MLS4

USER'S AND INSTALLER'S MANUAL

Motorline® PROFESSIONAL

00. CONTENT

INDEX

01. SAFETY INSTRUCTIONS

ATTENTION:

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 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.

GENERAL WARNINGS

• This manual contains very important safety and usage information. very important. 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.

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 central 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 the power supply cable. Please note that all the cables must enter the central 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 central (only at 24V motors)

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
i • Useful information	• Connectors information
👆 • Programming information	• Buttons information

DESCRIPTION

MLS4 is a waterproof standalone access control, reading EM&HID card. It uses an advanced Microprocessor, with high-capacity flash memory for 10000 users. Users can be easily added and deleted via admin card.
The infrared remote control allows the device not only to have alarm, protection, anti-passback function but also allows to install two units interlocked and add and delete the user on the device.
Besides, it has a low power consumption, anti-theft alarm and door release button.
All these characteristics make it convenient, safe and reliable.

SPECIFICATIONS

Feature	Description
Waterproof Design	Rainproof, moistureproof , durable
Ultralow power consumption	Longer working life, more stable performance
Large capacity	10 000 user cards
Wiegand reader	Can be used as wiegand 26 output reader
External reader connection	Can be connected an EM/IC/HIDwiegand 26 output reader
Two devices interlocked	Two devices can be interlocked online
Anti-passback	Single door or two doors anti-passback

TECHNICAL CHARACTERISTICS

• Power Supply	12Vdc ± 10%
• Static current	<30mA
• Maximum card reading distance	5 ~ 8cm
• Operating temperature	-25°C ~ 55°C
• Operating humidity	20% ~ 98%
• Output load blocking	2A
• Alarm Output load	2A
• Administrator card	2 units

DEVICE INSTALLATION

1 • Drill the holes according to the distance and the dimension on the back cover, or install the distributing box;
2 • Pass the cable through the hole, connect the necessary wires and insulate the unused wires with insulation tape to safeguard a short circuit;
3 • Fix the back cover on the wall with special screws;
4 • Fix the front cover to the back cover with the screws.

WIRES

Sequence	Marks	Color	Description
1	D0	Green	WG output line D0
2	D1	White	WG output line D1
3	OPEN	Yellow	Exit button
4	+12V	Red	+12V Input
5	GND	Black	GND
6	NO	Blue	Relay NO end
7	COM	Purple	Relay Com
8	NC	Orange	Relay NC end

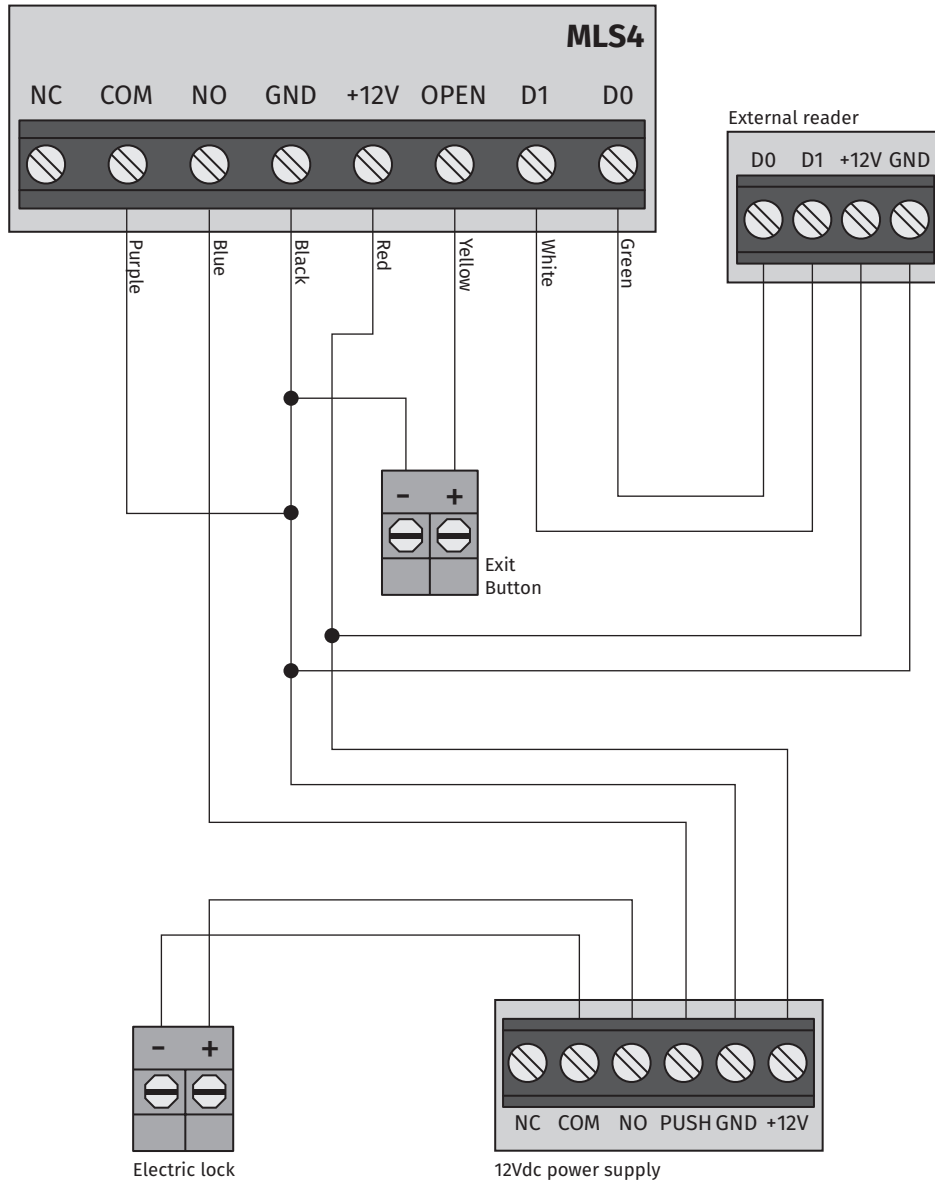**Note •** Please check all wires and install the front cover carefully before turn on the device.

STANDALONE FOR A DOOR WITH POWER SUPPLY

• **ELECTRIC LOCK**

MLS4

| NC | COM | NO | GND | +12V | OPEN | D1 | D0 |

Purple | Blue | Black | Red | Yellow | White | Green

External reader

| D0 | D1 | +12V | GND |

Exit Button

Electric lock

12Vdc power supply

NC | COM | NO | PUSH | GND | +12V

STANDALONE FOR A DOOR WITH POWER SUPPLY

• **ELECTROMAGNETIC LOCK**

MLS4

| NC | COM | NO | GND | +12V | OPEN | D1 | D0 |

Purple | Blue | Black | Red | Yellow | White | Green

External reader

| D0 | D1 | +12V | GND |

Exit Button

Electromagnetic lock

12Vdc power supply

NC | COM | NO | PUSH | GND | +12V

Motorline PROFESSIONAL
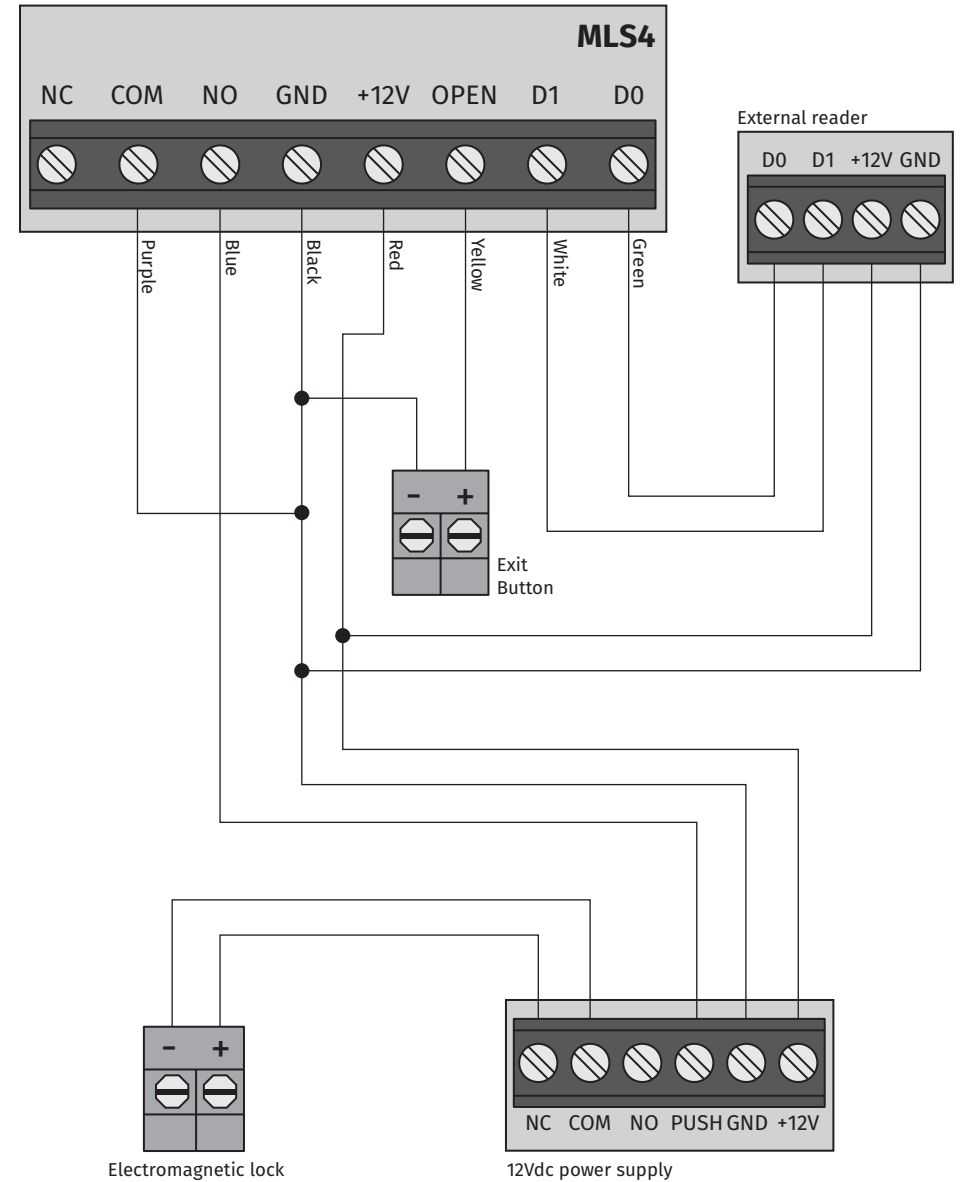
03. INSTALLATION AND CONNECTIONS

WIEGAND READER CONNECTION

MLS4

| NC | COM | NO | GND | +12V | OPEN | D1 | D0 |

Black — Red — White — Green

GND +12V D1 D0

External reader
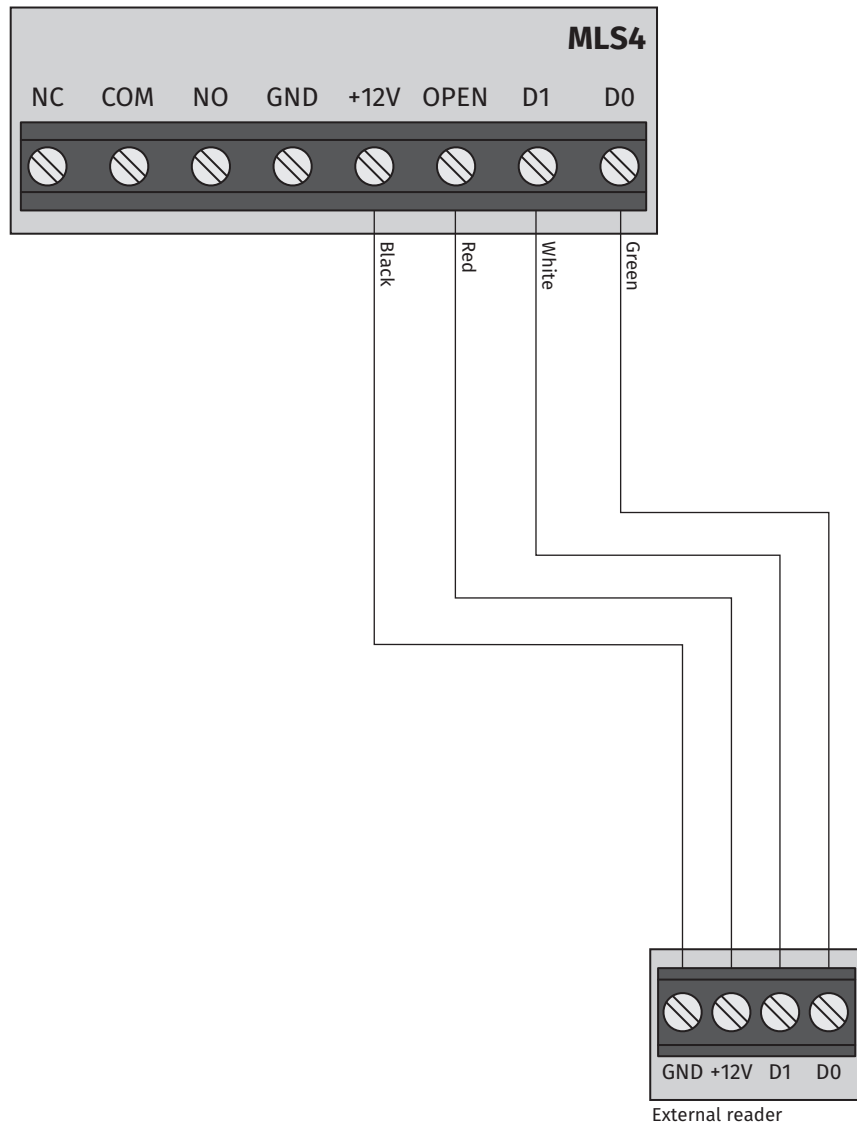
04. CONFIGURATION

FACTORY RESET AND SET MANAGEMENT CARD

Connect the yellow wire to the black wire and turn on the power. After the sound "didi", Factory reset is finished. When indication LED turns green, it means you can set the two admin cards. Pass the first card through the reader as admin add card. After that pass the second card as admin delete card. Then LED turns red flash, and after that, the device can work normally.

Note • Resetting to factory defaults does not delete user cards. If you present the same card on the second reading, the device will beep 3 consecutive times. Then you can present another card. If no operations occur within 10seconds, the device will enter working mode automatically and the parameter will reset to factory default.

ADMIN SETTING ON KEYPAD

Administrator operating mode	* master code # factory default: 999999 **Note** • All steps below require you to be in Programming Mode
Change the master code	0 new code # repeat new code # **Note** • Master Code length: 6~8 digits

Add users via remote control:

Read card to add user	1 pass card # pass card # ... #
Use card number to add user	1 card number # card number # ... # **Note** • **1** Card number must be 8 or 10 digits. If the card number has less than 8 or 10 digits, type 0 before the card number as many times as necessary. **2** Press **#** and confirm, click one last time on **#** to finish and click on ***** to get out.
Add user with ID and Card	1 User ID 1 # pass card 1 # User ID 2 # pass card 2 # ... #
Add consecutive card numbers	1 cards quantity # 8 or 10 digits card number # 8 or 10 digits card number # ... # Add consecutive user card numbers. Green fast flash.

PRODUCT INSTALLATION

Remove user by remote control:

Pass card to delete user	2 pass card 1 pass card 2 ... #
Use card number to remove user	2 8 or 10 digits card number # 8 or 10 digits card number # ... #
Remove user by ID	2 User ID 1 # User ID 2 # ... #
Delete all users	2 0000 # **Note** • This operation will delete all users, but admin cards won't be deleted.

Set security mode

Normal mode (factory default)	3 0 #
Dead mode	3 1 # Continuous reading of 10 invalid cards within 10 minutes will lead to device inactivity for 10 minutes
Set Door impulse time	4 0~99 # **Note** • Duration "0-99 seconds", 0mS equals 50mS

Set Reader Mode

Standalone Mode	3 11 #
Slave Reader Mode	3 13 # **Note** • For the reader to communicate with the MCA control board, it must be configured as a slave reader

PRODUCT INSTALLATION

Set Red light mode:

Static mode disabled	6 0 #
Static mode enabled (factory default)	6 1 #

Set Interlock:

Close interlock (factory default)	7 0 #
Open interlock	7 1 #

Set Anti-passback:

Disable anti-passback (factory default)	8 0 #
Enable hosting anti-passback mode	8 1 #
Enable auxiliary anti-passback mode	8 2 # **Note** • Details will be illustrated in Advanced Setup on page 7A.

ADMIN CARD OPERATION

Add user:

pass "Add User" card pass user card 1 pass user card 2 ... "Add User" card

Delete user:

pass "Delete User" card pass user card 1 pass user card 2 ... pass "Delete User" card

OPEN DOOR AS USER

Pass user card	Pass a valid user card through the reader. **Note** • The admin card cannot be used to open doors.

SOUND AND LIGHT INDICATION

OPERATION	LED COLOR	BUZZER
Initialization	Orange	Bip Bip
Static	Red Flash	
Correct code		Long bip
Enter programming	Red	Long bip
Setting	Orange	Bip
Exit	Red Flash	Long bip
Operation Failed		Bip Bip
Lock open	Green	Long bip
Add sequential card number	Green Quick Flash	

ADVANCED CONFIGURATIONS

1 • Two devices for single door
Install one device at inside and the other at outside. Inside device works as the controller and the outside device works as reader. The difference between two interlocked devices for a one door and a single device working with "Standalone" is below:

1.1 • Add users on both devices. Both inside user data and outside data can be shared. Up to 10,000 users can be added.

1.2 • The setting of the two devices must be the same. When admin PIN setting is different, outside device can't open the door with saved users data.

2 • Two interconnected devices for two doors
Install two controllers for two doors in way to control two locks separately, set interlock for two devices, open door contact. One door is closed when the other door is open. The device can't control another electric lock and saved data can't be shared between different devices. This function mainly apply for bank, prison etc.

ADVANCED CONFIGURATIONS

3 • Anti-passback for Single door
Install a common reader outside (or use this device without any card No. for reader). Install this device outside and set it as anti-passback host mode. In this case, the two devices consist of an anti-passback system for single door, mainly apply to controlling enter and exit for single door. Functions as follows:

3.1 • Set the necessary functions and add an user card on the host device.

3.2 • Users can only present the card on the outside reader to enter, and then present the card on the host device to exit. Users can't enter or exit 2 consecutive times.

4 • Anti-passback for two doors
Install one device on Door 1 in auxiliary anti-passback mode. Install one device on Door 2 in hosting anti-passback mode. In this case, the two devices consist in a anti-passback for two doors, mainly apply for one-way in and out for double doors like a parking. Functions as follows:

4.1 • Set the necessary functions and add an user card on the host device.

4.2 • Users can only present the card on the auxiliary device to enter, and then present the card on the hosting device to exit. Users can't enter or exit at 2 consecutive times.