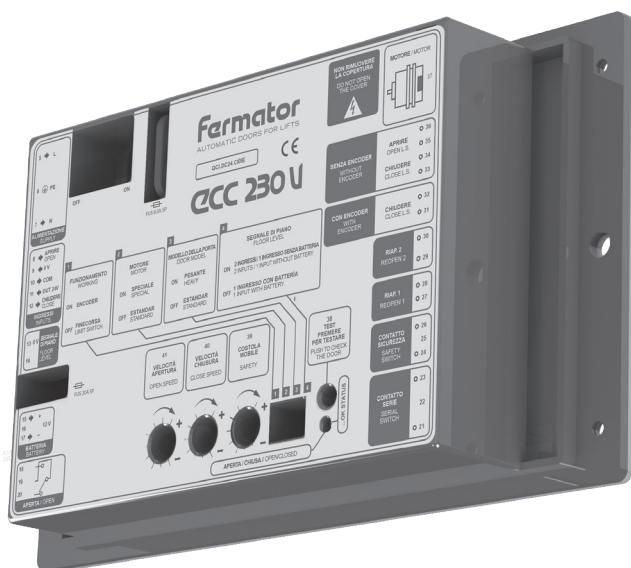


Fermator

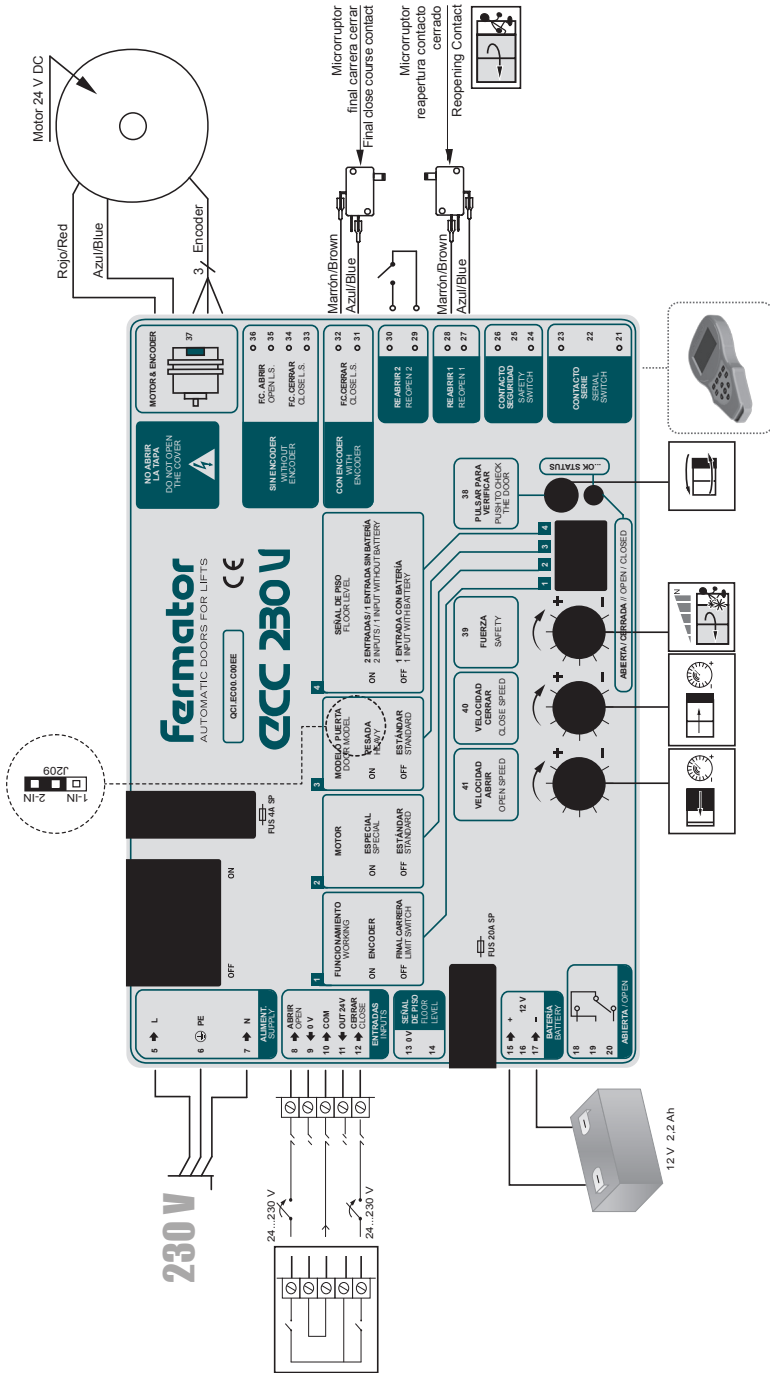
AUTOMATIC DOORS FOR LIFTS

ENG

Assembly manual.
Automatic horizontal sliding car door.
Component: ECC 230 V Electronic Module.

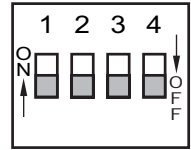


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The unit has to be programmed using the DIP switches on the front of the unit. If any change is made to any of the above switch selections, the unit must be switched OFF and ON again to read the new programming.

The switches functions are:



1 Working.

ON: Encoder.

The door movement control will be done using the motor encoder or the motor encoder and a close limit switch.

OFF: Limit switch.

The door movement control will be done using an open limit switch and a close limit switch.

2 Motor.

ON: Special Motor.

Different control is applied to perform the door movement with a special motor.

OFF: Standard Motor.

Standard control is applied to perform the door movement.

3 Door model.

ON: Heavy door.

The motor supplies a 30% extra torque to be able to move heavy doors.

OFF: Standard door.

Standard control is applied to perform the door movement.

4 Floor level.

| | Inputs | 12 V battery |
|-----|----------|--------------|
| ON | 2 Inputs | x |
| | | ✓ |
| OFF | 1 Input | x |
| | | ✓ |

Note: With DIP-switch No. 4 OFF is necessary to install a floor level contact in each floor.

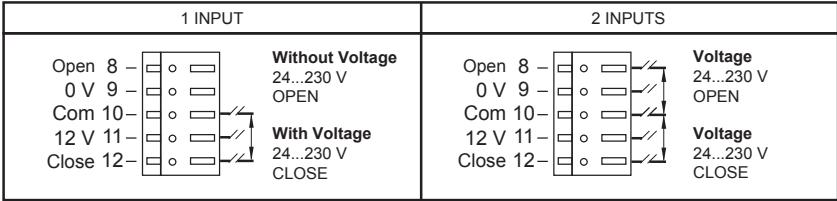
J209 1 & 2 INGRESSI.

1 InPUT (1-IN).

The door control unit will be controlled by a single input. Any voltage between 24 V DC to 60 V DC or 100 V AC to 230 V AC applied between terminals 10 & 12 will close the doors. Without input active the door remains opened. Open input is not used.

2 Inputs (2-IN).

The door control unit will be controlled by two independent inputs. Any voltage between 24 V DC to 60 V DC or 100 V AC to 230 V AC applied between terminals 10 & 12 will cause the doors to close. And between terminals 8 & 10 will cause the doors to open. In the absence of a signal, the doors will remain static. If both inputs are applied then the open signal has priority.



INPUTS

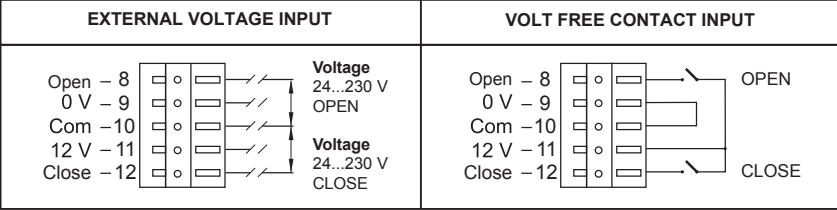
5 / 6 / 7

POWER INPUTS 230 VOLTS SINGLE PHASE AC.

The circuit has been designed to operate on a mains supply of 230 V AC (+10%,-15%, 50 or 60 Hz).

CONTROLS INPUTS

The circuit can work with external voltage inputs or by means a volt free contact input.



8

Open signal.

This signal orders the door to open. The tension to apply could be from 24 V DC to 60 V DC or 100 V AC to 230 V AC, with an external supply between this input and common (10).

9

0 V.

Opposite pole to 12 V, in the case of using internal VOLTAGE, it should be connected to the common input.

10

Common.

This input is the reference used for the open and close inputs.

11

12 V.

Isolated 12 V output available to control the door via a voltage free contact. Features are:

- a) This supply must only be used for this purpose.
- b) This contact must be isolated from any other power supply.

12

Close signal.

This signal is used for ordering to close the door.

13 / 14

Floor level.

This input activates the open movement in emergency rescue mode in case of power failure, through a 12 V battery to rescue the passengers from the lift. The door only will open if this signal is bridged (Normally Open).

15 / 16 / 17

Battery.

This input is for connecting a 12 V battery 2,2 Ah to act as external emergency power supply and allows the opening movement of the door in case of power failure.

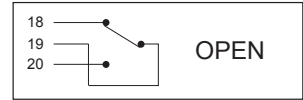
Output relay

Output relay have been provided to give continuous information to the main lift controller concerning the status of the doors.

18 / 19 / 20

Open.

Relay activated when the doors are fully open.



LED INDICATORS:

Ok status.

Red LED indicates proper working conditions.

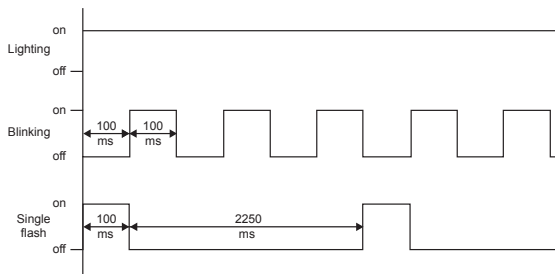
Depending on how the ECC - 230 V is powered, red LED lights up in different ways:

| Red LED | 230 V power supply | 12 V battery |
|--------------|--------------------|--------------|
| Lighting | ✓ | ✗ |
| Blinking | ✓ | ✓ |
| Single flash | ✗ | ✓ |

– LED lighting: constantly on.

– LED blinking: iso-phase on and off with a frequency of approximately 5 Hz: on for approximately 100 ms followed by off for approximately 100 ms.

– LED single flash: one short flash (approximately 100 ms) followed by a long off phase (approximately 2.250 ms).



Indicator states and flash rates

21 / 22 / 23

Serial switch.

Connection serial exit-entrance. It must be connected in series with the external lock series.

24 / 25 / 26

Safety switch.

Direct connection between the entrance and the exit without any influence in the electrical circuit function.

27 / 28 / 29 / 30

Reopen.

This connections are in serial and when it's activated the door reopens. It is very useful for the photocell, the cabin push-button or any other device that initiates the reopening process when the door starts to close. It does not activate when the door is closed. As it is a serial connection it is necessary to over-bridge the free one.

- 31 / 32** **Limit switch with encoder.**
 Limit switch connection if used with encoder. With DIP-switch No. 1 ON is necessary to install a close limit switch.
- 33 / 34 / 35 / 36** **Limit switch without encoder.**
 Limit switch connection if used without encoder. With DIP-switch No. 1 OFF is necessary to install an open and close limit switch.
- 37** **Motor and encoder.**
 Output to the 24 DC motor to control speed and torque. The ECC - 230 V motor controller is formed by a power stage with a feedback speed control circuit with voltage compensation and current limiting protections (Imax).
- 38** **Test pushbutton.**
 Operation of the Test pushbutton will cause a door open or close cycle.
- 39** **Safety.**
 La velocità di apertura della porta può essere regolata da 100 mm/s fino a 300 mm/s.
- 40** **Close speed.**
 The door closing speed can be independently adjusted from 100 mm/s up to 300 mm/s.
- 41** **Open speed.**
 The door opening speed can be independently adjusted from 100 mm/s up to 300 mm/s.
- 42** **On / Off switch.**
 Disconnects the unit from the 230 V AC mains supply.

REFERENCE DATA

POWER SUPPLY

- | | |
|-----------------------------------|-------------------------------------|
| • DC voltage range | 230 V +10%, -15%. AC/DC. |
| • Minimum power | 83 mA 2,8 W. |
| • Average power (240 cycles/hour) | 0,17 A 14,7 W. |
| • Maximum power | 0,27 A 33,7 W. |

PWM REGULATION

- | | |
|--------------------------|---------------------|
| • PWM frequency | 15KHz. |
| • Voltage range | 0...24 V DC III. |
| • Maximum output current | 2 A. |
| • Positional control: | Quadrature encoder. |

MOTOR

- | | |
|--------------------|---------|
| • Brushed DC motor | |
| • Voltage supply | 24 V. |
| • Power | 7 W. |
| • Enclosure class | IP 20. |
| • Nominal speed | 17 rpm. |

INPUTS

- Impedance 8K2 Ω.
- Voltage 24...230 V AC / DC.

OUTPUTS

- Contacts Switched.
- R. contact 50 mW.
- Swich time 5 ms.
- Output current Máximum: 5 A.
- Voltage 240 V

PERFORMANCE

- Open Speed 100...300 mm/s.
- Close speed 100...300 mm/s.
- Safety force 40...150 N adjustable.

DECLARATION OF CONFORMITY

Tecnolama, S.A.
Ctra. Constantí Km 3
43206 REUS (Spain)

Herewith declares that the products mentioned below conform with the following E.U. council directives:



Norm EN 81-1/2
DIRECTIVE 2006/42/EC (Machinery directive), DIRECTIVE 2014/30/UE
(Electromagnetic compatibility), of the European Parliament and of the Council.
ECC 230 V Electronic Module
(10/31700971_M1)

Tecnolama, S.A., 2016

Josep Vilà Gomis
Amministrador

ATTENTION: Any type of modification not reflexed in this manual, before testing it should be notified to our Technical Department.

TECNOLAMA accepts no responsibility in the event of any damage produced in the equipment described in this manual and associated installation if the instructions given have not been followed.

TECNOLAMA reserves the rights to modify the products specifications of this technical brochure without any previous advise.

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