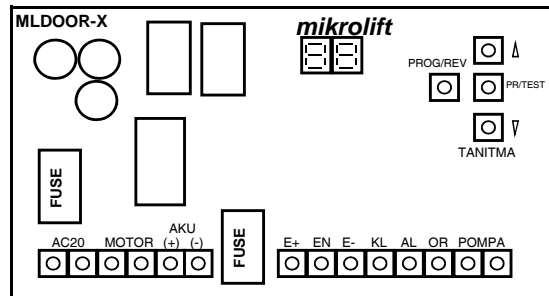


**MLDOOR-X CAR DOOR CONTROL CARD**

|       |   |
|-------|---|
| AC20  | Transformer Input, 60...90VA 0-20 Volt            |
| MOTOR | 24 V DC Motor                                     |
| AKU   | 12 V 1.2 Ah Dry Battery                           |
| E+    | Encoder (+)                                       |
| EN    | Encoder   |
| E-    | Encoder (-)                                       |
| KL    | Close Limit<br>(Open when door closed)            |
| AL    | Open Limit<br>(Open when door open)               |
| OR    | Limit Common                                      |
| POMPA | 48-190 V DC CAM Voltage<br>(Supplied by 220 V AC) |

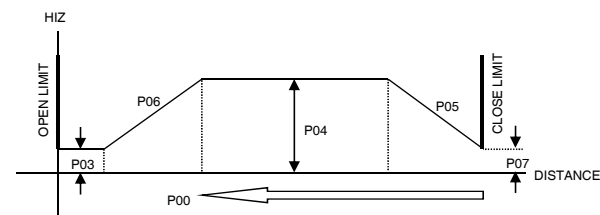
**PROGRAMMING ( Ver. 1.0)**

- \* To enter the Program PROG/REV switch is taken "ON". It is displayed "Pr".
- \* When "Pr" is displayed, by pressing button (TANITMA) door dimension is set to control card. This process is done at learning speed in P17 program. When learning operation is finished pulse number taken from encoder is displayed by two each as four digits. When Factory default is chosen 90mm door is based and before learning 0900 pulse value is chosen automatically.
- \* By pressing PR/TEST button for 2 seconds programming mode starts.
- \* When program starts, "P" is screened on left display and program number is screened on right display.
- \* Program number quantity is 20.
- \* Program number is changed by and buttons.
- \* When PR/TEST button pressed, program that is screened on display is starts.
- \* When program is chosen by PR/TEST button, program options are displayed, first option is the option that is saved at that time.
- \* Options are changed by and buttons. By pressing PR/TEST button, option that is on screen is saved. When saving time "o" is flashed three times on the screen.
- \* When anytime PROG/REV switch is taken "OFF", exit from program and returned to main program.
- To exit main program, PROG/REV button is pressed. 'E-' is displayed and by pressing PR/TEST button, exit from programming mode.

| Program | Option | Factory D. | Description  |
|---------|--------|------------|--|
| P 00    | 50-90  | 70         | Slow point while opening (Door Size % value)   |
| P 01    | 20-99  | 30         | Pressure detecting time while opening (0,2 - 0,99 seconds)   |
| P 02    | 03-10  | 05         | Testing number at obstruction while opening  |
| P 03    | 05-40  | 15         | Low speed while opening  |
| P 04    | 30-70  | 50         | High speed while opening   |
| P 05    | 01-10  | 05         | Acceleration ramp setting while opening (If value is low, speed up is faster).   |
| P 06    | 01-10  | 05         | Slowing ramp while opening (If value is low, speed down is slower)   |
| P 07    | 05-25  | 15         | Take off speed while opening   |
| P 08    | 01-15  | 05         | Open hold force  |
| P 09    | 50-90  | 70         | Slowing point while closing (Door size % value)  |
| P 10    | 20-99  | 30         | Pressure detecting time while closing (0,2 - 0,99 seconds)   |
| P 11    | 05-40  | 15         | Low speed while closing  |
| P 12    | 30-70  | 50         | High speed while closing   |
| P 13    | 01-10  | 05         | Acceleration ramp setting while closing (If value is low, speed up is faster).   |
| P 14    | 01-10  | 05         | Slowing ramp while closing (If value is low, speed down is slower)   |
| P 15    | 05-25  | 15         | Take off speed while closing   |
| P 16    | 01-15  | 05         | Close hold force   |
| P 17    | 20-40  | 20         | Learning time  |
| P 18    | 00-30  | 00         | Demo Mode<br>When "00" demo is not exist. When the value is not "00" door is opened and closed automatically without taking care off the pump signal. Waiting time when the door is opened and closed will be chosen second. Imust be "00" to exit from demo mode. |
| P 19    | 00-01  | 01         | Door type selection (00: Kramer 01: Telescopic)  |
| P 99    |        |            | Return to manufacturer factory defaults  |

**USAGE MANUAL**

- \* When the power is on first time, if the door is not open and close exactly, closing is done by speed at the parameter value in P17 program and wait by 3 seconds. If closing signal is not come at this time, the door is opened.
- \* When the door is wide open is displayed. First 'oP' is screened and then speed value is screened while opening. While opening if pressure detected, "P" and "O" when high speed and "P" and "o" when low speed flashed. It tries to open again after waiting. If try number is equal to P02 parameter value, "E" is screened and waits for 10 seconds. To exit from this situation without waiting that time, PROG/REV switch is used. When the door is opened, open hold force is applied on P08 parameter value.
- \* When the door is wide open is displayed. While closing, 'CL' is screened and then speed value is screened. While closing if pressure detected, "P" and "C" when high speed and "P" and "c" when low speed flashed. If pressure detected it is waited for a little time. if door type is kramer, the door is moved the opposite way a little time without checking the CAM signal. If the door type is telescopic, the door is opened without checking the CAM signal. When the door is closed exactly, close hold force is applied in P16 parameter.
- \* If pressure is detected easily, pressure detecting time must be increased. If pressure is detected late, pressure detecting time must be decreased. If pressure is detected when taking off, there is obstruction at the door or take off speed is set too low. At this situation pressure detecting time or take off speed must be increased.
- \* When the power off, if battery is connected, the door is opened exactly. When the power off "A" is screened and after a little time the door starts to open. When the door is opened "A" is not screened. Only the display point shows microprocessor working and it continues to flash. If pressure is detected on the battery when opening three times, opening is canceled and "A" is not screened on display.
- \* When PROG/REV switch is "ON" the motor power is cut and mechanic settings that is required are done easily.
- \* Pressing PR/TEST button, open and close test can be done. This button works the door as CAM signal is exist.

**LOG CURVED LINES****Opening****Closing**