

SMART DOOR USER MANUAL

eem
LIFT CONTROLLER and RESCUE SYSTEM



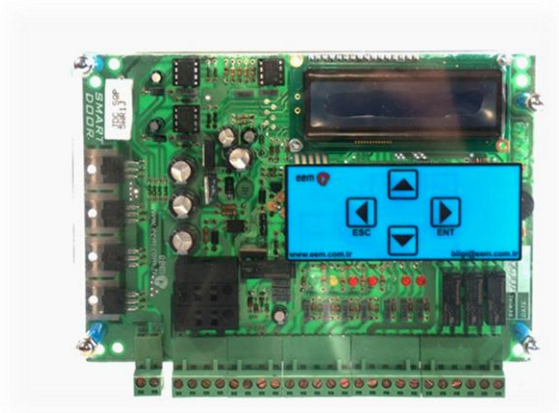
“Beyond Usual Conditions”



EEM Imp. Exp. Trade Co.
Lift Control System

Smart Door

AUTOMATIC DOOR CONTROL BOARD USER GUIDE



Serial No:

Version: 1.00

WARNING : Make sure that the version numbers of your user guide and the product are the same. Otherwise the explanations in this user guide will not exactly match with that of the product you are using.

EEM Imp. Exp. Trade Co. – Lift Control Systems

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Dear Customer,

Thank you for choosing Smart Door Automatic Door Control Board prepared based on the latest advancements in microelectronic systems. We would like to present you the best efficacy by our carefully quality controlled product that was manufactured in our modern facility. Therefore, we would like to request that please read this user guide throughly before starting installation and please keep it for future reference.

We give great care to ensure accurate installation and use of our product and allow it to be in your service for long years. For this, we continuously update and extend our documents. All technical drawings are presented by carefully checking several times. However, should you notice any mistakes please do not hesitate to inform us. We will be in your service with newer and richer up-to-date versions.

Please follow our new products and updates at our web site www.eem.com.tr

We hope you find our products to be a valuable tool in your business.

WARNING ! : All documents in this guide is intended for providing advice. Despite our best efforts, it may contain mistakes and flaws. Please verify all the information given, and thoroughly question them prior to apply.

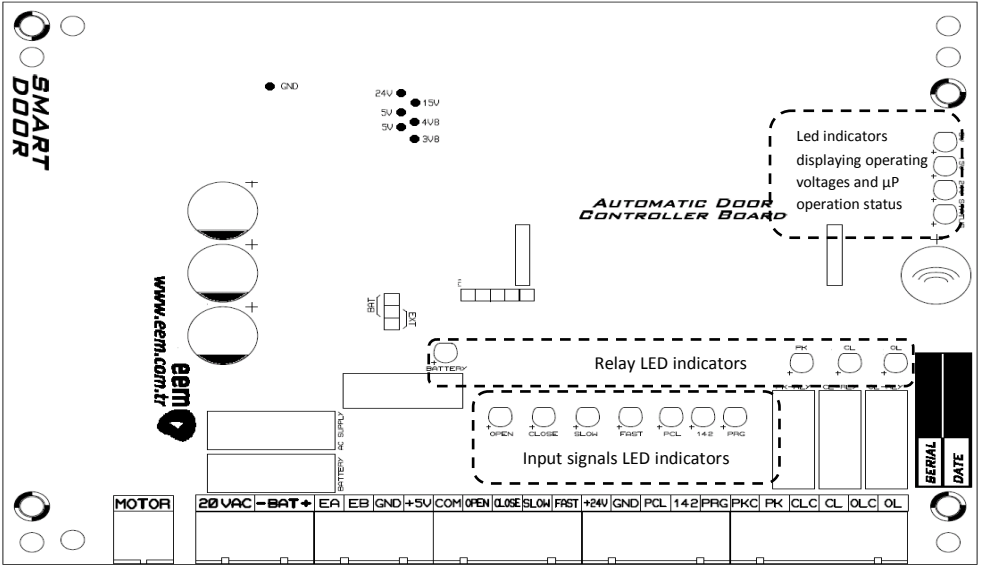
INTRODUCTION

Smart Door Automatic Door Control Board was designed for telescopic elevator doors having a variety of features for highly comfortable door control and its smart and flexible design make it suitable for different door applications.

- Smart Door hardware provides full control on the motor by means of 4 quadrant motor control and high resolution encoder input.
- The advanced software provides soft transitions in travel curves and by means of its algorithm not necessitating limit-switch, quick and undisturbed door movements can be possible.
- No limit-switch is required to be adjusted by door operator. Door width, door open-closed positions are automatically determined.
- For full compliance with control panel, output signals such as “door fully open”, “door fully closed” and “door jamming” can be given.
- Smart Door Automatic Door Board is suitable to be used in fire-elevator doors.
- By means of slow speed input signal (SLOW), in long duration photocell discontinuities, photocell signal is blocked and doors can be closed in slow speed (Nudging mode)
- In case of mains failure, by the help of 2x12V battery supply or by an external 24VDC supply, automatic opening on the floor can be done. Emergency supply type can be easily selected by a jumper on the board.
- Battery charging is accomplished by the board. After the urgent door opening by battery supply, board goes into sleep mode and fully discharging of the batteries is prevented.
- If the elevator car is not in the door opening region while the “car on the floor” signal outputs, in battery supplied systems moving the car to the floor level, the doors are kept closed until they reach the floor level.
- During the door is obstructed, door reopens accompanying a buzzer. The speed is kept low for preventing any damage to the passengers and the door, through the region in which an obstruction is encountered.
- To provide flexibility in the application to production firms, parameters such as motor reduction ratio, encoder pulse value, perimeter of drive wheel, and skate region can be input.
- For user adjustments, defined speed settings in centimeter/second and defined ramp regimes in centimeter can be set.
- Operation counter is recorded.
- In normal operation door speed, door position and operating condition, in case of a faulty operation the related fault are shown in the screen.

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LED Indicators	LED Status	Explanation
BATTERY (Red)	○	Board is supplied from mains.
	●●●	Board is supplied from an external source.
PK (Green)	○	No obstruction or photocell sensing and normal operation
	●●●	Obstruction or photocell sensing occurred
CL (Green)	○	Door is not fully closed
	●●●	Door is fully closed
OL (Green)	○	Door is not fully open
	●●●	Door fully open
OPEN (Green)	○	No door open signal
	●●●	Door open signal is present
CLOSE (Yellow)	○	No door close signal
	●●●	Door close signal is present
SLOW (Red)	○	No slow speed signal
	●●●	Slow speed signal is present (used for Nudging mode)
FAST (Red)	○	No high speed signal
	●●●	High speed signal is present
PCL (Green)	○	No photocell blocking signal
	●●●	Photocell blocking signal is present
142 (Red)	○	Elevator car is not on the cabin floor
	●●●	Car is on the cabin floor
PRG (Red)	○	No programmable signal input
	●●●	Programmable input signal is present
5V (Green)	○	5V voltage is unavailable
	●●●	5V voltage is available
15V (Green)	○	15V voltage is unavailable
	●●●	15V voltage is available
24V (Green)	○	24V voltage is unavailable
	●●●	24V voltage is available
STATUS (Red)	○	STATUS indicator blinks to indicate the board is active and operating.
	●●●	

DOOR BOARD CONNECTION TERMINALS AND INTENDED USES

Motor Connection Terminal	MOTOR	Motor connection terminal
		Motor connection terminal
Mains Connection Terminal	20 VAC	Connection terminal for mains grid supply
		Connection terminal for mains grid supply
External Source Terminal	- BAT +	(-) terminal for external DC source or battery
		(+) terminal for external DC source or battery
Encoder Connection Terminal	EA	Encoder channel A input terminal
	EB	Encoder channel B input terminal
	GND	(-) input terminal for encoder supply
	+5V	(+5V) input terminal for encoder supply
Door Control Signals Connection Terminal	COM	Common signal terminal for control signals
	OPEN	Input terminal for door open signal
	CLOSE	Input terminal for door close signal
	SLOW	Input terminal for slow speed signal
	FAST	Input terminal for high speed signal
Photocell, 142(On the floor) and Programmable Input Connection Terminal	+24V	Internal +24V signal terminal for control signals
	GND	Internal 0V signal terminal for control signals
	PCL	Photocell signal input terminal
	142	142 signal input terminal
	PRG	Programmable signal input terminal
Relay Connection Terminal	PKC	Jamming and Photocell blocking relay COM terminal
	PK	Jamming and Photocell blocking relay NO terminal
	CLC	Door fully closed relay COM terminal
	CL	Door fully closed relay NO terminal
	OLC	Door fully open relay COM terminal
	OL	Door fully open relay NO terminal

Menu Usage

In Smart Door Automatic Control Board, thanks to the detailed parameter settings combined operation of automatic door and control board is accomplished. The parameters adjusted in the menu provides full characterization of automatic door and motor's physical properties by the control board. Also harmonious operation of automatic door control board with the elevator control board can be possible. Parameters were named with utmost care to allow them give a clue about its meaning.

	Parameter Name	Value Interval	Default Value	Explanation
OPENING SETTINGS	1-HighSpeedWhenOpening	20-50 cm/s	40	Maximum speed reached during the door opening.
	2-LowSpeedWhenOpening	2-19 cm/s	5	Minimum speed value during door opening.
	3-OpenAcceleratingRamp	5-90 cm	30	Required ramp distance in transition from low speed to high speed during door opening.
	4-OpenSlowingRamp	5-90 cm	30	Required ramp distance in transition from high speed to low speed during door opening.
	5-OpenLowSpeedDistance	1-99 cm	2	Distance to be travelled in low speed after deceleration ramp during door opening.
	6-OpenPressureLevel	10-50	30	Jamming rate occurring during door opening.
	7-OpenHoldingForce	2-10	3	The force to be applied to provide door remaining fully open.
CLOSING SETTINGS	8-HighSpeedWhenClosing	20-40 cm/s	30	Maximum speed reached during the door closing.
	9-LowSpeedWhenClosing	2-19 cm/s	5	Minimum speed value during door closing.
	10-CloseAcceleratingRamp	5-90 cm	20	Required ramp distance in transition from low speed to high speed during door closing.
	11-CloseSlowingRamp	5-90 cm	20	Required ramp distance in transition from high speed to low speed during door closing.
	12-CloseLowSpeedDistance	1-99 cm	2	Distance to be travelled in low speed after deceleration ramp during door closing.
	13-ClosePressureLevel	10-50	25	Jamming rate occurring during door closing.
	14-CloseHoldingForce	2-10	3	The force to be applied to provide door remaining fully closed.
MANUFACTURERS SETTINGS	15-IdentifySpeed	5-20 cm/s	5	The speed of door movement during identification of the door.
	16-SkateDistance	2-10 cm	3	The required distance for the skate to lock after the door closed.
	17-SkateMovementSpeed	2-10 cm/s	3	Defined speed to be used during the locking and unlocking of the skate.
	18-EncoderPulse	1-255	100	Number of slots on the encoder disc coupled to the door motor.
	19-ReductionRate	1-50	15	Door motor reduction ratio.
	20-WheelPerimeter	5-250 mm	145	Perimeter of door motor drive wheel.
	21-Kp	0-100	50	PI controller parameter.
	22-Ki	0-20	5	PI controller parameter.

Parameter Name	Value Interval	Default Value	Explanation
23-RunInputType	Open-Close	Open-Close	Uses OPEN signal for door opening and uses CLOSE signal for door closing. If none of the signals are available door is motionless. If both signals are available door closes.
	Close		Uses CLOSE signal for door closing, when CLOSE signal disappear the door opens. Note: According to EN81, automatic door must stand still and remain in its current position in emergency stop, revision and retrieve positions. Therefore, single signal operation is not allowed. This option can only be used in old elevators.
	OpenContact		Open and close limit relays are used as normally open contact.
24-LimitRelays	ClosedContact	OpenContact	Open and close limit relays are used as normally closed contact.
	OpenContact	OpenContact	In obstructions or photocell blocking, press relay is used as normally open contact.
25-PressRelay	CloseContact		In obstructions or photocell blocking, press relay is used as normally closed contact.
	26-142 Function	OpenOnFloor	Cancel
ClosedOnFloor		If 142 input is present door opens; else it does not open.	
Cancel		142 input is ignored.	
27-Rescue Mode	Battery	Battery	In case of mains failure batteries are used for rescuing. Battery charge is accomplished by the board.
	ExternPower		In case of mains failure, external power supply is used. In that case no charging is made.
	Closed		DEMO operation is off, door operates normally.
28-DEMO Mode	Open	Closed	DEMO operation is on, door opens and closes in defined intervals and therefore operation status can be observed. In the while, open-close signals are ignored. When photocell is off or door obstruction is sensed, door reopens, DEMO operation continues.
	Yes		No
29-FactorySettings	No	No	Default values are not loaded.
	Türkçe		Türkçe
30-DİL\LANGUAGE	English	Screen messages are displayed in English.	
	31-EXIT	ENTER	ESC
ESC		Exit the menu without saving the parameter changes.	

OTHER SETTINGS


Button Functions

The operations accomplished by four buttons placed on the Smart Door Automatic Control Board are shown below. Each button has different functions in different screens.

Buttons	Functions	Screen
	Press and hold for 2 seconds to start door identification	Info Screen
	Entered into manuel OPEN/CLOSE screen.	
	Used to enter into the menu.	
	Press and hold for 2 seconds to enter *REVISION MODE	
	No function	
No function	Counter screen is entered.	Manuel OPEN/CLOSE Screen
	Door moves toward closing direction.	
	Door moves toward opening direction.	
	No function	
	Information screen is entered.	
Switches into the next parameter.	Switches into the previous parameter.	Counter Screen
	Activates the selected parameter.	
	Exits without saving the parameter change.	
	Increases parameter value.	
	Decreases parameter value.	
Increases parameter value.	Decreases parameter value.	Menu Screen (Parameter inactive)
	Saves the changes made to the parameter.	
	Exits without saving the selected parameter.	
	Increases parameter value.	
	Decreases parameter value.	
Increases parameter value.	Decreases parameter value.	Menu Screen (Parameter active)
	Saves the changes made to the parameter.	
	Exits without saving the selected parameter.	
	Increases parameter value.	
	Decreases parameter value.	

button is pressed to exit *REVISION MODE!!!

Operation Screens and Explanations

The LCD screen placed on the Smart Door Automatic Door Control Board is used to display information about door position, speed and info and error messages about the operation of the board.  Down arrow button is used to adjust screen content and function. Screen functions, switching between the screens and associated explanations are given below.

Opening Screen:

When the board is powered, board name, software version and board serial no are displayed for 1 second.

Info Screen:

Contains message information about door position, speed information and accomplished function.

Manuel OPEN/CLOSE Screen:

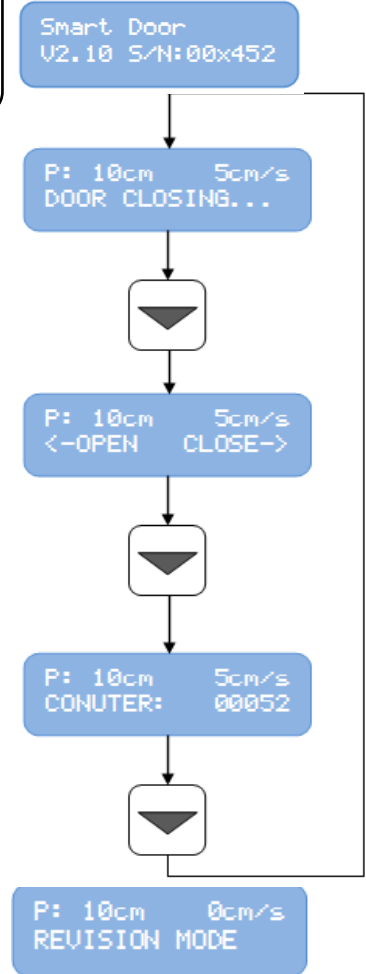
Door position and speed info is displayed. When this screen is active, door open/close can be done manually with ESC and ENTER buttons. In this menu screen OPEN/CLOSE signals are disregarded. If no button has been pressed for 60 seconds, the menu automatically returns to Info Screen.

Operation Counter Screen:

Door position, speed info and counter indicating the number of door open/close operations that have been made since the product sold are displayed.

REVISION MODE Screen:

It contains door position, speed info and message indicating that the operation is in REVISION MODE. This mode is used in maintenance for the mechanical parts of the door. In REVISION MODE all signals are disregarded and door is at rest.



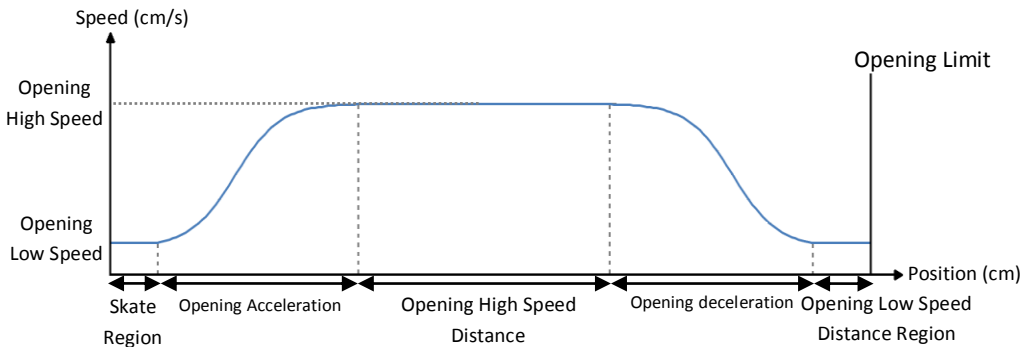
Parameters for Door Opening

The acceleration and deceleration distances must be increased with the increase of the difference between opening high speed and opening low speed values. In order to provide a comfortable motion, acceleration and deceleration distances should not be chosen lower than half of the high speed value. When the door opening limit is reached, for a soft stop, opening high speed and opening low speed distances must be harmonious and should not be too high.

During the door opening, if an obstruction exceeding the limit adjusted by door opening pressure level is detected, door motion stops. It waits for 15 seconds and if OPEN signal is still active, the door continues opening motion. In the meantime, if OPEN signal cuts and CLOSE signal is active, door is closed. In the following door opening, it moves in low speed around the obstruction region and operation reverts back to the normal if the reason of obstruction disappears. If the obstruction repeats, the previous cycle repeats.

Once the door is fully opened, in order to prevent the door closing by the influence of the spring on the door, a force is applied to the door to keep it opened. This force must be adjusted so as to beat the force of the spring. If this parameter value is adjusted too high, heating occurs in motor and drive components.

Parameter Name	Value Interval	Default Value	Explanation
1- HighSpeedWhenOpening	20-50 cm/s	40	Maximum speed of the door during opening.
2- LowSpeedWhenOpening	2-19 cm/s	5	Minimum speed during door opening.
3-OpeningAcceleraringRamp	5-90 cm	30	Required ramp distance during door opening in transition from low to high speed.
4-OpeningSlowingRamp	5-90 cm	30	Required ramp distance during door opening in transition from high to low speed.
5-OpeningLowSpeedDistance	1-99 cm	2	The covered distance in low speed during door opening after deceleration ramp.
6- OpenPressureLevel	10-50	30	Jamming rate occurred during door opening.
7- OpenHoldingForce	2-10	3	The force to be applied to provide the door remaining fully open.



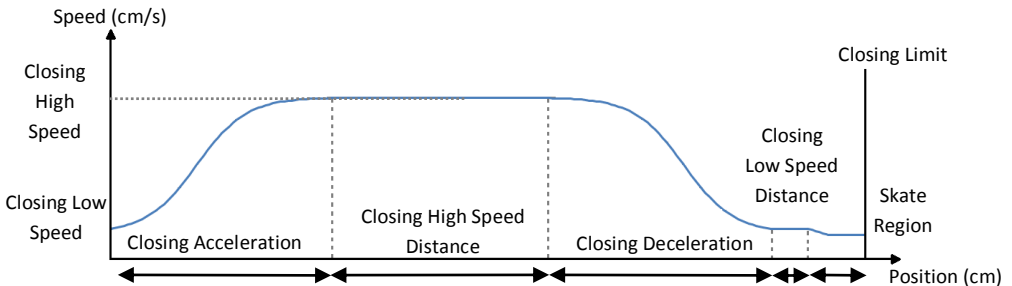
Parameters for Door Closing

The acceleration and deceleration distances must be increased with the increase of the difference between closing high speed and closing low speed values. In order to provide a comfortable motion, acceleration and deceleration distances should not be chosen lower than half of the high speed value. When the door opening limit is reached, for a soft stop, closing high speed and closing low speed distances must be harmonious and should not be too high.

During the door closing, if an obstruction exceeding the limit adjusted by door closing obstruction level is encountered, door motion stops and door continues to move in opening direction and door opens. Through the obstruction region motion speed is kept low. If the reason of obstruction disappears, normal operation continues. If the obstruction continues door opens. An effort to move through the obstruction region is made 5 times and if it fails to be closed in the fifth try consecutively, SLOW input is checked together with the CLOSE input. If both CLOSE and SLOW inputs are active, movement starts in closing direction in low speed accompanying a buzzer. If the door can be fully closed, operation reverts back to normal, otherwise door is tried to be closed in low speed accompanying a buzzer. This loop continues till CLOSE signal disappears.

Once the door is fully closed, in order to prevent the door leaving from the lock by the influence of the skate spring on the door, a force is applied to the door to keep it closed. This force must be adjusted so as to beat the force of the spring. If this parameter value is adjusted too high, heating occurs in motor and drive components.

Parameter Name	Value Interval	Default Value	Explanation
8- HighSpeedWhenClosing	20-40 cm/s	30	Maximum speed of the door during closing.
9- LowSpeedWhenClosing	2-19 cm/s	5	Minimum speed during door closing.
10-ClosingAccelerationRamp	5-90 cm	20	Required ramp distance during door closing in transition from low to high speed.
11-ClosingSlowingRamp	5-90 cm	20	Required ramp distance during door closing in transition from high to low speed.
12-ClosingLowSpeedDistance	1-99 cm	2	The covered distance in low speed during door closing after deceleration ramp.
13- ClosePressureLevel	10-50	25	Jamming rate occurred during door closing.
14-CloseHoldingForce	2-10	3	The force to be applied to provide the door remaining fully closed.



Information Messages

LCD screen on Smart Door Automatic Door Control Board displays information messages about operation procedure of the board.

Info Message	Explanation
DEFINING CLOSE...	Displayed during recognition process in closing direction.
DEFINING OPEN...	Displayed during recognition process in opening direction.
DOOR CLOSED	Indicates that door is fully closed.
DOOR OPEN	Indicates that door is fully open.
DOOR CLOSING...	Indicates door moves in closing direction.
DOOR OPENING...	Indicates door moves in opening direction.
DOOR WAITING...	Indicates that control signal is off during door motion.

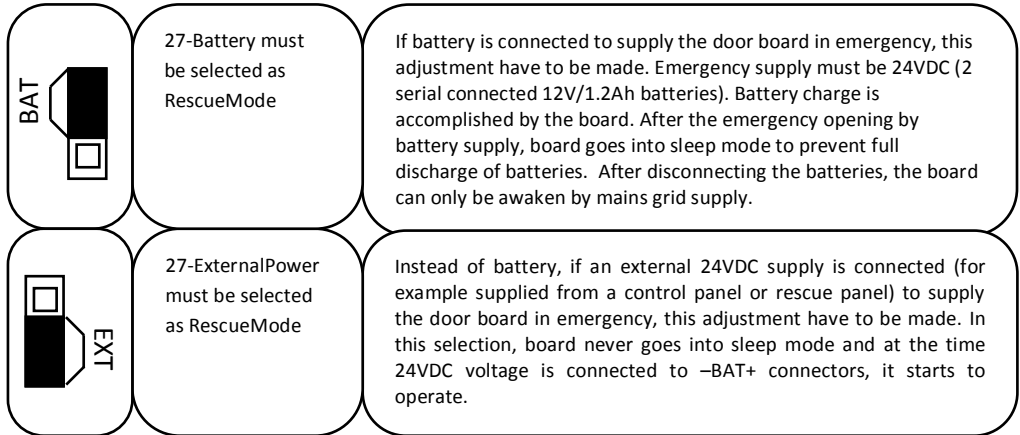
Error Messages

LCD screen on Smart Door Automatic Door Control Board displays error messages arising during the operation procedure of the board. When the error reason disappears, error message is replaced by the information message. High current, low current and low voltage error messages can permanently block operation of the board.

Error Message	Explanation
H1.HIGH CURRENT	In the case the obstruction levels are adjusted low, it indicates that during normal operation of the door an obstruction error can be signaled.
H2.LOW CURRENT	It indicates that an error occurred in motor current measurement.
H3.OPENING JAMMING	It indicates that an obstacle was detected during door opening.
H4.CLOSING JAMMING	It indicates that an obstacle was detected during door closing.
H5.LOW VOLTAGE	It indicates that control card power supply is insufficient for normal operation.
H6.PHOTOCELL ACTIVE	It indicates that photocell blocking occurred during door closing.
H7.TIMEOUT ERROR	It indicates door motion could not be completed in determined time.

Operation in Emergency

In case of mains failure, Smart Door Automatic Door Control Board continues to operate supplied from an external source or battery. By using the jumper on the board and from the menu, the type of source in rescue mode can be selected. Battery charge is accomplished by the board.



Note: This selection is only valid when +24VDC emergency supply voltage is connected to –BAT+ connection terminals. If door board will be permanently supplied by mains grid (by UPS or systems moving the car to the floor level), this selection is not mandatory.

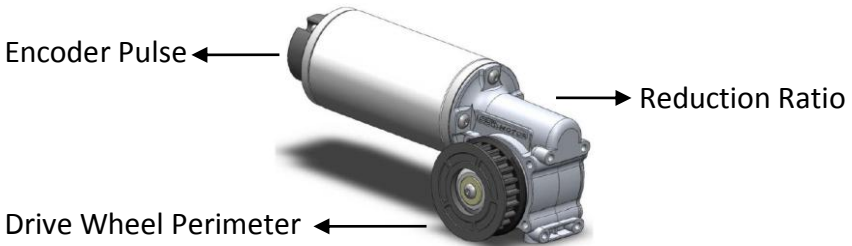
Operation with ‘on the floor’ Signal

In emergency mode of operation (in case of mains failure) OPEN and CLOSE signals are active. Door opening and closing can be accomplished by the signals applied to these inputs. If “27-RescueMode” menu item is selected “**Battery**”, according to the parameter in “26-142 Function”, 142 signal input becomes functional. If 142 function is adjusted as “**OpenOnFloor**”, if 142 signal input is active, door is not allowed to open, and else it opens. If 142 function is adjusted “**ClosedOnFloor**”, if 142 input is active the door is allowed to open, else opening prohibited. In case battery power is used in emergency, door is opened using 142 signal and board gets into the sleep mode to prevent discharging of batteries.

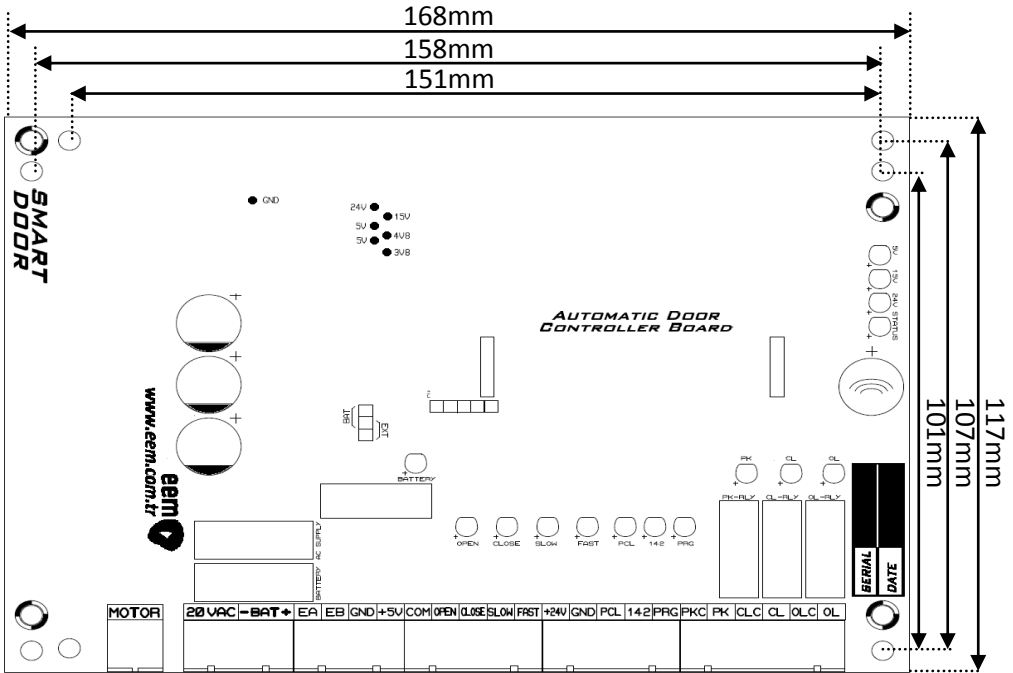
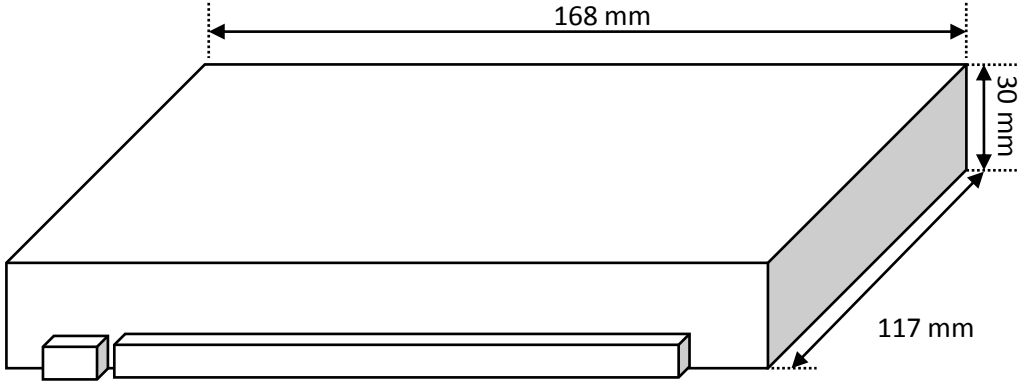
Motor and Speed Controller Parameters

Kp and Ki parameters determine response times of PI speed controller implementing motor speed regulation. Integral factor must be chosen lower than Kp as integral factor is multiplied by the sum of the errors. Otherwise, undesirable deviations in travel curves and vibrations may occur. Kp parameter should be chosen at least 10 times larger than Ki parameter. If Ki and Kp parameters are adjusted too high values, motor is strained. Adjusting too low values increases the time for the motor to reach reference speed, therefore accuracy decays.

	Parameter Name	Value Interval	Default Value	Explanation
Manufacturer Settings	18-EncoderPulse	1-255	100	Number of pulses generated in one rotation by the encoder coupled to the motor
	19-ReductionRate	1-50	15	Door motor reduction ratio.
	20-WheelPerimeter	5-250 mm	145	Perimeter of door motor drive wheel.
	21-Kp	0-100	50	PI parameter for speed controller
	22-Ki	0-20	5	PI parameter for speed controller



SmartDoor Automatic Door Control Board Physical Dimensions



FREQUENTLY ENCOUNTERED PROBLEMS AND SOLUTIONS

DOOR DOES NOT MOVE

- Verify that door board is powered. If it is powered, 24V LED indicator must light. If it is not on, measure 20V AC supply input. If input voltage is not available, verify that electrical power reaches to the supply transformer from the panel. If input voltage is available check the glass fuse placed on the board.
- Verify the motor power connections.
- Verify the door signal type from the menu item. If “23-SignalType” parameter is selected as “Open-Close”, in case none of the open and close signals are available door stays motionless. Verify that open and close signals reach from the control panel. When these signals reach, OPEN and CLOSE terminal LED indicators must be on. For testing control inputs you may try to disconnect the signals coming from the control panel, try the operation of the inputs by making a connection from COM terminal to GND and from +24V to OPEN and CLOSE terminals.
- Check if a mechanical obstruction is available in the door.

DOOR PANELS OPEN AND CLOSE IN AN UNCONTROLLABLE or QUICK MANNER

- Verify the motor and encoder wiring. When you move the door manually, the speed and position of the motor must be shown by the indicator.
- Encoder channels A and B may be reverse connected. Try again by reversing EA and EB terminals.

DOOR DOES NOT OPEN

- When door opening command is given, OPEN LED indicator must be on. Otherwise, check if door closing command comes from the control panel.
- Make sure that door closing CLOSE LED indicator is not on. If door closing signal is available, as the priority is on the door closing, door does not open.
- In operation with only close signal (with door opening magnet) make sure that closing signal is not available.
- Check if a mechanical obstruction is available in the door.

DOOR DOES NOT CLOSE

- When the door closing command was given, CLOSE LED indicator must be on. Otherwise, check that door closing command comes from the control panel.
- Check if a mechanical obstruction is available in the door.

DOOR MOVES IN REVERSE DIRECTION

- If the door opens instead of closing or it closes instead of opening, motor connections are reverse. Reverse the motor connections. Besides, make sure that you reverse encoder channels A and B.

THE DOOR EITHER BUMPS or SLOWS DOWN TOO EARLY

- Make sure that door recognition was accomplished.
- Make sure that speed settings have been made appropriately.

THE DOOR IS OBSTRUCTED FREQUENTLY

- Check if a mechanical obstruction is available in the door.
- Obstruction pressure may have been adjusted too low.
- Encoder may be operating erroneous.
- Supply voltage may be too low.

DOOR PANELS SHAKE

- Verify encoder wiring.
- Check PI parameter settings (Kp and Ki).
- Check the mechanical parts of the door.

AFTER THE DOOR FULLY OPENS IT MOVES BACK 1-2 cm AND TRIES TO OPEN AGAIN AND AGAIN

- The pressure for keeping the door open may be adjusted too low and it may not be able to beat the force of the spring. The pressure for keeping the door open should be increased a little.
- Outside door spring may be too hard in current floor. Check the spring of the outside door.

DOOR MOTOR and DRIVE CIRCUIT HEATS EVEN DURING THE DOOR IS MOTIONLESS

- Pressure values for keeping the door open and closed may be adjusted too high. Please check these values.

HW. LOW CURRENT ERROR IS SHOWN ON THE SCREEN and DOOR DOES NOT WORK

- The current drawn by the motor during operation is continuously followed by the board. If the current is constant or too low this error is given and operation stops. If there is not any noticeable problem on the board (for example a disconnected IC or a component causing a short circuit), it must be sent to the technical service.

H5.LOW VOLTAGE ERROR IS SHOWN IN THE SCREEN and DOOR DOES NOT WORK

- This error message is shown in case the supply voltage is below the minimum value needed for normal operation of the door. When the operation voltage is restored to the normal level, operation reverts back to normal.

H1. HIGH CURRENT ERROR IS SHOWN ON THE SCREEN DURING DOOR MOVEMENT

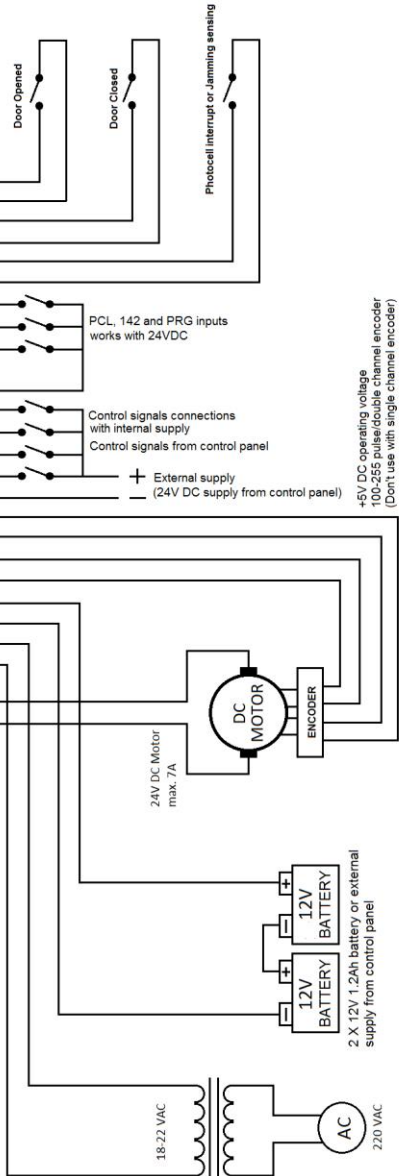
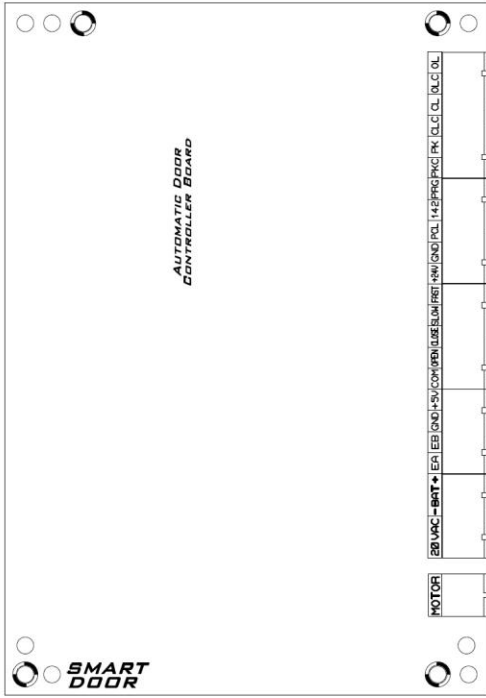
- If H1. HIGH CURRENT ERROR is occasionally shown on the screen during door opening or closing, “6-OpenObstructLevel” or “13-CloseObstructLevel” parameters have been adjusted a low value. In that case, momentary pressures occurred during movements (such as mechanical frictions, large spring forces) causes this message to be shown on the screen. Frequent appearing of this message during operation makes H1. HIGH CURRENT error to be encountered. In most cases, it senses an obstruction during closing and causes the door to re-open. In that case, in regard to its occurring frequency during opening and closing “6- OpenObstructLevel” or “13-CloseObstructLevel” parameters must be increased.

H1. HIGH CURRENT ERROR IS SHOWN ON THE SCREEN and DOOR DOES NOT WORK

- If H1.HIGH CURRENT error is shown during operation, it notifies that during the door motion in opening or closing direction, obstruction sensing value has been adjusted a low value and during the motion obstruction is sensed in short durations. If this error is permanent on the screen, it notifies that unexpectedly large current was drawn in a long duration. In that case buzzer alerts. To make this error disappear, door recognition process must be repeated, any mechanical obstruction must be checked and encoder connection must be examined. Door position during door motion must be traced from the screen.

H7.TIMEOUT ERROR IS SHOWN ON THE SCREEN AND DOOR DOES NOT OPERATE

- If H7.TIMEOUT ERROR error is shown during operation, it means that door movement was not completed within pre-determined time. In that case, usually door recognition may not be able to be accomplished properly or encoder connection is probably erroneous. When the power to the board is disconnected, this error resets. Encoder connection must be controlled, power is applied to the board and door recognition is repeated. The completion time for door movement is projected as 25 seconds. In case an obstruction is encountered, operation time is reset. Without facing any obstacle, if the door did not reach to the open or closed position, the movement ends at the end of 25 second. In most cases, H1. HIGH CURRENT error occurs before H7. TIMEOUT ERROR error.



+ External supply
 - (24V DC supply from control panel)

+5V DC operating voltage
 100-255 pulse/double channel encoder
 (Don't use with single channel encoder)

Dear Customer,

We, as EEM Co., Ltd. give utmost importance to the customer satisfaction. We are seeking your help about this. Please contribute developing our products by kindly spending a few minutes of your precious time to fill up this form and send it to us by post or fax. Thank you very much for your contribution.

❖ Please introduce us your firm?

Firm Name: _____ Contact Person _____ :

Address : _____

Tel : _____

Fax : _____

❖ What is your firm's area of interest?

- | | |
|---|---|
| <input type="checkbox"/> Installation | <input type="checkbox"/> Electronic equipment for lifts |
| <input type="checkbox"/> Equipment wholesale | <input type="checkbox"/> Mechanical parts production |
| <input type="checkbox"/> Control panel production | <input type="checkbox"/> Other |

❖ How did you hear about us?

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> Fair | <input type="checkbox"/> Internet |
| <input type="checkbox"/> Advise | <input type="checkbox"/> Magazine/Newspaper ads |
| <input type="checkbox"/> Other | |

❖ Which products of ours have you used? Are you satisfied with our service?

Service\ Product	Rescuer	Control Card	Speed Control Eq.	Control Panel	Revision Set	Door Card
Sale	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞
Price	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞
Quality	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞
Delivery	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞
Installation	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞
Technical Support	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞
After Sale Service	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞	😊 😐 😞

😊 : Good 😐 : Medium 😞 : Bad

❖ Are you seeking for a new product, technical support or supplier firm?

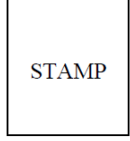
Yes No Explanation:

❖ In your opinion, what are the two prime factors for a product? (Please make at most two choices.)

- | | | | |
|-------------------------------------|--|--|--------------------------------------|
| <input type="checkbox"/> Confidence | <input type="checkbox"/> Easy Installation | <input type="checkbox"/> Price | <input type="checkbox"/> After Sales |
| Service | <input type="checkbox"/> Delivery Time | <input type="checkbox"/> Technical Support | |



SENDER :



ADDRESS :

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Karatay/KONYA/TURKIYE

Curve from here!



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