

Control Unit Manual

FSM-1 Screen Pad

Rapid Speed Rolling PVC Door



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Description

General Safety Information

Usage Instructions:

- No part of this document can be reproduced without the written consent of Kollias Ltd.
- This document may be updated in the framework of technical progress.
- All dimensions are in millimeters.
- Drawings are not in scale.

Symbols:

DANGER!

Symbolizes imminent danger that might result to death or serious injury.

ATTENTION!

Symbolizes imminent danger that might result to damage or destruction.

CHECK

Symbolizes that a check must be done.

DANGER!

There is serious danger if the below rules are not followed!

Guaranty

The function and safety of the control board is only guaranteed when the safety rules in this document are followed.

Kollias Ltd. bears no responsibility for any damages or injuries that might occur from incorrect handling of the product.

Kollias Ltd. bears no responsibility for any damages or injuries that might occur from using not approved spare parts and/or components.

Use

The FSM-1 control unit is exclusively designed to operate rapid speed rolling PVC doors.

Usage Group

Only trained and specialized electricians are allowed to connect, program and service the control unit. They must also:

- Be aware of the safety regulations.
- Be aware of the related electrical regulations.
- Be trained in using and servicing of appropriate equipment.
- Be able to recognize dangers related to electricity.

Installation and connection instructions

- The system must be disconnected from electricity before any work occurs.
- Ensure that the power will not return in the middle of the works.
- All current standards and regulations must be followed.

Product Description

The FSM-1 control unit has a clear, smart and simple design and configuration.

The control unit is provided ready and configured from the factory, so that mistakes are avoided and assembly times are minimized.

FSM-1 control units do not require any time consuming configurations!

The user can extract important data regarding the function of the rapid speed door, through the touch screen. The user can also intervene in the factory settings, and adjust them closer to his/hers needs.

The rapid speed door has two cooling systems:

- 1) 24V DC, used for the cooling of the control unit.
- 2) 230V AC, used for the cooling of the motor and brake.

Both systems are activated simultaneously for 5 minutes each time the door is operated. Each operation of the door resets the cooling time.

Under normal conditions, the ventilators should be cleaned every two years, as the accumulation of dirt can stop their operation.

✔ The ventilation ports must never be covered!

⚠ ATTENTION!

- 1) Control Unit Ventilation
- 2) Power Group Ventilation



If a ventilator stops working, the door will continue operating until the power group reached the temperature of 100 °C. If the temperature goes over 100°C, the door will only be able to close, and the “TEMP.” indication in the touch screen will turn red.

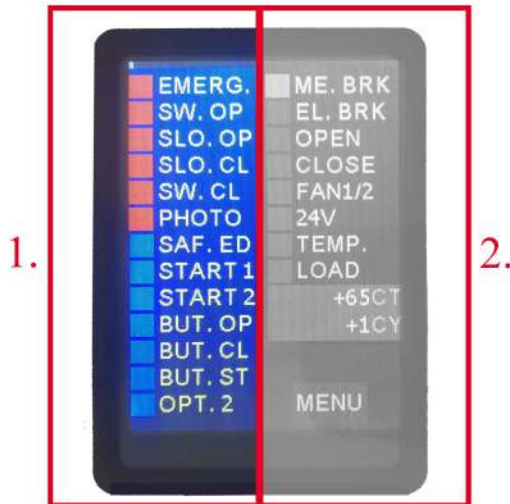


The test subject in the above picture has been repeatedly tested in rough conditions for over a year without any dysfunctions. In that time it concluded over 1.500.000 operation cycles and it continues to function properly to this day.

Touch Pad Configuration

Home Screen

The home screen is divided into two parts.



On the left side (1) are the commands of the control unit and the condition of the door:

1. EMERG.

The door has stopped for one of the following reasons:

- 1.1 The Emergency Stop has been activated.
- 1.2 The crank has been inserted in the manual override input (more details in page 7).
- 1.3 The inverter has overloaded.

2. SW. OP

Upper limit switch has been activated.

3. SLO. OP

Speed altering switch activated at door open.

4. SLO. CL

Speed altering switch activated at door close.

5. SW. CL

Lower limit switch has been activated.

6. PHOTO

Photocell condition indication.

- When the indication is blue, the contact of the photocell is closed and the door is operating normally.
- When the indication is red, the contact of the photocell is open and the door cannot close.
- When the indication is black, the contact of the photocell has been disabled from the menu. The door will operate normally, however without regarding the condition of the photocells.

7. SAF. ED

Safety Edge condition indication.

- When the indication is blue, the contact of the safety edge is closed and the door is operating normally.
- When the indication is red, the contact of the safety edge is open and the door cannot close.
- When the indication is black, the contact of the safety edge has been disabled from the menu. The door will operate normally, however without regarding the condition of the safety edge.

8. START 1

Command START 1 from the corresponding contact of the control unit.

9. START 2

Command START 2 from the corresponding contact of the control unit.

10. BUT. OP

Command to open the door from the boutonniere.

11. BUT. CL

Command to close the door from the boutonniere.

12. BUT. ST

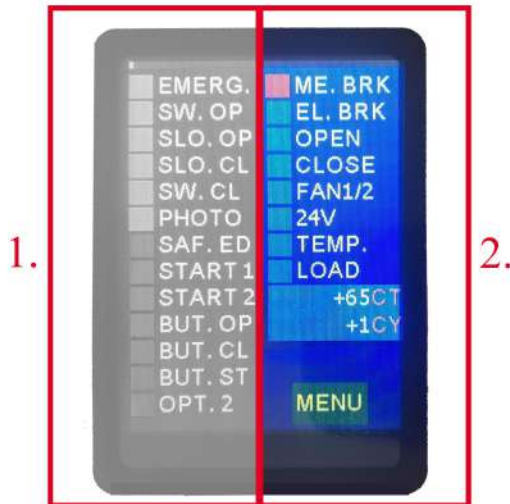
Command to stop the door from the boutonniere.

13. OPT. 2

Touch Pad Configuration

Home Screen.

The home screen is divided into two parts.



On the right side (2) there is information regarding the drive system.

1. ME. BRK

Indicates that the electromagnetic brake has been activated.

2. EL. BRK

Indicates that the brake of the motor has been activated.

3. OPEN

Indicates that the door is opening.

4. CLOSE

Indicates that the door is closing.

5. FAN1/2

Indicates the operating of the ventilators.

6. 24V

Indicates power supply of 24V

7. TEMP.

Indicates temperature overload.

8. LOAD

Indicates that the system has been overloaded.

9. CT

Indicates the opening of the door in real time, based on the revolutions of the motor.

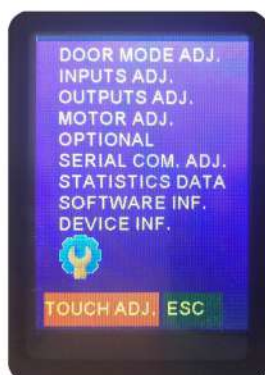
10. CY

Indicates the operating cycles that the door has performed.

Touch Pad Menu

MENU

Changing the configuration of the functions is protected by a factory set password that is only given to authorized personnel.



To change the condition of a function in the menu, first choose the condition and then activate or disable by pressing UP or DOW respectively.

To move back to the previous screen press ESC.

- DOOR MODE ADJ.

Auto Close function of the door.

1. AUT CL – ON/OFF

Activate / Disable Auto Close.

2. AUT CL SEC

Sets the auto close time when AUT CL is activated.



- INPUTS ADJ.

Activate / Disable Inputs

1. PHOTO – ON/OFF

Activate / Disable Photocell

2. SAF. EDGE – ON/OFF

Activate / Disable Safety Edge



- **OUTPUTS ADJ.** Function has not been defined.

- MOTOR ADJ.

Motor Information and Adjustments.



1. SW OPEN

Control Unit upper limit.

2. ORIG OPEN

Mechanical upper limit.

3. SLO OPEN

Point of speed switch at opening.

4. SLO CLOS

Point of speed switch at closing.

5. SW CLOS

Control Unit lower limit.

6. SLO SPEED

Motor speed at slow open operation.

7. HIG SPEED

Motor speed at rapid open operation.

8. SLO SP2

Motor speed at slow close operation.

9. HIG SP2

Motor speed at rapid close operation.

10. ACCELER

Motor acceleration.

11. AUTO SW ADJ. – ON/OFF

Auto configure limit place.

* In this case the control unit can bypass the mechanical limits by 6,25%.

Door Operation

Manual Override Instructions

Commands to Open, Close, and Stop, are given through the Touch Screen.

Setting the limits through the Control Unit.

To set the operation limits, do the following:

1. Manually adjust the limit switch.
2. Close the door.
3. Activate the AUTO SW ADJ. command in the MOTOR ADJ. menu.
4. The door opens and closes by itself.
5. Return to Home Screen by pressing ESC.

Adjusting the Touch Screen of the Control Unit.

To adjust the Touch Screen do the following:

1. From the menu choose TOUCH ADJ. and press ENTER.
2. Use the pen to move the orange dot to each of the four corners of the screen.
3. Press OK.



Manual Override Instructions

Picture 1



Picture 2



1. Open the crank input by moving the red switch upwards, as seen in Picture 1.
2. Place the crank in the input, and rotate smoothly until it adjusts (Picture 2).
3. Release the brake by pushing the red lever in the direction seen in Picture 3, and hold it there for as long as the manual override lasts.
4. Use the crank.
5. Release the brake lever.
6. Remove the crank and move the switch to its initial position.

Picture 3



