IdleGuard 601

G-IDG601-A 2021-2025 Chevy Tahoe SSV, PPV
2024 Chevy Silverado SSV

Introduction

The IdleGuard module is used for Chevy Tahoe's with the Protected Idle feature. The Protected Idle feature allows the vehicle to remain idling but will not allow the transmission to be shifted from Park without the valid key fob. To enter this mode the cruise control cancel button must be pressed for 2 seconds. IDG601 will automatically enable this feature so the officer will not have to press the cruise control cancel button.

IDG601 also offers an optional paid feature that provides outputs intended to disable the weapons rack release button or any other equipment. The outputs activate 10 seconds after the Protected Idle is enabled to provide the officer time to operate their equipment. The time can be configured anywhere from 0-300 seconds.

Installation Instructions

Disconnect vehicle battery before proceeding with installation

CAUTION

All electronic products are susceptible to damage from Electrostatic Discharge or ESD. Ground yourself before handling or working with the module and harnessing by first touching chassis ground, such as the barrel of the cigarette lighter.

IMPORTANT—READ BEFORE 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.

Avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Avoid radio frequency energy from antennas or inverters next to the module. Avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

IDG601 Module

Remove the lower dash panel below the steering column area and find a suitable location to mount the IDG601 module. Locate the module in an area away from any high heat sources (engine heat, heater ducts, etc.). Do not mount the module until all wire harnesses are routed and secure. The last step of the installation is to mount the module.

Gateway Plug and Play Harness

1. Locate the Gateway module that is located under the dash and above the accelerator pedal.

2. Locate the 30-pin connector, X1 labeled "BLK" on the module.

3. Unplug the Black 30-pin connector from the Gateway module and plug it into the mating connector on the data link harness 840-00208. Plug the male connector from the IDG601 harness into the OEM Gateway module (X1).

Harness 840-00208

BCM Connections

- Locate the BCM under the instrument panel to the left side of the steering column. Locate the connector X2 (**Pink connector**) plugged into the BCM. Note the Pin Numbers on the connector.

Cruise Control Switch Circuit

2021-2024 Tahae

1. Locate Pin #14 Brown/Green wire on the X2 connector.
2. Unscrew the Grey cap on the end of the included Red Posi-Tap and install it on the Brown/ Green wire (position 14) on the X2 connector. Screw the rest of the connector onto the cap (not too tight).

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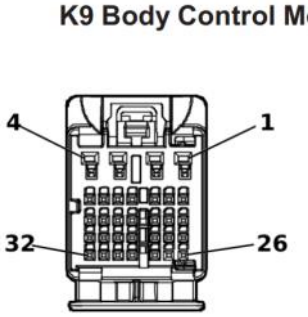
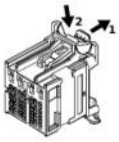
1. Locate Pin #14 Gray/Green wire on the X2 connector.
2. Unscrew the Grey cap on the end of the included Red Posi-Tap and install it on the Gray/Green wire (position 14) on the X2 connector. Screw the rest of the connector onto the cap (not too tight).





Unscrew the other end of the Posi-Tap connector, strip 1/4" insulation off the Brown/Green wire from the Intermotive harness 840-00264, and insert it through the hole in the Posi-Tap so the wire end is even with the edge. Hold the wire so it doesn't push back out of the Posi-Tap, and screw it back into the main Posi-Tap body.

8-Pin IDG601 Connector Pin-Out Definition

This connector contains the IDG601 output pins. Each output rated at 1/2A and is intended to drive relay coils or other low current loads. **Note: when driving relays, a diode-protected type must be used. InterMotive recommends DigiKey #PB682-ND Relay.**

The pins are defined as follows:

- Pin #1 (Orange wire) Protected Idle Output, +12V with 10 sec delay (optional)
- Pin #2 not used
- Pin #3 (Brown/Green wire) Cruise Control Output.
- Pin #4 not used
- Pin #5 not used
- Pin #6 (Violet wire) Protected Idle Output, Ground with 10 sec delay (optional)
- Pin #7 (Blue wire) Protected Idle Output (optional)
- Pin #8 not used

Posi-Tap

Connect the desired outputs to vehicle equipment as needed. Tape up unused leads. When connecting to relays, use relays with appropriate kick-back suppression, such as Digikey #PB682-ND. Unsuppressed relays will induce very high voltage spikes throughout modern vehicles sensitive computer electronics and should not be used, per Ford, GM, SAE, etc.

Reconnect the vehicle battery

Initial Installation Power-Up

When the IDG601 module is first plugged in, it attempts to acquire the vehicles VIN to interpret vehicle data on the OBD network for five minutes. If Vin is not received then the module will go to sleep. The key must be in the Run position for network traffic to be present (engine off is OK).

1. Turn the ignition switch to the Run position.
2. Plug the 4 pin data link connector into the module

- If the module LEDs "scroll" , then it has NOT acquired a recognized VIN. The chassis may be a new Model Year which the module does not recognize, or the chassis has an unrecognized engine. Ensure your chassis is listed at the top of page one of these instructions. Contact InterMotive Tech Support for assistance.
- If no LEDs come on when the module is plugged in and powered up, it is working properly. Proceed to post installation testing.

IDG601 Post Installation Testing

1. Get in the driver seat turn ignition and close all doors.
2. Put the module into diagnostic page 3. Press the test button 3 times and confirm the status LED flashes 3 times. LEDs 1-4 should be off.
3. Start the engine and keep the service brake applied. Verify protected idle has not been activated.
4. Release the service brake and within 3 seconds protected idle will be activated. A message in the cluster will indicate Protected Idle is active.
5. If outputs are enabled proceed to step 6, otherwise skip to step 6.
6. Verify protected idle output Pin 7 (Blue Wire) is ground. LED2 will be ON.
7. Verify the delayed protected idle outputs are not active. LED3 and LED4 should be OFF
8. Open the driver door and verify the delayed output is active after the configured delay time. Pin 1 Orange wire is +12V and Pin 6 Violet wire is ground. LED3 and LED4 will be on when outputs are active.
9. Disable Protected Idle by shifting out of park. Make sure the key fob is in range. Verify LED2-4 are off.
10. Place Transmission back into park, release service brake and within 3 seconds protected idle will be activated. LED2 will be on.
11. Press test button to exit diagnostic mode. All LEDs should turn off

The IDG601 is properly installed only if it passes the above tests. If any irregular operational issues persist, recheck the condition set configuration. Contact InterMotive at 530-823-1048 for technical assistance.

IDG601 Module Mounting

Ensure all the harnesses are properly connected and routed, and are not hanging below the dash area. Mount the IDG601 module using screws or double sided tape. Reinstall the lower dash panel.

Diagnostics

To enter diagnostic mode, momentarily press the red test button with the ignition on. There are 3 'pages' of diagnostic data. Each time the test button is pressed the module will advance to the next 'page'. The Status LED will flash the page number (e.g. the Status LED will flash 3 times when in 'page' 3).

Page 1

The on-board LED's will light when a corresponding load is active:

LED1 ON = Protected Idle State Machine
LED2 ON = Protected Idle State Machine
LED3 ON = Protected Idle State Machine
LED4 ON = Service Brake Applied

Page 2

The on-board LED's will light when a corresponding load is active:

LED1 ON = Vehicle Speed Greater than 2 mph
LED2 ON = Transmission not in Park
LED3 ON = RPM less than 350
LED4 ON = Protected Idle Active

Page 3

The on-board LED's will light when a corresponding load is active:

LED1 ON = Cruise Control Output
LED2 ON = Protected Idle Output (Ground)
LED3 ON = Delayed Protected Idle Output (+12 V)
LED4 ON = Delayed Protected Idle Output (Ground)

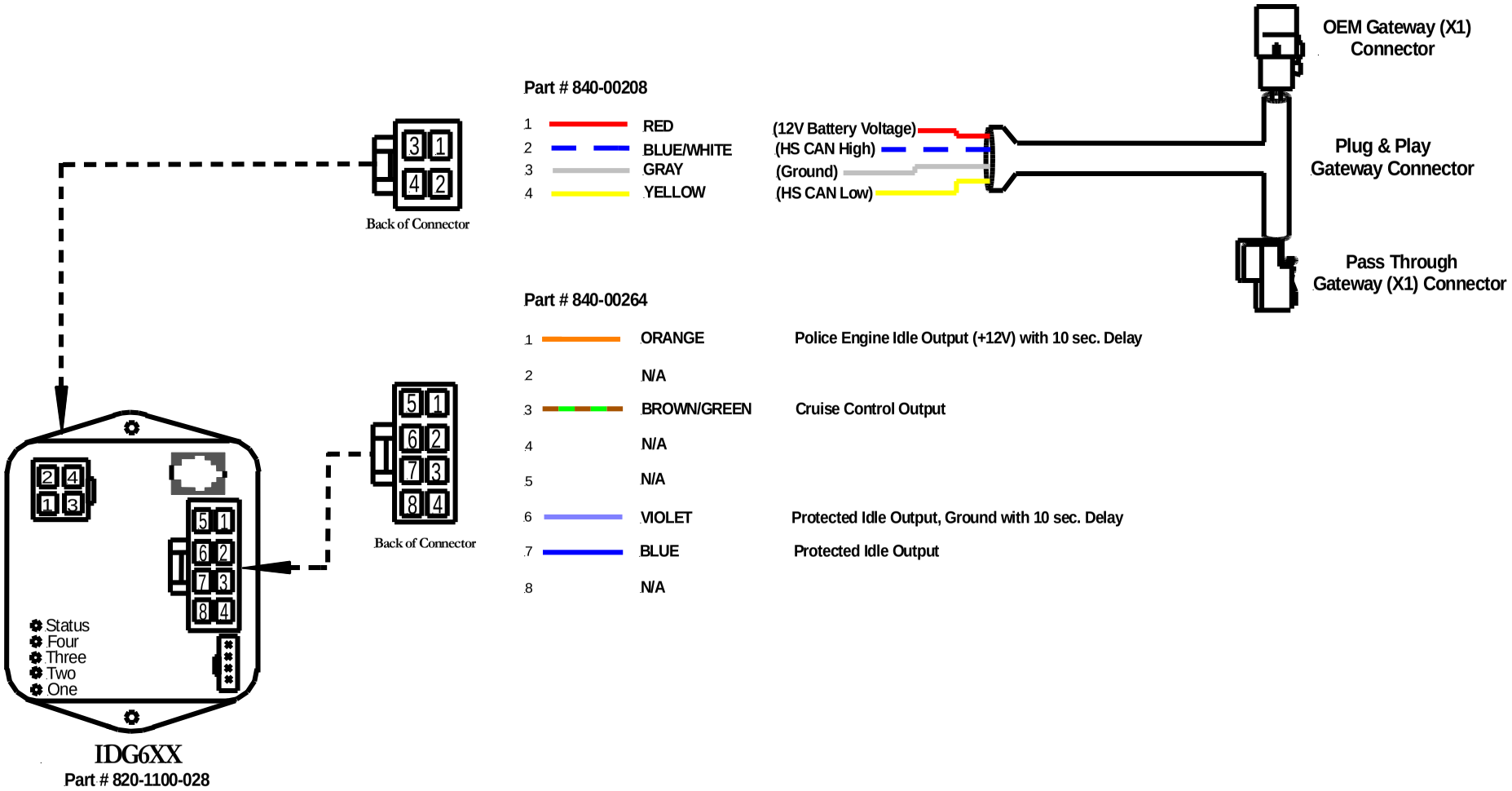
IDG601 Operation

Turning the vehicle ignition ON will wake up and initialize the IDG601 module.

The IdleGuard will activate the vehicle's Protected Idle feature once the engine is running, vehicle is in park and service brake is released. If service brake is pressed, IDG601 will not turn on Protected Idle.

To disable Protected Idle the user just needs to shift out of park or press cruise control button for 2 seconds with a valid key fob present.

When the key is turned OFF, the IDG601 module will go into a low power sleep mode and it's outputs will shut off. This may take up to five minutes, and the Diagnostic LED's (if active) on the module will go out once in sleep mode.



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If the IDG6XX fails any step in the Post Installation Test, review the installation instructions. If necessary, call InterMotive Technical Support at (530) 823-1048.