

LOCK610-A Shift Interlock Commercial 2008-2012 Chevy/GMC Full Size Van Contact InterMotive for specific applications

Introduction

The LOCK610-A module represents the next generation of Lift Interlock and Input/Output capabilities from InterMotive Vehicle Controls. The LOCK610-A provides a number of benefits for the installer and user. 1/5 the size of its predecessor, easier, faster installation with fewer and unique connectors simplifying installation and ensuring proper connections.



Installation Instructions

Be sure the vehicle's battery is disconnected before proceeding with installation.



It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.

Remove the lower dash panel below the steering column area and find a suitable location to mount the module so that the Diagnostic LED's can be viewed with the lower dash panel removed. Secure using 2-sided foam tape, screws or wire ties. Locate the module in an area away from high heat sources. High temperatures can typically be caused by engine heat or hot air from heater ducts. Do not actually mount the module until all wire harnesses are routed and secure (last step of the installation is to mount the module).

Data Link Harness Installation

- Locate the vehicle OBDII Data Link Connector. It will be mounted below the lower left dash panel.
- Remove the mounting screws for the OBDII connector. Plug the red connector from the LOCK610-A Data Link Harness into the vehicle's OBDII connector. Ensure the connection is fully seated and secure with the supplied wire tie.
- Mount the Black pass through connector from the LOCK610-A Data Link Harness in the former location of the vehicle's OBDII connector.
- Secure the LOCK610-A Data Link harness so that it does not hang below the lower dash panel.
- Plug the free end of the Data Link harness into the mating 4-pin connector on the LOCK610-A module.



Shift Lock Solenoid Harness Installation

Locate the OEM shift lock solenoid down on the right side of the steering column and remove the OEM 2-pin black connector and install matching InterMotive T - harness. Verify the green locking tabs are in the locked position.



Control Inputs/Outputs - 8-pin connector

The LOCK610-A provides three ground side inputs and two 12V, 1/2 amp outputs.

Refer to the LOCK610-A CAD drawing as reference when reading these instructions. A control relay may be needed to power some lifts, due to the lift drawing more than 1/2 amp. Install a TVS (diode clamped) relay as shown on the CAD drawing.

The blunt-cut (4-wire) harness provides for control connections to the vehicle as follows:

The following **two** wires, (three if optional Green wire used), will need to be lengthened by soldering and heat shrink or taping.

Orange – This output is to be connected to the lift or lift relay. Refer to your particular lift model drawing when making this connection. This output provides 12V @ 1/2 amp when it is safe to operate the lift.

Gray – This input is to be connected to the Lift Door switch. As the CAD drawing shows, make sure that a ground signal is provided with the door open. When the door is open the vehicle is prevented from shifting out of PARK. This door must be open in order to allow lift operation.

Green – Connect this wire only if an additional door connection is desired.

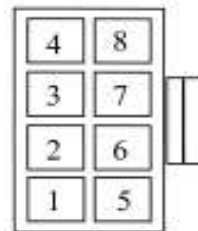
This input is an **optional** connection for an additional door (passenger). It is connected the same as the Lift Door and also prevents shifting out of PARK. This door does not have to be open to allow lift operation.

Brown – Connect this wire only if "key off" lift operation is desired.

This **optional** input connects to the OEM Park Brake switch, such that the switch is made when the Park Brake is set. Install a standard rectifier diode (digkey RL202-TPCT-ND or equivalent) as shown in the CAD drawing, to isolate the Parking Brake ground signal. Strip back some insulation off the Lt. Blue wire, solder the Brown wire on and tape or use heat shrink tubing.



- Pin #1 — N/C
- Pin #2 — N/C
- Pin #3 — ORANGE (Vehicle Secure (12V) Output)
- Pin #4 — BROWN (Park Brake (GND) Input) *Optional
- Pin #5 — GREEN (Passenger Door Open (GND) Input) *Optional
- Pin #6 — N/C
- Pin #7 — BLUE (Shift Interlock Output) Plug & Play Harness
- Pin #8 — GRAY (Lift Door Open (GND) Input)



Connect the 8 pin connector to the module
Mount the module using 2-sided foam tape, screws or wire ties



Post Installation / Check List

The following checks must be made after installation of the system, to ensure correct and safe operation of the lift. If any of the checks do not pass, do not deliver the vehicle. Recheck all connections as per the installation instructions.

Reconnect the battery to enable system testing

Begin the checklist with the vehicle in the following state:

- Lift stowed
 - Lift Door closed
 - Park Brake set.
 - Transmission in Park
 - Ignition off (Key off)
1. Turn ignition key on (to "run"), attempt to deploy the lift. The lift must not deploy with the Lift Door closed.
 2. With key on, release the Park Brake and open the Lift Door, attempt to deploy the lift. The lift must not deploy with Park Brake released.
 3. With key on, Lift Door open, Park Brake set, transmission in Park, attempt to deploy the lift. The lift should deploy.
 4. With key on, Lift Door closed, Park Brake set, make sure transmission will not shift out of Park.
 5. With key on, Lift Door open, Park Brake released, make sure transmission will not shift out of Park.
 6. With the lift deployed, attempt to shift the transmission out of Park. The transmission shift lever must not shift out of Park.
 7. With key on, Lift Door closed, Park Brake released and the Service Brake applied, the transmission shift lever should be able to shift out of Park.
 8. **Optional input:** If the vehicle is equipped with a connection for an additional door (passenger), verify transmission shift lever will not shift out of Park, if the door is open.
 9. **Optional input:** If the vehicle is equipped with key off lift function, the Park Brake will need to be set and the Lift Door open for system to be operational.
 10. With key off, verify the shift lever is locked with the Lift Door closed and Park Brake released.

Lift Interlock Diagnostic Mode Testing

Enabling Diagnostic Mode allows a visual indication of system status and is a good troubleshooting tool which may be used in conjunction with the above tests. The module is fully functional in this mode. Enter Diagnostic Mode by the following steps.

- Place transmission in Park and turn ignition switch to "run" position.
- Touch a grounded wire to the Test Pad (on the module) to go into Diagnostic Mode. LED's on the module will prove out, then become status indicators.
- LED 1 should be on when Shift Lock enabled.
- LED 2 should be on when transmission is in Park.
- LED 3 should be on when Park Brake is set.
- LED 4 should be on when Lift Door is open.
- LED marked "status" indicates "Vehicle Secure" or "Lift enabled" meaning there is 12V on Pin 3 (green wire) which connects to the lift.
- Cycling the key will exit Diagnostic Mode and all LED's will be off.



LOCK610-A Shift Interlock Commercial 2008-2012 Chevy/GMC Full Size Van Operating Instructions

The LOCK610-A system is a microprocessor driven system for controlling wheelchair lift operation. Lift operation will only be allowed when all of the following conditions are met:

Key on function:

1. The vehicle is in "Park".
2. The Park Brake is applied.
3. The Lift Door is open.

Key off function: (Optional)

Same conditions as Key on and only if the discrete Park Brake input is installed.

Optional inputs

If the vehicle is equipped with a connection for an additional door (passenger) the system will not allow the vehicle to be shifted out of Park unless the passenger door is closed.

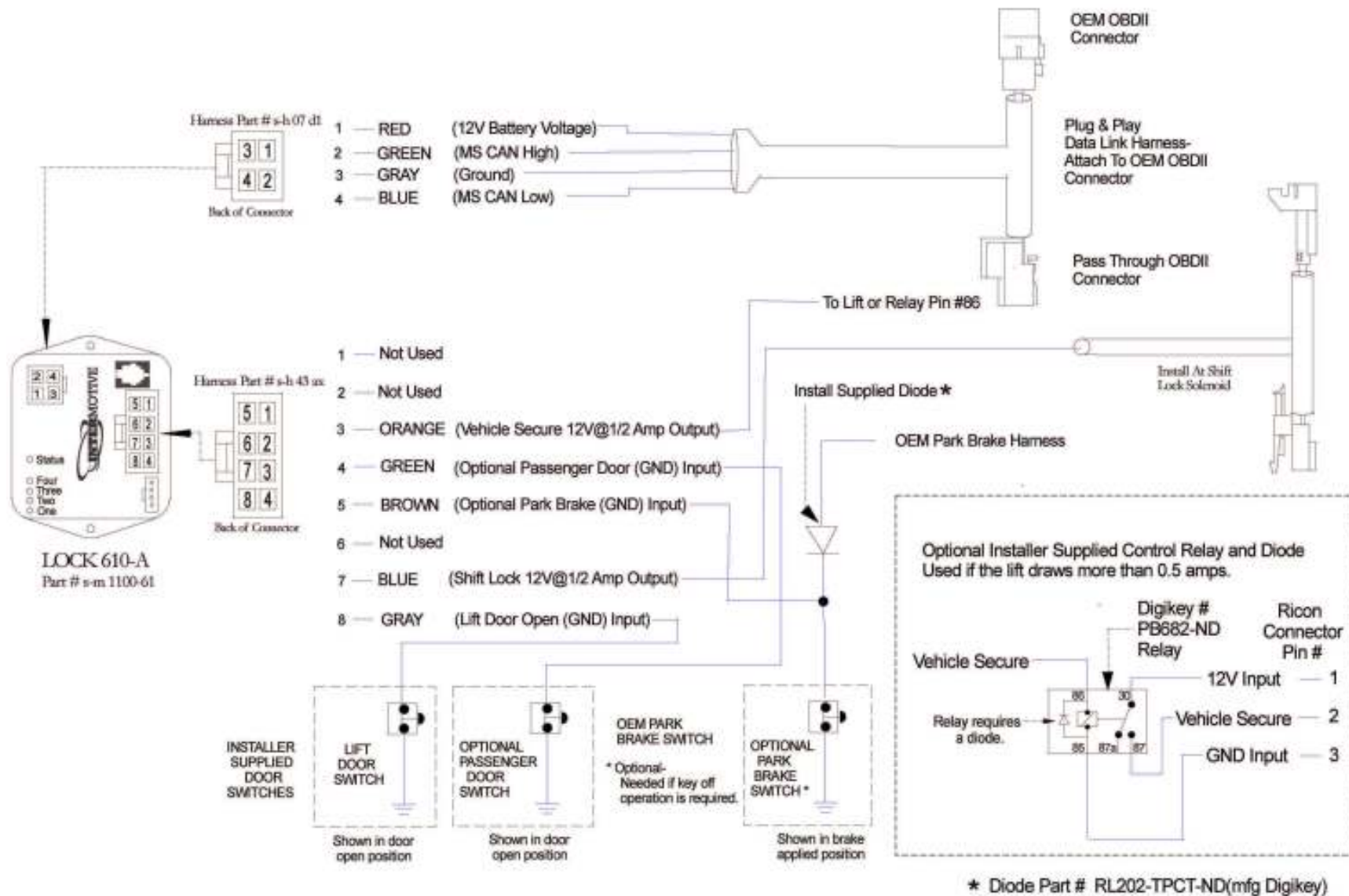
Key off lift operation, for the system to be functional, the Park Brake discrete input will need to be installed.

The LOCK610-A also will not allow the vehicle to be shifted out of Park if the Lift Door is open. As an added feature, it also will not allow the vehicle to be shifted out of Park anytime the Park Brake is applied. This feature eliminates excessive Park Brake wear due to driving with the Park Brake applied.

The LOCK610-A can operate with the vehicle ignition on or off (if optional input supplied). When the Lift Door is closed and ignition power is not present for 5 minutes, the system will enter a low current "sleep" mode of operation. To wake from "sleep" mode, the ignition must be turned on (key on) or the Lift Door must be opened.

Important note:

Do not leave the Lift Door open when the vehicle is not in use. This will cause a draw on the vehicles electrical system and may result in a dead battery.



Submit product registration at www.intermotive.net

If the LOCK610-A fails any step in the Post Installation Test, review the installation instructions and check all connections.
If necessary, call

InterMotive Technical Support @ (530) 823-1048.

LOCK610A-03-CAD