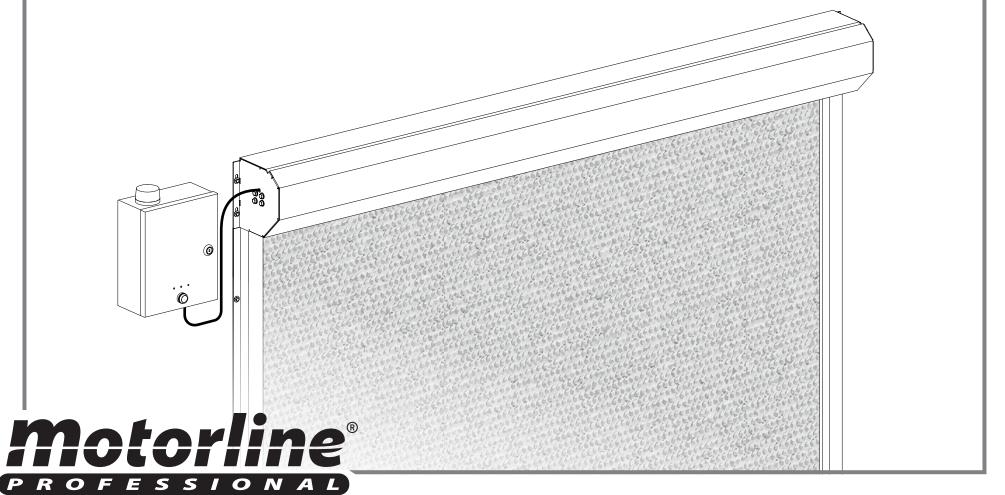


# FLAMA

**USER'S AND INSTALLER'S MANUAL** 



# 00. CONTENT

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### 01. SAFETY INSTRUCTIONS

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.



EN

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



· Useful information



 Potentiometer information



Connectors information



Buttons information



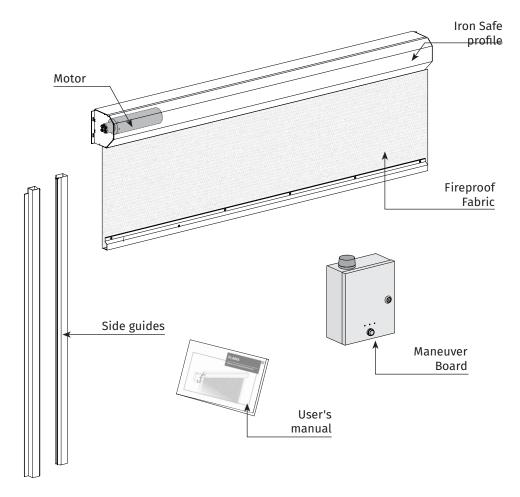
Programming information

# 02. PACKAGE

### **INSIDE PACKAGE**

The kit consists of the following components:

- **01** Motor
- 02 Side guides
- 01 Iron Safe profile
- **01** Fireproof Fabric
- 01 Maneuver Board
- 01 Outside RESET button
- 01 User's Manual



# 03. OPERATOR

### **TECHNICAL CHARACTERISTICS**

**FLAMA** is a fire curtain built with indicated galvanized steel profiles, with lacquer.



### MANEUVER BOARD

Power Supply

230 Vac 50 Hz



### **MOTOR**

	DC95	DC120	DC160				
• Power Supply		24Vdc					
• Current	10.8A	14.5A	21A				
• Power	200 W	300 W	700 W				
• Rotation speed	12 RPM	8 RPM	4.2 RPM				
• Noise	LpA < 60 dB (A)						
• Force	100 Nm	240 Nm	480 Nm				
Working temperature	-25°C a 55°C						
• Protection class	IP 55						
• Working frequency		50 %					



#### **FIREPROOF FABRIC**

• Wire	EC9 68/2 V4A
• Weight	710 g/m2
• Thickness	0.7 mm
Operating temperature	-25°C ~ 600°C
• Color	Silver / Gray Coating both sides
• Weaving pattern	8H Satin
• Construction	Web $\rightarrow$ 16 wires/cm   Weft $\rightarrow$ 15 wires/cm
• Tensile Strength	>4500N/5cm ±10%







# 03. OPERATOR

### **TECHNICAL CHARACTERISTICS**



#### OTHER COMPONENTS

• Transformer	230 V ~ 24 Vac
• Battery	2 Batteries in series 12 V = 24V
Battery Life	+/- 12 continuous cycles (opening and closing)*

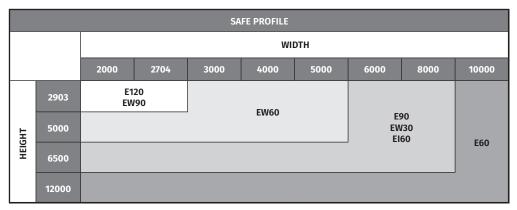
### PERFORMANCE DESIGNATION

We have the following performance designation approved by TECNALIA:

- EI Prevents the passage of flames, hot gases and temperature transmission with water.
- EW Prevents the passage of flames, hot gases and the transmission of thermal radiation without water.
- E Prevents the passage of flames and hot gases without water.

When tested with water, FLAMA's sprinklers had the following characteristics:

- During the test, a flow rate of 60L/min was used, at a pressure of 1 bar. Each sprinkler should operate at approximately 7,3L/min·m2.
- They must be placed 1,5m apart.
- The distance between the fireproof fabric/iron safe profile and the sprinklers is 40cm.





# 03. OPERATOR

### SAFE PROFILE INSTALLATION MEASURES

FLAMA has two models, and the installation of each model is variable due to its measurements. See the table below:

	SAFE PROFILE												
			WIDTH										
	1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 11000 12												12000
	1000												
	2000												
	3000												
	4000												
	5000												
неіднт	6000												
포	7000												
	8000												
	9000												
	10000												
	11000												
	12000												

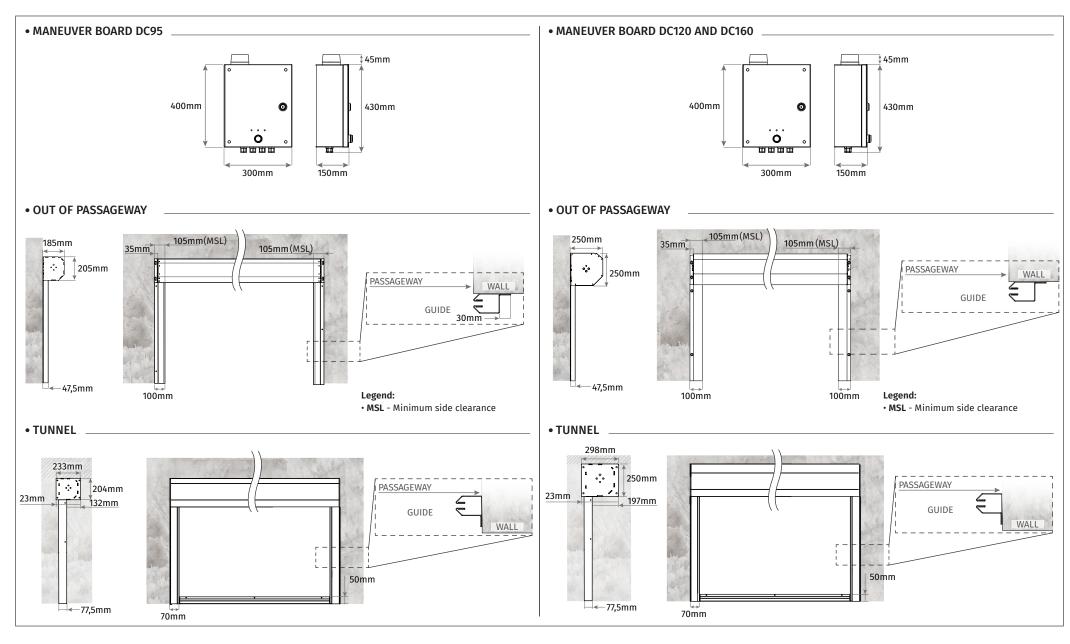
FLAMA ST



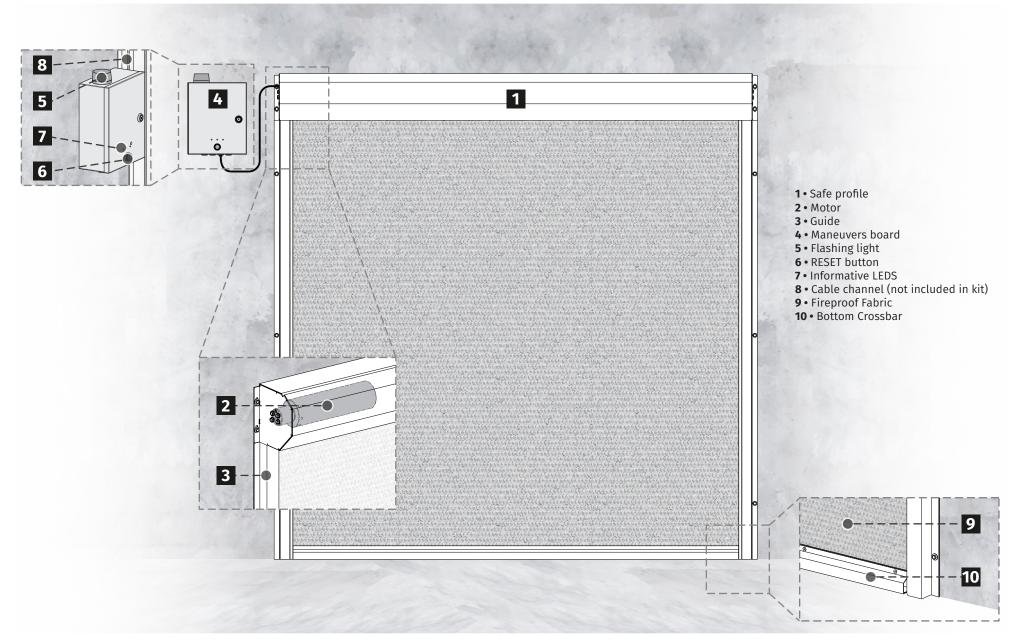
FLAMA XL

### **FLAMA ST DIMENSIONS**

### **FLAMA XL DIMENSIONS**



### **INSTALLATION MAP**



### PRE-INSTALLATION INFORMATION

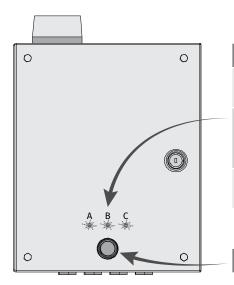
In order to the FLAMA work correctly, before the installation it is important to take into account the following parameters:

- Read all the steps at least once, in order to learn about the installation and configuration process.
- Check the horizontal ground alignment, so that the Flama can be installed properly.
- Make sure there is adequate electrical protection against short circuits / power surges and grounding in Electrical Board.
- Be careful in the event of handling directly the control board. Improper handling can damage some electrical components.
- Make sure you have prepared all the necessary materials for the installation.
- Evaluate the security devices to be installed. This will ensure that unexpected accidents do not happen.
- Use appropriate screws to the place where the components of the FLAMA will be fixed.
- Do not use plastic dowels in the FLAMA installation.



It is very important that all precautions are respected! Only in this way it can be assured the proper functioning and durability of the FLAMA!

### **CONTROL BOARD**



LED	Status	Description			
Α	On	230V power supply			
(Green)	Off	No 230V power supply			
B (Yellow)	On	The battery is active			
	Off	The battery has no charge			
(Icaon)	Flashing	Motor without sinal			
С	On	The battery is off			
(Red)	Off	The battery is on			

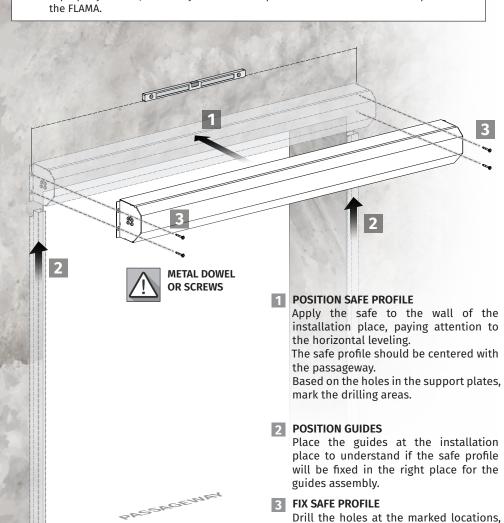
Control board reset button

# 04. INSTALLATION

### FIXING THE SAFE PROFILE



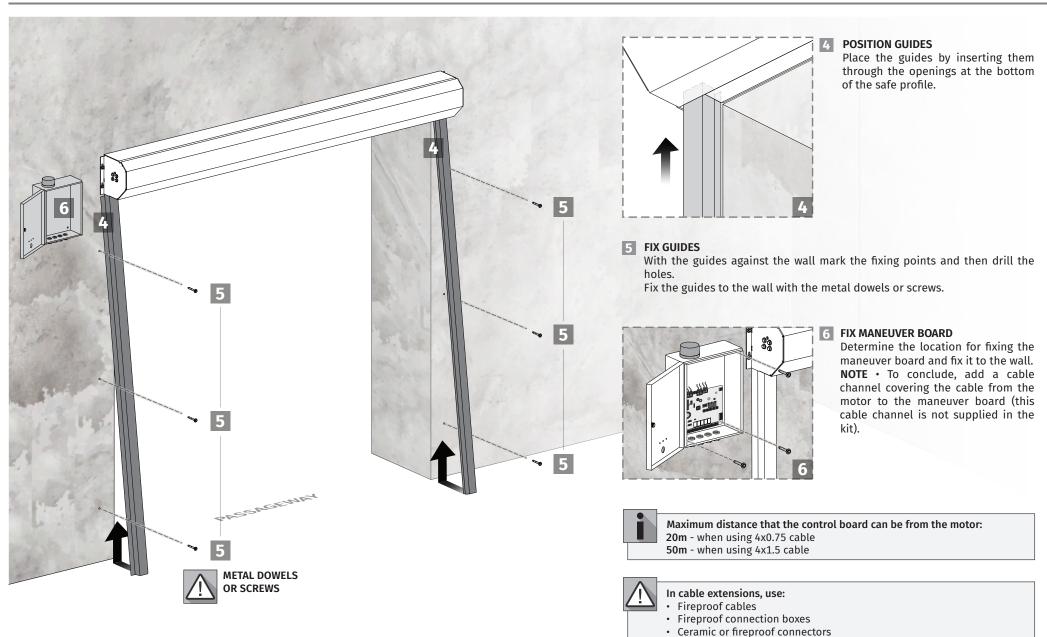
Before proceeding with installation, should check that if all the measurements are correct, taking into account the installation location. It is also important that the installation site is properly leveled, since only then will it be possible to ensure the correct operation of



**FIX SAFE PROFILE** 

Drill the holes at the marked locations, and then apply the safe profile to the wall, fixing it with metal dowel or screws. The safe profile must be securely fastened to prevent accidents.

### FIXING THE SIDE GUIDES AND MANEUVER BOARD



### DC95 CONTROL BOARD DIAGRAM

#### **MOTOR WIRES**

01 · brown wire

02 · white wire

03 · vellow wire

04 · green wire

05 · unused

#### **FLASHING LIGHT**

**06** • red wire (12V +)

07 • black wire (12V -)

#### CONTACTS

08/09 · Opening contact

**10/11** • Intermediate position contact

12/13 · Closing contact

**14** • (12V +)

**15** • (12V -)

#### FIRE ALARM

20 ⋅ No voltage ( •• ••)

21 · No voltage ( •• ••)

22 · Unused (Future Use)

23 · Unused (Future Use)

#### **EXTERNAL SWITCH**

**24** • Open

25 · Stop

**26** • Close

27 · Reset

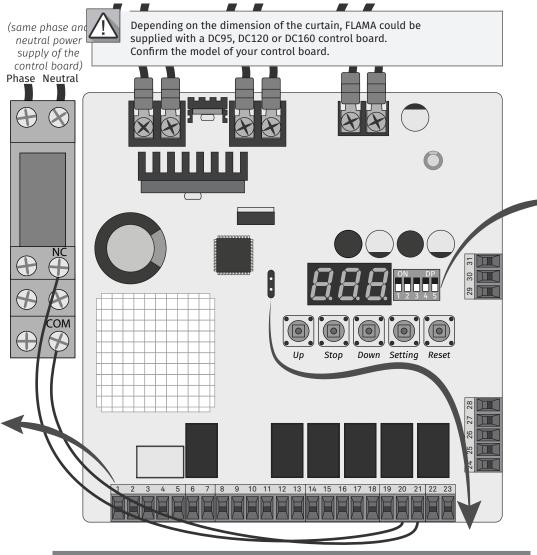
28 · Common

#### **EXTERNAL SWITCH**

29 · Unused (Future Use)

30 · Unused (Future Use)

31 · Unused (Future Use)



#### LOCK SHUNT | FIRE TEST

After completing the programming of the curtain, you can simulate the alarm operation. To do this, insert the jumper into the two metal pins.

**NOTE:** The curtain must be in the open position for testing.

# DIP SWITCH 1 CURTAIN OPERATING MODE

**ON** • Automatic Mode (Drops down by impulse) **OFF** • Human presence Mode (Drops down by Human presence)

# DIP SWITCH 2 FIRE ALARM CONTACT

ON • normally closed (NC).
OFF • normally open (NO).

# DIP SWITCH 3 CURTAIN OPERATING IN CASE OF FIRE

**ON** • Secondary Closing: When the first fire alarm is triggered, the curtain goes down to the middle position. When another fire alarm is triggered, the curtain drops to the lower limit.

**OFF** • If the fire alarm is triggered, the curtain goes down to the intermediate point and waits for the time set at the intermediate stop, then closes to the ground (this allows people to escape from the fire area if there is no other exit).

# DIP SWITCH 4 CHANGE MOTOR ROTATION DIRECTION

**ON/OFF** • allows you to reverse the direction of the motor rotation.

**NOTE:** This change can also be made by reversing the black and red motor cables.

# DIP SWITCH 5 AUTOMATIC RESET

**ON** • Automatic Reset: When the fire alarm is triggered, the curtain goes down and returns to normal functionality as soon as the fire alarm is disabled.

**OFF** • Manual Reset: When the fire alarm goes off, the curtain goes down and a manual reset is made to return the curtain to normal functionality.

**NOTE:** Reset is made on the exterior button of the maneuver board.

### DC120 AND DC160 CONTROL BOARD DIAGRAM

### LOCK SHUNT FIRE TEST

After completing the programming of the curtain, you can simulate the alarm operation. To do this, insert the jumper into the two metal pins.

**NOTE:** The curtain must be in the open position for testing.

#### **MOTOR WIRES**

- 01 · brown wire
- 02 · white wire
- 03 · yellow wire
- 04 green wire
- 05 · unused
- 4 · (12V +)
- **5** (12V -)

#### **FIRE ALARM**

- 09 · Unused
- **10 ·** No voltage (**⋄ ⋄ ⋄ )**
- **11 ·** No voltage (**✓ • )**

#### FLASHING LIGHT

- 12 · red wire (12V +)
- 13 · black wire (12V -)

#### **SWITCH EXTERNO**

- **14** Open
- **15** Stop
- **16** Close
- 17 · Reset
- 18 · Common

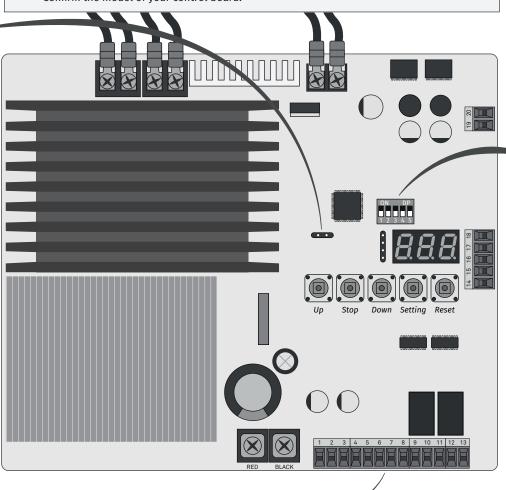
#### **SWITCH EXTERNO**

- 19 · Unused (Future Use)
- 20 · Unused (Future Use)



Depending on the dimension of the curtain, FLAMA could be supplied with a DC95, DC120 or DC160 control board.

Confirm the model of your control board.



# DIP SWITCH 1 CURTAIN OPERATING MODE

**ON** • Automatic Mode (Drops down by impulse) **OFF** • Human presence Mode (Drops down by Human presence)

# DIP SWITCH 2 FIRE ALARM CONTACT

**ON** • normally closed (NC). **OFF** • normally open (NO).

# DIP SWITCH 3 CURTAIN OPERATING IN CASE OF FIRE

**ON** • Secondary Closing: When the first fire alarm is triggered, the curtain goes down to the middle position. When another fire alarm is triggered, the curtain drops to the lower limit.

**OFF** • If the fire alarm is triggered, the curtain goes down to the intermediate point and waits for the time set at the intermediate stop, then closes to the ground (this allows people to escape from the fire area if there is no other exit).

# DIP SWITCH 4 CHANGE MOTOR ROTATION DIRECTION

**ON/OFF** • allows you to reverse the direction of the motor rotation.

**NOTE:** This change can also be made by reversing the black and red motor cables.

# DIP SWITCH 5 AUTOMATIC RESET

**ON** • Automatic Reset: When the fire alarm is triggered, the curtain goes down and returns to normal functionality as soon as the fire alarm is disabled.

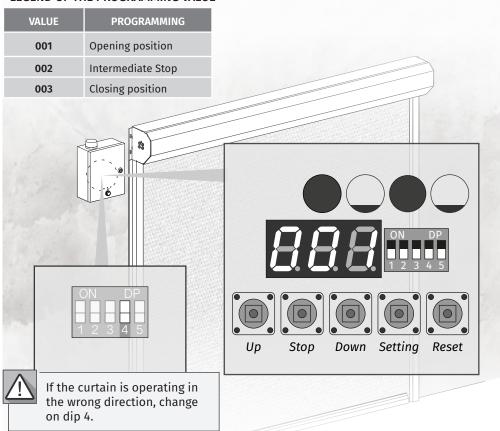
**OFF** • Manual Reset: When the fire alarm goes off, the curtain goes down and a manual reset is made to return the curtain to normal functionality.

**NOTE:** Reset is made on the exterior button of the maneuver board.



### **LIMIT SWITCHES PROGRAMMING**

#### • LEGEND OF THE PROGRAMMING VALUE



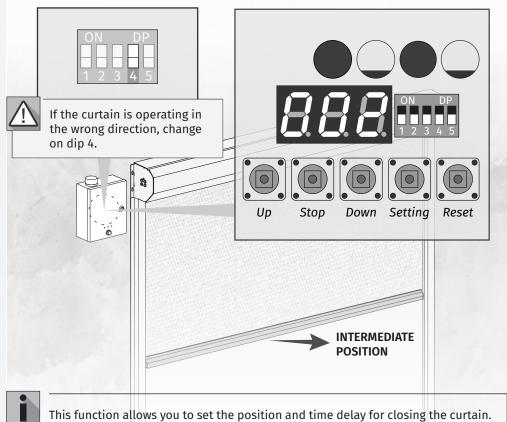
- 01 Turn on the 230V power and turn on the battery (Switch inside the maneuver board).
- **02** Press the **Setting** button until LED1 lights up (blue light). The value **001** will appear on the display.
- 03 Press the *Up* button until the curtain is at the desired opening point.
- ${\bf 04 \cdot Press\ the\ \it Setting}$  button to confirm. Menu  ${\bf 002}$  appears.

Menu 002 is for programming intermediate stop. If you do not want intermediate stop press Setting to advance to 003 (continued at step 07).

- 07 Press the **Down** button until the curtain is at the desired closing point.
- **08** Press the **Setting** button to confirm and the blue led turn off.

 ${f NOTE}$  · Even if you do not consider it necessary, we advise you to set an intermediate limits witch.

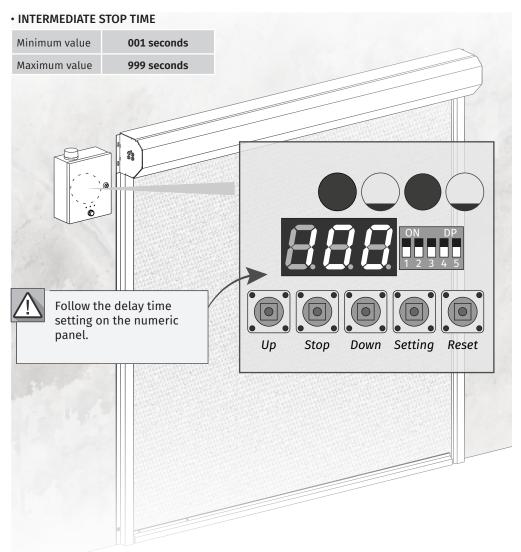
#### PROGRAMMING THE INTERMEDIATE POSITION



This function allows you to set the position and time delay for closing the curtain. In case of a fire alarm, the curtain does not close at the moment the alarm is triggered, allowing people to leave the local safely. The time is set by the user, being that, we advise that the time should be based on the self-protection measures of the building.

- 05 Press the *Down* button until the curtain drops to the desired midpoint.
- **06** Press the **setting** button to confirm. The value **003** will appear on the display.

### **SET THE INTERMEDIATE STOP TIME**



- 01 · Turn on the 230V power and turn on the battery.
- 02 · Press the Setting button until the LED1 lights up (blue light).
- 03 Press the **Stop** button as many times as necessary until the --5 function appears.
- **04** Press the *Up/Down* buttons to add/remove seconds. Pressing the *Setting* button it confirms and advances in the digits.

**NOTE** • To remove the scheduled curtain delay on closing, set the values to zero.

# <u>Motorline</u>

# **06. AUXILIARY INFORMATION**

### MANUAL OPERATING MODE

It is possible to use the FLAMA in manual mode. To do this, access the inside of the maneuvers board and slide curtain working mode switch (page 10/11). From that moment, it will be possible to open and close the curtain using the up and down buttons.

### **ENERGY FAILURE**

The fire curtain is equipped with two batteries. This means that in the event of a power failure it is possible to open and close the curtain by 50 maneuvers.

When there is a power failure, the curtain closes automatically. To open the curtain press the RESET button on the outside of the maneuver board.

### **VISUAL AND SOUND ALARM**

The manuevers board has a siren and a flashing light. These 2 components act to signal the existence of a power failure or the operation of the fire alarm. They work simultaneously with existing alarm/protection systems in the building.

### **TEST FUNCTIONS**

#### Test limit switches

• After programming the limit switches (page 12), open and close the curtain completely. Check that the stop occurs at the places you have programmed.

#### Test fire alarm

• Remove the lock shunt on the control board. The buzzer will ring and the curtain will have to close.

### Test delay before closing

• If enabled, the curtain will delay when the closing is activated.

### Test two-stroke closing

• If enabled, the curtain will close halfway, delay a few seconds, and close completely.

After the alarm is activated, press the outer button to reset the control board and the curtain returns to normal operation. (The curtain performs the ascent maneuver and the alarm is turned off).



# **07. TROUBLESHOOTING**

### FINAL CONSUMERS AND SPECIALIZED TECHNICIANS INSTRUCTIONS

Problems	Causes	Solutions
The green light turns off	• Energy failure	<ul> <li>Make sure that there are no malfunctions with the power supply, the power cord plug or the fuse.</li> <li>Make sure that the transformer is not on short-circuit.</li> </ul>
Yellow light turns off (red turns on)	Batteries off or with low charge	<ul> <li>Check if the batteries are properly connected.</li> <li>Check if the batteries are charged. If not, charge them.</li> </ul>
Yellow light flashes	Batteries on charge	
Code Error "001"	• There is a fault in the output signal to the motor	Check if all wires are connected correctly.
Code Error "002"	Motor overload (Locked motor)	<ul> <li>Check if the motor is not overloaded.</li> <li>Check if there are no obstacles in the curtain passageway.</li> </ul>
Yellow light is flashing unconstantly	• There is a problem with the motor output signal.	• Check if the green cable is properly connected.

# **EU DECLARATION OF CONFORMITY**



### **EU Declaration of Conformity**

It is hereby declared that Electrocelos - Sistemas Automatizados e Comunicações de Barcelos, S.A., located in Travessa do Sobreiro, 29, 4755-474 Rio Côvo — Barcelos, obtained and affix the CE marking on the product mentioned below, due to its design and construction method, as well as in our commercialized version, in conformity with the EC directive basics requirements of safety and health. This declaration is invalid if occurs any alteration in the product without our agreement.

Brand: Motorline Professional

Model: Fire Curtain - FLAMA

As such, the product meets with the following European directives:

Regulation	Standards
EU 305/2011	EN 1363-1:2012
	EN 1634-1:2014
	EN 12101-1:2005
	EN 13501-2:2016
	EN 16034:2014
	EN 16005:2012+AC:2015
	UNE-EN 12101-1:2005+A1:2006

Directive	Standards	
2014/30/EC	EN 60034-1:2010	
2014/35/EU	EN 60034-1:2004 EN 60335-1:2002+A11:2004+A1:2004	
2011/65/EC		

Barcelos, 30 of May of 2018



Electrocelos — Sistemas Automatizados e Comunicações de Barcelos, S.A. Travessa do Sobreiro, n. 29, 4755-474 Rio Côvo, Santa Eugénia - Barcelos Tel. 253 830 060 • Fax 253 830 068 • mail@motorline.pt • www.motorline.pt



Mod.070.5.B





# **MAINTENANCE**

### **MAINTENANCE TASKS AND FREQUENCY**

During maintenance/revision check the parameters mentioned below. On the date you carry out the maintenance, mark with an "X" the tasks performed.

	Frequency (months)			Date							
	6 1	12	24 3	36	/ /	/ /	/ /	/ /	/ /	/ /	/ /
FIXING / OPERATION											
Check that the fastening is in good condition		Х									
Check that the guides and safe are well against the wall		Х									
Check visual appearance		Х									
Check that the screen is not damaged		Х									
Check that guides and safe profile are not damaged		Х									
Check if you take the complete courses without arrests		Х									
Check two-strop closing (if programmed)		Х									
ELECTRICAL OPERATION											
Simulate closes and opens at 100% with batteries		Х									
Simulate closes and opens at 100% with 230V		Х									
Simulate if the 230V fails, it closes completely		Х									
Simulate if when triggering an alarm, it closes completely		Х									
Check battery charge		Х									
Check that the 230V and battery lights work		Х									
Check beep if it works		Х									
Check if the RESET button raises the door		Х									
SEVERAL											
Put maintenance tag		Х									
Clean door and surrounding area		Х									
	Company /	Тес	hnicia	ın:							



Since maintenance standards vary depending on the legislation in force in the country where the fire curtain is being installed, the installer must verify that the recommended maintenance frequency is correct.

