



LF-10T

**DOOR CONTROL BOARD
USER MANUAL**

LF-LF10T-UM-EN

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LF-10T User Manual

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1 GENERAL FEATURES

The LF-10T Door Control Board is designed for 24 VDC elevator door motors, providing smooth and comfortable door operation. Thanks to its integrated power transformer, no external transformer is required, making installation inside the control panel simpler and more practical. Its unique and ergonomic design ensures ease of use and fast commissioning.

- Smooth and comfortable door operation
- Compact design with an integrated transformer, eliminating the need for an external transformer
- Easy installation compatible with standard wiring practices
- Automatic detection of fully open and fully closed door positions
- Compliance with fire safety regulations
- Nudging mode
- Audible warning in the event of door obstruction
- Flexible parameter configuration
- Clear and user-friendly operating status display

2 SYSTEM OVERVIEW

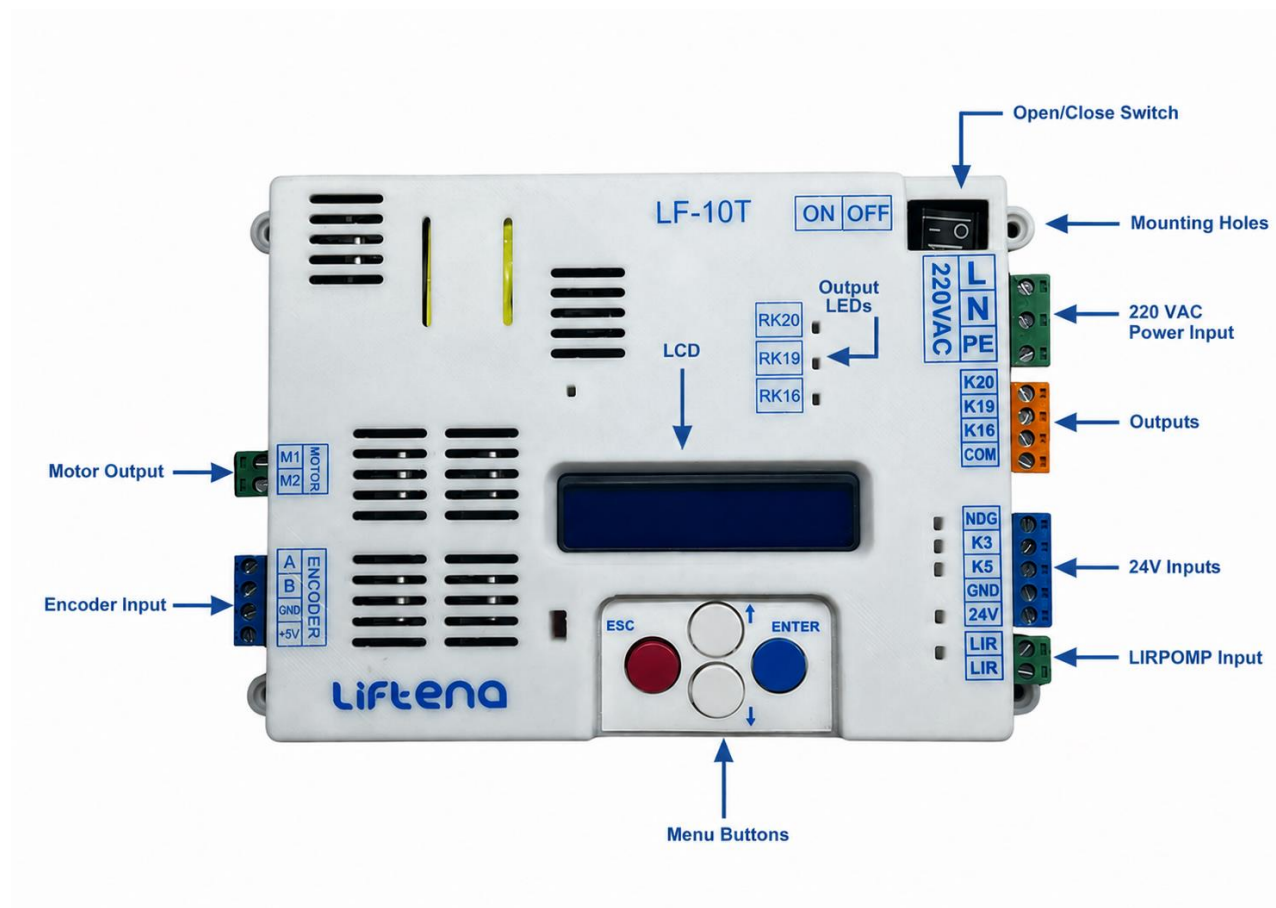


Figure 1 General View

3 TECHNICAL SPECIFICATIONS

3.1 Power Supply Input

Feature	Description
Supply Voltage	20VAC
Input Protection	8A Glass Fuse

Table 1 Power Supply Input

3.2 Encoder Circuit

Feature	Description
Encoder Type	Incremental Encoder
Supply Voltage	5VDC

Table 2 Encoder Circuit

3.3 Motor

Feature	Description
Motor Voltage	30VDC
Maximum Current	7A
Motor Protection	Current Protection

Table 3 Motor Specifications

3.4 Input Signals

Symbol	Description
K5	Open command signal input 24VDC
K3	Close command signal input 24VDC
NDG	Nudging command signal input 24VDC
LIR	Lirpomp close command signal input 190VDC (Used in applications with an internal safety door.)

Table 4 Input Signals

3.5 Output Signals

Symbol	Description
K20	Full Open Contact
K19	Full Closed Contact
K16	Obstruction Contact

Table 5 Output Signals

4 SYMBOLS

Terminal	Symbol	Description
Door Power Input	220L	System Supply Phase
	220N	System Supply Neutral
	PE	System Protective Earth
Relay Output Terminal	K20	Full Open Contact
	K19	Full Closed Contact
	K16	Obstruction Contact
	COM	Relay Common Terminal
Command Input Terminal	NDG	Nudging Command Signal Input 24VDC
	K3	Door Open Command Signal Input (Activated by +24 VDC)
	K5	Door Close Command Signal Input (Activated by +24 VDC)
	GND/ 1000	GND Terminal for Command Signal Inputs
	+24V	+24VDC Outputs
LirPomp Input Terminal	LIR	190 VDC LIRPOMP Close Command Signal Input for
	LIR	Internal Safety Door Applications
Motor Terminal	M1	Motor Power Terminal
	M2	Motor Power Terminal
Encoder Terminal	A	Encoder A Channel Input
	B	Encoder B Channel Input
	GND	Encoder Supply (-)
	+5V	Encoder Supply (+5VDC)

Table 6 Terminal Symbols

5 GENERAL WIRING DIAGRAM

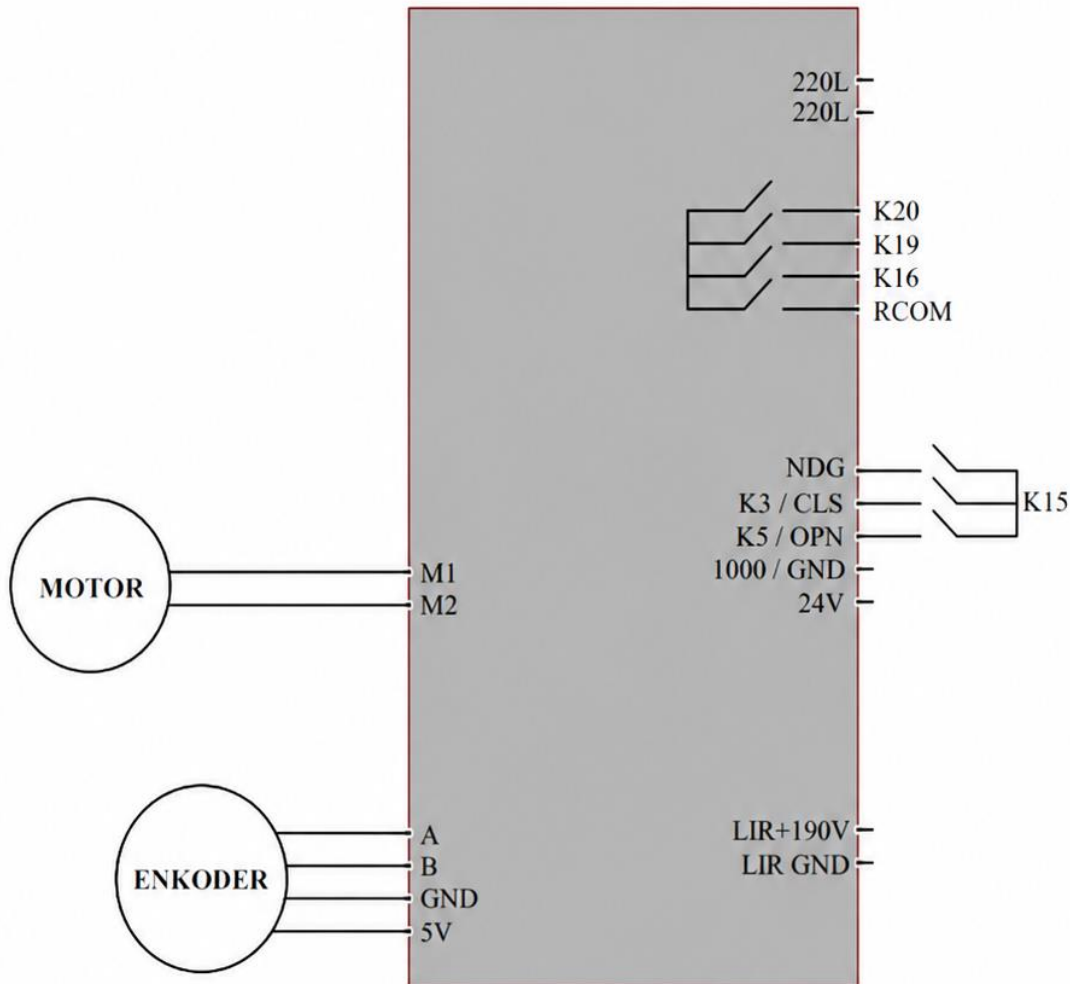


Figure 2 General Wiring Diagram

6 MANUFACTURER WIRING DIAGRAM

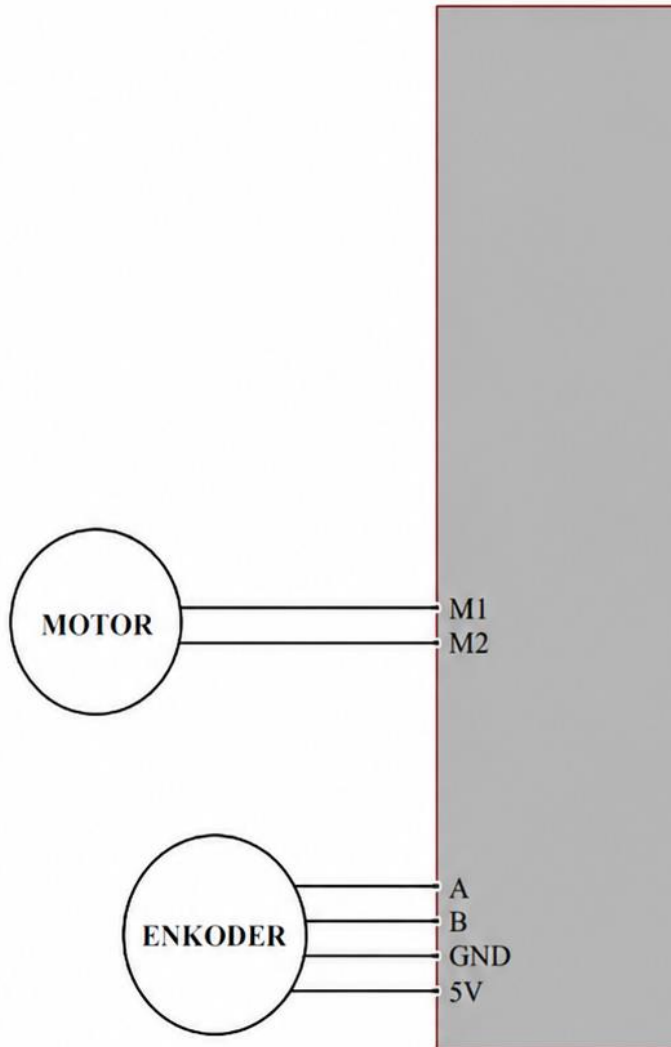


Figure 3 Manufacturer Wiring Diagram

7 INSTALLER WIRING DIAGRAM

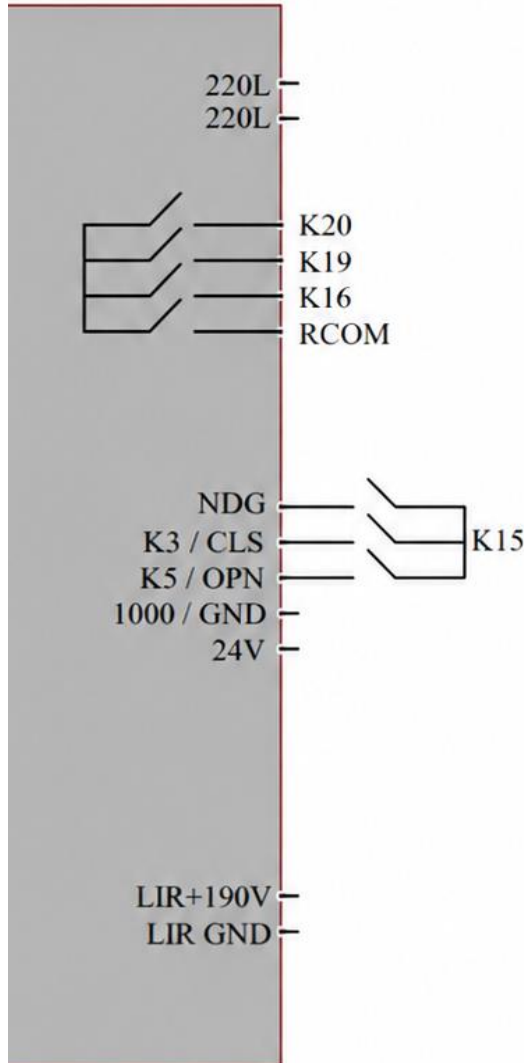
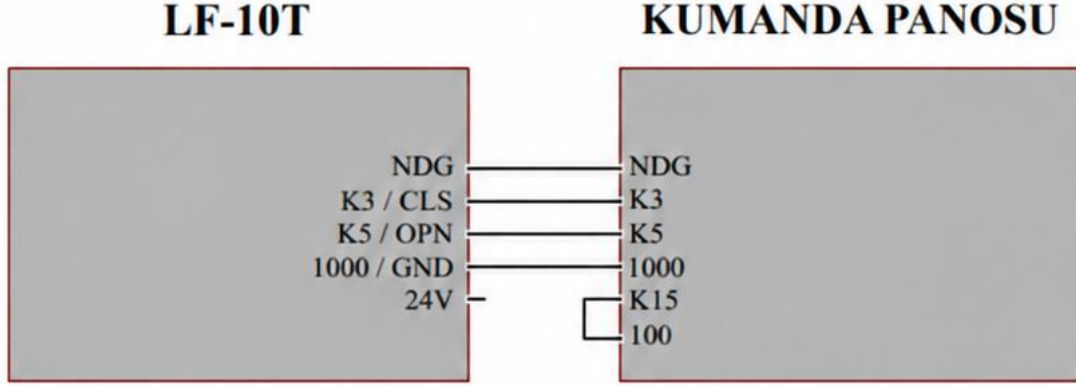


Figure 4 Installer Wiring Diagram

7.1 Control Panel Powered Signal Wiring Diagram



Şekil 5 Control Panel Powered Signal Wiring Diagram

7.2 Door Control Board Powered Signal Wiring Diagram

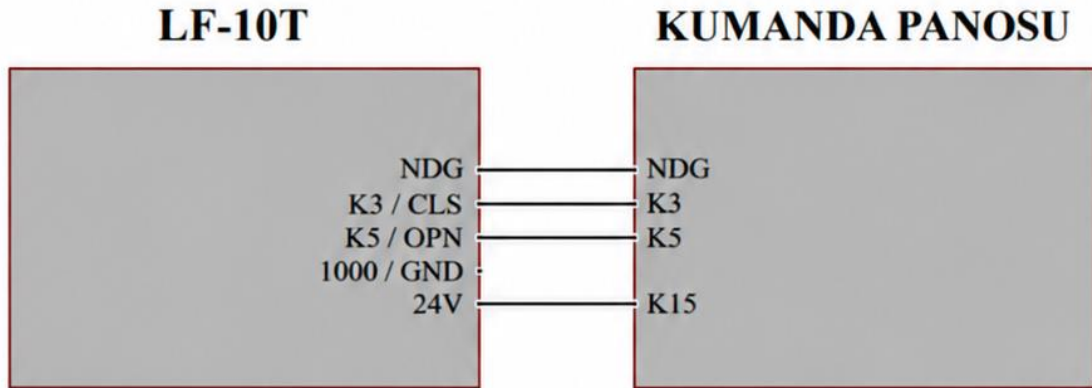


Figure 6 Door Control Board Powered Signal Wiring Diagramı

8 OPERATING SCENARIO

8.1 First Settings

After the door installation is completed, enter the Configuration Menu as described in Section 8.4, and configure the parameters appropriately according to the configuration options described in Section 9.

8.2 Initial Power-Up

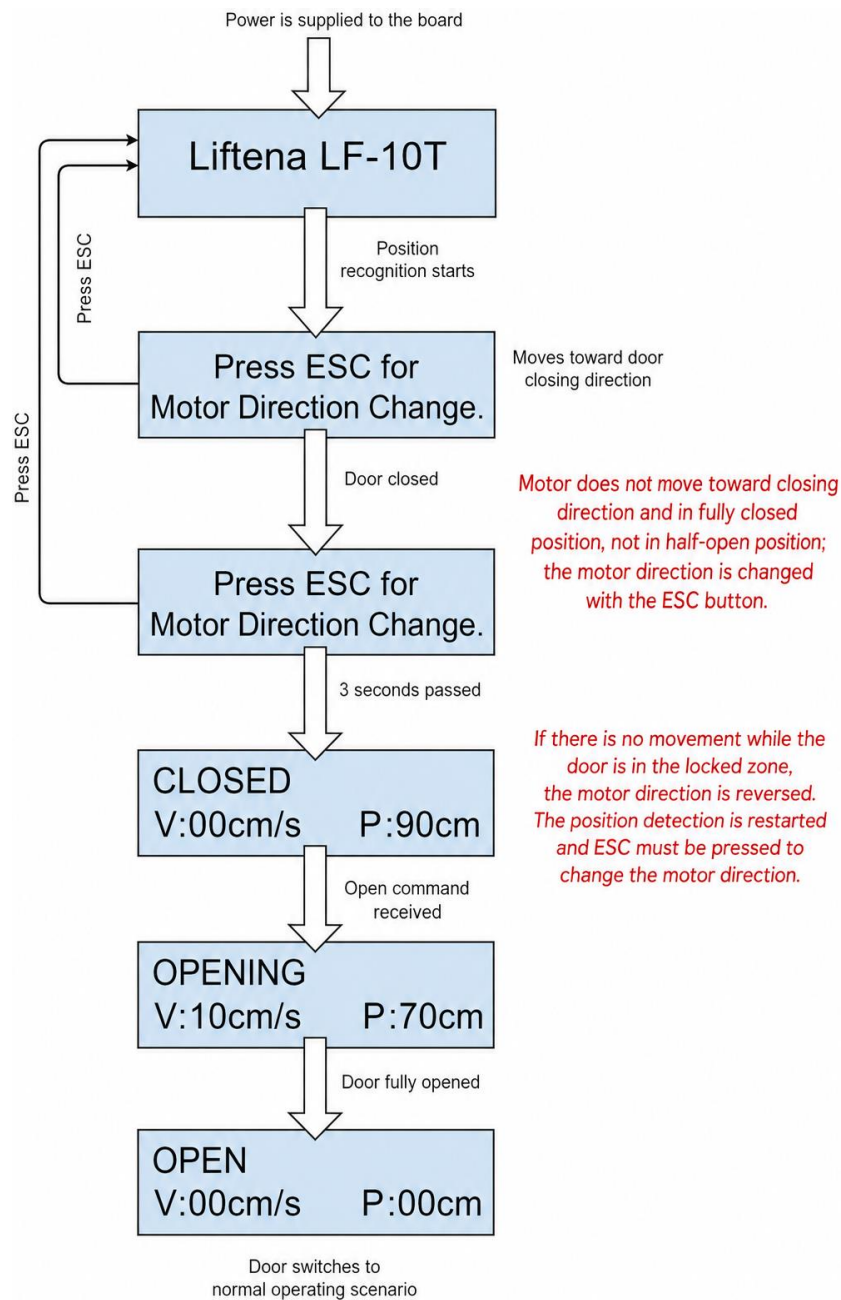


Figure 7 Board Startup Flow Diagram

8.3 Normal Operation Screen Transitions

During normal operation, the (+) and (–) buttons are used to navigate between screens. In Manual Drive mode, pressing the ENTER button moves the door in the closing direction, while pressing the ESC button moves the door in the opening direction.

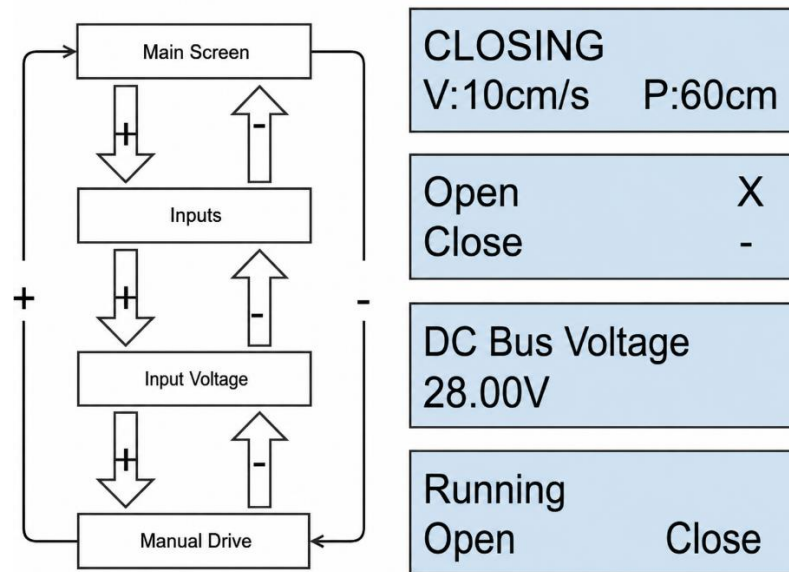


Figure 8 Normal Mode Screen Transitions

8.4 Menu Navigation

- When the board is powered on for the first time, press the (+) and (–) buttons simultaneously to access the Configuration Menu with Manufacturer access level.
- While the board is operating, press the ESC and ENTER buttons simultaneously to access the Configuration Menu with Installer access level.
- To exit the Configuration Menu, repeatedly press the ESC button until the "Exit?" prompt appears. When the "Exit?" prompt is displayed, press the ENTER button to return to Normal Operation Mode.

9 MENU

Menu	Submenu	Options	Description	Access Level
1-Language	No submenu available for language selection.	"TR" "EN" "FR" "DE" "GE"	Selects the display language.	Unlimited
2-Genel Ayarlar	Demo?	"Enabled" "Disabled"	When Demo Mode is enabled, the door continuously performs opening and closing cycles.	Unlimited
	Komut Tipi	Close Only / Open & Close	Open & Close: The door operates with both open and close command signals. Close Only: The door operates using the close and LIRPOMP command signals. When a Close or LIRPOMP command is received, the door closes; otherwise, it remains open.	Unlimited
	Door Type	Full Automatic / Semi-Automatic		Unlimited
	Manufacturer	GENERAL ...	Loads manufacturer-specific parameter settings according to the selected manufacturer.	Manufacturer

	Reset Position		Clears the stored door position data and starts the door learning process again.	
3-Speed Settings	Factory Preset	SLOW MEDIUM FAST MANUAL	Door speed parameters can be quickly restored to the factory preset values. When MANUAL is selected, each parameter can be adjusted individually. If any option other than MANUAL is selected, the remaining speed parameters will be hidden from the menu.	Unlimited
	Closing Speed (mm/s)	0 - 400	Sets the maximum target speed during door closing.	Unlimited
	Closing Slow Speed (mm/s)	0 - 100	Sets the creeping speed as the door approaches the fully closed position.	Unlimited
	Closing Slow Distance (mm)	0 -100	Sets the creeping distance before the door reaches the fully closed position.	Unlimited
	Closing Spoon Speed (mm/s)	0 -100	Sets the closing speed during the door spoon engagement phase.	Unlimited
	Closing Acceleration (mm/s ²)	0 -1000	Sets the maximum target acceleration during door closing.	Manufacturer
	Opening Speed (mm/s)	0 - 450	Sets the maximum target speed during door opening.	Unlimited

	Opening Slow Speed (mm/s)	0 -100	Sets the creeping speed as the door approaches the fully open position	Unlimited
	Opening Slow Distance (mm)	0 -100	Sets the creeping distance before the door reaches the fully open position.	Unlimited
	Opening Spoon Speed (mm/s)	0 -100	Sets the door speed during the spoon opening phase.	Unlimited
	Opening Acceleration (mm/s ²)	0 -1000	Sets the maximum target acceleration during door opening.	Unlimited
	Spoon Length (mm)	0 -100	Sets the spoon length parameter.	Üretici
	Nudging Speed (mm/s)	0 -200	Sets the nudging speed.	Unlimited
	Current KP	0-1000	Proportional gain for the current control loop.	Unlimited
4-Control Settings	Speed KP	0-1000	Proportional gain for the speed control loop.	Unlimited
	Closed Holding Force (Closed Hold Force)	0-300	Sets the force applied by the motor while the door is in the fully closed position.	Unlimited
	Open Holding Force (Open Hold Force)	0-250	Sets the force applied by the motor while the door is in the fully open position.	Unlimited
	Obstruction Force	0-600	Sets the maximum force applied by the door while closing to overcome an obstruction.	Unlimited

			If an obstruction is detected while closing: • The door stops. • The obstruction position is stored in memory. • The K16 relay is activated to send an obstruction signal to the controller. • The door opens completely. • The K16 relay is deactivated. • The door resumes normal operation. Note: As the door approaches the stored obstruction position, it slows down. If an obstruction is detected while opening: • The door stops. • The obstruction position is stored in memory. • The controller waits 5 seconds for a closing command. • If a closing command is received, the door closes. • If the open command is still active, the door attempts to open again. The door passes the previously detected obstruction area at a reduced speed. If the obstruction is cleared, the door returns to normal operation. Otherwise, the same procedure is repeated.	
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	Closed Position Control Force (Closed Position Control Force)	0-700	Sets the motor force applied at the fully closed position.	
	Open Position Control Force (Open Position Control Force)	0-700	Sets the motor force applied at the fully open position.	
5-Motor Settings	Encoder Pulses	0-2048	Number of encoder pulses generated per motor revolution.	Manufacturer
	Motor Speed (RPM)	0-3000	Sets the motor speed in revolutions per minute (RPM).	Manufacturer
	Gear Ratio	0-50	Sets the motor gearbox reduction ratio.	Manufacturer
	Drive Wheel Circumference	0-50	Sets the circumference of the drive wheel.	Manufacturer
6-Factory Settings	No submenu available for the Factory Settings menu.	"Reset Device"	Restores the device to its factory default settings.	Unlimited

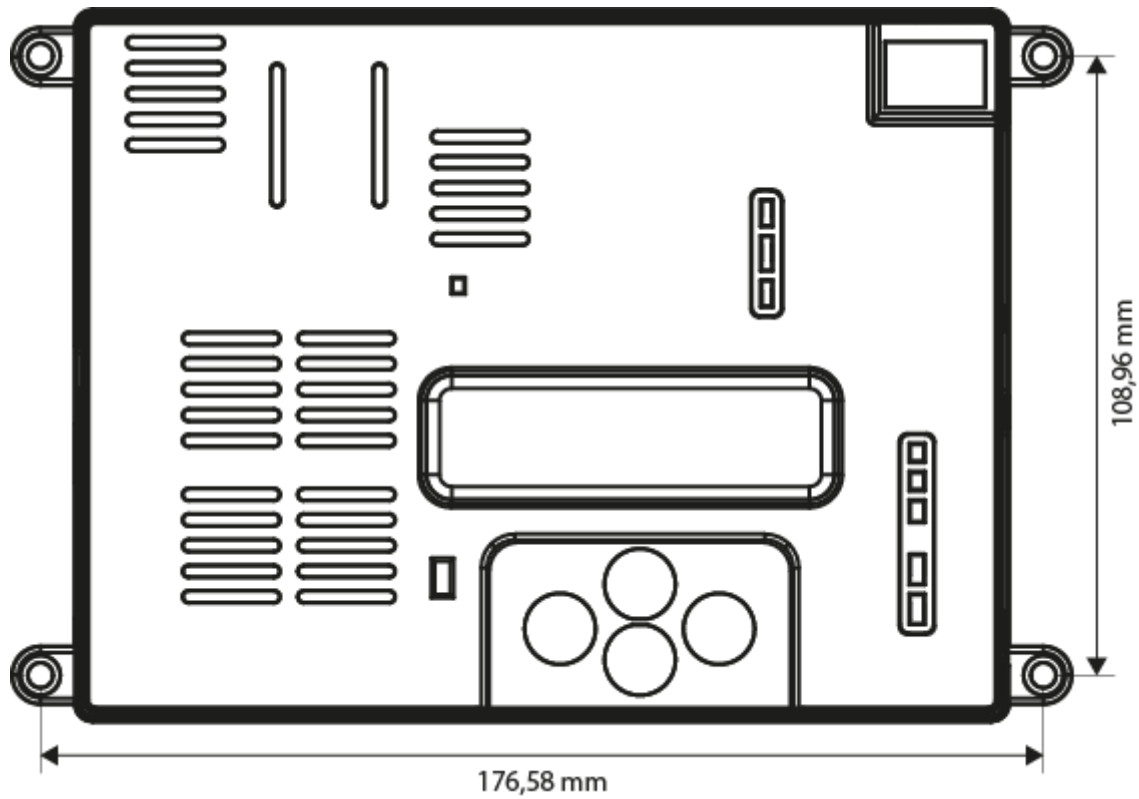
Table 7 Menu

10 TROUBLESHOOTING

Problem	Solution
Door Does Not Move	Check the door controller power supply. • Verify the 220 VAC input. • If the 24 V LED is off, check the glass fuse. • Check the motor power connections. • Verify the door open and close command signals.
Door Does Not Open	Make sure the K3 LED is OFF.
	Make sure the K3 LED is OFF.
Door Does Not Close	Make sure the K3 LED is ON.
Manual Door Learning Does Not Start Even When the ENTER Button Is Held Down	Since the signals sent by the main controller have priority, disconnect the K3, K5, and NDG signal input connections before starting the manual door learning process.
Door Slams or Slows Down Too Early	Perform the door learning procedure again and check the operation.
Frequent Door Obstruction Detection	Check the encoder connection.
	The obstruction force setting may be too low. Increase the value if necessary.
	Inspect the door mechanism for mechanical issues.
Door Panels Vibrate	Check the Current KP value.
	Check the encoder connection.
The Display Shows "Closed" Immediately After Power-On While the Door Mechanism Is Locked and the Door Does Not Move	The motor rotation direction is incorrect. Power-cycle the controller. When the "Change Motor Direction" warning appears, press the ESC button.
The Door Repeatedly Opens and Closes by 2–3 cm While in the Fully Open Position	If the problem occurs only on one floor, check whether the door spring on that floor is too stiff.
	The Open Holding Force value may be set too low. Increase the setting.

Table 8 Troubleshooting Solutions

11 BOARD DIMENSIONS



12 NOTES

Not available.

13 APPENDICES

Not available.