



ECI MOVFR – LCD Door Board Installation Manual

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Electronic Controls Inc
7073 North Atlantic Ave
Cape Canaveral, FL 32920
WWW.ECIAMERICA.COM
800-633-9788



ECI MOVFR-LCD Installation Manual

REV	DATE	DESCRIPTION
1.0	10/25/2017	INITIAL RELEASE
1.2	11/2/2017	Added installation Kits, AUTO Operation
2.0	4/13/2017	Added new logo
2.1	5/4/2018	Removed CL/HCL Max Speed , Added Light curtain parameter
2.2	5/14/2018	Added drill template directions



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1 Warning and Disclaimer

Thank you for purchasing equipment from ECI America, INC. We want your new equipment to operate safely. Anyone who installs or uses this equipment should read this publication (and any other relevant publications) before installing or operating the equipment.

To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and usually change with time. It is your responsibility to determine which codes should be followed, and to verify that the equipment, installation and operation is in compliance with the latest revision of these codes.

At a minimum, you should follow all applicable sections of the National Fire Code, National Electrical Code, ASMEA17.1 Safety code for Elevators and Escalators and the codes of the National Electrical Manufacturer's Association (NEMA). There may be local regulatory or government offices that can also help determine which codes and standards are necessary for safe installation and operation. Equipment damage or serious injury to personnel can result from failure to follow all applicable codes and standards. We do not guarantee the products described in the publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation or operation.

Our products are not fault-tolerant and are not designed, manufactured or intended for use or resale as online control equipment in hazardous environments requiring fail-safe performance, such as in the operation of nuclear facilities, aircraft navigation of communication systems, air traffic control, direct life support machines or weapon systems in which the failure of the product could lead directly to death, personal injury, or severe physical or environmental damage ("High Risk Activities"). ECI America, Inc. specifically disclaims any expressed or implied warranty of fitness for High Risk Activities.

This publication is based on information that was available at the time it was printed. WE reserve the right to make changes to the products and/or publications at any time without notice and without any obligation.



2 Introduction

The ECI MOVFR (Variable Frequency Drive) LCD Door Operating system is a 2 board combination designed to be a drop in replacement for the GAL MOVFR door operator. The ECI VFD LCD door operator includes a 230VAC input Variable Frequency Drive (VFD) board and a control board with key pad and LCD screen. All adjustments and system monitoring are performed through the on board LCD screen eliminating the need for an external handheld device. All control inputs are compatible with 24 to 230 volt AC or DC signal or dry contact voltages.

3 Conventions Used



When you see the “notepad” icon in the left-hand margin, the paragraph to its immediate right will be a special note. Notes represent information that may make your work quicker and more efficient. The word **NOTE:** in boldface will mark the beginning of the text.



When you see the “exclamation point” icon in the left-hand margin the paragraph to its right will be a warning. The information could prevent injury, loss of property, or even death in extreme cases. Any warning in this document should be regarded as critical information that should be read in its entirety. The word **WARNING:** in boldface will mark the beginning of the text.



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4 Safety Information

Know the safety hazards related to any procedure you are about to perform. Know what equipment has been specified for each specific contact and know what tools and materials you should plan to have available. Before connecting electrical wiring, take precautions to prevent accidents from happening to yourself and others around you.



ALWAYS CONSIDER SAFTY FIRST!

- Wear a hard hat when working in the hoist way.
- Wear safety glasses or goggles when using power tools
- Always wear protective gloves when installing or removing access covers, conduits, wire way or electrical devices.
- When working on car canopy, always be aware of where the sides of the car are located.
- Use properly grounded cords and power equipment (ground fault circuit interrupters).
- Make sure there are proper clearances in hoist way between the car and other devices. Before connecting wiring, cover sharp edges to keep hands and arms from being cut.
- Always know where other people are and how the elevator wiring can affect their safety.
- Safety lock and tag out procedures are always required before performing and kind of service, repair, adjustment, lubrication or inspection of power equipment.
- To reduce the danger of electrical shock, always make sure electrical connections are secure. Also make sure no bare wires are exposed after pulling cable.
- Use a circuit tester to be certain the circuit is not active before touching it.





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5 System Overview

5.1 Control Board

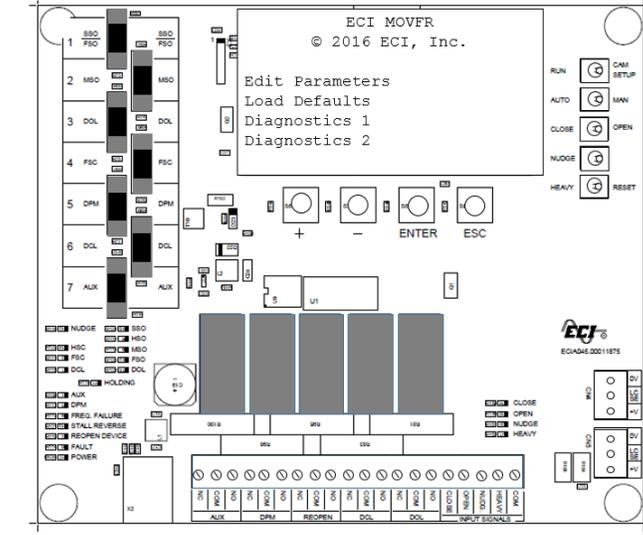


Figure 1 - Control Board

5.1.1 Electrical

5.1.2 Connections

5.1.2.1 Input Signals

- **CLOSE** – Any 24 to 240 VAC/VDC input between CLOSE and COM will produce a CLOSE operation.
- **OPEN** – Any 24 to 240 VAC/VDC input between OPEN and COM will produce a OPEN operation.
- **NUDGE** – Any 24 to 240 VAC/VDC input between NUDGE and COM, with a CLOSE input present, will produce a NUDGE operation
- **HEAVY** – Any 24 to 240 VAC/BDC input between HEAVY and COM, with OPEN or CLOSE valid, will move the door at the HEAVY parameter settings.
- **COM** – Common input for OPEN, CLOSE, and NUDGE inputs.

5.1.2.2 Output Relay Contacts

- AUX NO
 - AUX COM
 - AUX NC
- } Auxiliary Relay contacts rated at 230V 10A. Energized when AUX optical sensor blocked
-
- DPM NO
 - DPM COM
 - DPM NC
- } DPM Relay contacts rated at 230V 10A. Energized when DPM optical sensor blocked



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- REOPEN NO
 - REOPEN COM
 - REOPEN NC
- REOPEN Relay contacts rated at 230V 10A. Energized when torque limit exceeded, obstruction of light curtain.
-
- DCL NO
 - DCL COM
 - DCL NC
- DCL Relay. Door Close Limit contacts rated at 230V 10A. Energized when DCL optical sensor blocked
-
- DOL NO
 - DOL COM
 - DOL NC
- DOL Relay. Door Open Limit. Energized when DOL optical sensor is blocked

5.1.2.3 Interfacing with Light Curtain

When there is an obstruction of the edges the REOPEN LED will light and the REOPEN relay will energize sending a command to the controller to OPEN the doors. The light curtain connectors CN4 and CN5 are interchangeable.

5.1.2.3.1 Formula Systems ®

- The REOPEN relay contacts should be connected to the controller as shown in Figure 2 - Reopen Contact Connection

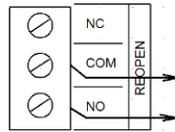


Figure 2 - Reopen Contact Connection

- CN4 and CN5 should be wired as shown in Figure 3- Formula Systems® Wiring

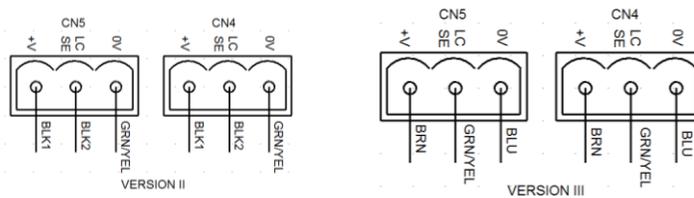


Figure 3- Formula Systems® Wiring

5.1.2.3.2 Tri-Tronics (Leading Edge)®

- The REOPEN relay contacts should be connected to the controller as shown in Figure 2 - Reopen Contact Connection.
- CN4 and CN5 should be wired as in Figure 4- Tri-Tronics® wiring



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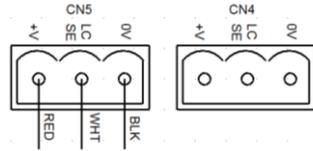


Figure 4- Tri-Tronics® wiring

5.1.3 User Interface

5.1.3.1 LCD Screen Main Menu

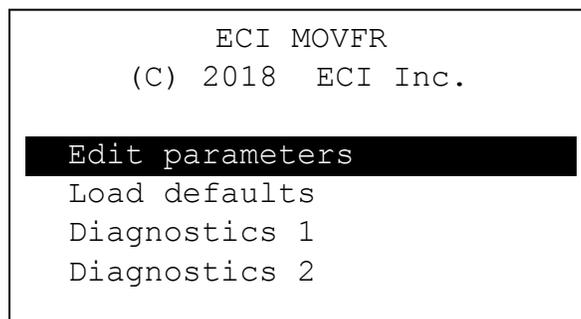


Figure 5 - LCD Screen Main Menu

Figure 5 - LCD Screen shows the main menu. Pressing the “-“ button moves the cursor down to the next selection. Pressing “+” button moves cursor up.

There are 6 selections to the main menu.

- **Edit parameters** – Pressing ENTER with the Edit Parameters hi-lighted will enter the parameters menu.
- **Load Defaults** – Pressing ENTER with Load defaults hi-lighted will load the default settings for all parameters
- **Diagnostics 1** – Pressing ENTER with Diagnostics hi-lighted will display the first diagnostics screen.
- **Diagnostics 2** – Pressing ENTER with Diagnostics hi-lighted will display the second diagnostics screen.
- **Technical Support** – (not shown) Pressing ENTER with Technical support hi-lighted will display the technical support screen.
- **Rotate screen** – (Not shown above) Pressing ENTER with Rotate Screen hi-lighted will flip the screen 180°

5.1.3.2 Control Board LEDs

- **OPEN** – Illuminated when OPEN input is valid
- **CLOSE** – Illuminated when CLOSE input is valid
- **NUDGE** – Illuminated when NUDGE input is valid
- **HEAVY** – Illuminated when HEAVY input is valid



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- **SSO** – Slow Start Open. Speed setting is *OP slow start*. When illuminated indicates the start of the open cycle when the interlock rollers unlock hoistway door. SSO/FSO sensor blocked and MSO sensor open during an OPEN cycle.
- **HSO** – High Speed Open. Speed setting is *OP High Speed*. When illuminated indicates High speed open. SSO/FSO and MSO sensors open during an OPEN cycle.
- **MSO** – Medium Speed Open. Speed setting is *OP medium sp*. When Illuminated indicates Medium Speed open. SSO/FSO sensor open and MSO sensor blocked during an OPEN cycle.
- **FSO** – Final Speed Open. Speed setting is OP final speed. Illuminated during Final speed open when SSO/FSO and MSO sensors are blocked during an OPEN cycle.
- **HOLDING** – Illuminated when DCL or DOL sensors are blocked (fully OPEN or CLOSED positions) and *CL/OP hold torq* and *hold sp* parameter settings are greater than 0
- **NUDGE** – Nudge speed. Speed setting is *Nudge*. Illuminated when CLOSE and NUDGE inputs are active.
- **HSC** – High Speed Close. Speed setting is *CL high speed*. Illuminated during High speed close when FSC sensor is open during a CLOSE.
- **FSC** – Final Close Speed. Speed setting is *CL final speed*. Illuminated during final close speed when FSO sensor is blocked during a CLOSE.
- **AUX** – Illuminated when AUX sensor is blocked
- **DPM** – Illuminated when DPM sensor is blocked
- **DOL** – Door Open Limit. Illuminated when DOL sensor blocked
- **DCL** – Door Close Limit. Illuminated when DCL sensor is blocked
- **STALL REVERSE** – Not used
- **FREQUENCY FAILURE** -
- **REOPEN DEVICE** – Illuminated when the REOPEN relay is energized via the light curtain inputs.
- **FAULT** – Illuminated when there is a communications failure between Control and Drive boards
- **POWER** – Illuminated when power to board is good.

5.1.3.3 Keypad

- **+** Button - This button moves the cursor up in the screen for selecting menus or parameters and increases the number of the setting being programmed
- **-** Button - This button moves the cursor down in the screen for selecting menus and decreases the number of the setting being programmed
- **Enter** Button - The ENTER button selects the menu or parameter indicated by the cursor and enters the current number of the parameter being programmed.
- **ESC** Button - The ESC button is used to move back to the previous menu

5.1.3.4 Switches

- **RUN / CAM SETUP** – 2 position switch. RUN position is for normal operation. CAM SETUP allows for adjusting CAMs with valid inputs to OPEN, CLOSE etc. without moving the doors.



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- **AUTO / MAN** – 2 position switch. AUTO position is for normal operation. MAN position is for controlling the doors using OPEN, CLOSE, HEAVY and NUDGE switches.
- **CLOSE / OPEN** – 3 position switch. Center position no function. With AUTO/MAN switch in manual position this controls opening and closing the doors.
- **NUDGE** – 3 position switch. Center position no function. With AUTO/MAN switch in MAN and the CLOSE switch in CLOSE this switch puts door at NUGGING speed.
- **HEAVY / RESET** – 3 position switch. Center position no function. HEAVY position moves doors at heavy SPEED SETTING with AUTO/MAN at MAN and using OPEN/CLOSE switch. RESET position resets any active faults.

5.1.4 CAM Optical Sensors

- **FSO/SSO** – Final Speed Open and Slow Speed Open sensor. Valid only during an open cycle.
- **MSO** – Medium Speed Open sensor. Valid only during an open cycle.
- **DOL** – Door Open Limit sensor. When blocked will energize the DOL relay.
- **FSC** – Fast Speed Close sensor. Valid only during a close cycle.
- **DPM** – Car Door Closed Sensor. When blocked will energize the DPM relay.
- **DCL** – Door Close Limit sensor. When blocked will energize the DCL relay.
- **AUX** – Auxiliary sensor. When blocked will energize the AUX relay.

5.1.5 Operation

5.1.5.1 Edit Parameters

ECI MOVFR	
(C) 2018 ECI Inc.	
CL hold torq.	50
CL hold sp.	0
CL torque	0
CL High speed	45

Figure 6 - Edit Parameters Menu

Pressing the ENTER button while EDIT PARAMETERS is highlighted will display the parameters show in Figure 6 - Edit Parameters Menu. Pressing the – button moves the cursor/highlight down. Pressing ENTER selects the highlighted parameter and the + and – buttons are used to change setting.

5.1.5.1.1 Standard Parameter settings with defaults

- **CL hold torq.** – Enabled when the door reaches DCL and parameter is set to a value greater than 0. Together with CL Hold sp will prevent the door from drifting out of the DCL. Default setting is 0. Max setting is 100.



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CAUTION: Holding power should be set less than 15W to prevent motor heating which will reduce motor life.

- **CL hold sp.** – Enabled when the door reaches DCL and the parameter is greater than 0. Together with the CL Hold Tq will prevent the door from drifting out of the DCL. Default setting is 0. Max setting is 100.



CAUTION: Holding power should be set less than 15W to prevent motor heating which will reduce motor life.

- **CL torque** – This parameter is used to set the closing force to the doors. A lower value produces less force. Default setting is 15. Min is 1 and max is 100.
- **CL high speed – HSC** - This is the fastest close speed. A higher value produces a faster speed. This should not be set higher than **CI Max cl sp** parameter. Default setting is 40. Min is 1 and max is 100.
- **CL final speed – FSC** – This is the final close speed for the door entering into the DCL. A lower value produces a slower speed. This parameter should be set to prevent slamming or bouncing when to or reaches DCL. Default setting is 25. Min is 1 and max is 100.
- **CL nudge speed** – This parameter sets the nudging speed. Higher the value the faster the speed. Default setting is 30. Min is 1 and max is 100.
- **CL accel** – Sets the acceleration in the close direct. A lower value produces a quicker acceleration. Default setting is 100. Min setting is 1. Max setting is 255.
- **CL decel** – Sets the deceleration in the close direction. A lower value produces a quicker deceleration. Default setting is 100. Min setting is 1. Max setting is 255.
- **OP quick stp rev** – Determines how quickly the door opens after changing direction during a reopen. A higher value produces a faster speed. The default setting is 20. Min is 1 and max setting is 100.
- **OP slow start – SSO** - This is the speed for the start of the open cycle when the clutch engages the interlock and unlocks the hoistway door. A slower speed provides a smoother quiet start. A higher value produces a higher speed. The default setting is 25. Min is 1 and max is 100.
- **OP high speed – HSO** – This is the fastest speed of the open cycle. A higher value produces a faster speed. The default setting is 50. Min is 1 and max is 100.
- **OP medium speed – MSO** – This is the door speed setting through MSO range. When properly adjusted the doors will decelerate through MSO from HSO to FSO. The default setting is 35. Min is 1 and max is 100.
- **OP final speed – FSO** – This is the final open speed. This parameter should be set low to prevent slamming when the DOL and OPEN stop roller are reached. The default setting is 25. Min is 1 and max is 100.
- **OP accel** – A lower value produces a faster acceleration. This parameter should be set for smooth operation during an open cycle. This will also affect the REOPEN cycle acceleration. Default setting is 100. Min is 1 and max is 100.



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- **OP decel** – A lower value produces a quicker deceleration. This should be set so the OP Final Speed FSO is reached before the DOL and OPEN stop roller to prevent slamming and bouncing. The default setting is 50. Min is 1 and max is 100.
- **OP torque** – Default setting is 15. Min is 1 and max is 100.
- **OP hold torq.** – Enabled when the door reaches DOL and parameter is set to a value greater than 0. Together with OP Hold sp will prevent the door from drifting out of the DOL. Default setting is 0. Min is 0 and max is 100.



CAUTION: Holding power should be set less than 15W to prevent motor heating which will reduce motor life.

- **OP hold sp.** – Enabled when the door reaches DOL and the parameter is greater than 0. Together with the OP Hold Tq will prevent the door from drifting out of the DOL. Default setting is 0. Min is 0 and max is 100.



CAUTION: Holding power should be set less than 15W to prevent motor heating which will reduce motor life.

5.1.5.1.2 Heavy Door Parameter settings with defaults

The heavy door parameters are enabled when the HEAVY input is valid during AUTO operation and when the HEAVY switch is on in MANUAL operation. These parameters are the same as the standard parameters so only the default and range settings are listed.

- **HCL hold torq.** – Default setting is 0. Min is 0 and max is 100.
- **HCL hold sp.** – Default setting is 0. Min is 0 and max is 100.
- **HCL torque** – Default setting is 15. Min is 1 and max is 100.
- **HCL high speed – HSC** - Default setting is 35. Min is 1 and max is 100.
- **HCL final speed – FSC** - Default setting is 25. Min is 1 and max is 100.
- **HCL nudge speed** – Default setting is 30. Min is 1 and max is 100.
- **HCL accel** – Default setting is 100. Min is 1 and max is 255.
- **HCL decel** – Default setting is 100. Min is 1 and max is 255.
- **HOP quick stop** – Default setting is 20. Min is 1 and max is 100.
- **HOP slow start** – Default setting is 25. Min is 1 and max is 100.
- **HOP high Speed – HSO** - Default setting is 45. Min is 1 and max is 100.
- **HOP medium speed – MSO** - Default setting is 35. Min is 1 and max is 100.
- **HOP final speed – FSO** - Default setting is 25. Min is 1 and max is 100.
- **HOP accel** – Default setting is 100. Min is 1 and max is 100.
- **HOP decel** – Default setting is 50. Min is 1 and max is 100.
- **HOP torque** – Default setting is 1. Min is 1 and max is 100.
- **HOP hold torq** – Default setting is 0. Min is 0 and max is 100.
- **HOP hold sp.** – Default setting is 0. Min is 0 and max is 100.

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5.1.5.1.3 Input Voltage setting Parameter

- **Input voltage** – Parameter for setting valid AC/DC voltage for CLOSE, OPEN, NUDGE and HEAVY inputs. Default setting is 24. Minimum is 12 and max is 240. Voltages below these settings will not be detected by the control board.

5.1.5.1.4 Light Curtain Reopen enable

The last parameter in the list is the light curtain setting. To enable the on board light curtain input (see section 5.1.2.3 Interfacing with Light Curtain) this parameter must be set to “1”. “0” is the default.

NOTE: Setting this parameter to “1” without a light curtain connected will cause to door to remain open at all times.

5.1.5.2 Load Defaults

Selecting LOAD DEFAULTS will set all parameters to their default settings.

5.1.5.3 Diagnostics 1

ECI MOVFR		
(C) 2018 ECI Inc.		
VBUS :	317V	0s
SPEED :	0	
TEMP :	29C/	84F
MOTOR :	.0A	
CYCLE :	xxxx	(ESC)

Figure 7 - Diagnostics 1 Screen

VBUS – present DC voltage for motor driver.

0s – 16 second timer. Resets at each OPEN or CLOSE command. Will time down to 0 then all motor drive is stopped until present command is cycled off then on or a new command is issued.

SPEED – current speed of the motor. Reflects the actual speed setting.

TEMP – Current temp of the output driver.

MOTOR – Current to motor in amps.

CYCLE – Number of cycles (OPEN and CLOSE) since manufacture.

5.1.5.4 Diagnostics 2

Selecting Diagnostic 2 will display the voltage present on any of the inputs:

- Close Input
- Open Input
- Nudge Input
- Heavy Input



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5.2 Variable Frequency Drive Board (VFD Board)

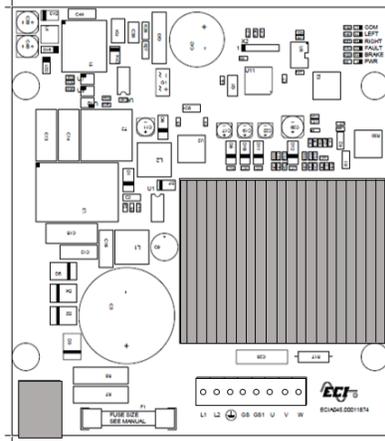


Figure 8 - Variable Frequency Drive Board

5.2.1 Frequency Board Electrical

- 220VAC
- 5A 250V fuse

5.2.2 Frequency Board Connections

- **L1** and **L2** – 240 VAC input power
- **U V W** – motor connections
-  Chassis Ground
- **GS** and **GS1** – Gate switch dry contact.
- **RJ45** – Communications port to Control Board.

5.2.3 Frequency Board LEDs

- **PWR** – On when power is present
- **BRAKE** – On all the time
- **FAULT** – On when no communications between Control board and Drive board
- **RIGHT** – On when motor turning a direction
- **LEFT** – On when motor turning opposite direction of Right
- **COM** – On when communications with Control board are good



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6 Installation

6.1 Replacing MOVFR-0001N

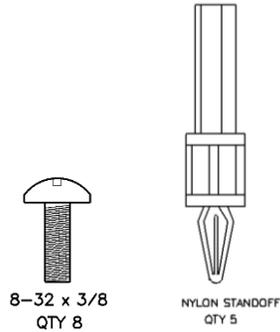


Figure 9- MOVFR-0001N Installation Kit

- Disconnect power from drive.
- Remove Control board and Drive shown in *Figure 10 - MOVFR-0001N* (shown without CAMs)

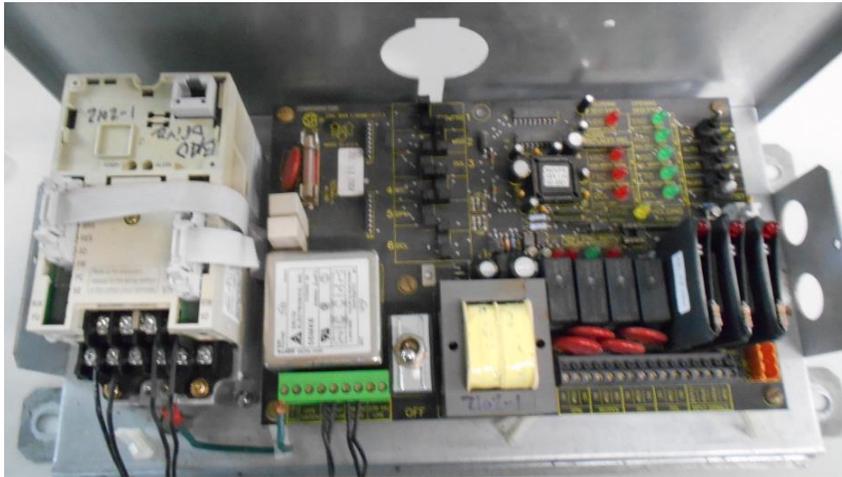


Figure 10 - MOVFR-0001N

- Remove the standoffs indicated in *Figure 11 - Standoff Removal* leaving the 2 standoffs on the far right and the 2 nylon standoffs in the center. Standoffs can be removed using a pair of pliers and snapping the standoff. See *Figure 12 - Snapping Off Standoff*.



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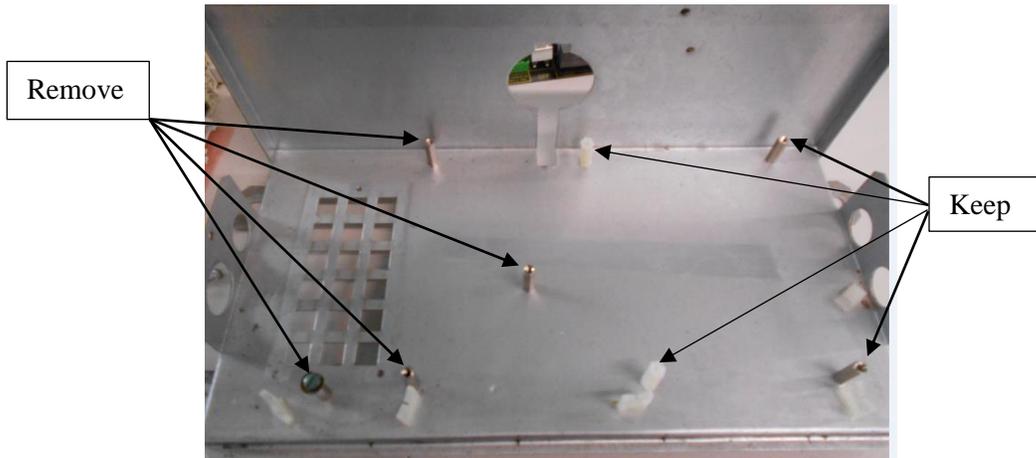


Figure 11 - Standoff Removal

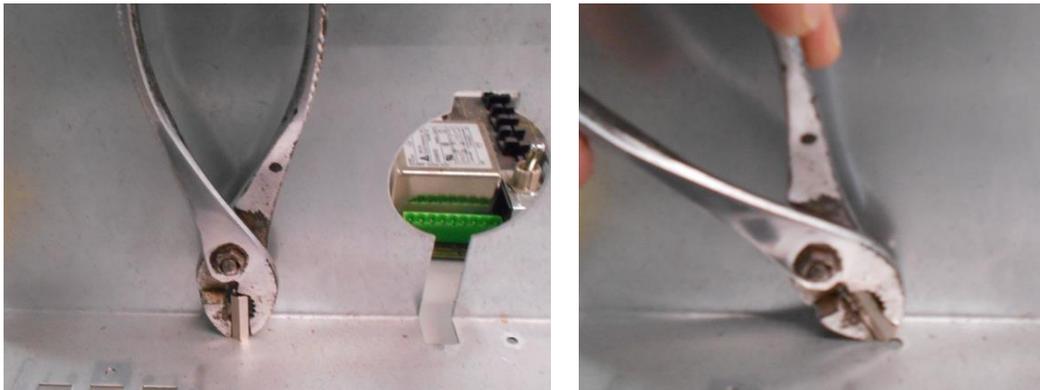


Figure 12 - Snapping Off Standoff

- Remove drill template from manual (last page of manual). Fold or cut page of drill template along dotted lines and place in top left corner of operator as shown in Figure 13 - Drill Pattern placement



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Drill .106" hole here for self-tapping grounding screw

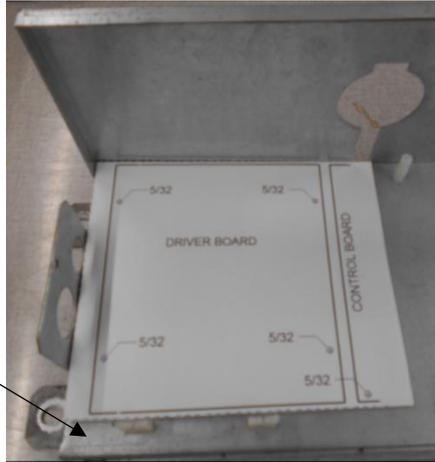


Figure 13 - Drill Pattern placement

- With the drill template secure into the corner of the operator, drill the five (5) 5/32 inch holes at locations shown on the template.
- Drill a 6th .106" dia hole for self-tapping grounding screw in area shown in figure 13.
- Remove the template and insert standoffs supplied with boards into the 5 new holes as shown in *Figure 14 - Standoff Placement*

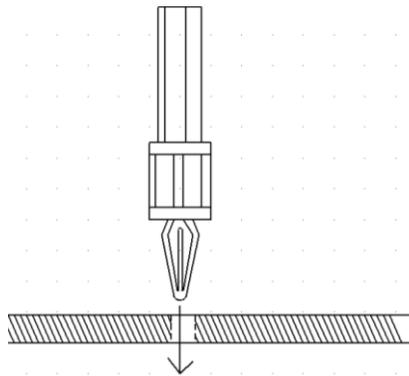


Figure 14 - Standoff Placement

- Using hardware supplied with the board, mount the Control and Drive boards as shown in Figure 15 -ECI MOVFR LCD Installed. Connect communication cable (supplied with boards) between Control and Drive boards.



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Communication
cable (CAT5)

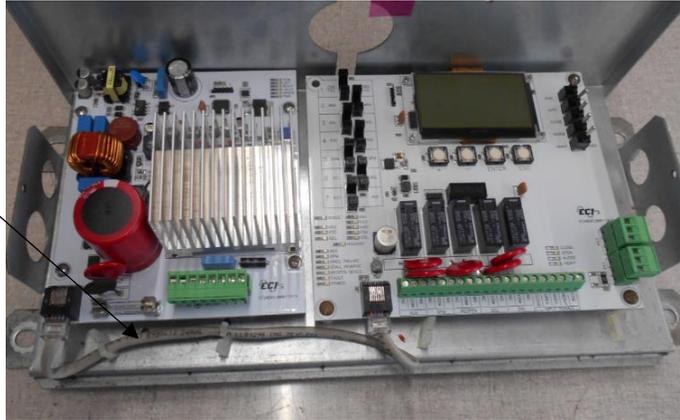


Figure 15 -ECI MOVFR LCD Installed

- Make all connections to the Control and Drive boards at this time. Proceed to section 7 Initial Power Up and Test.

6.2 Replacing MOVFR-0069N

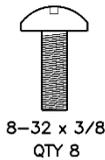


Figure 16- MOVFR-00069N Installation Kist

- Remove the Control Board and Drive shown in Figure 17 - MOVFR-0069N
- Mount and secure the ECI MOVFR-LCD Control board and Drive board as shown in Figure 18 - ECI MOVFR-LCD Installed.
- Connect communication cable (CAT5) between Control and Drive Boards.
- Make all connections to the Drive and Control boards at this time and proceed to Section 7 Initial Power Up and Test.



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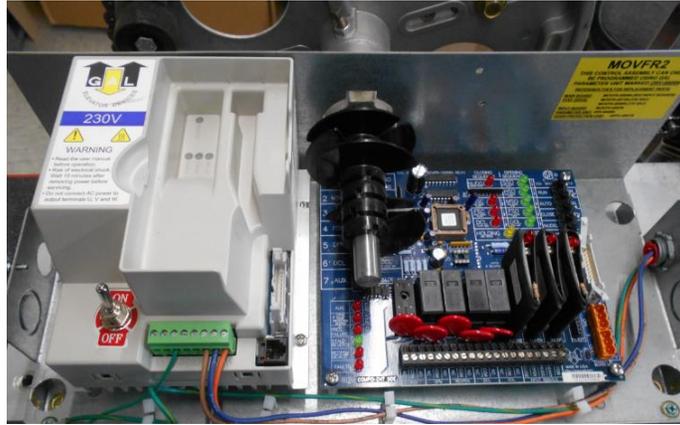


Figure 17 - MOVFR-0069N

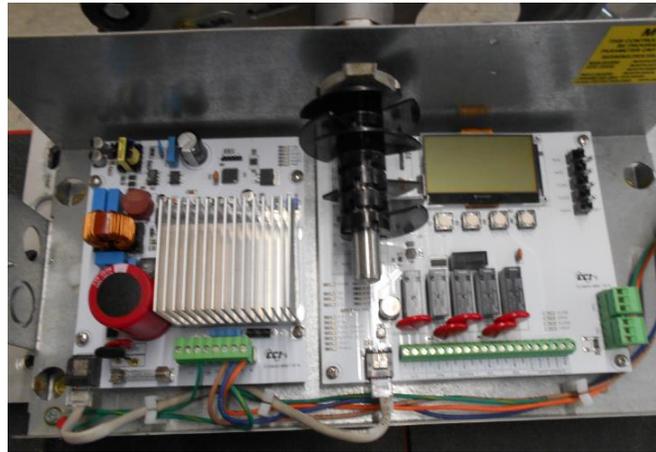


Figure 18 - ECI MOVFR-LCD Installed



7 Initial Power Up and Test

7.1 Manual Operation

- With the doors in the fully closed position and the AUTO/MAN switch in the MAN position, apply power to door operator
 - LCD Display should show

```
ECI MOVFR
(C) 2016 ECI Inc.

Edit parameters
Load defaults
Diagnostics 1
Diagnostics 2
```

- Check that the POWER on the display board and PWR LED on the drive board are lit.
- Check that the COM, and BRAKE LEDs on the drive board are lit.
- Press Enter Button to select EDIT PARAMETERS
- Press – button until INPUT VOLTAGE is highlighted.
- Press ENTER button and set to proper input voltage using + button. Press ENTER then ESC buttons when complete.
- Move cursor down to DIAGNOSTICS 1 and press ENTER
 - LCD should show

```
ECI MOVFR
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VBUS : 317V 0s
SPEED : 0
TEMP : 29C/ 84F
MOTOR : .0A
CYCLE : xxxx (ESC)
```

NOTE that the VBUS and TEMPs are estimates

- With the AUTO/MAN switch in MAN position set the CLOSE/OPEN switch to the OPEN position. (If motor moves in wrong direction, remove power from unit and swap 2 or the 3 motor leads.)
 - The SPEED and MOTOR readings should increase as the door moves.
 - Hold switch until door is fully open and the DOL LED lights.



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- When fully OPEN the SPEED and MOTOR reading should go to 0 even with the switch in OPEN position.
- **NOTE** that the HOLDING LED will not light as the OP HOLD SP and TORQ settings are at default 0 settings.
- Go to EDIT PARAMETERS screen and change OP hold torq and OP hold sp to 1. **NOTE:** these settings will have to be set >1 to ensure enough force to hold doors. **NOTE:** HOLDING power should not exceed 15W to prevent motor heating motor which can reduce its life.
- The HOLDING LED should light at the next open cycle.
- Repeat with the CLOSE/OPEN switch in the CLOSE position.
 - **NOTE** that the HOLDING LED will not light with DCL due to the CL HOLD SP and TORQ settings are at default 0.
 - Go to EDIT PARAMETERS screen and change CL hold torq and CL hold sp to 1. **NOTE:** these settings will have to be set >1 to ensure enough force to hold doors. **NOTE:** HOLDING power should not exceed 15W to prevent heating motor which can reduce its life.
 - The HOLDING LED should light on the next close cycle.

8 Adjustments

At this time adjustments can be made through the parameter settings to produce smooth door operation and adjust OPEN and CLOSE torque settings. Refer to section 8.1 for speed profiles and CAM settings.

NOTE - For HEAVY DOOR adjustments the elevator car must be at a “heavy door” floor. When moving a heavy door in MAN operation the HEAVY switch must be used with the CLOSE and OPEN switches.



NOTE: IT IS IMPORTANT TO RETURN THE DISPLAY TO THE MAIN MENU WHEN ADJUSTMENTS ARE COMPLETE. FAILING TO DO SO WILL RESULT IN PARAMETERS REVERTING TO DEFAULT SETTINGS SHOULD POWER BE LOST.



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8.1 Speed Profiles

8.1.1 Closing Speed Profile

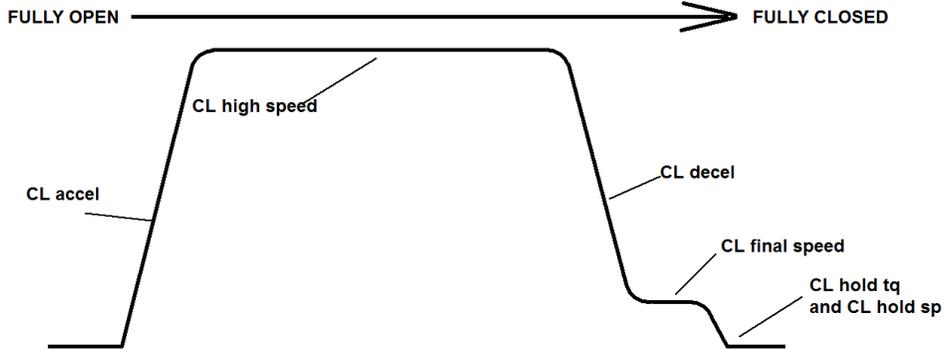


Figure 19- Close Speed Profile

8.1.2 Closing CAM/Sensor Sequence



Figure 20 - Close CAM/Sensor Sequence

8.1.3 Open Speed Profile

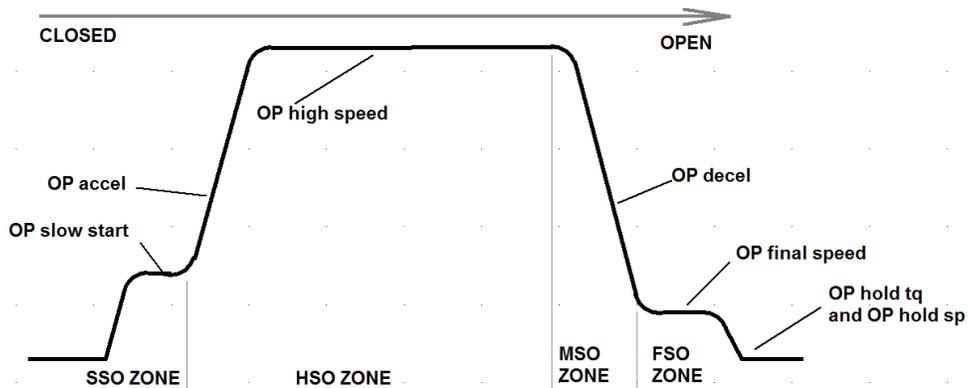


Figure 21 - Open Speed Profile



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8.1.4 Open CAM/Sensor Sequence

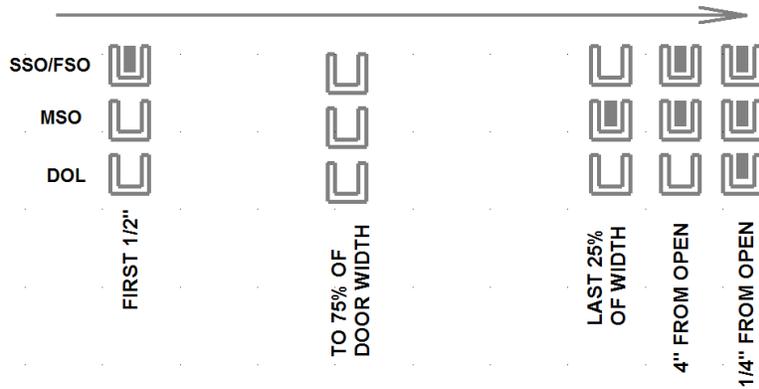


Figure 22 - OPEN CAM/SENSOR Sequence

8.2 CAM Settings

8.2.1 Right Hand CAMS

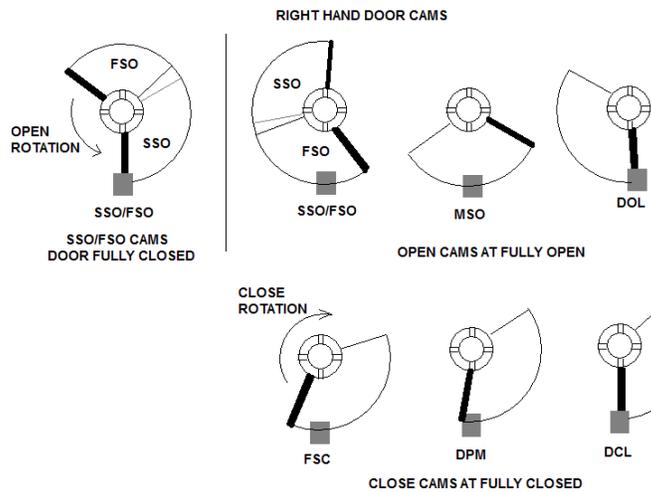


Figure 23- Right Hand CAM Settings



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8.2.2 Left Hand CAMs

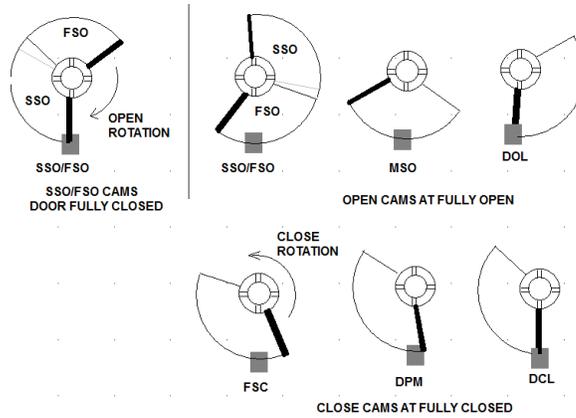


Figure 24 - Left Hand CAM Settings

9 AUTO Operation

- Go to EDIT PARAMETERS and change the INPUT VOLTAGE parameter to the proper voltage for your system.
- Switch the AUTO/MAN switch to AUTO position.
- Door operator is now ready for normal operation.



10 Drill template for MOVFR-0001N replacement

FOLD OR CUT PAGE ALONG DOTTED LINES

