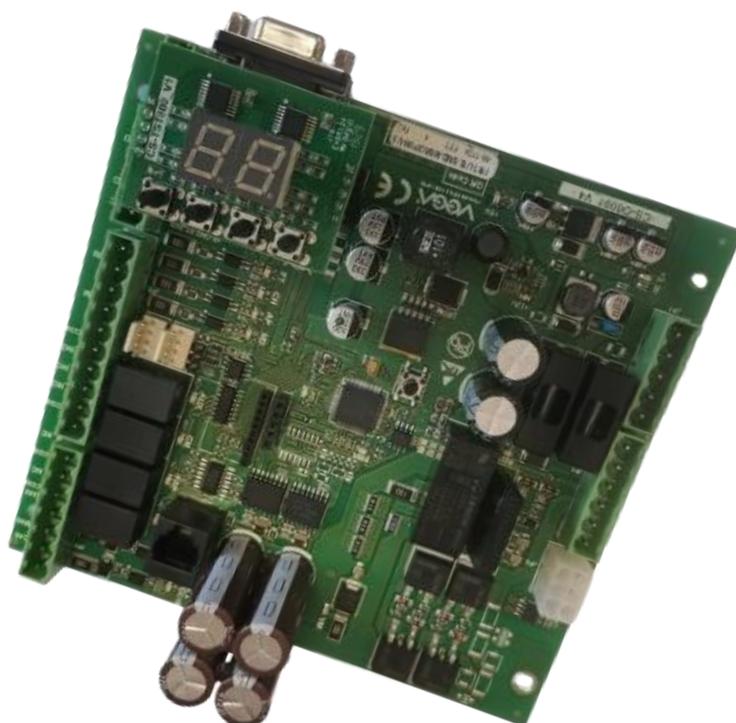




Door Drive



User Manual

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Intended Use

Door Drive was developed to optimize the management of automatic doors.

Electrical Characteristics

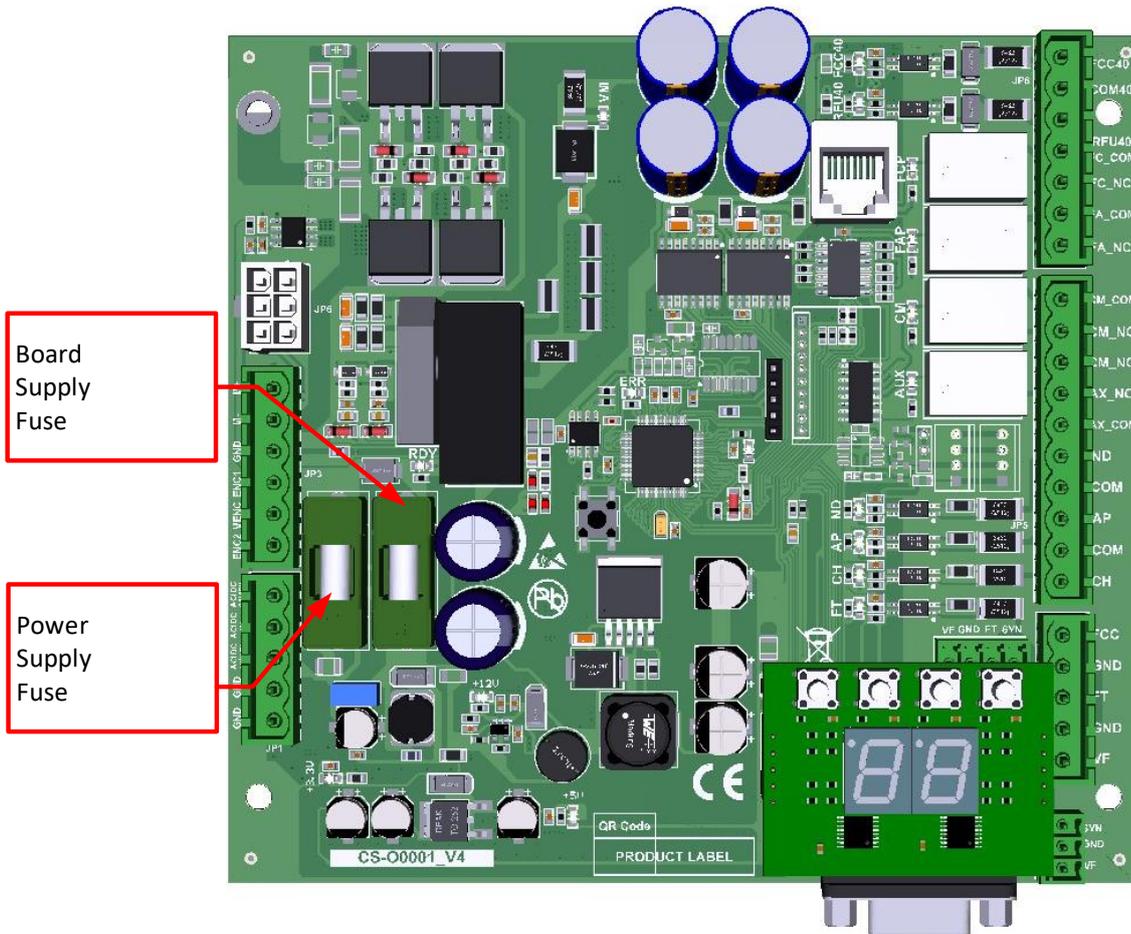
Greatness	Value	Tolerance	Note
Board Power Supply	10 Vac ÷ 24Vac 12 Vdc ÷ 24Vdc	± 10%	
Board Current Consumption	0.5 A		
Voltage Power Supply	22 Vac ÷ 48 Vac 24 Vdc ÷ 48 Vdc	± 10%	
Power Current Consumption	5 A		Maximum Torque kgm
Power Supply Fuse	10 A		Glass 5x 20 type T
Board Supply Voltage	1 A		Glass 5x 20 type T

Technical Characteristics

Greatness	Value	Note
Power Current Consumption Mean	5A	
Inputs Protection FCC, FT, ND	50 V	Overvoltage and misconnection protection
Connections made without disconnecting the board FCC, AX, INPUTS	50 V	Overvoltage and misconnection protection
Opening Door Parking: 1. Even direct current on the armature winding. § 2. Short circuit of the armature winding #	1,6A	Disabled Function

§ max holding torque 8Nm on 100.60x series motors

max holding torque 4Nm on 100.60x series motors



USE ONLY FUSES HAVING IDENTICAL CHARACTERISTICS

Connections Table

Connector JP3, Connector JP6

Terminale	Funzione	Note
M+	MOTOR POLE	Red Motor Wire
M -	MOTO POLE	Blue Motor Wire
GND	GROUND BOARD	White Motor Wire
ENC1	ENCODER CHANNEL	Green Motor Wire
VEN	ENCODER SUPPLY	Brown Motor Wire
ENC2	ENCODER CHANNEL	Yellow Motor Wire Encoder second Channel Valid for Quadrature Encoder

Connector JP1

Terminale	Funzione	Note
24V/48V ac/dc	POWER SUPPLY VOLTAGE	
0V ac/dc	POWER SUPPLY VOLTAGE	
12/24V ac/dc	BOARD SUPPLY VOLTAGE	
GND	BOARD SUPPLY VOL	
EARTH (*)	GROUND SCHEDA	Collegare mediante un conduttore di sezione $\geq 1\text{mm}^2$ alla piastra metallica di supporto della scheda Operatore. Mantenere tale conduttore il più corto possibile.

* Ensure that the metal plate supporting the Operator board is connected to the "xx" ground of the system. Make the connection to the metal plate by means of screw, nut and knurled washer. In case the metal plate is insulated by paint, remove the paint from the contact area of the washer

Connector JP8

Terminale	Funzione	Note
FCC40	CLOSING & OPENING LIMIT SWITCH INPUTS 48V	Input coming directly from the door closing contact, a terminal with 00 should be jumpered.
COM40		
RFU40		Input coming directly from the door opening contact
FC_COM	CLOSING LIMIT SWITCH OUTPUT	Normally close, signals (opening) the closure made.
FC_NC		
FA_COM	OPENING LIMIT SWITCH OUTPUT	Normally close, signals (opening) the opening made.
FA_NC		

Connector JP5

Terminal	Function	Note
CM_COM	COMMON CONTACT RELAY MECHANICAL OBSTRUCTION	CM_COM IS ASSOCIATED WITH CM_NO AND CM_NC, REPRESENTING THE COMMON OF A RELAY CONTACT 1 EXCHANGE.
CM_NO	NO CONTACT RELAY MECHANICAL OBSTRUCTION	
CM_NC	PARTE NC CONTATTO RELE' COSTOLA	
AX_NO	GONG CONTACT	THE GONG IS ACTIVATED FOR 5 sec. AT THE END OF OPENING.
AX_COM		
ND	EMERGENCY	INPUT FOR ENABLING EMERGENCY OPENING OR CLOSING AT LOW SPEED (12V÷48V FROM COM REFERENCE).
COM	REFERENCE FOR COMMANDS	CAN BE CONNECTED TO EITHER POSITIVE (12V÷48V) OR NEGATIVE (GND).
AP	OPENING COMMAND	CONTROL PANEL OPENING COMMAND (12V÷48V COMPARED WITH THE COM REFERENCE).
COM	REFERENCE FOR COMMANDS	CAN BE CONNECTED TO EITHER POSITIVE (12V÷48V) OR NEGATIVE (GND).
CH	CLOSING COMMAND	CONTROL PANEL CLOSING COMMAND (12V÷48V COMPARED WITH THE COM REFERENCE).

Connector JP2

Terminal	Function	Note
FCC	ANALOGIC INPUT MOTOR THERMAL SENSOR	ANALOGIC AUXILIARY INPUTS USED FOR MOTOR THERMAL SENSOR
GND	REFERENCE FOR FCC	
FT	PHOTOCELL INPUTS	PHOTOCELL SIGNALING (12V÷48V COMPARED WITH THE COM REFERENCE).
GND	GROUND PHOTOCELL	SUPPLY VOLTAGE AND REFERENCE FOR PHOTOCELL
VF	PHOTOCELL VOLTAGE SUPPL	

Connector JP9

Function	Note
PROGRAMMING CONNECTION	USE ONLY SUPPLIED PROGRAMMER

Connector JP12 and JP11

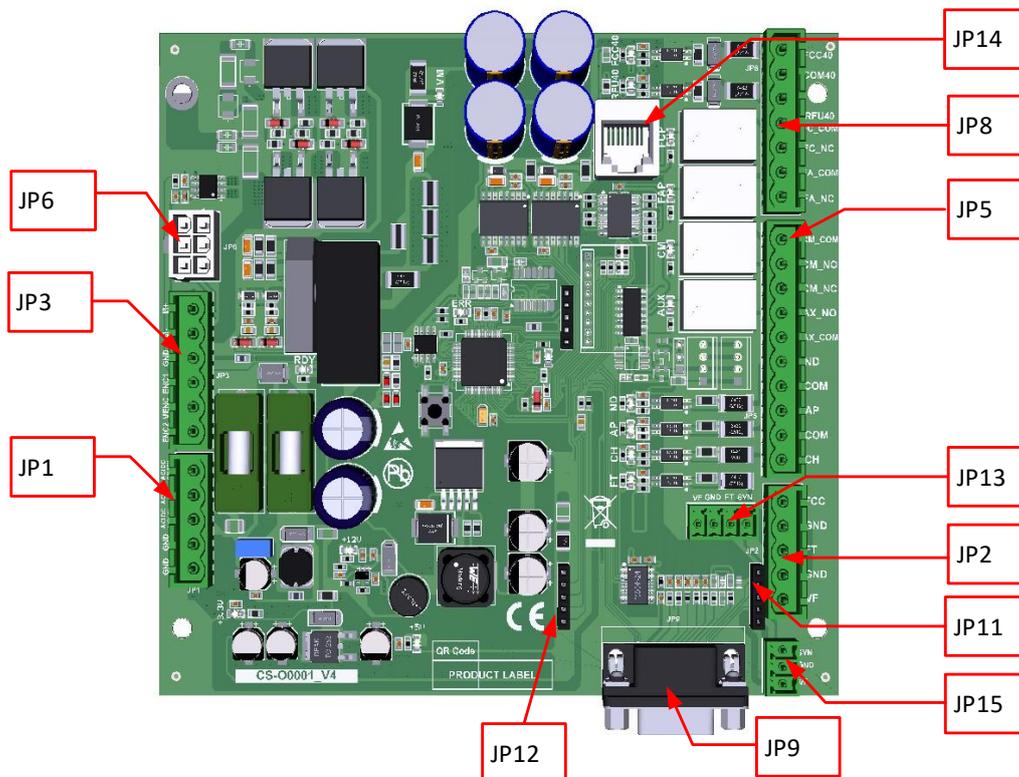
Function	Nota
TST800 CONNECTION	USE ONLY SUPPLIED PROGRAMMER, IF PROVIDED

Connector JP13 and JP15

Function	Nota
VEGA B-LIFT-240 LIGHT CURTAINS CONNECTION	B-Lift-240 Light Curtains connector JP13: Vega RX light curtain connector JP15: Vega TX light curtain connector

Connector JP14

Function	Nota
DISP801 CONNECTION	Vega DISP801 external keypad connector. Used for FW update of the board.

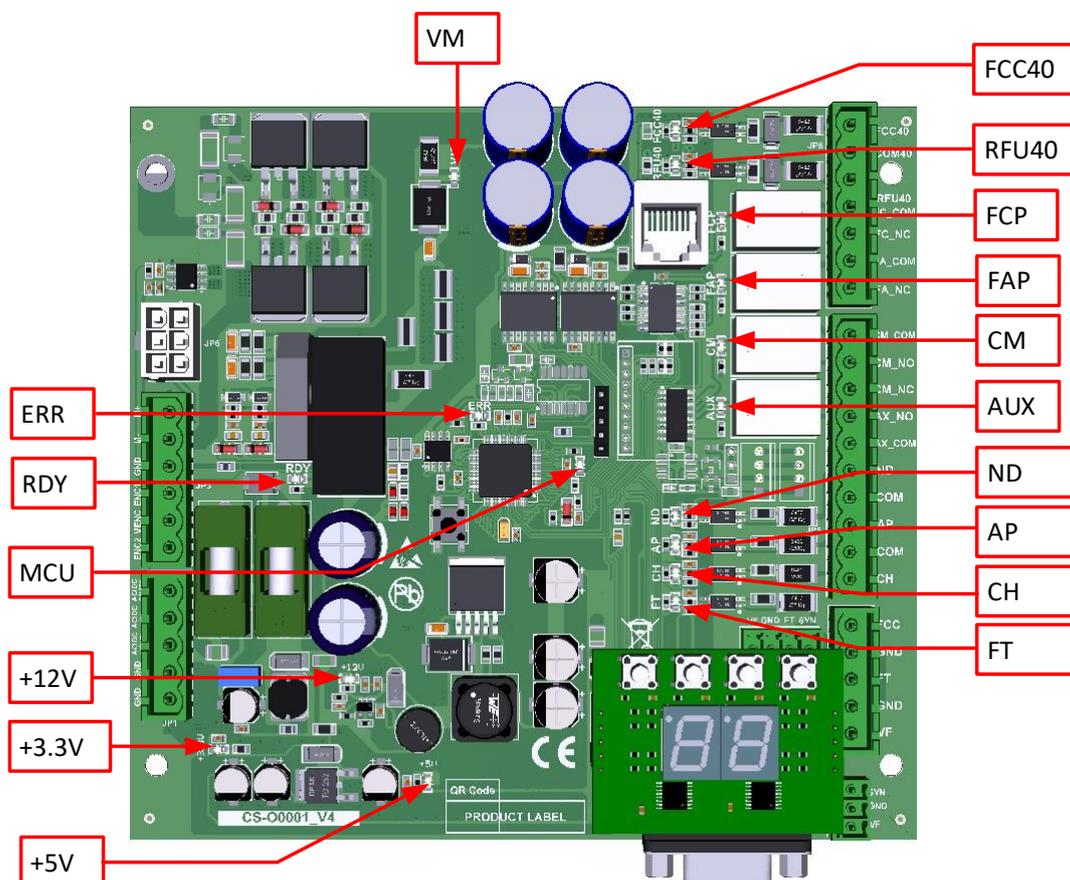


The programming keypad can also be connected with the board powered.

When pulling out the connector, never pull on the connecting cable.

Alerts Present Signal LEDs

LED	Function	Note
+12V (Red Led)	BOARD SUPPLY VOLTAGE	Signals the presence of the voltage+12V of the board
+5V (Red Led)	BOARD SUPPLY VOLTAGE	Signals the presence of the voltage+5V of the board
+3.3V (Red Led)	BOARD SUPPLY VOLTAGE	Signals the presence of the voltage+3.3V of the board
VM (Red Led)	POWER SUPPLY VOLTAGE	Signals the presence of the voltage (24v-48v) of the motor
FT (Red Led)	PHOTOCELL	Signals the activation of the photocell
CH (Red Led)	CLOSING COMMAND	Signals the control panel closing command
AP (Red Led)	OPENING COMMAND	Signals the control panel opening command
ND (Red Led)	EMERGENCY	Signals the presance of the enabling emergency opening or closing command from control panel
MCU (Green Led)	Blink every sencond	Board is programmed with production firmware
	Blink every ~120 ms	The Board is in BOOT Mode
ERR (Red Led)	ERROR	Signals the presance of errors or faults on the board
RDY (Red Led)	READY	Signals the board is in "Ready state"
FCC40 (Red Led)	CLOSING LIMIT SWITCH INPUT	Signals the presance of the closing limit switch command
RFU40 (Red Led)	OPENING LIMIT SWITCH INPUT	Signals the presance of the opening limit switch command
FCP (Red Led)	CLOSING LIMIT SWITCH OUTPUT	Signals the successful closure
FAP (Red Led)	OPENING LIMIT SWITCH OUTPUT	Signals the successful opening
CM (Red Led)	OBSTRUCTION	Signals the presance of an obstruction or the opening phase
AUX (Red Led)	GONG	Signals the activation of the opening end gong

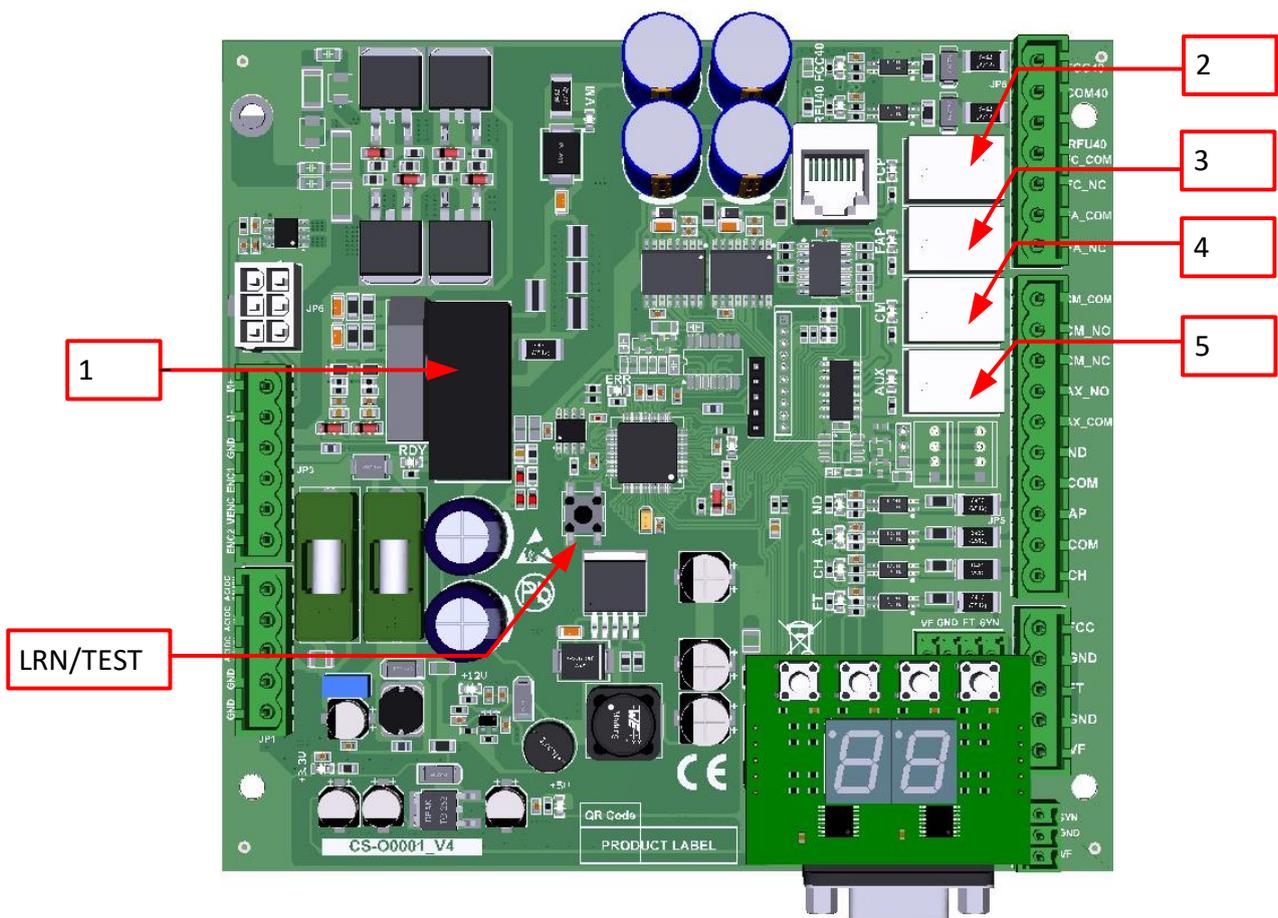


Relay

Relay	Function	NOTE
1	RDY	
2	FCP	
3	FAP	
4	CM	
5	AUX	

Learning/Test button

Button	Function	NOTE
LRN/TEST	Fast pression	Depending on the state, the door performs a complete opening or closing.
	Almost 4 sec. pression	Door perfoms learning stroke procedure



Wiring Diagram Connector JP3

Terminal	Conductor Type	Minimal Section
M+	N07 VK	0.75mm"
M -	N07 VK	0.75mm"
GND	N07 VK	0.75mm"
ENC	N07 VK	0.75mm"
VENC	N07 VK	0.75mm"
ENC2	N07 VK	0.75mm"

Connector JP1

Terminal	Conductor Type	Minimal Section
24/48 V ac/dc	N07 VK	0.75mm"
0 V ac/dc	N07 VK	0.75mm"
12/24 V ac/dc	N07 VK	0.75mm"
GND	N07 VK	0.75mm"
EARTH	N07 VK	1 mm"

Connector JP8

Terminal	Conductor Type	Minimal Section
FCC40	N07 VK	0.75mm"
COM	N07 VK	0.75mm"
RFU40	N07 VK	0.75mm"
FCP	N07 VK	0.75mm"
FCP	N07 VK	0.75mm"
FAP	N07 VK	0.75mm"
FAP	N07 VK	0.75mm"

Connector JP5

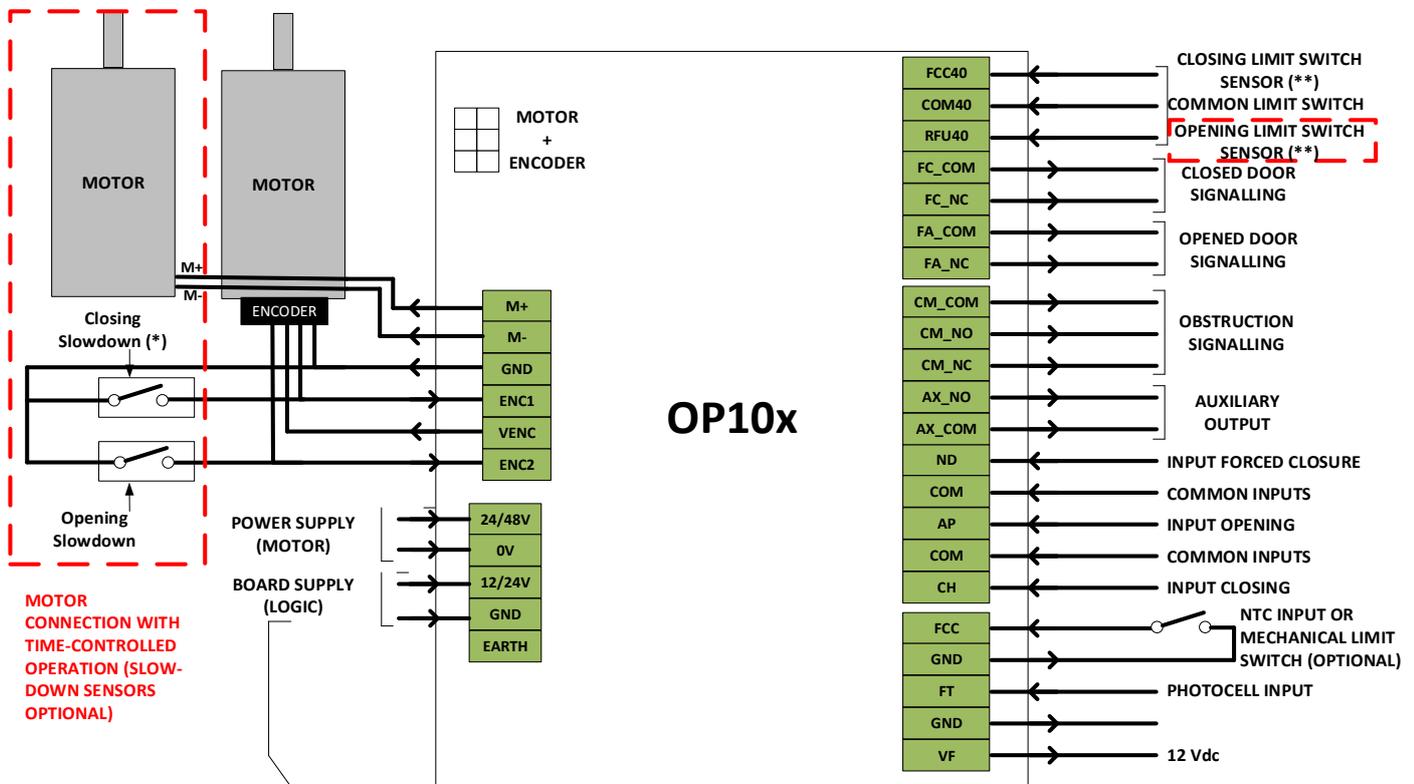
Terminal	Conductor Type	Minimal Section
CM_COM	N07 VK	0.75mm"
CM_NO	N07 VK	0.75mm"
CM_NC	N07 VK	0.75mm"
AX	N07 VK	0.75mm"
AX	N07 VK	0.75mm"
ND	N07 VK	0.75mm"
COM	N07 VK	0.75mm"
AP	N07 VK	0.75mm"
COM	N07 VK	0.75mm"
CH	N07 VK	0.75mm"

Connector JP2

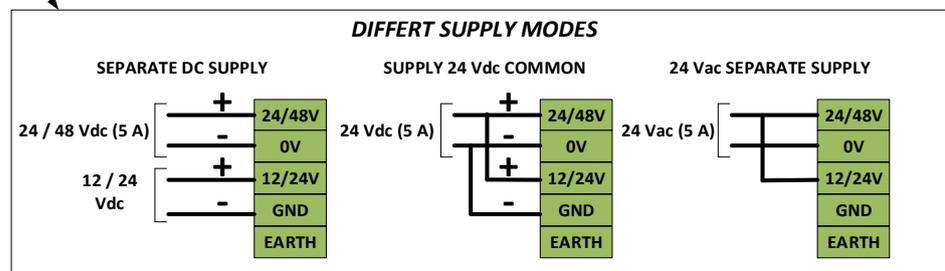
Terminal	Conductor Type	Minimal Section
FCC	N07 VK	0.75mm"
GND	N07 VK	0.75mm"
FT	N07 VK	0.75mm"
GND	N07 VK	0.75mm"
VF	N07 VK	0.75mm"

Supply and Commands Connections

Supply Connections



MOTOR CONNECTION WITH TIME-CONTROLLED OPERATION (SLOW-DOWN SENSORS OPTIONAL)

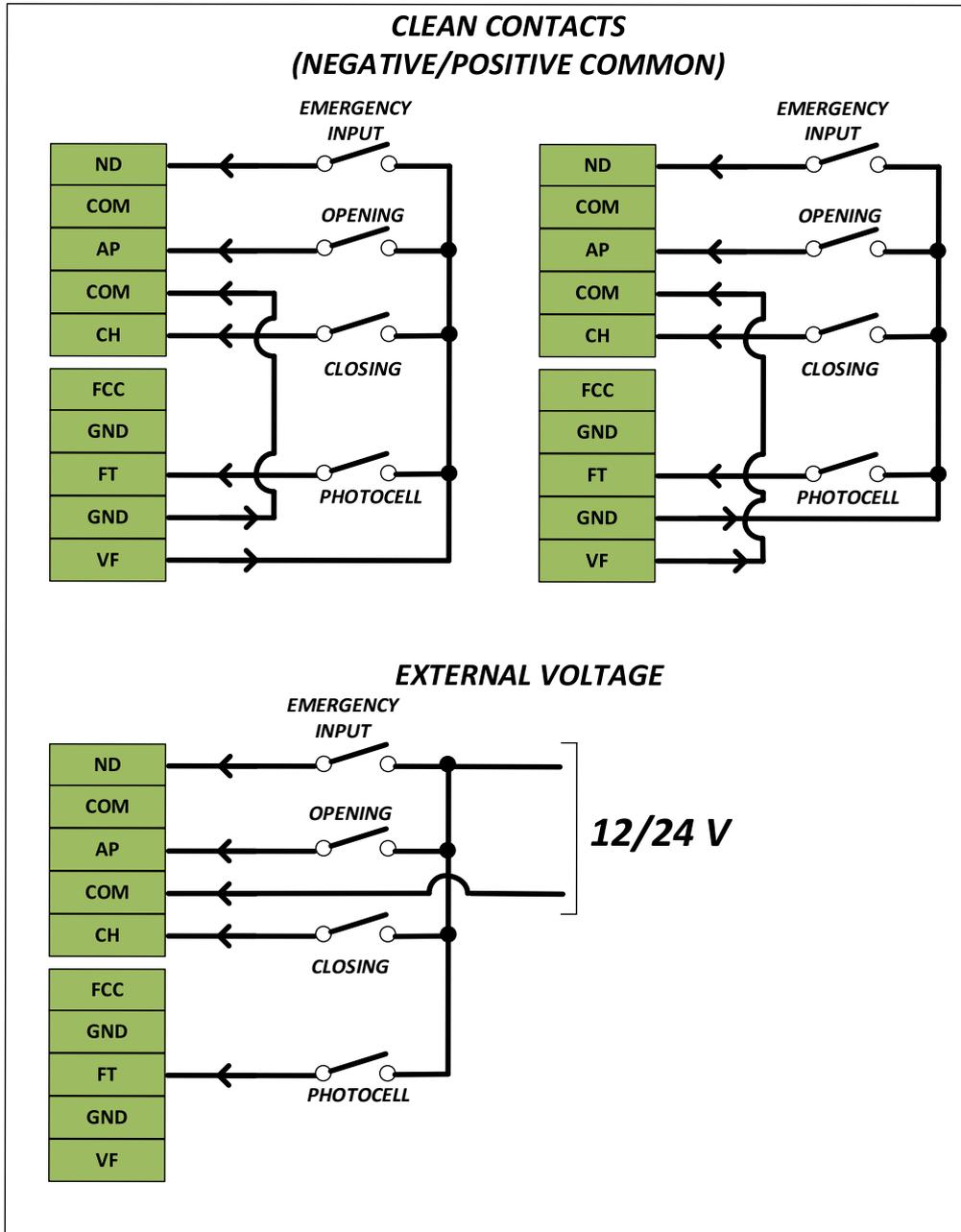


***NOTE:** It is important that in timed operation, the slow-down sensors turn the GND to ENC1 (Slowdown Closing) and ENC2 (Slowdown Opening).

****NOTA:** To activate the closing limit switch input FCC40 and opening limit switch RFU40 it is important that:

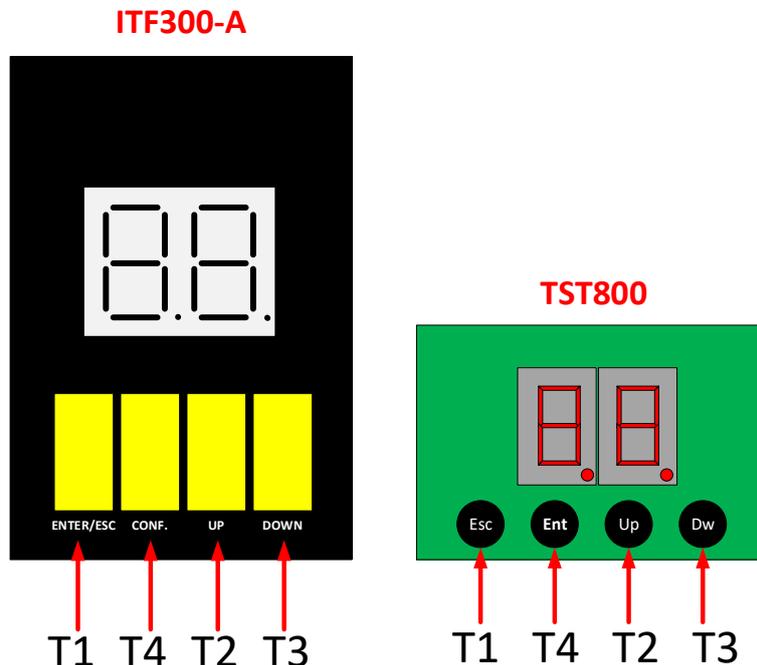
- an external voltage of at least 20V is applied;
- the GND of this external voltage is connected to COM40;

Commands Connections



Control board adjustment menu

Programming-adjustment of the board is done by the operator using the programming keypad.



The keypad must be inserted into the appropriate connector on the board; this operation can also be done with the board powered.

The operator parameter adjustment system is based on a 2-digit numerical display system and 4 operation buttons:

T1=Esc. T2=+ T3= – T4=Confirm

Normally the display appears off (except the two dots), to enter the menu you need to press and hold the T1(Esc) key for more than 3 seconds, the number 01 representing parameter No. 1 will appear.

If you want to adjust another parameter, simply press the T2(+) and T3(-) keys until the digit of the parameter you want to adjust is displayed.

Once the current parameter is displayed and you want to check its value you should press the T4(Confirm) key, at this point the display will show the value of the parameter, with the T2(+) and T3(-) keys you can set a new value and confirm it with T4(Confirm). If the parameter value is ok you exit by pressing T1(Esc), thus going back to the parameter menu; to exit the menu completely and save permanently you must press T1(Esc) for more than 3 seconds.

NOTE: The programming of the board must be done while the door is stopped. Only by exiting the programming menu will the changed parameters be permanently stored in EEPROM.

EXTERNAL KEYPAD COMMANDS:

It is possible to activate, directly from programming keypad, the opening and closing command;

T4(Confirm) + T2(+): commands opening;

T4(Confirm) + T3(-): commands closing;

or perform a quick press of the LRN/TEST button on the board.

Adjustable Parameters

PAR	NAME	MIN	MAX	DEFAULT (17)
OPENING CLOSING PROFILES				
01	Max Opening Speed	1	99	70 (*35)
02	Max Closing Speed	1	99	55 (*35)
03	End Ramp Minimum Speed	1	20	5 (*15)
04	Opening Deceleration Distance (cm)	1	50	20 (*5)
05	Closing Deceleration Distance (cm)	1	50	20 (*5)
06	Closing Acceleration distance (cm)	0	50	20 (*5)
07	Opening initial distance at constant speed (cm)	0	25	0
08	Opening final distance at constant speed (cm)	0	25	2 (*5)
09	Closing final distance at constant speed (cm)	0	25	2 (*5)
TORQUES				
10	Opening Torque	0	99 (9,9 A)	60
11	Closing Torque	0	99 (9,9 A)	40
12	Holding Torque in Opening (tenths of Ampere)	0 (not active)	40 (4,0 A)	10
13	Holding Torque in Closing (tenths of Ampere)	0 (not active)	40 (4,0 A)	10
14	Opening Limit Torque (tenths of Ampere)	0	99 (9,9 A)	40
15	Closing Limit Torque (tenths of Ampere)	0	99 (9,9 A)	40
OPTIONS				
16	Stop waiting time (tenths of sec)	0	80	3
17	Signaling opening in progress by obstruction	0 (not active)	1 (active)	1
18	Man-present commands	0 (not active)	1 (active)	0
19	Motor Direction	0	1	0
20	Autorunning	0 (not active)	1 (active)	0
21	Hold time of the closing command since the activation of signal FCC_40 (tenths of sec)	0	99	0
22	Skate Operation	0 (not active)	1 (active)	0
23	Closing wait time - skate operation (tenths of sec)	0	99	30
24	Enabling rephrasing (closing movement) at power on	0(not active)	1(active)	0
25	Close Limit Switch Logic (FCP)	0 (NC)	1 (NO)	0
26	Open Limit Switch (FAP)	0 (NC)	1 (NO)	0
COMMANDS				
27	Default			
28	Learning	0 (NO)	1 (Start)	0
MECHANICAL PARAMETERS				
29	Motor Type 0: Motor Type Kormas 1: Motor Type Elvi 30W 2: Motor Type Elvi 52W 3: Motor Type EbmPapST 40V	0	3	0
30	Pulley Diameter (mm)	0	150	33
31	Thermal Motor Check 0: Disabled 1: Digital Thermal Control ON/OFF 2: Analogic Thermal Control	0	2	0
32	Threshold_MAX Thermal Motor (Analog)	1	99	50
33	Threshold_WORK Thermal Motor (Analog)	1	99	60
PHOTOCEL PARAMETERS				
34	Photocell	0 (No)	1 (Yes)	0
35	Photocell Logic	0 (NC)	1 (NO)	0
PARAMETERS 81-20/50				
36	Reopening Space (cm)	0 (Not Active)	99	0
37	Active Closing Limit Space (cm)	0	99	1
38	Waiting time for reopening (sec) (since the close command is no longer active)	0	99	0
DIAGNOSTIC PARAMETERS				
39	Diagnostic	0	4	0
40	Runs counts: units and tens (READING ONLY)	Example: 64235 runs P42 = 06 – P41 = 42 – P40 = 35		
41	Runs counts: hundreds and thousands (READING ONLY)			
42	Runs counts: tens and hundreds of thousands (READING ONLY)			

PARAMETRI FUNZIONAMENTO A TEMPO				
43	Operator card operation option 0. Encoder operation. ENC1 and ENC2 of connector JP3 are the encoder channels. 1. Timed operation without deceleration. Input FFC40 mandatory. 2. Timed operation with decelerations. ENC1 and ENC2 of connector JP3 are remapped to be used as slow-down sensor inputs.	0 (encoder)	2(time with slowdown sensors)	0
44	Opening acceleration constant	1	50	3
45	Opening deceleration constant	1	50	3
46	Closing acceleration constant	1	50	3
47	Closing deceleration constant	1	50	3
48	Constant current correction	1	20	3
49	Time in high-speed opening in tenths of seconds	5	99	20
50	Time in high-speed closing in tenths of seconds	5	99	20
51	Slowdown Sensor Logic 0. Slow-down sensor opening NO, slow-down sensor closing NO. 1. Opening slow-down sensor NO, closing slow-down sensor NC. 2. Opening slow-down sensor NC, closing slow-down sensor NO. 3. NC opening slow-down sensor, NC closing slow-down sensor.	0	3	0
52	Limit switch sensor logic 0. Limit switch sensor opening NO, limit switch sensor closing NO. 1. Limit switch sensor opening NO, limit switch sensor closing NC. 2. Opening limit switch sensor NC, Closing limit switch sensor NO. 3. NC opening limit switch sensor, NC closing limit switch sensor.	0	3	0
53	Ramp speeds disabled when the board is in timed operation.	5	99	15
54	Final closing speed when the board is in timed operation.	5	20	10
55	Debounce (tenths of a second) for open/close commands in time mode, with or without rellants. Increasing this parameter requires the input to be active for longer before it is accepted.	1	20	5

***NOTE** : Default parameters in timed operation. Each time PAR43 is set, these parameters are automatically reset to the default value for timed operation.

See programming notes

Start Up

At the power on, the door remains stationary waiting for commands.

Board Initialization with encoder

Before learning the door light, it is necessary to initialize the board with the default parameters: go to menu 27 and enter, you will see an 88 displayed; press the T4(Confirm) key, you will see the display show a 00 and again 88. Then exit the menu.

Initialisation Timed operation board

With the board switched off, disconnect the motor/encoder cable, then switch the board on.

Set P43 to 1 or 2 in case slowdowns are connected. No learning is required in this mode. Check that the logic of the limit switches and slowdowns agrees with that of the system. By default NO logic is set, the input is activated when the sensor contact closes. Switch off the board and reconnect the motor cable. Switch the board back on.

Stroke Learning(only with encoder)

After initializing the board, at parameters 27, you can proceed with stroke learning.

Hold the elevator doors half open.

Go to parameter 28, select the value 01 and press T4(Confirm): the doors go first in the direction of opening until the stop, then in the direction of closing (at the end of learning, the display will show the travel made in cm. for 2 seconds) and the door remains closed.

If the stroke in CM Turns out to be very different from the actual stroke, check parameter 30 (Pulley diameter in mm).

(Learning can also be done by pressing and holding the LRN/TEST button for at least 4 seconds.)

NOTE: If in the learning procedure the door moves first to close and then to open then reverse parameter 19 (if there is '0' put '1' and if there is '1' put '0').

Motor Type

If during the learning procedure the door moves jerkily or goes very slowly or goes too fast enter parameter PAR 29 and change the motor type.

PAR 29 = 0 → Kormas motor

PAR 29 = 1 → Elvi 30W motor

PAR 29 = 2 → Elvi motor 52W

PAR 29 = 3 → EbmPapSt motor 40V

PAR 29 = 4 → CEAM Motor 48V

By default PAR 29 = 0, i.e., Kormas motor type.

Commands from control panel

Open

Door opening must be controlled from the elevator control panel. The opening command is ignored in the following cases: in the learning procedure, during obstruction tripping in the opening phase, and in the presence of the closing command.

Therefore, to command the door to open during the closing phase, it is first necessary to interrupt the closing command.

Close

Door closure must be controlled from the elevator control panel. The closing command is ignored in the following cases: in the learning procedure, during the intervention of an obstruction in closing, and in the presence of the opening command. Therefore, to command the door to close in the opening phase, it is first necessary to interrupt the opening command.

Commands Type

The operation of the door in relation to commands from the switchboard depends on the value programmed in parameter 18.

- P18 = 0 → PULSE: one pulse of the control is enough to make the door move open or close until the stroke is completed.
- P18 = 1 → A MAN PRESENT: the door moves open or close only as long as the control is present.

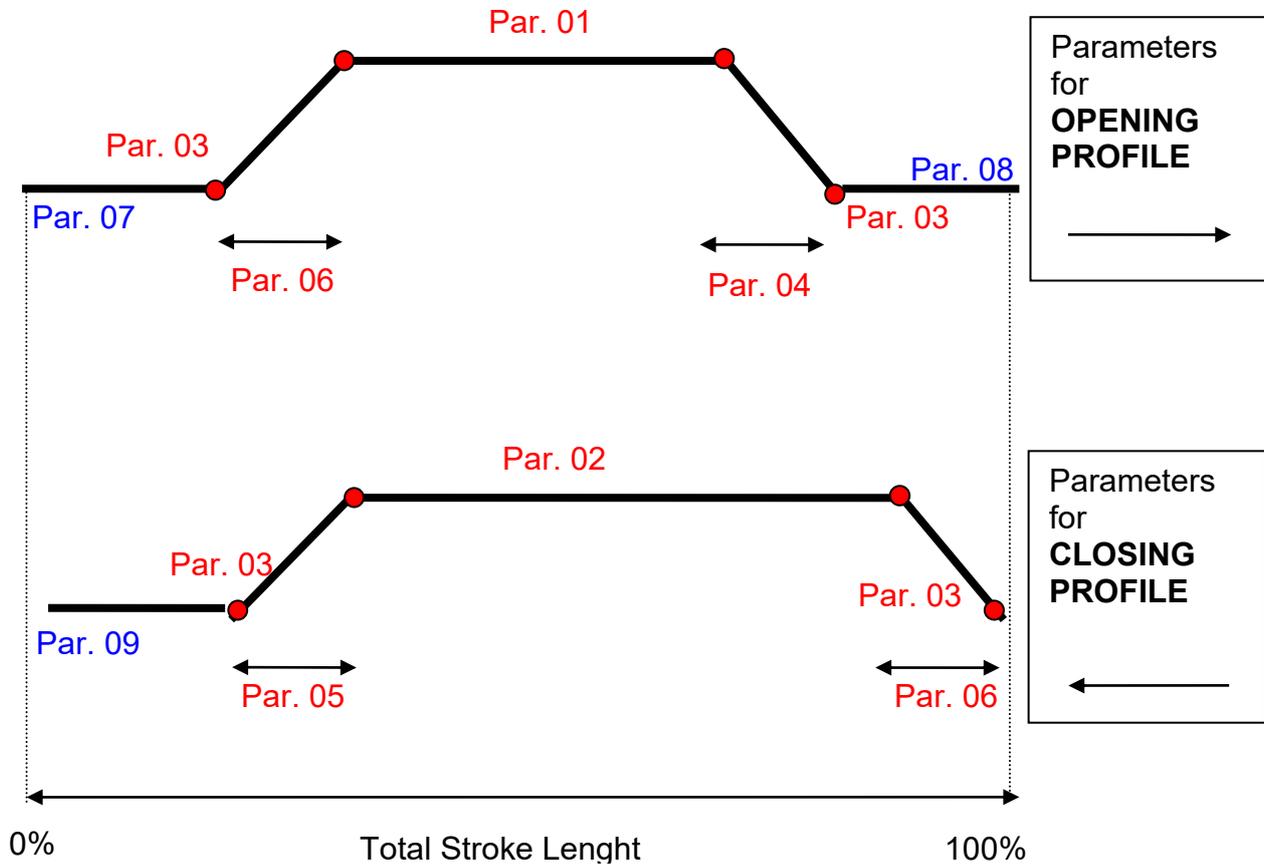
Signals Toward the Control Panel

Obstruction Signaling and Photocell

- Obstruction Signaling: this function is active during both opening and closing. The interposition of an obstacle between the closing leaves causes the current to rise. Raising the programmed current threshold then causes the door to reopen or re-close following the speed profile relative to the estimated position. If you try to trip the rib in opening beyond $\frac{3}{4}$ of the stroke the door stops in opening anyway, and when it springs back in closing you lose the ramp.
- Photocell: this function is enabled during closing and when the door is open. The board will make a simple signal to the panel that the photocell has been interrupted. The switchboard will decide whether to command the opening.

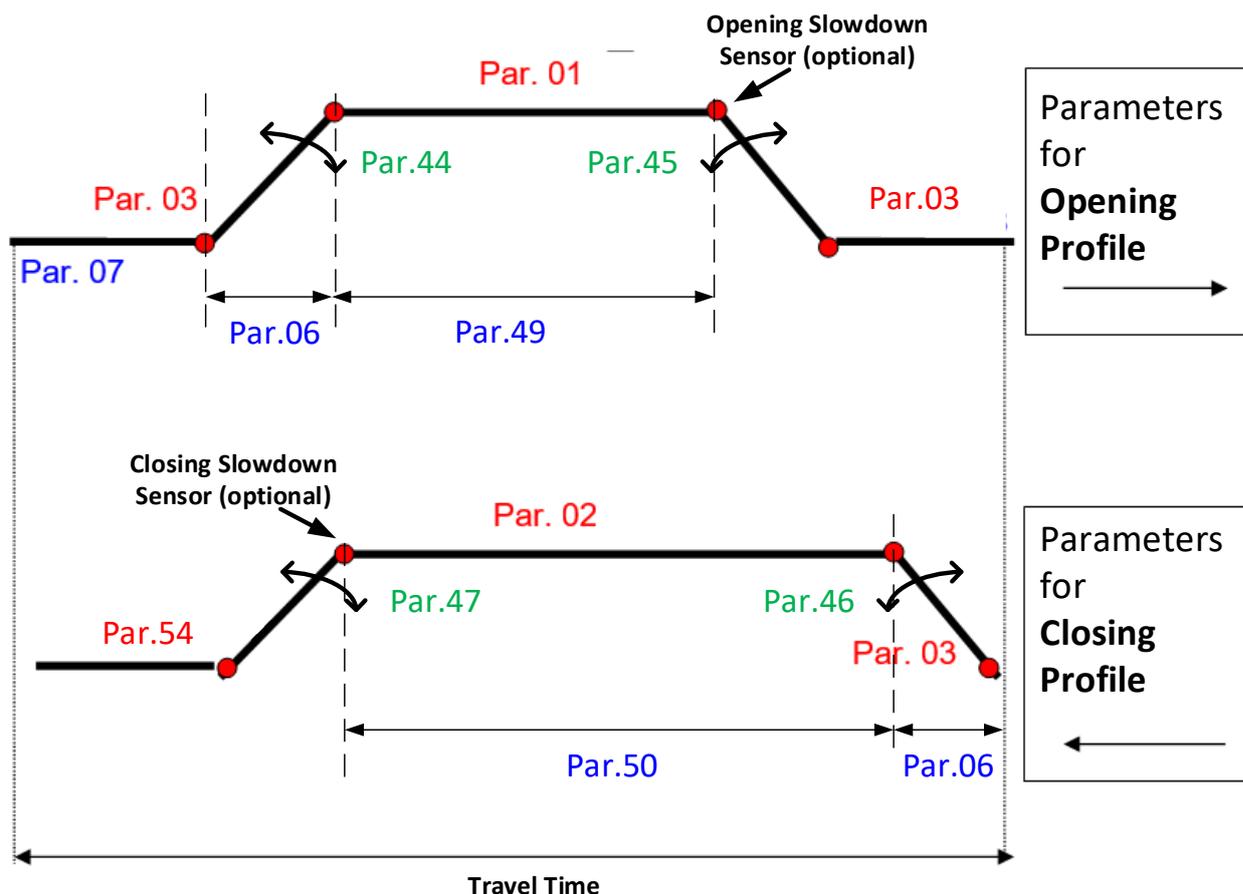
End opening ramp and end closing ramp with encoder (PAR43=0)

The space in cm. before the stop where the motor begins to slow down to reach the minimum speed on the stop can be set. The ramps should be adjusted according to the weight of the doors moved and the maximum speed that has been set, for it is clear that heavy and fast doors require greater braking spaces.



End of opening ramp and end of closing ramp time-controlled operation (PAR43=1 or 2)

It is possible to set the time in tenths of a second before the stop where the motor starts to slow down to reach the minimum speed on the stop. The ramps should be adjusted according to the weight of the doors moved and the maximum speed that has been set. For heavy doors, the higher the speed, the greater the braking distance. In the case of heavy doors, it is advisable to use the opening and closing slowdown sensors.



Auxiliaries

Tightening Torque in Opening

In parameter 12, an opening holding force can be set. By setting the value 0, the holding force is disabled: after the door has come to a stop, the motor is shorted out.

If the value is other than zero, the board continues to drive the motor with a current equal to the value programmed at P12 (tenths of an Ampere).

Tightening Torque in Closing

A closing holding force can be set in parameter 13. By setting the value 0, the holding force is disabled: after the door has come to a stop, the motor is shorted out.

If the value is other than zero, the board continues to drive the motor with a current equal to the value programmed at P13 (tenths of an Ampere).

Security Torque in Opening

The Opening Force (P10) is used as a threshold to command the moving rib in opening.

Security Torque in Closing

The safety torque (P11) is used as a threshold to control the movable rib in closing.

Limit Switch Torque in Closing

Represents the current threshold that needs to be exceeded to acquire the fully closed door state and thus pass the relevant standby currents.

Limit Switch Torque in Opening

It represents the current threshold that needs to be exceeded to acquire the fully open door state and thus pass the relevant standby currents.

Programming Motor Direction

At parameter 19 you can choose the direction of door opening. By setting this parameter, the board is able to properly drive the door without the need to exchange any of the electrical connections between the motor and the board.

In practice the board during learning should move first to open and then to close. If this is not the case you must act on parameter 19 by changing the currently programmed value (if there is '0' put '1' and if there is '1' put '0'). Once this parameter has been changed it is necessary to repeat the learning procedure.

Analogic Input for Thermal Motor Sensor (FCC)

This input is used for thermal protection of the motor (if equipped with a thermal sensor).

Thermal management depends on the parameter 31:

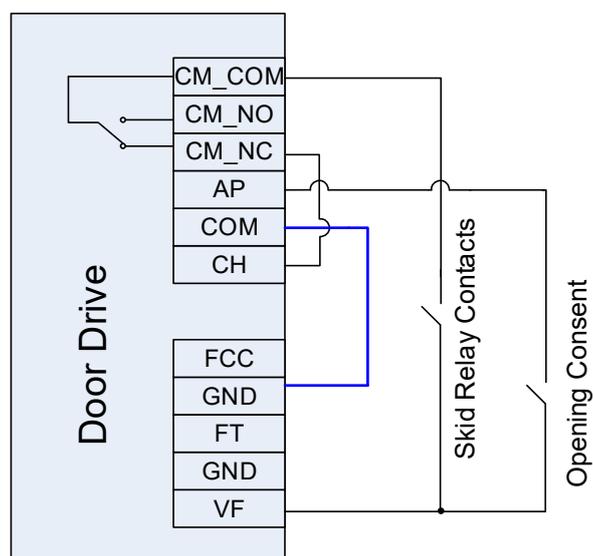
- P31=0: management disabled.
- P31=1: thermal management ON/OFF mode. For thermal contact sensors that are normally closed. When a certain temperature is reached, the contact opens and the board goes into protection, so when it is first opened, the door remains open and no longer takes commands by signaling E2 on the keypad. When the contact closes again, the board resumes normal operation.
- P32=2: analogic thermal management. For thermal sensors with NTC for which the resistance value varies depending on the motor temperature. When the temperature goes up the voltage on the FCC input goes down, and when it goes below the threshold set in parameter 32 the board goes into protection, so when it is first opened, the door stays open and no longer takes commands by signaling E2 on the keypad. When the temperature drops and then the voltage on FCC rises above the threshold set in parameter 33 the board resumes normal operation.

Skate Function

This function is activated by programming at address 22 the value "1"

In patino operation (PAR 22=1), the waiting time before reclosing after a obstruction or photocell activation (PAR 23) can be programmed.

The problem of the obstruction and photocell having to be automatic when there is a skid operation, can be solved by passing the closing command through the NC contact of the obstruction relay (CM_COM - CM_NC) so that when the realy is activated, the closing command is cut off and reopening is activated. In addition, during the opening phase, the opening-in-progress signaling function via obstruction (PAR 17) can be exploited to keep the closing command cut off. When the obstruction occurs, the door would reopen with this connection, but as soon as it reaches the OPEN state, the CM relay is cut off, the skid command is active, and then the door would close again immediately. For the opening to be activated, the fall of the CP command is not enough but there must be consent on the AP command. Closing always occurs when the closing command (Skid) is active even without the consent signal on AP.



Timed Operation

For timed operation, P43 must be set to 1 or 2.

In this mode, the closing limit switch is compulsory in order to let the board know that the door has reached the end of closing and that an obstacle has not occurred.

The opening limit switch, on the other hand, is optional. If the door has detected an obstacle on opening, it will still signal door open and stationary. There is no possibility of an obstacle being detected on opening.

In standard time operation (P43 = 1) after P3 dsec the door starts to accelerate. It remains in high speed for P49 or P50 dsec and then decelerates until it reaches the respective stop.

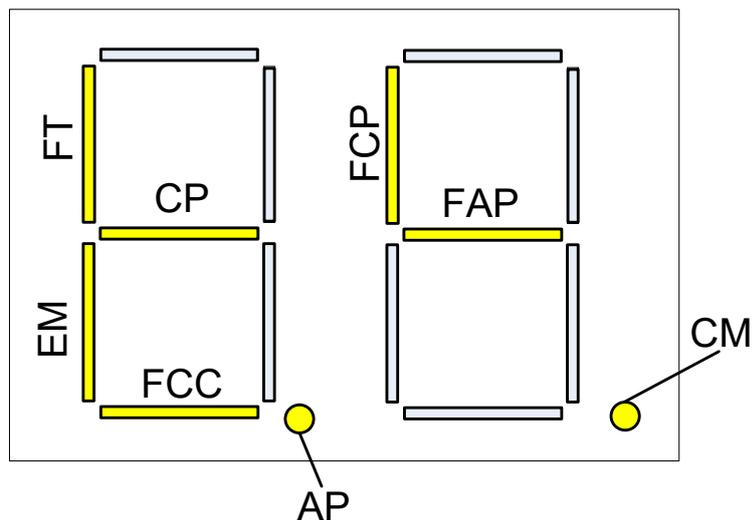
In time operation with deceleration (P43 = 2) the behaviour is similar to before, it only changes that the door starts decelerating either because the high speed time is faked or because the corresponding deceleration sensor has been activated.

Diagnostic

At parameter 39, the diagnostic function of the board can be activated.:

- P39 = 0: diagnostics disabled. The board in this case displays a code in case of an error.
 - E1: Motor Encoder Error
 - E2: Thermal Motor Error
 - E3: IxT Protection Error
 - E4: incoherent encoder (remake learning procedure)
 - E5: Zero current error
 - E6: Read/Write memory error

- P39 = 1: the board displays the encoder height in cm.
- P39 = 2: the board displays the current read.
- P39 = 3: the board displays the active signals on the display segments.
- P39 = 4: the board displays the voltage at the ends of the motor.
- P39 = 5: the board displays the voltage at the ends of the H-bridge.



NOTE: To view diagnostics once you have chosen the value at parameter "39" you must exit programming.

**VEGA SRL, AS THE MANUFACTURER DISCLAIMS ALL LIABILITY FOR DAMAGE CAUSED BY:
INCORRECT OR MISSING CONNECTIONS.
INCORRECT PROGRAMMING.
INCORRECT USE OF THE BOARD.**

REPLACEMENT OF ANY ELECTRICAL, ELECTRONIC, MECHANICAL PARTS WITH NON-ORIGINAL VEGA SRL MATERIAL IS PROHIBITED.

Declaration of Conformity



The UNDERSIGNED.

Ing. VITTURINI Paolo as legal representative of the company VEGA Srl

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AS MANUFACTURER I DECLARE UNDER MY SOLE
RESPONSIBILITY THAT THE PRODUCT

ELEVATOR DOOR OPERATOR

Is constructed to be incorporated into an automatic door.

The product complies with the following Directive:

Electromagnetic Compatibility Directive 89/336/EEC as amended and supplemented.

It is not permissible to put the product into service until the machine in which it will be incorporated has been declared to comply with the Directive provided for the door in question.

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Ing. VITTURINI Paolo