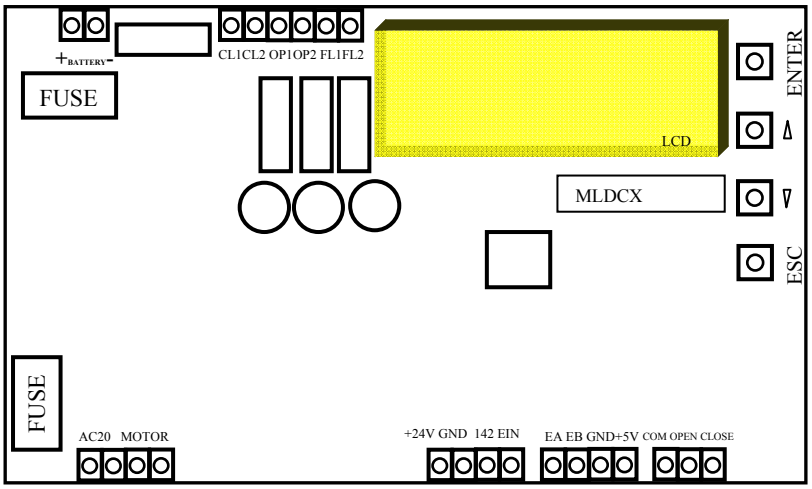
MLDCX AUTOMATIC DOOR CONTROL CARD



TERMINAL EXPLANATIONS

AC20	Transformator Input (Motor power+10W)
MOTOR	24 V DC Motor
+24V	24V internal supply for input signals (+) pin
GND	24V internal supply for input signals (-) pin
142	Floor level signal input
EIN	Rezerved input
EA	Encoder A Channel
EB	Encoder B Channel
GND	Encoder supply (-)
+5V	Encoder supply (+)
COM	Common for speed signals
OPEN	Open signal input
CLOSE	Close signal input
AKU +	Battery (+) (2 qty. 12V/1.2 Ah dry battery)
AKU -	Battery (-)
CL1	Door closed relay common
CL2	Door closed relay NO contact
OP1	Door open relay common
OP2	Door open relay NO contact
FL1	Fault and photocell detect relay common
FL2	Fault and photocell detect relay NO contact

USAGE INFORMATION

- Door situation informations are shown upper line of LCD screen. Door speed is screened at left side of bottom line (V=XXcm/s) and position information at right side (P=XXXcm).
- When the first power ON, the door is moved in the direction of openning if there is not “CLOSE” input and it is moved in the direction of closing if there is “CLOSE” input with teaching speed. At this operation moment, because of missing door location, “---” is screened on LCD.
- Pressing ENTER on board, it is taken to “Inspection” mode. At this moment, the door is stable. It is provided to do the mechanical adjustments without cutting the power by operator. At this moment some functions are assigned to ENTER, UP, DOWN buttons. This functions are described below. To exit “Inspection” mode, must be pressed ESC button.
- Pressing ESC button on board, it is taken to “Manual Movement” mode. At this moment, it is moved in direction of door closing by pressing UP button, it is moved in direction of door opening by pressing DOWN button. To exit “Manual Movement” must be pressed ENTER button.

INSPECTION MODE KEY DEFINITIONS

ENTER = By pressing this button during 2 sec., it is started programming mode.

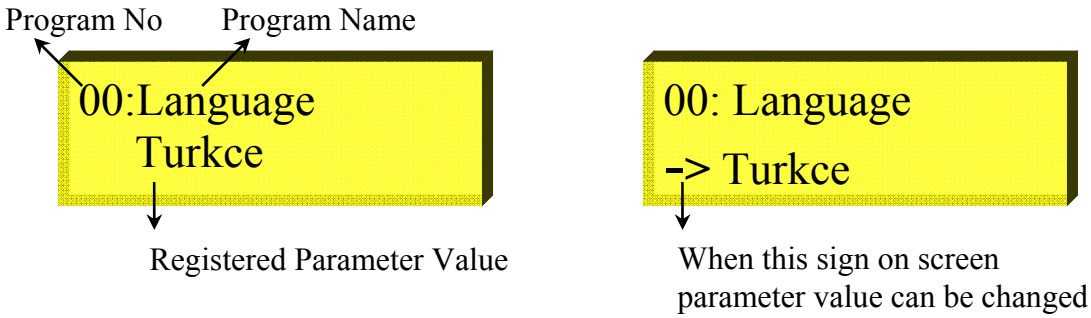
UP = By pressing this button, Total Run number is screened on LCD during 5 sec.

DOWN = By pressing this button, door lenght “Teaching” is started. Door is opened with teaching speed first. Then, it is closed with teaching speed. While teaching operation, detected encoder value is screened on upper right side of LCD.

ESC = By pressing this button, it is exit from “Inspection”.

PROGRAMMING (Ver:1.01)

- To programming of MLDCX card, by pressing ENTER button it is taken to Inspection mode first. At this mode, by pressing ENTER button again, it is started programming.



- You can choose any program by using UP and DOWN buttons.
- To exit programming mode, ESC button is pressed in main menu,

  "Exit ->ENTER"

  "Return ->ESC"

  is screened on LCD. When pressed ENTER button, it is exit from programming mode, and by pressing ESC button, it is returned to first menu which is operated.
- When ENTER button in the main menu is pressed, the program on the screen starts.
- If the program has parameter, an arrow appears at the beginning of the second line of LCD screen. You can change the parameter value by using UP and DOWN buttons. To store the value, press the ENTER button and return the main menu. By pressing the ESC button the registered value is valid and you can return the main menu.

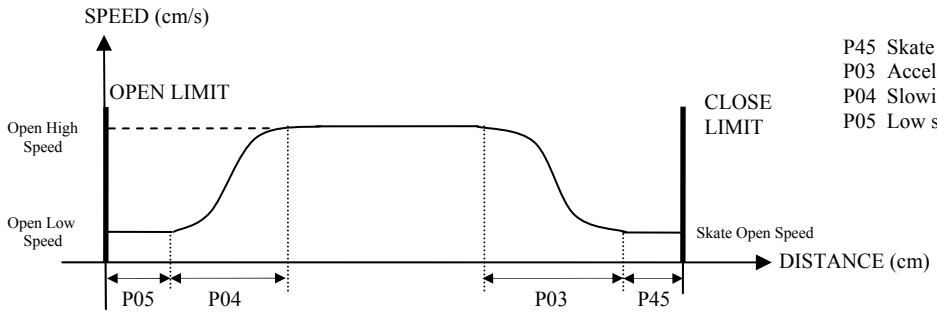
Program	**Factory Settings**	**Parameters / Explanations**
00:Language	Turkce	Turkce - English
01:OpenHighSpeed	35 cm/s	20-50 *(High speed when opening)*
02:Open LowSpeed	5 cm/s	2-20 *(Low speed when openning)*
03:Op.Accelerate	20 cm	5-90 *(Accelerating ramp adjusment when openning)*
04:Open Slowing	15 cm	5-90 *(Slowing down ramp adjustment when openning)*
05:OpenLowS.Zone	2 cm	1-99 *(Low speed movement distance when openning)*
06:Op.Pres.Level	70	20-83 *(Pressure level adjustment when openning)*
07:Cl.High Speed	25 cm/s	20-50 *(High speed when closing)*
08:CloseLowSpeed	5 cm/s	2-20 *(Low speed when closing)*
09:Cl.Accelerate	20 cm	5-90 *(Accelerating ramp adjusment when closing)*
10:Close Slowing	15 cm	5-90 *(Slowing down ramp adjustment when closing)*
11:Cl.Low S.Zone	2 cm	1-99 *(Low speed movement distance when closing)*
12:Cl.Pres.Level	60	01-83 *(Pressure level adjustment when closing)*

13:Run InputType	Open - Close	Open - Close, Close *(Working the door with "Open – Close" or only "Close")*
14:Limit Relays	Open Contact	Open Contact,Close Contact *(Chosing contact of Limit relays)*
15:PressureRelay	Open Contact	Open Contact,Close Contact *(Chosing fault relay contact which activated when detected pressure or photocell)*
16:142 Function	Passive	Passive,Open At Floor,ClosedAtFloor *(Chosing rescue mode with at floor signal action when selected "Open with Battery". When there is "Open with Battery" situation, these situations are applied by looking this parameter:* Passive *:Door is opened without looking 142 input* Open At Floor *:Door is not open if there is 142input, if there is not, it is opened* Close At Floor *:Door is not opened if there is not 142 input, if there is, it is opened)*
17:Rescue Mode	Open With Extra Power	Open Witht Battery, Open Ext.Pow. *(Chosing rescue mode)*
18:Demo Mode	Passive	Iptal,01s – 30s *(If the value is passive, there is no demo.It is always provided the door working at waiting door open and close during the value of selected second without noticing door open-close signal)*
19.SetUserPassw.		(Changing User password)
20.CanselU.Pass?		(*(Canceling the password with changing 0000)*
21.ClsLowSpPrsLv	60	20-83 (Pressure level applied in the low speed zone of closure)
22. EIN Inputs	Close Slowly	Close slowly , Photocell
23. Door Type	INTERNAL	Telescopicc – Central - İnner Door
24. Motor Type		Dunker-Kormas-Tepas
25. Working Mode	Normal	Normal-Slow Closing (If this parameter is set to slow shutdown, the door pressure level does not exceed ten newtons)
Manufact.Setting		CAUTION! Door manufacturer can be reach these parameters.
99:Factory Set ?		*(All parameter values are changed into factory settings)*

Error Recording	
01. Current sensor fault	
02. Encoder Direction Eror	Check encoder direction
	Then check the motor direction

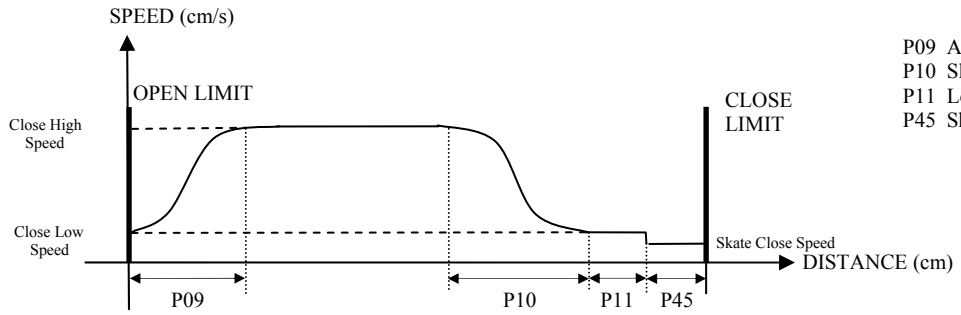
TRAVEL CURVES

OPENING



P45 Skate Zone
P03 Accelerating ramp when opening
P04 Slowing down ramp when opening
P05 Low speed distance when opening

CLOSING



P09 Accelerating ramp when closing
P10 Slowing down ramp when closing
P11 Low speed distance when closing
P45 Skate Zone

Changing the Manufacturer's Settings as Factory Settings:

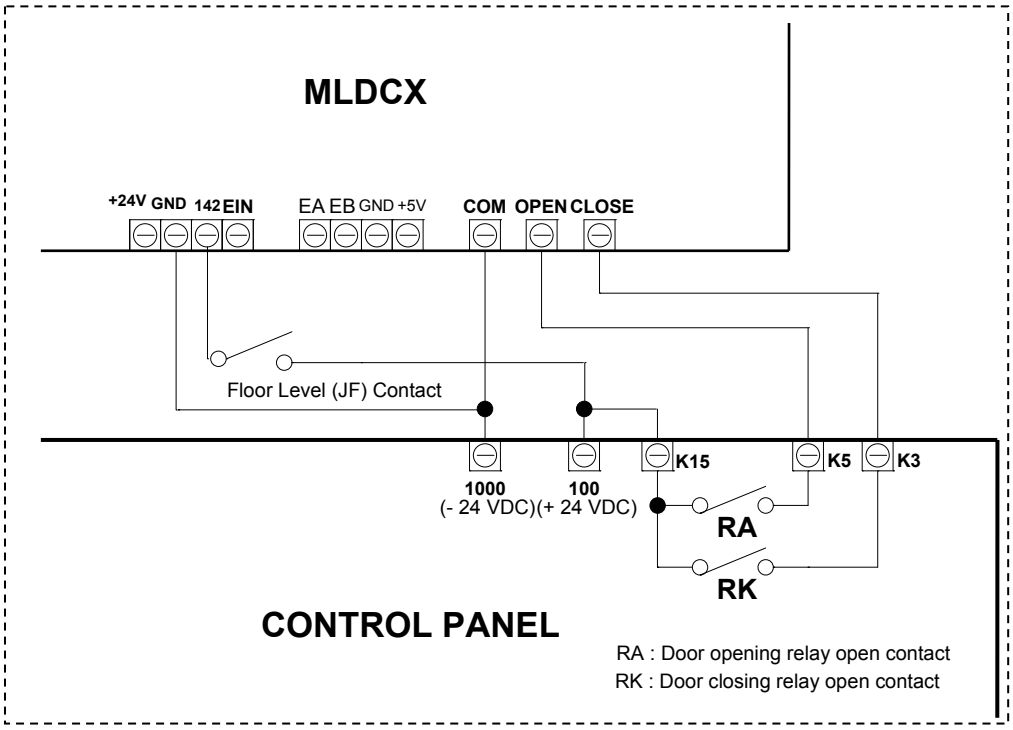
All the parameters (user and manufacturer) set by the MLDCX card manufacturer can be assigned to that door's own factory setting with a secret key. The factory settings of all doors thus produced will be their own. To do this, press and hold the Enter button for 2 seconds on the "Total Work" screen after all the parameter settings of the door have been completed. The operation is completed when "OK" appears on the screen.

Motor Types:

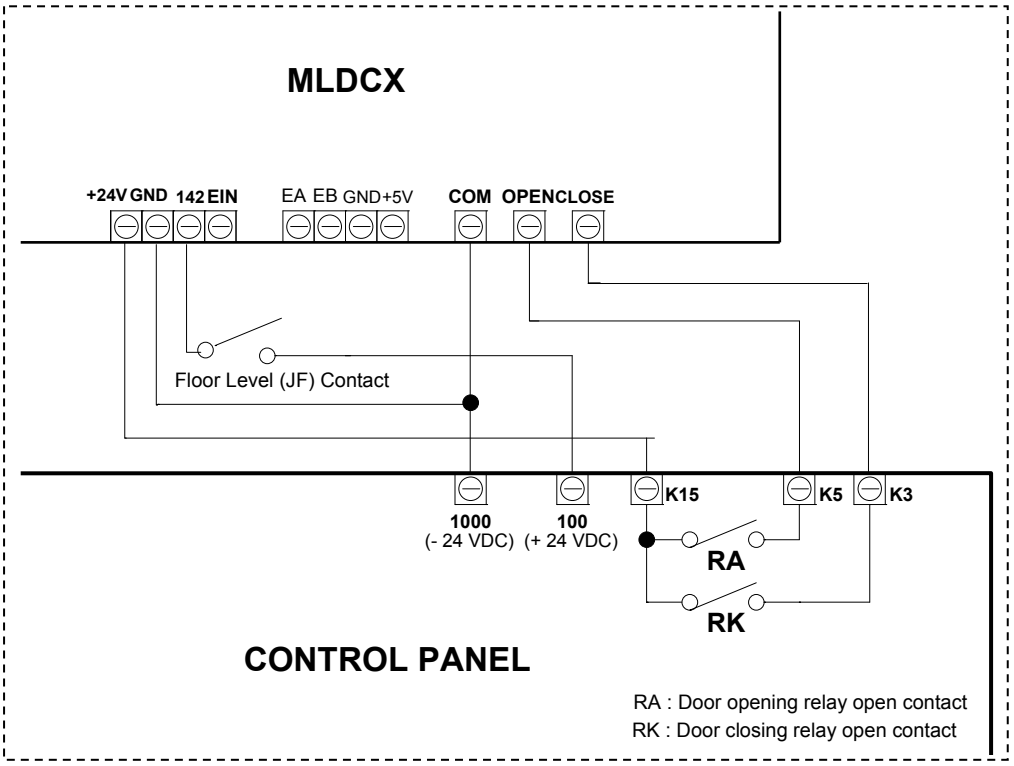
Engine 1: Dunker
Engine 2: Kormas
Engine 3: Tepaş

MLDCX CARD CONNECTION TO LIFT CONTROL SYSTEM

1) Connection with using 24VDC that coming from Control Panel (Recommended)



2) Connection with using internal 24VDC



AUTOMATIC DOOR CONTROL CARD MANUFACTURER SETTINGS

The hardware settings of the door mechanism with the MLDCX card installed are encrypted under the name "Manufacturer Settings" in the programming section for users not to be able to reach. If the Enter key is pressed when the "Manufacturer Settings" screen is displayed after 25th menu in programming, 4 digit code is required. When this password is entered, the hardware parameters described below are opened. These parameters will remain on until the MLDCX card's power is turned off and on again. The manufacturer setting parameters are given in "1 2 3 4" as the factory default value. Each manufacturer can assign a new password to be set by itself; But this password can not be canceled. If this code is entered incorrectly 5 times, a 6-digit PUK code will be required. This PUK code is produced from the serial number of the MLDCX card. The manufacturer and user PUK codes are different.

Program	**Factory Settings**	**Parameters / Descriptions**
40: LearningSpeed	6 cm/s	2-19 *(Amount of identification speed)*
41: OpenHoldForce	70	1-100 (Open holding power setting)
42: Cls.HoldForce	70	1-100 (Close holding power setting)
43: SkateOpenSpe.	7 cm/s	1-20 (Skate speed adjustment on opening)
44: SkateCloseSp.	7 cm/s	1-20 (Speed setting in the skate zone)
45: Skate Zone	6 cm	1-199 (Skate area distance)
46:Encoder Pulse	100	0-2000 (Number of pulses of encoder connected to motor)
47:Motor Rpm	3000 d/d	1-9999 (Motor speed)
48: Reducer Rpm	200	1-999 (Number of gearbox output cycles)
49: Wh. Circumfer.	157 mm	30-999 (Drive wheel circumference)
50: PI Control KP	12	1-20 Motor speed control accuracy setting (Decreasing sensitivity increases the sound and vibration of the motive with this increase)
51: PI Control KI	5	1-5 Motor current control accuracy setting (Decreasing the torque response requirement will speed up the response, along with the increased sound and vibration of the motive)
52: Reset Counter		*(Resetting the Total Operation Counter)*
53: SetMan.Passw.		(Changing the manufacturer password)
54: LearnPressLev	80	20-90 (Learning press level adjustment)
55. Limit Zone	10 mm	5-50
56. CloseLimitZon	10 mm	1-10
57. Press Level	500 ms	20-2000
99. Factory Set ?		(All parameter values are changed with factory settings.)