triggered involuntarily.
- If the power cable is damaged, it must be replaced by the manufacturer, after-sales service or similarly qualified personnel to avoid danger.
- The device must be disconnected from the electrical network when removing the battery.
- Ensure that blocking is avoided between the actuated part and its fixed parts due to the opening movement of the actuated part.

WARNINGS FOR TECHNICIANS

- Before beginning the installation procedures, make sure that you have all the devices and materials necessary to complete the installation of the product.
- You should note your Protection Index (IP) and operating temperature to ensure that is suitable for the installation site.
- Provide the manual of the product to the user and let them know how to handle it in an emergency.
- If the automatism is installed on a gate with a pedestrian door, a door locking mechanism must be installed while the gate is in motion.
- Do not install the product "upside down" or supported by elements do not support its weight. If necessary, add brackets at strategic points to ensure the safety of the automatism.
- Do not install the product in explosive site.
- Safety devices must protect the possible crushing, cutting, transport and danger areas of the motorized door or gate.
- Verify that the elements to be automated (gates, door, windows, blinds, etc.) are in perfect function, aligned and level. Also verify if the necessary mechanical stops are in the appropriate places.
- The control board must be installed on a safe place of any fluid (rain, moisture, etc.), dust and pests.
- You must route the various electrical cables through protective tubes, to protect them against mechanical exertions, essentially on

01. SAFETY INSTRUCTIONS

the power supply cable. Please note that all the cables must enter the control board from the bottom.
- If the automatism is to be installed at a height of more than 2,5m from the ground or other level of access, the minimum safety and health requirements for the use of work equipment workers at the work of Directive 2009/104/CE of European Parliament and of the Council of 16 September 2009.
- Attach the permanent label for the manual release as close as possible to the release mechanism.
- Disconnect means, such as a switch or circuit breaker on the electrical panel, must be provided on the product's fixed power supply leads in accordance with the installation rules.
- If the product to be installed requires power supply of 230Vac or 110Vac, ensure that connection is to an electrical panel with ground connection.
- The product is only powered by low voltage satefy with control board (only at 24V motors).
- Parts/products weighing more than 20 kg must be handled with special care due to the risk of injury. It is recommended to use suitable auxiliary systems for moving or lifting heavy objects.
- Pay special attention to the danger of falling objects or uncontrolled movement of doors/gates during the installation or operation of this product.

WARNINGS FOR USERS

- Keep this manual in a safe place to be consulted whenever necessary.
- If the product has contact with fluids without being prepared, it must immediately disconnect from the power supply to avoid short circuits, and consult a specialized technician.
- Ensure that technician has provided you the product manual and informed you how to handle the product in an emergency.
- If the system requires any repair or modification, unlock the automatism, turn off the power and do not use it until all safety conditions have been met.
- In the event of tripping of circuits breakers of fuse failure, locate the malfunction and solve it before resetting the circuit breaker or replacing the fuse. If the malfunction is not repairable by consult this manual, contact a technician.
- Keep the operation area of the motorized gate free while the gate in in motion, and do not create strength to the gate movement.
- Do not perform any operation on mechanical elements or hinges if the product is in motion.

RESPONSABILITY

- Supplier disclaims any liability if:
  - Product failure or deformation result from improper installation use or maintenance!
  - Safety norms are not followed in the installation, use and maintenance of the product.
  - Instructions in this manual are not followed.
  - Damaged is caused by unauthorized modifications
  - In these cases, the warranty is voided.

MOTORLINE ELECTROCELOS SA.
Travessa do Sobreiro, nº29
4755-474 Rio Côvo (Santa Eugénia)
Barcelos, Portugal

SYMBOLS LEGEND:


- Important safety notices


- Potentiometer information


- Useful information


- Connectors information


- Programming information


- Buttons information

02. PRODUCT

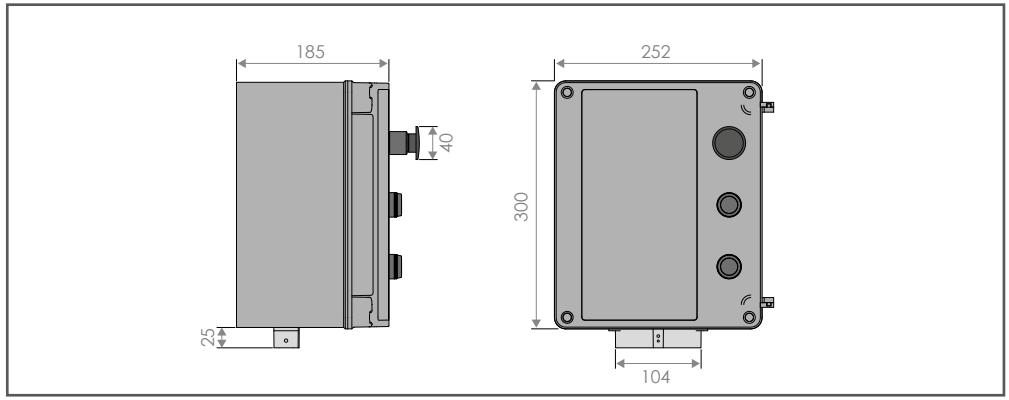
DESCRIPTION OF PRODUCT

- Control board capable of working with motors up to 750W, 1500W and 2200W. It has a frequency inverter that allows a soft start and stop, thus providing greater reliability and durability of the product. The control board also allows the regulation of the opening/closing speed as well as the adjustment of the slowdown speed both in opening and in closing.
- This control board allows easy and intuitive operation of various parameters and menus through a display.
- It also has other functions such as Human Presence, possibility to view the count of cycles carried out by the door so far (complete opening and closing corresponds to one cycle).
- This control board is also capable of receiving a ROLLING CODE remote controls signal (MR13 receiver) and allows the connection of MF2020 Photocells.

TECHNICAL CHARACTERISTICS

	MC112PR	MC113PR	MC114PR
• Power	750W max	750W to 1500W	1500W to 2200W
• Power Supply	230Vac 50/60Hz		
• Protection class	IP64		
• Working temperature	-25°C ~ 55°C		
• Relative Humidity	<90%		
• Accessory output	24Vdc 3W / 12Vdc 2W		
• Maximum frequency output	90Hz		

DIMENSIONS

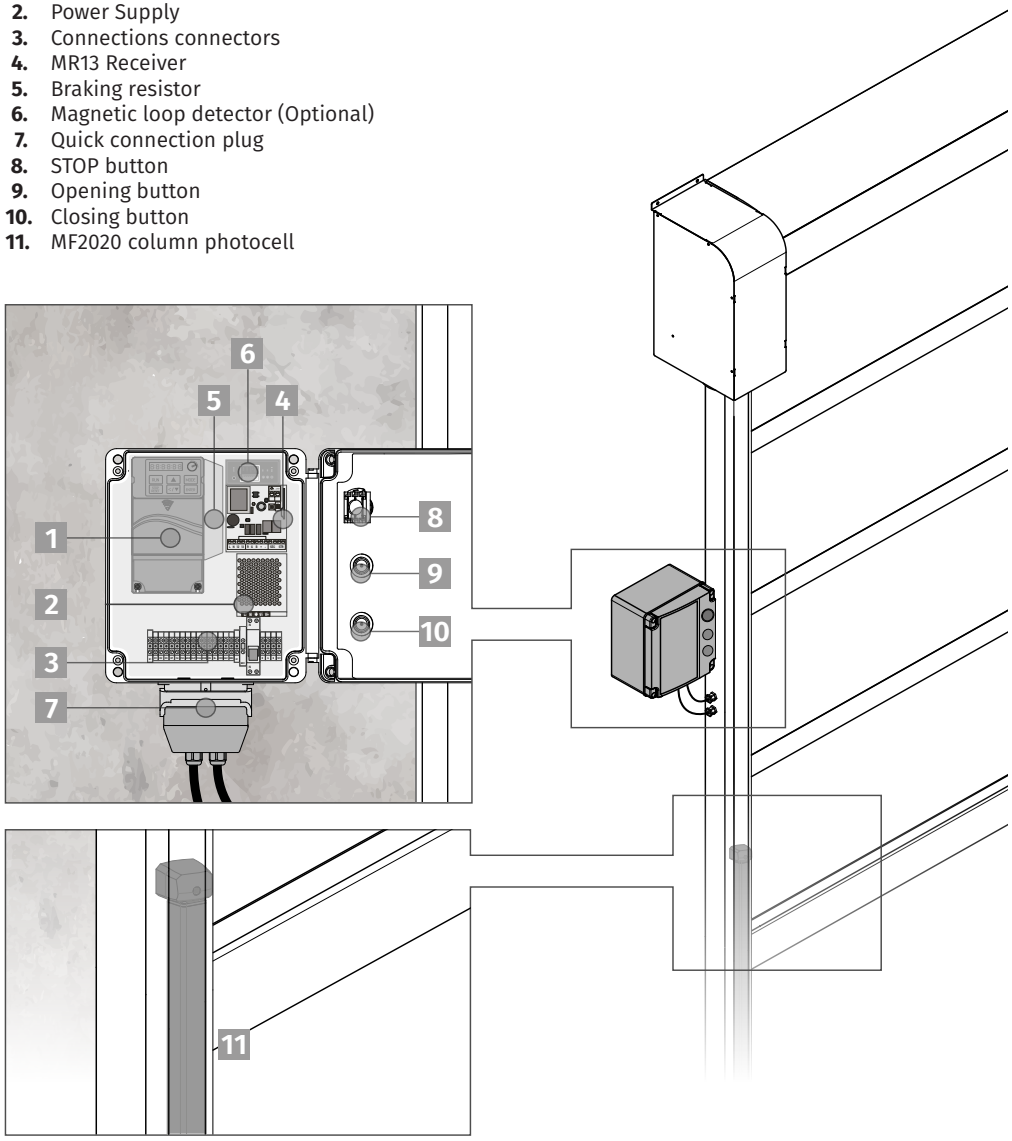


02. PRODUCT

COMPONENTS MAP

The control board is composed of the following components:

1. Frequency inverter
2. Power Supply
3. Connections connectors
4. MR13 Receiver
5. Braking resistor
6. Magnetic loop detector (Optional)
7. Quick connection plug
8. STOP button
9. Opening button
10. Closing button
11. MF2020 column photocell



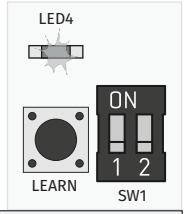
03. COMPONENTS

MR13 - RECEIVER

LEARN BUTTON

• This button is used to program Rolling Code Motorline remote controls.

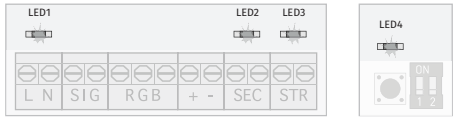
Programming Remote Control:
1 • Press the **LEARN** button 1 time and **LED4** will flash 1 time.
2 • Then press the button you want to program.



• To RESET the memory, press the **LEARN** button for 10 seconds and all remote controls will be erased.
• While pressing the **LEARN** button, **LED4** is on.
At the end of 10 seconds **LED4** will flash and turn off confirming the operation.

LEDs

• **LED 1:** (ON) Indicates that it is being powered at 230Vac. | OFF - No power.
• **LED 2:** (ON) "SEC" contact closed | (OFF) "SEC" contact open
• **LED 3**: (ON) "STR" contact closed | (OFF) "STR" contact open.
• **LED 4:** Programming LED.



CONNECTORS

• **L/N:** 230Vac power input.
SIG: Input of frequency inverter pulses.
R/G/B: Connection of RGB led's
• **+/-:** Power supply for external accessories (max. 150mA).
• **SEC:** NC safety signal output (**not used**).
• **STR:** NO open signal output.
• **ANT:** Antenna hot pole input.
• **⏚:** Antenna mass input.



03. COMPONENTS

MF2020

The MF2020 is a column photocell designed to safeguard all types of industrial doors (sectional and rapid doors) up to a maximum width of 10 meters.
The emitter and receiver create a grid of infrared beams offering protection up to 2.5 meters high (depending on the height of the same, due to the existence of doors whose size does not allow for a cover of 2.5m).
When the infrared beams are interrupted, a signal is sent to the control board. As soon as the detention area is free, a new signal is sent to the control board to indicate that the area is clear.
The photocell has three operating modes:
• **Static, Sequential and Sequential for transparent tarpaulins**

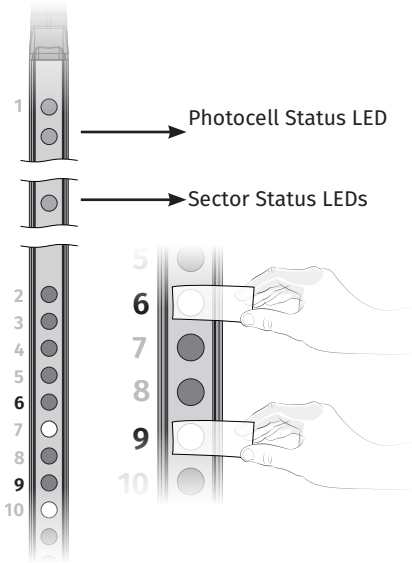
NOTE: For more information about the MF2020 photocell, consult the product manual.

Mode	Status LED (Photocell RX)
SEQUENTIAL	Blinks 1 time every 2 seconds
STATIC	Always ON
SEQUENTIAL FOR TRANSPARENT TARPAULINS	Blinks 2 times every 2 seconds

By default, the photocells are in **SEQUENTIAL** Mode (max. speed of 1.4 m/s).

To select the next Operating Mode, follow these steps:

01 • Turn off the power supply photocells;
02 • On the photocell receiver (RX) cover sensors **6** and **9** from the top and keep the others clear;
03 • Reconnect the photocells to the power supply. ***The photocell will operate in the next Operating Mode.***
04 • Uncover sensors **6** and **9** again.

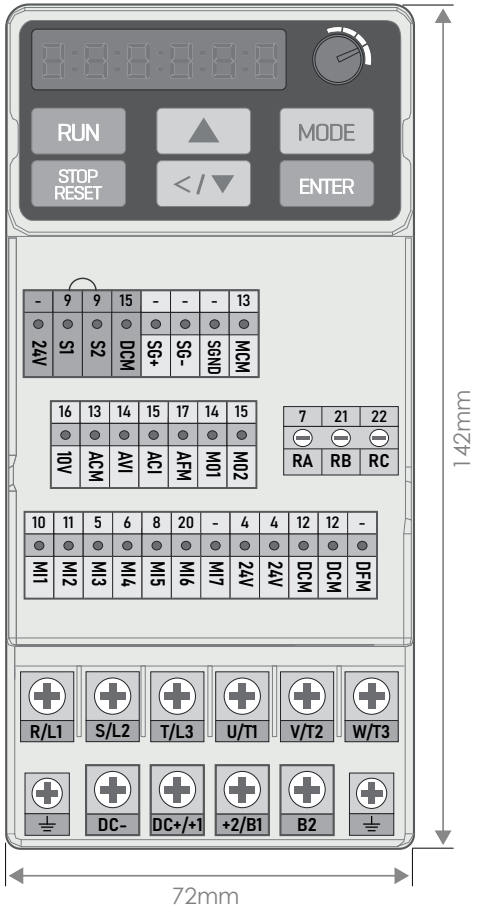


Whenever you carry out the steps to change the Operating Mode, the photocell assumes the mode immediately following the mode it is in in the following order:
• **SEQUENTIAL ➡ STATIC ➡ SEQUENTIAL FOR TRANSPARENT TARPAULINS ➡ SEQUENTIAL ➡**

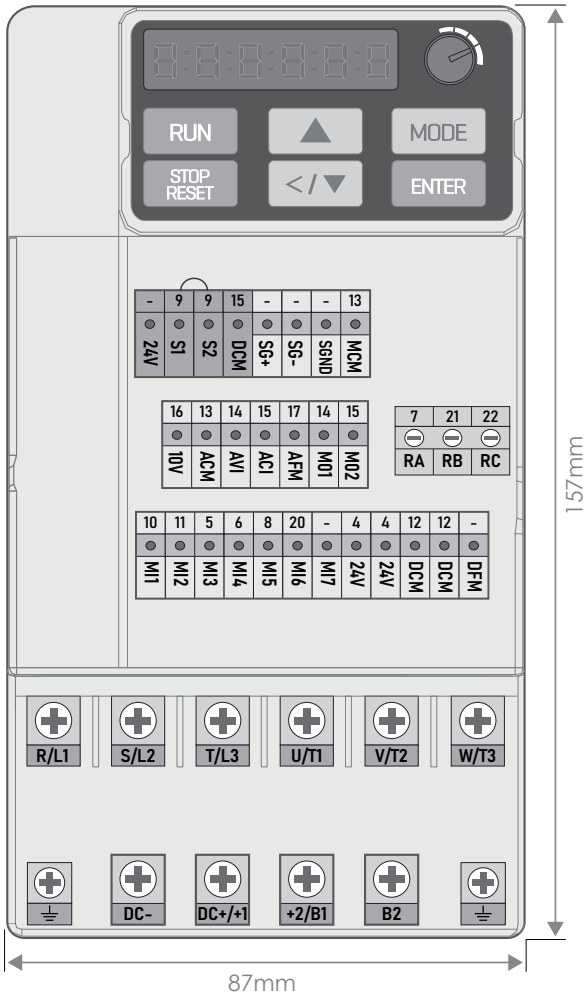
04. INVERTERS AND CONECTORS

FREQUENCY INVERTERS

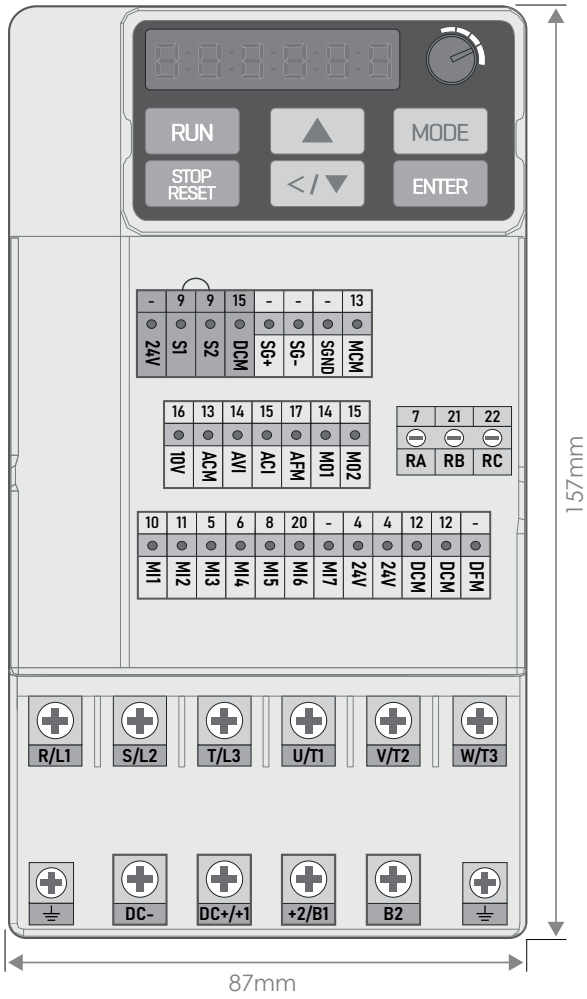
MC112PR (Up to 750W)



MC113PR (750W to 1500W)



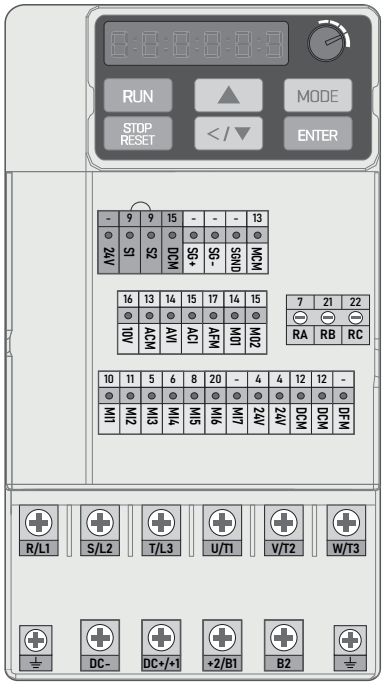
MC114PR (1500W to 2200W)



The frequency inverters have different dimensions depending on their power.
The MC114PR inverter is used as a reference for the connections scheme in this manual, however their connections are the same.

FREQUENCY INVERTERS CONNECTIONS

The following panel are all inputs and outputs of frequency inverter.



24V • Common STOP
S1 • STOP button
S2 • STOP button
DCM • Not used

SG+ • Not used
SG- • Not used
SGND • Not used
MCM • Voltage input for **M01** and **M02** outputs

10V • Not used
ACM • Not used
AVI • Not used
ACI • Not used
AFM • Not used
M01 • Pulse output for MR13
M02 • Output for optional interlocking relay or pre-flashing light.
Programmable at **parameter 04.61**

MI1 • Opening button
MI2 • Closing button
MI3 • Limit switch
MI4 • Limit switch
MI5 • Photocells
MI6 • STOP button
MI7 • Connection for opening at slow speed used in case of emergency opening whenever using UPS
24V • Output +24Vdc 3W
24V • Output +24Vdc 3W
DCM • Output 0Vdc 3W
DCM • Output 0Vdc 3W
DFM • Not used

RA • NO relay output for electric brake
RB • Not used
RC • Common relay for electric brake

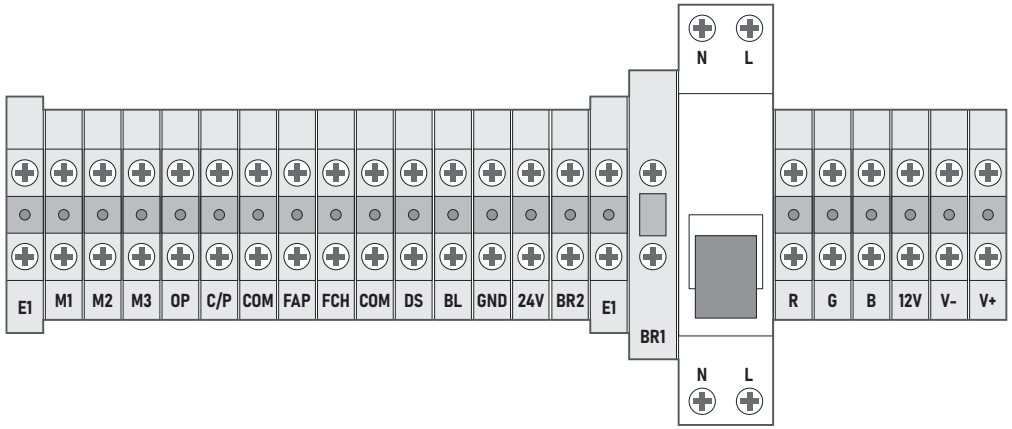
R/L1 • 230Vac Power Supply
S/L2 • 230Vac Power Supply

U/T1 • Motor output – Phase 1
V/T2 • Motor output – Phase 2
W/T3 • Motor output – Phase 3
T/L3 • Not used

⏚ • Ground
DC- • Not used
DC+/+1 • Not used
+2/B1 • Braking resistor connection
B2 • Braking resistor connection
⏚ • Ground

CONNECTIONS CONNECTORS

The below panel ate all inputs and outputs of connection connectors.



E1 • Ground

M1 • Motor output – Phase 1
M2 • Motor output – Phase 2
M3 • Motor output – Phase 3
OP • Opening button
C/P • Closing/Pedestrian Button
COM • Common
FAP • Opening limit switch
FCH • Closing limit switch
COM • Common
DS • Photocells input
BL • STOP
GND • 24V Negative
24V • Output +24Vdc 3W
BR1 • Output with fuse for electric brake (1A 250V fuse)
BR2 • Electric brake

E1 • Ground

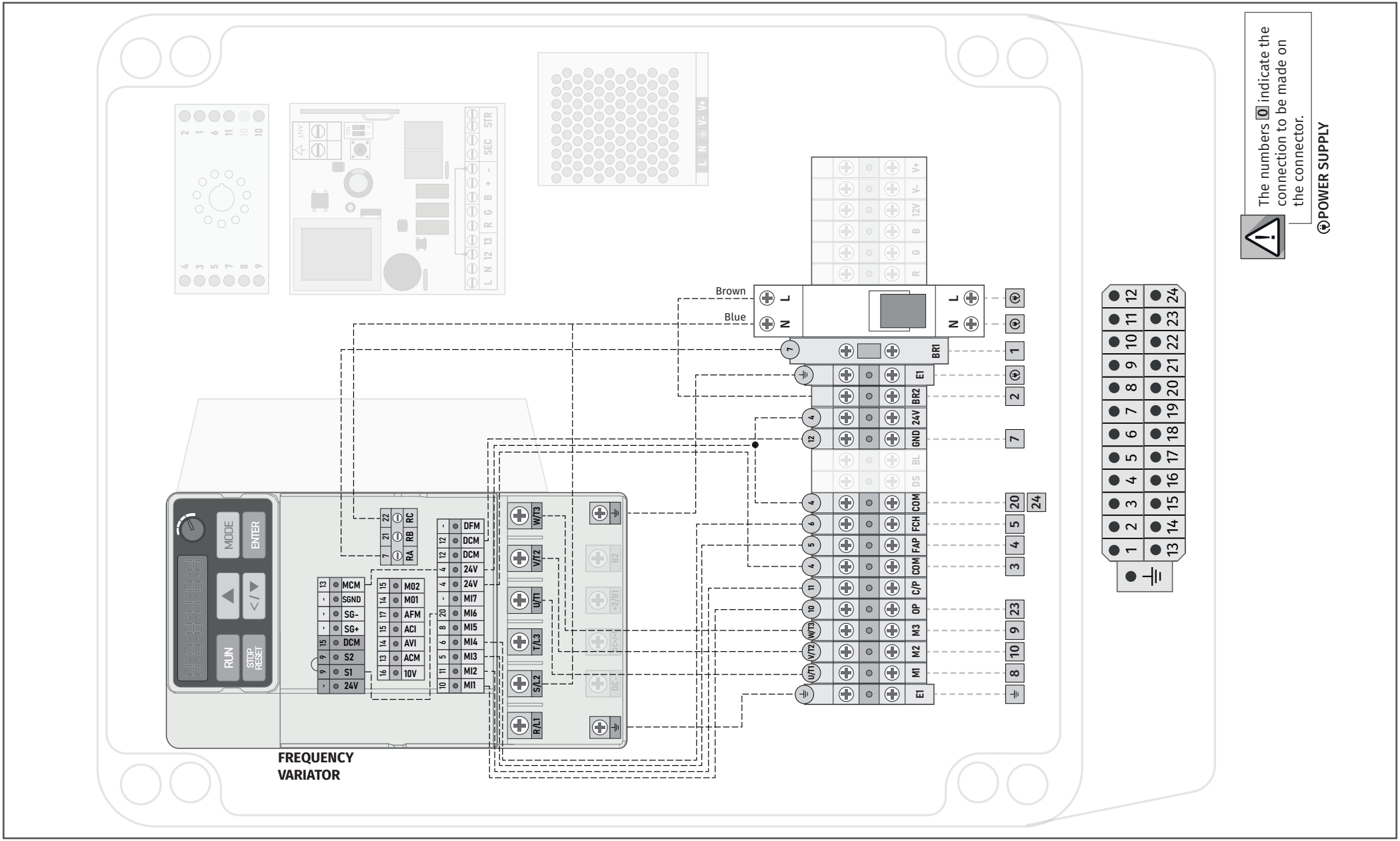
N • 230Vac Power Supply
L • 230Vac Power Supply

DPN 16A circuit breaker

R • RED LED output
G • GREEN LED output
B • BLUE LED output
12V • 12Vdc 2W LED Power Supply
V- • Output 0Vdc 36W Power Supply
V+ • Output +12Vdc 36W Power Supply

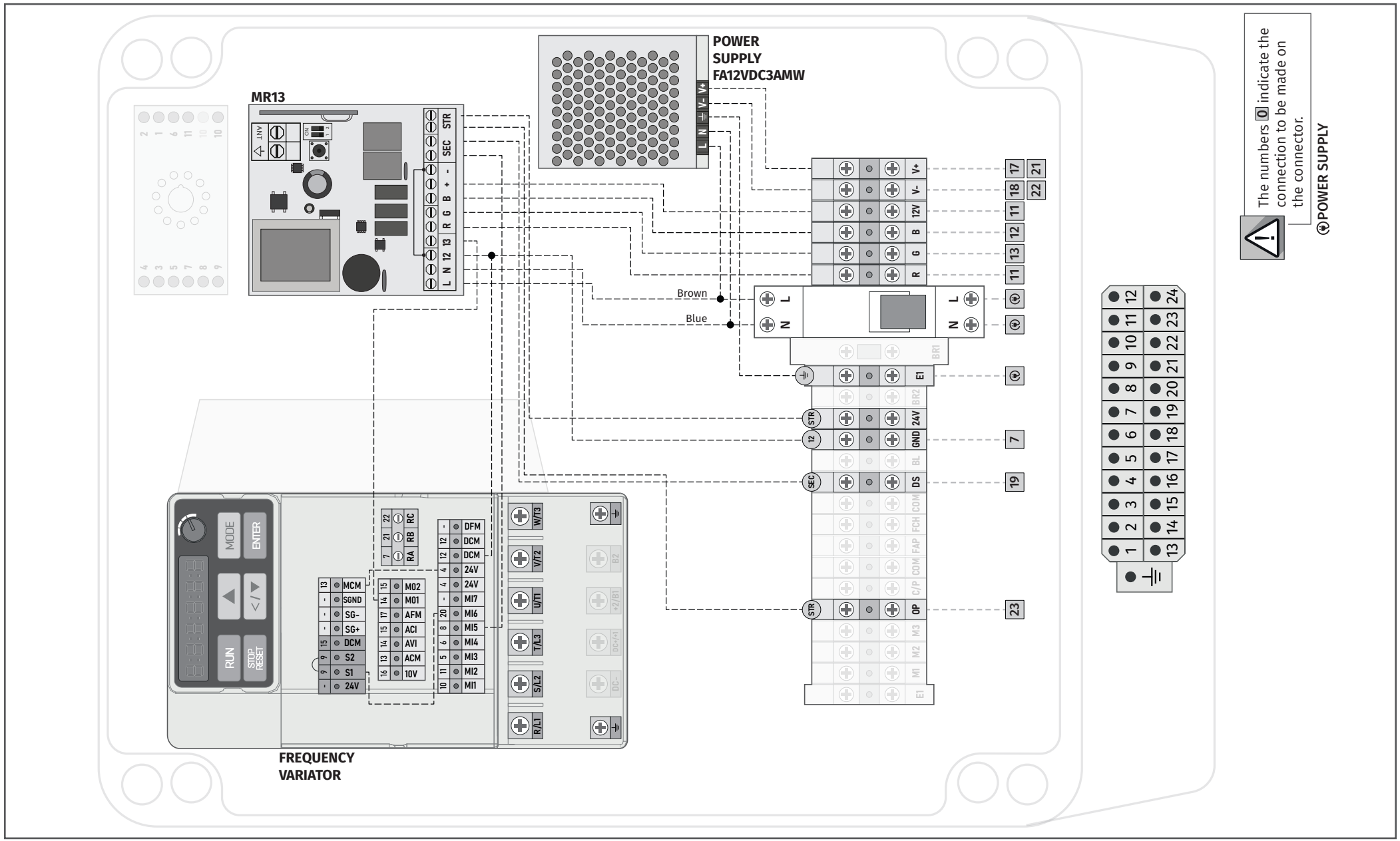
05. CONNECTIONS SCHEME

FREQUENCY INVERTER CONNECTIONS



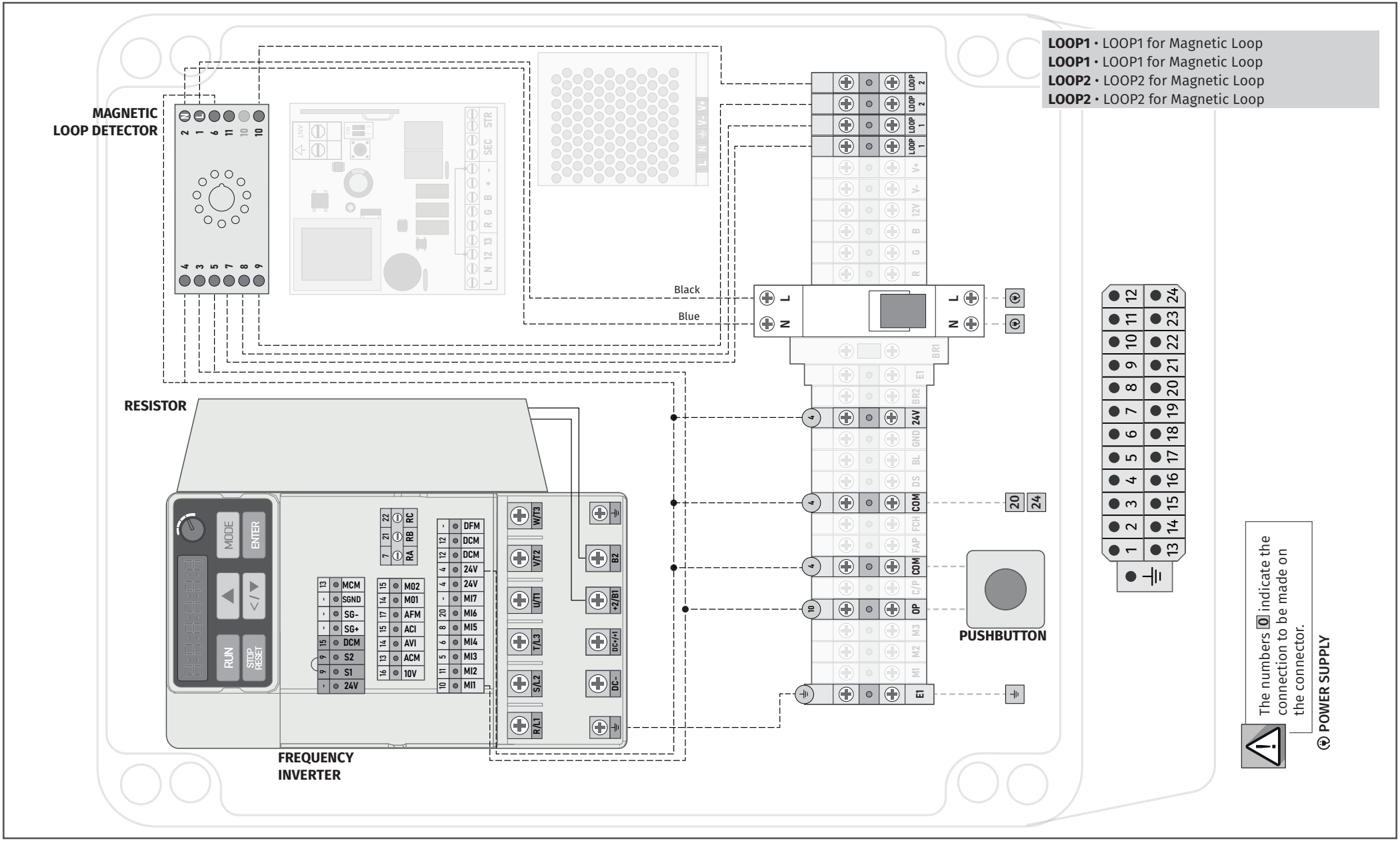
05. CONNECTIONS SCHEME

MR13 RECEIVER AND POWER SUPPLY CONNECTIONS



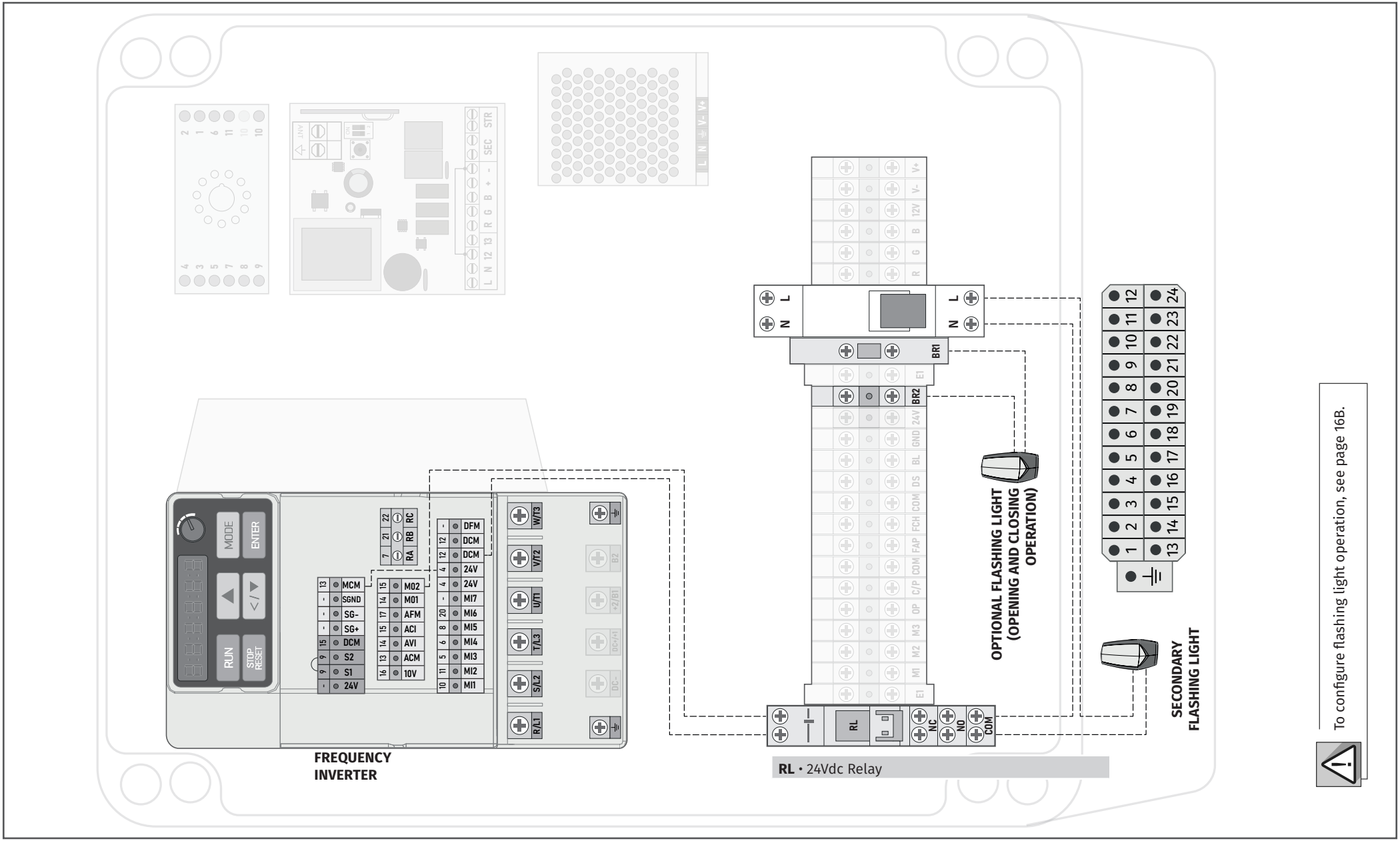
05. CONNECTIONS SCHEME

OTHER CONNECTIONS (MAGNETIC LOOP DETECTOR, RESISTOR AND PUSH BUTTON)



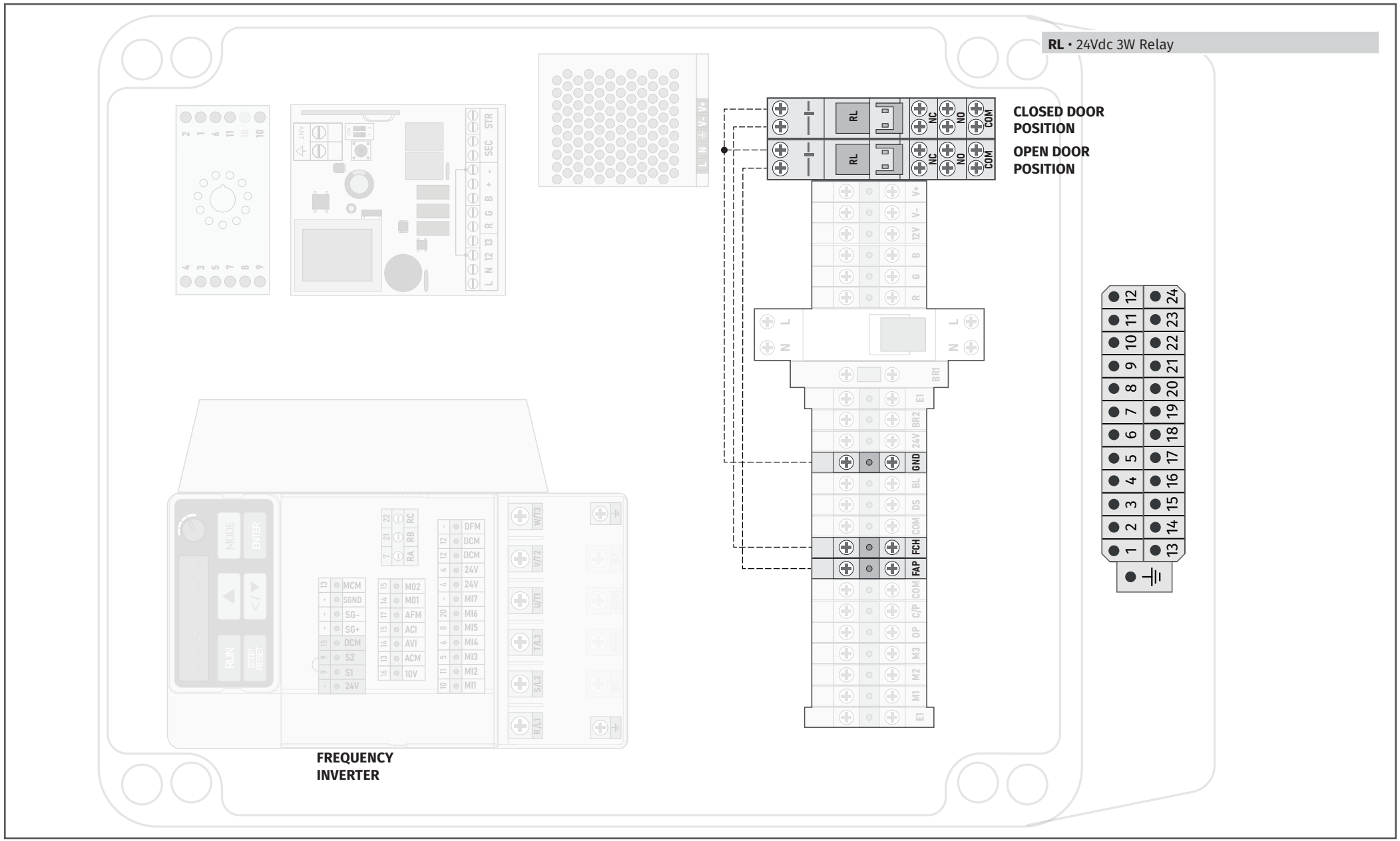
05. CONNECTIONS SCHEME

CLOSING PRE- FLASHING LIGHT



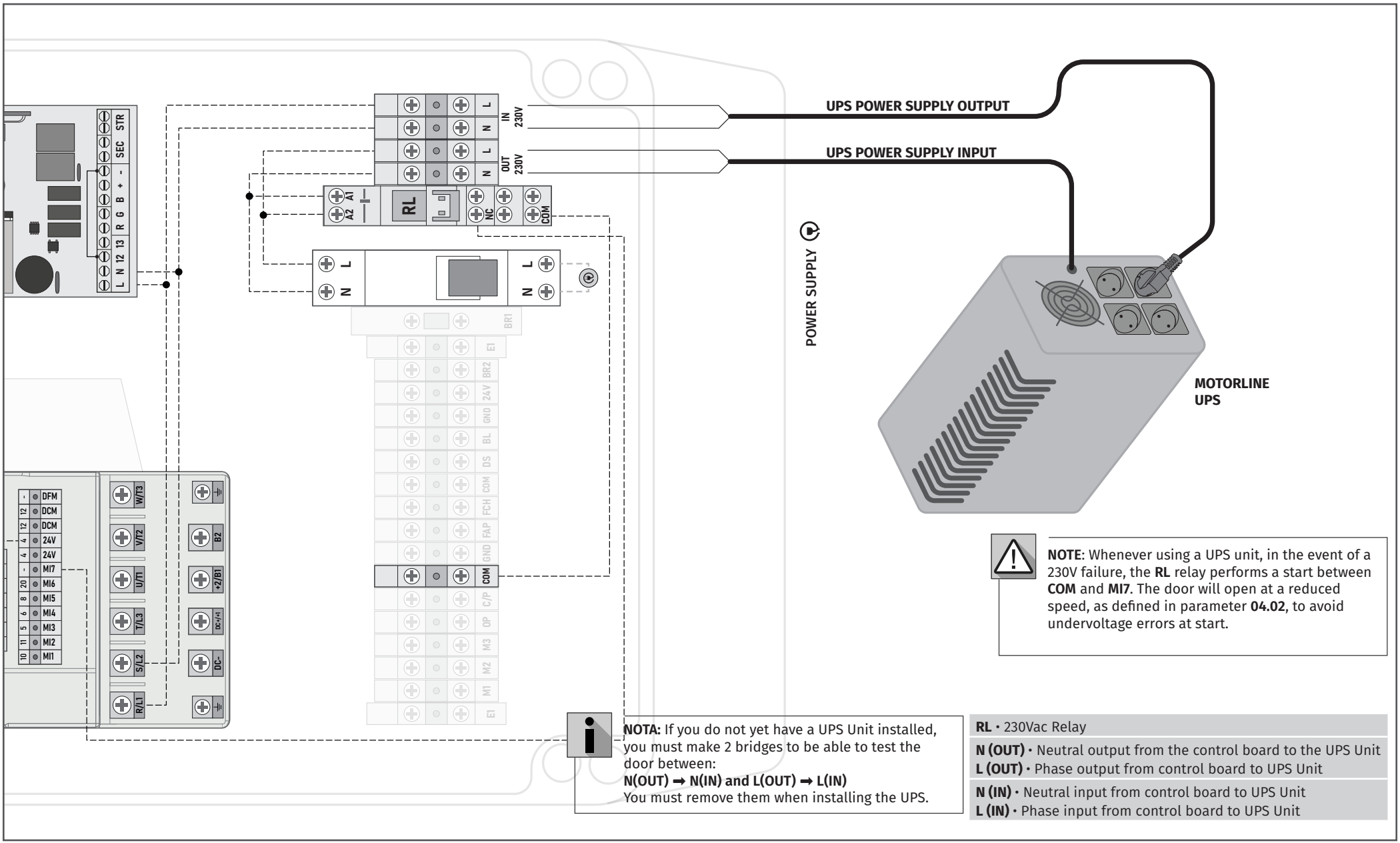
05. CONNECTIONS SCHEME

DOOR POSITION OUTPUTS



05. CONNECTIONS SCHEME

UPS UNIT CONNECTION



NOTE: Whenever using a UPS unit, in the event of a 230V failure, the **RL** relay performs a start between **COM** and **MI7**. The door will open at a reduced speed, as defined in parameter **04.02**, to avoid undervoltage errors at start.

NOTA: If you do not yet have a UPS Unit installed, you must make 2 bridges to be able to test the door between:
N(OUT) ➡ N(IN) and L(OUT) ➡ L(IN)
You must remove them when installing the UPS.

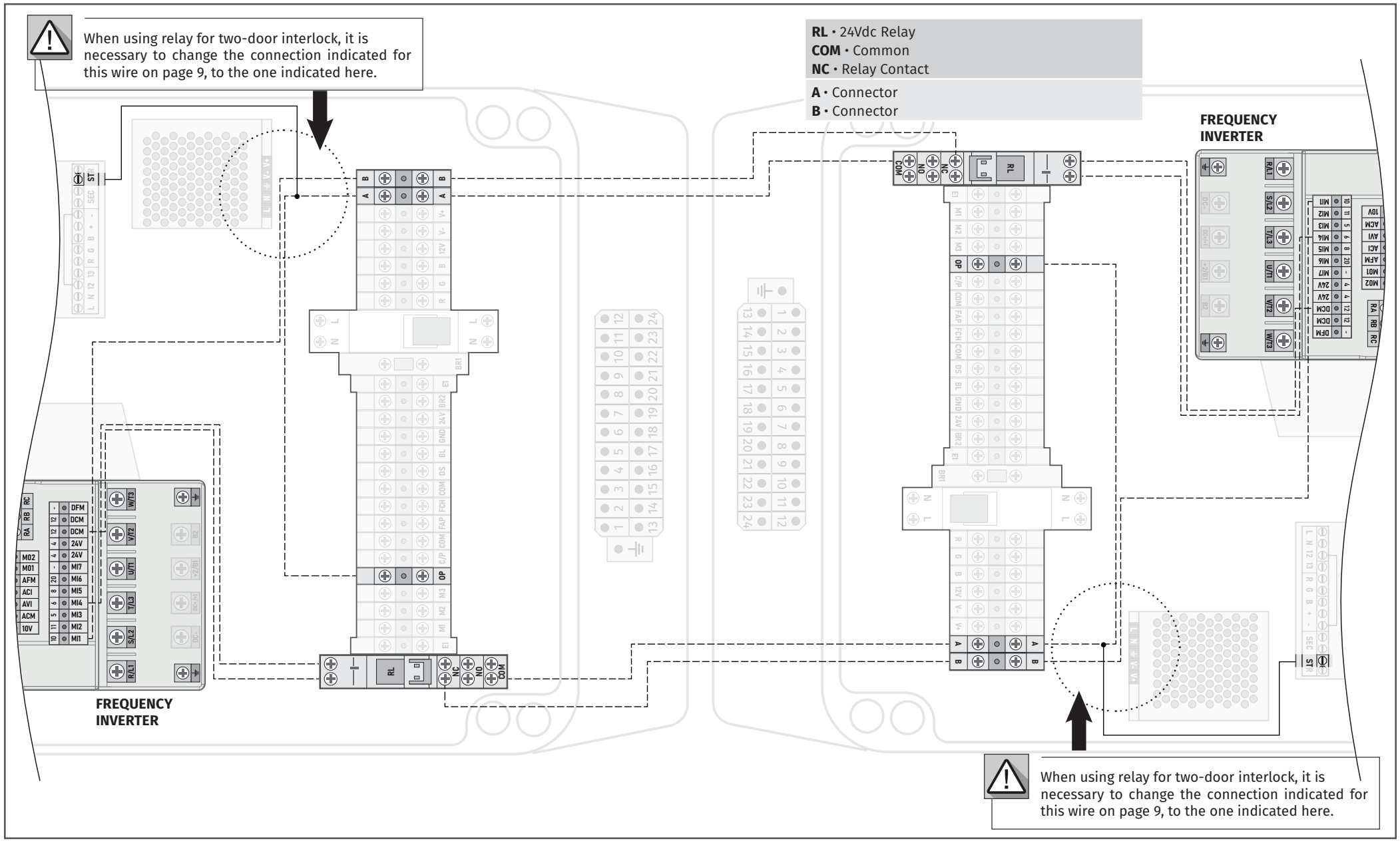
RL • 230Vac Relay

N (OUT) • Neutral output from the control board to the UPS Unit
L (OUT) • Phase output from control board to UPS Unit

N (IN) • Neutral input from control board to UPS Unit
L (IN) • Phase input from control board to UPS Unit

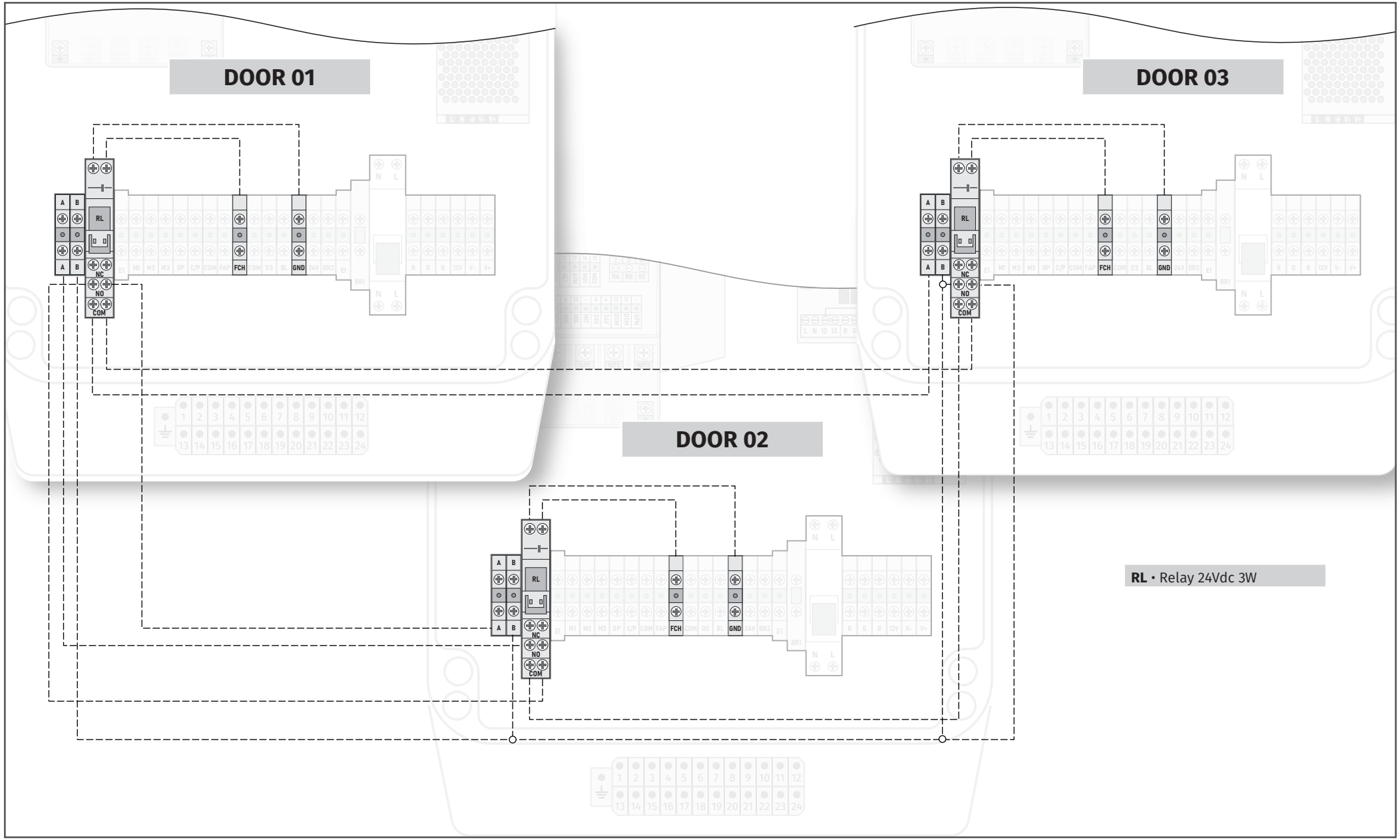
05. CONNECTIONS SCHEME

RELAY FOR TWO-DOOR INTERLOCK



05. CONNECTIONS SCHEME

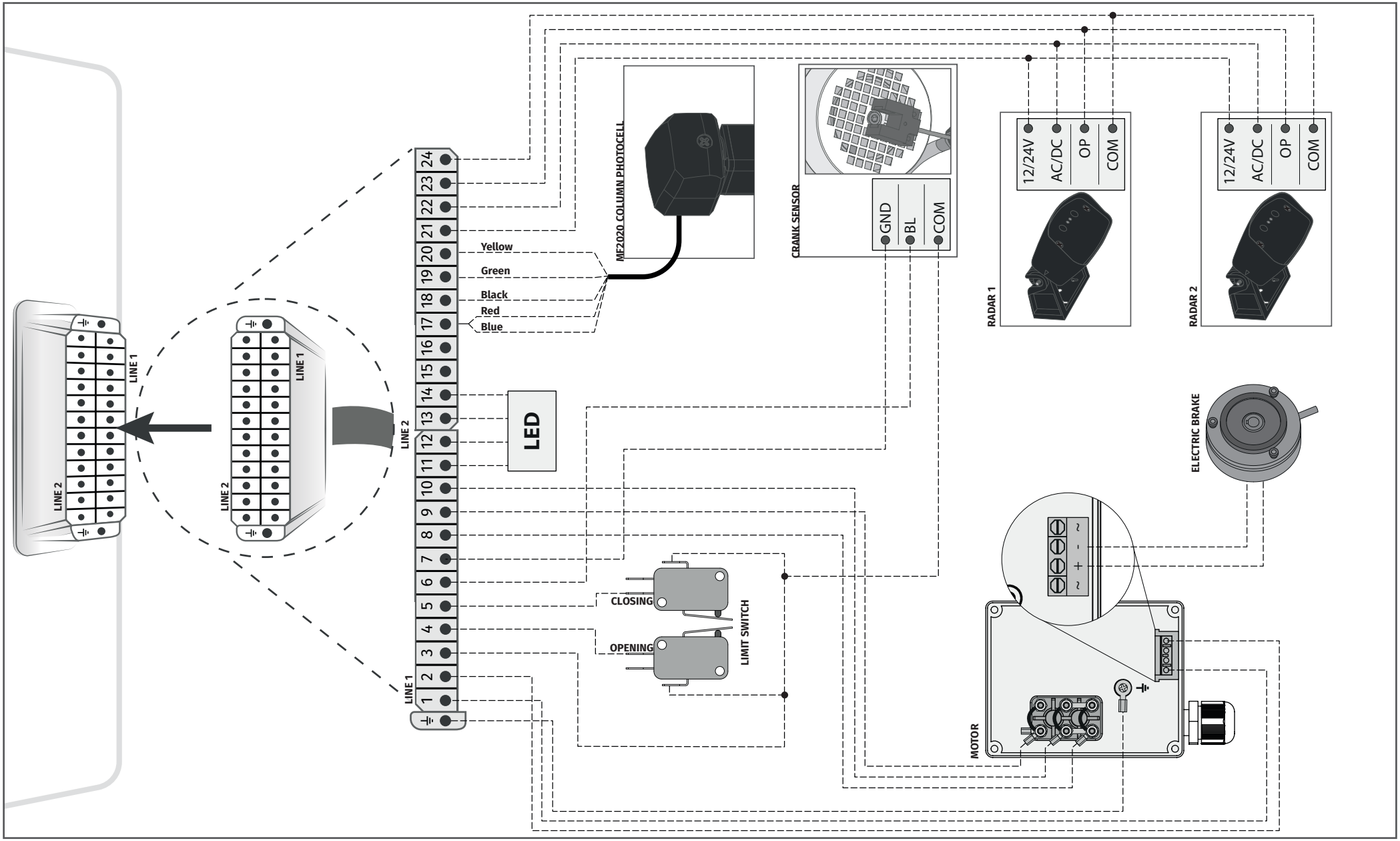
RELAY FOR THREE-DOOR INTERLOCK



RL • Relay 24Vdc 3W

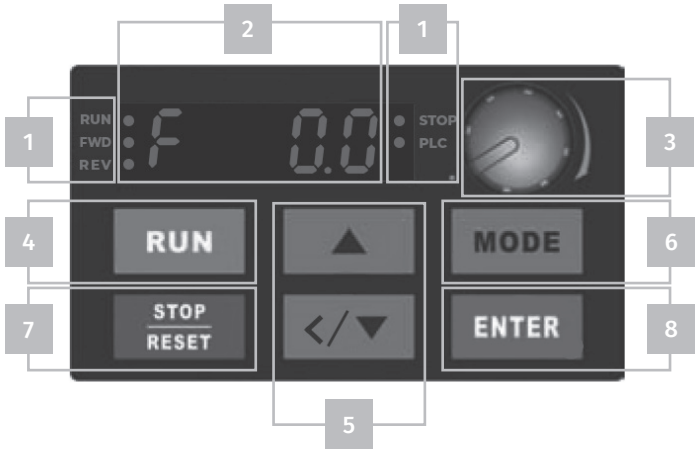
05. CONNECTIONS SCHEME

EXTERNAL COMPONENTS CONNECTIONS



06. PROGRAMMING

DIGITAL NUMERIC KEYBOARD



1	**Status Display** Shows the current state of the control board	**RUN**	OK Inverter
		FWD	UP movement
		REV	DOWN movement
		STOP FLASHING	Stand By
		STOP OFF	STOP is active or door is moving
		PLC	The PLC is working
2	**LED Display** Indicates the frequency, voltage, current, user-defined units, etc		
5	**UP and DOWN arrows** Allows you to set a number of parameters and change the numeric data for a main frequency		
6	**MODE** Allows you to change the different reading parameters/go back in the menus		
7	**STOP/RESET** Restarts the device after a failure occurs		
8	**ENTER** Used to enter/change programming parameters		

• **3** and **4** cannot be used.

• Only the menus on page 16A can be set by the user. **Any change made in a menu other than those mentioned on page 16A, void the warranty**. Motorline shall not be liable for damages caused if this is not observed.

06. PROGRAMMING

MENU NAVIGATION



1 Press **ENTER** to enter the MENU



2 Using the arrows, select one of the **SUBMENUS** referenced on page 16A.



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



4 Using the arrows to change the value



5 Press **ENTER** to confirm.



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

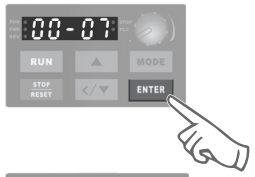
To exit MENU press “MODE” until you reach “C”

LOCK/UNLOCK KEYBOARD

Keyboard locking is done through a password. Below are the steps for configuring and using the password.



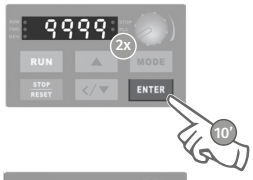
SET PASSWORD
Enter at parameter **00.08** and set password to lock the keyboard.
The parameter value will change from 0 (disabled) to 1 (enabled)



CHANGE A PARAMETER
1 · Enter at parameter **00.07** and set password.
You will temporarily unlock the keyboard.
2 · Change the parameter you want.
The release will remain until the motor make a new operation.



WRONG PASSWORD
1 · You have **3 attempts** to enter the correct password in parameter **00.07**. *LED Display indicates the number of failed attempts from 01 to 03.*
Example: The wrong **first attempt** appears on the **LED Display 01**.
2 · On the **4th wrong attempt** appears on the LED Display **Pcode** error message.
3 · Power off the power supply to retry 3 attempts.



RESET FACTORY SETTING
1 · Enter at parameter **00.07** the code **9999** twice.
2 · Then hold the **ENTER** button for **10 seconds**.
The factory settings are restored.



DISABLE PASSWORD
1 · Enter at parameter **00.07** and enter password.
2 · Enter at parameter **00.08** and change the value from **1** to **0**.
The password will be disabled.

Check page 16B for menu navigation.

PROGRAMMING MENU ACCESS (MENU 04)



1 Press **MODE** until you find **H** function.



2 Press **ENTER** to enter on **H** function.



3 Use the arrows to find the value **04**.



4 Press **ENTER** to enter on 04

Check page 16B for menu navigation.

PROGRAMMING MENU - 04

If the values are incorrectly adjusted, there is a risk of causing damage to motor and the frequency inverter.

Parameter	Function	Settings	Factory Setting
04.00	**OPEN SPEED** Allows set door opening speed.	00.00 to 70.00 Hz	50.00 to 70.00 Hz
04.01	**CLOSE SPEED** Allows set door closing speed.	00.00 to 60.00 Hz	30.00 to 40.00 Hz
04.02	**OPENING DECELERATION SPEED** Allows you to select the deceleration speed on the ascent. **NOTE** • The changes on deceleration opening or closing speed will change the length deceleration.	00.00 to 40.00 Hz	25.00 Hz
04.03	**CLOSING DECELERATION SPEED** Allows you to select the deceleration speed on the descent. **NOTE** • If change the door speed it is necessary adjust this parameter.	00.00 to 40.00 Hz	25.00 Hz
04.50	**LENGTH OPENING DECELERATION** Allows to set the length of deceleration. The length can be set in course programming or in the menu directly.	0 to 1000	150 (250mm)
04.51	**LENGHT CLOSING DECELERATION** Allows to set the lenght of deceleration. The lenght can be set in course programming or in the menu diretly.	0 to 1000	150 (250mm)
04.52	**PAUSE TIME** Allow to set the time the door is paused when it is open. **NOTE** • By set 0 seconds, the door has no pause time.	0 = OFF 0 to 99 (ex: 99=99 sec.)	5s
04.53	**HUMAN PRESENCE** This menu allows the door to open with an impulse until it reaches the limit switch. In order to close the door the user must be permanently pressing the door close button. In this function the pedestrian button will be closing.	0 = Disabled 1 = ON	0 = Disabled
04.54	**OPERATING LOGIC** This menu allows to add 3 working modes each with their specifications.	0 = Step by step 1 = Condominium 2 = Inversion	1 = Step by step
04.55	**ACCELERATION RAMP AT OPENING** This menu allows you to adjust the opening acceleration ramp time to allow a smoother start of the door.	0 to 30 (ex: 10=1 sec.)	15
04.56	**ACCELERATION RAMP AT CLOSING** This menu allows you to adjust the closing acceleration ramp time to allow a smoother start of the door.	0 to 30 (ex: 10=1 sec.)	15

06. PROGRAMMING

PROGRAMMING MENU - 04

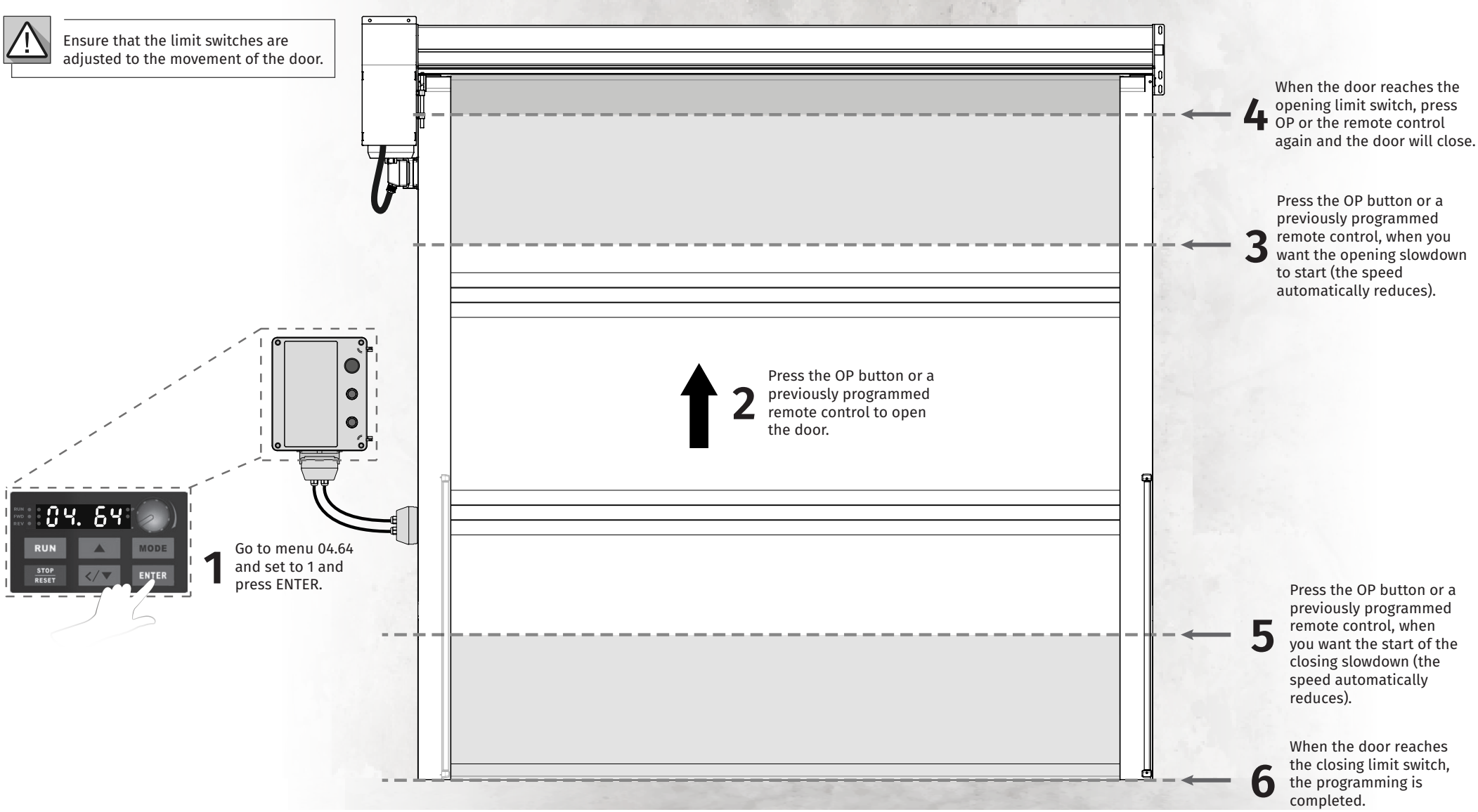
Parameter	Function	Settings	Factory Setting
04.57	**PEDESTRIAN OPENING TIME** This menu can select the length of the pedestrian opening. Knowing that 100 means 8M if put 12 means opening of a meter. If the Human presence is active this menu doesn't work. If set to 0 the CH/PED button will only be closed.	0 to 100	15 (aprox. 1.5m)
04.58	**DECELERATION RAMP AT INVERSION** Allows to set the deceleration time at inversion. Steeper or smoother stop.	0 to 20 (ex: 10=1 sec.)	10 (1 s)
04.59 04.60	**MANEUVER COUNT** This function allows to view all complete maneuvers performed by the automation. The menu 04.60 show the number of maneuvers performed to the thousands while the menu 04.59 show up to hundreds of thousands (see example).	**Notes:** 1 maneuvers = 1 opening and closing cycle. **Example:** Menu 04.59 0002 Menu 04.60 0502 **Total maneuvers = 20502**	
04.61	**FLASHING LIGHT OUTPUT** Allows to change the operating logic of flashing light. If it is set to 0 the flashing light will be active only when the motor is working. If select 1 the flashing light is active as long as it exits the closing limit switch, when it reaches the closing limit switch it will remain ON for the time set in menu 04.63.	0 = connected in opening and closing 1 = courtesy light	0 = opening and closing
04.62	**RESET MANEUVER COUNT** This menu allows to reset the maneuvers of menus 04.59 and 04.60. In order to be able to reset, will need to enter the password available only to the Motorline technical department.	Password must be entered	
04.63	**COURTESY LIGHT TIME** This menu allows adjust the time when the light is on, since reaching the limit switch if selected in menu 04.61.	0 to 50 Min	0
04.64	**PROGRAMMING MENU** This menu has the function of placing the control board in course programming.	0 to 1	1 = control board in programming
04.65	**REVERSE SLOWDOWN ADJUSTMENT** This menu allows you to adjust the inversion slowdown. When the door movement is reversed, the slowdown may be higher or lower than the reference value. Therefore, with this menu you can adjust to the desired value.	0 to 1000	150

06. PROGRAMMING

SLOWDOWN ADJUSTMENT

The door course must be programmed and include slowdowns.
Slowing down is a reduction in the door's movement speed, until it reaches the limit switch.
To programm the course, follow the following steps, respecting the order indicated:

Ensure that the limit switches are adjusted to the movement of the door.



1 Go to menu 04.64 and set to 1 and press ENTER.

2 Press the OP button or a previously programmed remote control to open the door.

3 Press the OP button or a previously programmed remote control, when you want the opening slowdown to start (the speed automatically reduces).

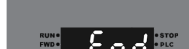
4 When the door reaches the opening limit switch, press OP or the remote control again and the door will close.

5 Press the OP button or a previously programmed remote control, when you want the start of the closing slowdown (the speed automatically reduces).

6 When the door reaches the closing limit switch, the programming is completed.

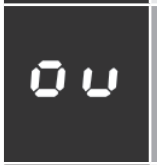
06. PROGRAMMING

LED DISPLAY MESSAGES

Message displayed	Description
	Displays the master frequency of the AC inverter.
	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 in opening - Displays the opening operation status on the AC inverter.
	Door in closing - Displays the closing operation status on the AC inverter.
	Input indications. This indication is displayed whenever there is no common input or the PLC1 parameter is in PLC0. It may also happen a short circuit in the 24V.
	Mandatory mode for operation (**do not change this menu**)
	External fault
	Displays "End" for approximately 1 second if the input is accepted by pressing the ENTER button. After a value is set in the parameter, the new value is automatically added to the memory. To modify an entry, use the ▲ and ▼ buttons.
	Displays “Err” if the input is invalid.
	STOP enable the crank sensor
C111	Limit switch enabled and opening button pressed.
C222	Limit switch enabled and closing button pressed.
C333	Nothing activated.
C444	Opening limit switch enabled and descent button pressed
C555	Closing limit switch enabled and descent button pressed
C888	Photocells enabled.
C101	Ascent limit switch enabled.
C202	Descent limit switch enabled.
C999	Emergency stop, STOP or crank sensor.
C800	No connection/limit switches and safety.

07. TROUBLESHOOTING

INSTRUCTIONS FOR CONSUMERS AND SPECIALIZED TECHNICIANS

Fault identification	Description of failure	Corrections
	**OVERCURRENT** Abnormal increase of current.	**01** • Check if the motor power corresponds to the output power of the AC motor inverter. **02** • Check for possible short circuits on U / T1, V / T2, W / T3 wiring connections. **03** • Check for possible short circuits in the wire connections between the AC motor inverter and the motor and ground wire. **04** • Check for loose contacts between the AC motor inverter and the motor. **05** • Check for possible overload conditions on the motor. **06** • After a short circuit, if there are still anomalies in the operation of the AC motor inverter, you must send the product to the manufacturer.
	**OVERVOLTAGE** The DC voltage has exceeded the maximum allowed value.	**01** • Check if the input voltage of the AC motor inverter is within the rated voltage class. **02** • Check for possible voltage variations. **03** • Check if the power required for the brake is within the specified limits.
	**LOW VOLTAGE** The AC motor inverter detects that the DC terminal voltage is below the minimum value.	**01** • Check if the input voltage of the AC motor inverter is within the rated voltage class. **02** • Check for abnormal motor load. **03** • Check if the input power connections are correct with R-S-T (for 3-phase models) without losing the phase.
	**OVERLOAD** The AC inverter detects excessive current at the control output.	**01** • Check if the motor is overloaded. **02** • Use the following model with AC motor inverter power.
	**OVERLOAD DURING ACCELERATION**	**01** • Short-circuit at the motor output: Check that the isolation on the output lines is in good condition. **02** • Acceleration time too short: Increase the acceleration time.
	**OVERCURRENT DURING DECELERATION**	**01** • Short-circuit at the motor output: Check that the isolation on the output lines is in good condition.
	**DETECTION OF EFFORT AND EXCESS OF CONSUMPTION**	**01** • Check parameter 06.04 and set lower sensitivity (set a value closer to 200%). **02** • Check if the door is stuck at some point.