

ILISC320-A

Shift Interlock

2012-2015 Nissan NV Full Size Van

Introduction

The ILISC320-A is a commercial-use shift interlock, designed to lock the transmission in park when specified external vehicle equipment is in use. The interlock feature is provided only when the ignition key is on. The transmission will lock in Park when designated condition sets are met or when the Park Brake is set.



Disconnect vehicle battery before proceeding with installation



WARNING
Disconnect the battery to
prevent setting a check engine
light.

Installation Instructions

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 and find a suitable location to mount the module. Do not mount the module until all wire harnesses are routed and secure. (The last step of the installation is to mount the module). It is recommended the module be mounted with two screws, however 2-sided foam tape may also be used. Attach the harnesses such that a tilt steering column does not contact them in the full down position. When installing the harnesses, leave several inches of take-out so that the module can be removed in order to view diagnostic LED's. Locate the module in an area away from any high heat sources such as heater ducts.

Data Link Harness

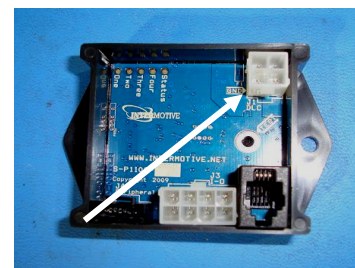
- Locate the vehicle's OBDII Data Link Connector. It is mounted in the lower dash panel which was removed in the previous step.
- Remove the OBDII connector from the panel by pushing in the tabs on the right and left sides of the connector and pulling it out from the back.
- Plug the red connector from the ILISC320-A Data Link Harness into the vehicle's OEM OBDII connector just removed. Ensure the connection is fully seated and secure with the supplied wire tie.



- Mount the White pass through connector from the ILISC320-A Data Link Harness in the former location of the vehicle's OBDII connector in the lower dash panel. It will snap into place when properly seated.
- Secure the ILISC320-A Data Link harness so that it does not hang below the lower dash panel when the panel is re-installed.
- Plug the free end of the Data Link harness into the mating 4-pin connector on the ILISC320-A module.



Pass Through Connector



LED Dash Mounted Panel

The LED panel is included with the system but is not required to be installed in order for the interlock to work.

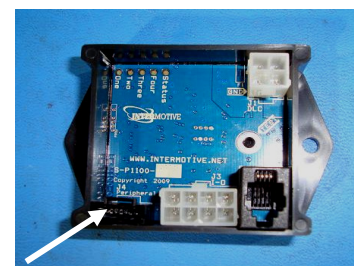


Mounting the LED Display Panel

- Locate a suitable position on the dashboard, within view of the driver, to mount the LED Display Panel.
- Ensure there is open space behind the dash for the harness where the panel will be mounted. The harness is 40" in length, which is the maximum distance the display can be from the module.
- Drill a 5/8" hole in the dash where the center of the display will be located.
- Attach the Black 4-pin connector of the LED display panel harness to the module.
- Run the other end of the harness under the dash and out through the 5/8" hole. Attach this end to the LED Display Panel.
- Place the panel on the dash, ensure it is level, and secure using supplied screws.



LED Panel Harness



4 pin LED panel Connector

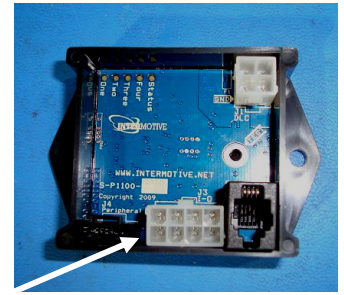
Control Inputs/Outputs - 8-pin connector

Refer to the ILISC320-A schematic when reading these instructions.

Note: The term "door" refers to any device that would require interlock protection when this device causes input pin 5 to be at ground potential.

The 8 pin Input/Output harness provides the following functions:

1. Connection to the OEM shift lock solenoid (Yellow and Blue Wires)
2. Door Switch (Gray Wire)
3. Vehicle in Park-12V Output (Brown Wire)
4. Equipment Disabled - 12V @ 1/2 Amp Output (Red Wire)



Shift Lock Solenoid Harness Installation

- Remove the steering column plastic cover. Locate the black wiring harness below the ignition switch that terminates at the white 8-pin connector mounted to the steering assembly. Carefully remove the tape surrounding the wires. (See photo 1). Find the Blue wire and cut it in a location which will allow easy connection to both ends.
- Slide the supplied heat shrink over both ends of the Blue wire.
- Attach the Blue wire from the shift lock solenoid to the ILISC320-A Blue wire, which is pin #2 of the 8 pin connector (Photo 2). Use solder to make a solid, reliable connection.
- Attach the OEM Blue wire from the PCM to the ILISC320-A harness Yellow wire, which is pin #6 on the 8 pin connector (Photo 3). Solder connection.
- Position the two pieces of heat shrink directly over the solder joints. Using a heat gun or other heat source, shrink to complete the shift lock wiring.
- Plug the 8 pin Input / Output connector into the ILISC320-A module.

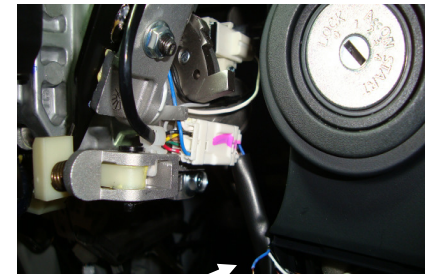


Photo 1

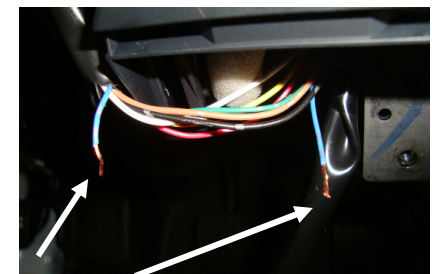


Photo 2



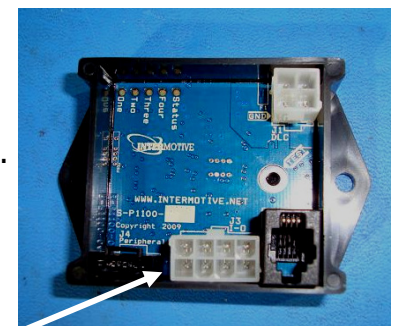
Photo 3

Module Mounting Location

Ensure all the harnesses are properly connected and routed, and are not hanging below the dash area. Mount the module as described on page one. Verify the module is in an area away from any external heat sources (engine heat, heater ducts, etc.), and mount it with two screws or double sided tape.

Place the included interlock label where it can be easily seen (e.g., on the dash).

Reconnect the vehicle battery



ILISC320A-082615-

ILISC320-A Post Installation / Check List

The following checks MUST be made after installation of the system, to ensure correct and safe operation. If any of the checks do not pass, do not deliver the vehicle. Recheck all connections per the installation instructions. If needed, call InterMotive Tech Support for assistance.

Begin the checklist with the vehicle in the following state:

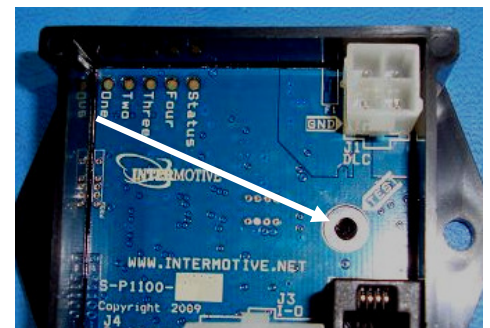
- Door closed
 - Park Brake set (PB)
 - Transmission in Park (P)
 - Ignition off (Key off). Wait until the module goes into "Sleep" mode (all panel LED's OFF) which takes approximately 15 seconds after CAN communication has stopped.
1. Turn the key to the ON position. Verify the module wakes up and (if LED display is installed) all 5 LED's illuminate for approximately 2 seconds. The lower icon's on the LED panel are backlit and remain illuminated whenever the module is awake. See Operating Instructions page for definition of LED panel icons.
 2. If LED panel is not installed, enable diagnostic mode (see below) and use the LED's on the module.
 3. Verify that all LED's except "Door" remain illuminated. Attempt to shift the vehicle out of Park. Verify the vehicle cannot be shifted out of Park.
 4. Attempt to engage interlocked equipment. Verify equipment operates (Interlock is OFF.)
 5. Release Park Brake; attempt to shift the vehicle out of Park. Verify Shift lever comes out of Park. Put vehicle back in Park.
 6. Engage equipment. Attempt to shift vehicle out of Park. Verify the vehicle cannot be shifted out of Park.
 7. Disengage equipment and shift out of Park. The interlock will engage (relay energized) preventing equipment operation.

If any of the previous Post Installation tests fail, enter diagnostic mode below.

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 to run position.
- Touch a grounded wire to the Test Pad (on the module) to go into Diagnostic Mode. The LED's on the module will prove out, then become status indicators.
- LED 1 will be on when Shift Lock is enabled.
- LED 2 will be on when transmission is in Park.
- LED 3 will be on when Park Brake is set.
- LED 4 will be on when Door is open.
- LED marked "status" indicates "Equipment Enabled" meaning Pin 3 (Red Wire) no longer has 12V.
- Cycling the key, or grounding the test pad again will exit Diagnostic Mode and all module LED's will be off.

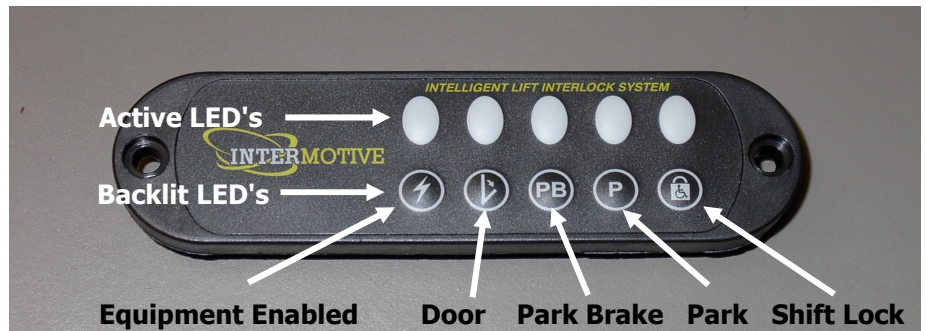


Leave with vehicle
Operating Instructions
ILISC320-A Interlock
2012 Nissan NV Van

The ILISC320-A is a commercial use shift interlock, designed to lock the transmission in park when specified external vehicle equipment is in use. The interlock feature is provided only when the ignition key is on. The transmission will lock in Park when designated condition sets are met or when the Park Brake is set.

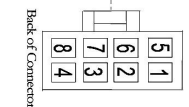
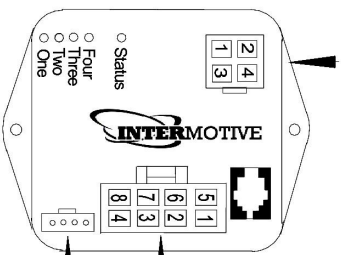
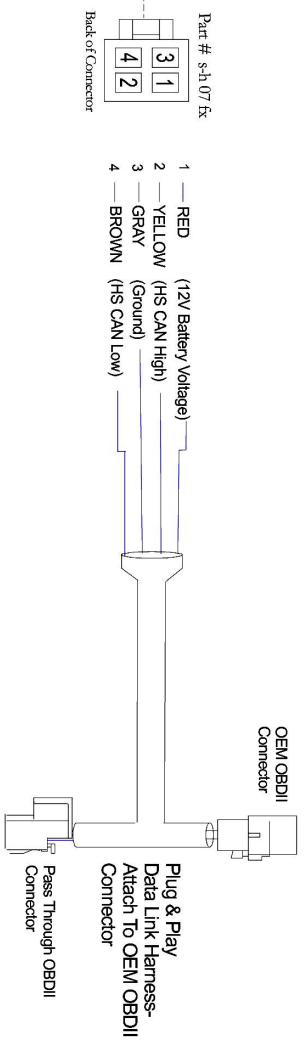
Key On operation:

- When the vehicle is in "Park" the (P) LED and "Equipment Enabled" LED will be illuminated.
- When the Park Brake is applied, the (PB) LED will be illuminated.
- When the Door is open, the Door LED will be illuminated.
- When in Park, with either the Park Brake applied or the Door open, the Shift Lock LED will be illuminated, and the vehicle cannot be shifted out of park.

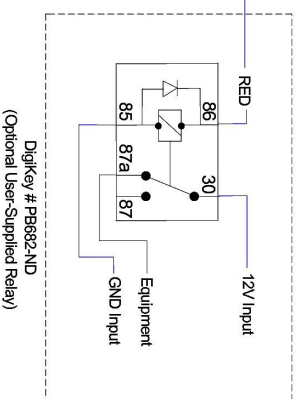
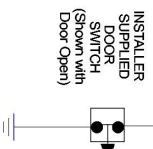


With the vehicle out of Park, all LED's will be OFF and any external equipment will be inoperative.

With Key Off, module is inoperative, but vehicle will be shift-locked and any external equipment will operate due to the "Equipment Disabled" output being turned off.

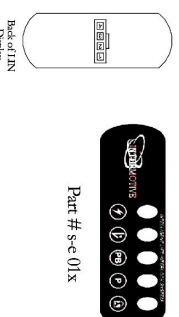
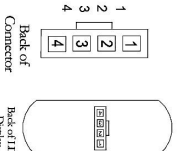


- Part # s-h 68 ax
- 1 — Not Used
 - 2 — BLUE (Shift Interlock Output)
 - 3 — RED (Optional Equipment Disabled 12V@12 Amp Output)
 - 4 — Not Used
 - 5 — GRAY (Door Switch)
 - 6 — YELLOW (Shift Interlock Output)
 - 7 — BROWN (Vehicle in Park 12V Output)
 - 8 — Not Used



Shift-A (Attach to the BLUE wire from the shift lock solenoid)

Shift-B (Attach to the BLUE wire going to the PCM)



Submit product registration at www.intermotive.net

If the ILISC320-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.

ILISC320-01-CAD