

# IntelliShift VG-6 Installation Guide with IO Inputs

Installation of your new device should be performed by a 12V certified technician or mechanic familiar with automotive 12V systems.

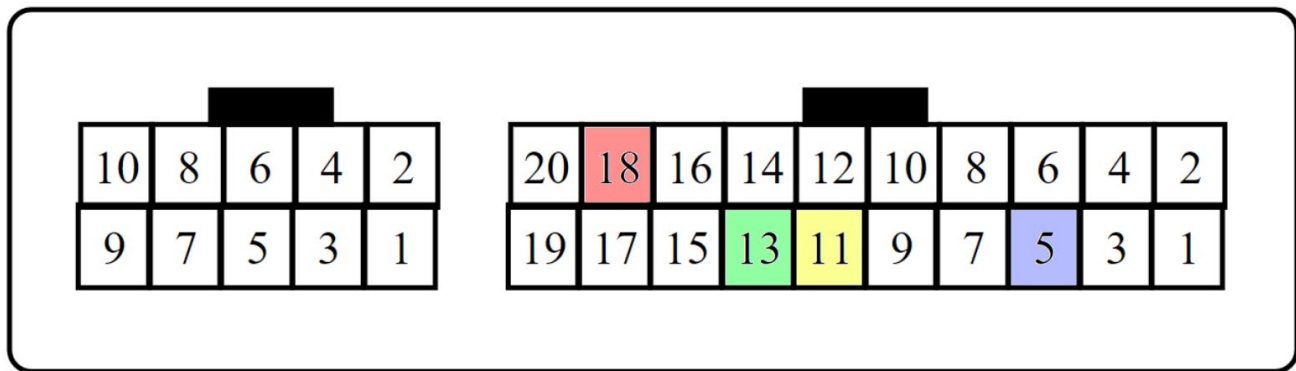


## Inputs on VG-6

- **Input 1:** Pin 18 Positive (+)
- **Input 2:** Pin 11 Positive (+)
- **Input 3:** Pin 5 Negative (-)
- **Input 4:** Pin 13 Negative (-)

## Install Notes

- Inputs are used to give the customer a notification indicating an auxiliary option they like to monitor. For example, a Cement Company wants to monitor every time their Driver unloads Cement at a job site, we can achieve this by wiring directly to the PTO's On/Off switch Light or the PTO Indicator off the PTO itself. Since this is usually Positive in polarity, we designate this to Input 1 and/or Input 2 if the customer has multiple options they want to monitor.
- Another example is if a Shipping Company wants to monitor when the rear/side door is open, we can achieve such by either tapping into an existing door harness or if there isn't one, adding a Door sensor to monitor the door itself. Since that is usually Negative in polarity, we designate this to Input 3 or Input 4.
- If for whatever reason the polarity is the opposite for the Input it's designated for, please use a Relay to reverse the polarity for its designated input.

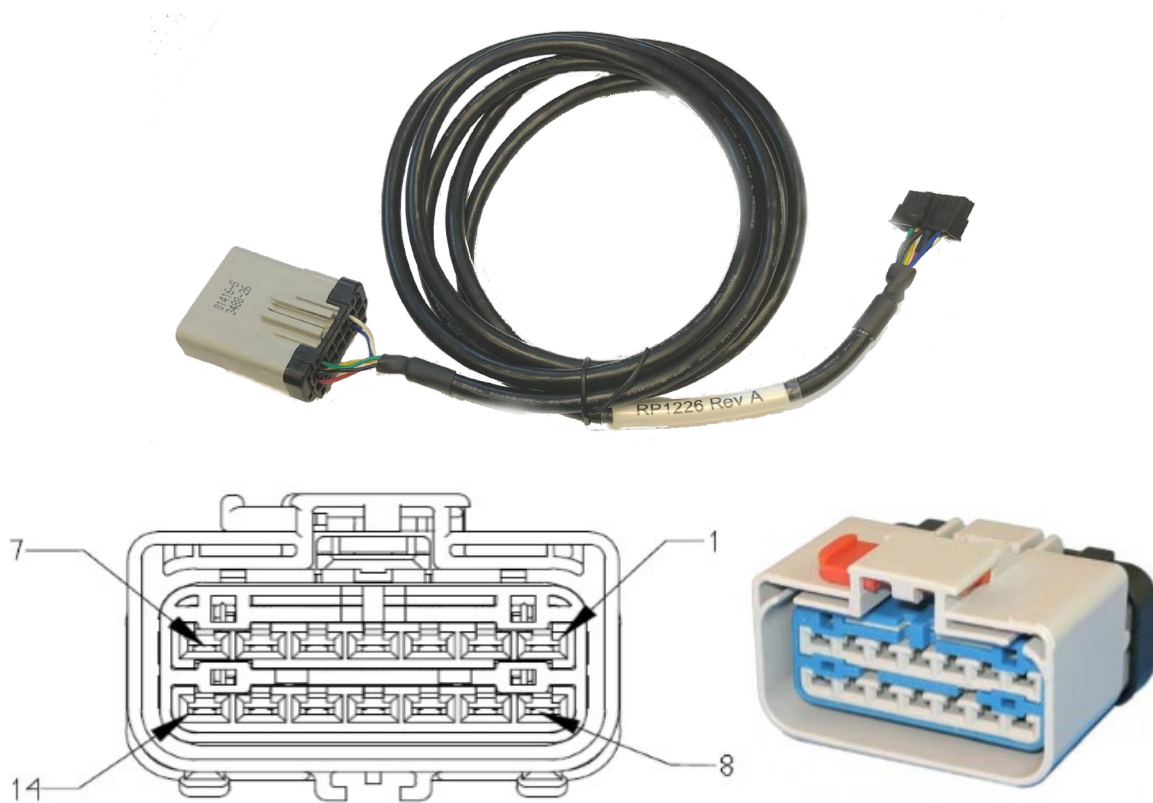


REAR VIEW

## Harness Amendment

- With Trucking Companies understanding the ever increasing use of aftermarket Telematic systems inside their vehicles, some manufactures are providing an access port for us to use exclusively to send data to our device. This port, called **RP1226**, will allow us to not interfere with the existing J1939 port in the truck that is used for Diagnostics. The following are trucks that currently allow this connection are listed below and will update periodically to reflect newer vehicles.

### 2019+ Kenworth Trucks ALL MODELS, 2020+ Freightliner Trucks ALL MODELS

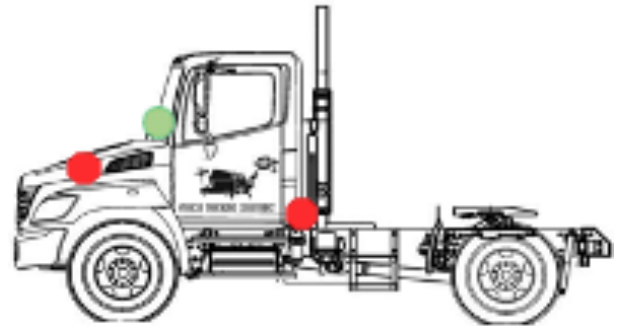
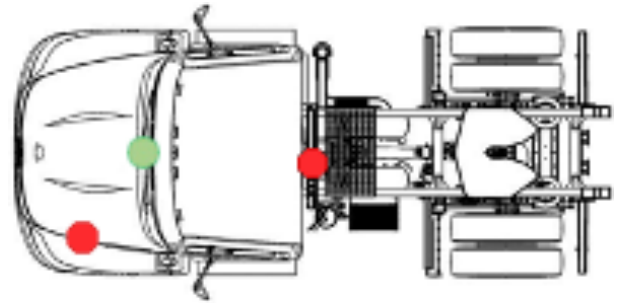


## Mounting Guidelines

- The device should be installed under the dashboard with a clear line of sight to the sky, and as close to the windshield as possible. Place the device with barcode decal "THIS SIDE TOWARDS SKY" facing up. (Reference diagram A)
- DO NOT install the unit underneath metal as the signal will not penetrate and reach the satellite.
- During the initial installation, the vehicle should ideally be outside to ensure the best GPS signal. The devices may not report a location to the satellite if it is inside a garage or other structure.
- Secure the device with Velcro, and/or zip ties to ensure it is solidly mounted to the vehicle.

## Installation Guidelines

- After securing the harness within the vehicle it is now time to power up the device.
- With the Ignition Off, Plug in the device to the Molex Connector.
- During the boot up process the device will show a Solid Green light for 30 Seconds
  - This represents the device powering up
- After the device has powered up the Green LED will start to Flash at the following Rates
  - 25 times on-off every 10 seconds when the ignition is on
  - Eight times on-off every 10 seconds when the ignition is off
- During the installation if you see a Red LED flashing please be sure to review the section on Troubleshooting
- Before finalizing installation, contact our Support Department at **(631) 670-1623** to verify the device is properly reporting to **IntelliShift**.



## 1-X Error Codes: IntelliShift-Specific Errors

- **1-1:** The device has an expired license key due to a failure to resync with the IntelliShift configuration server. Contact IntelliShift with the serial number of the device.
- **1-2:** Low supply voltage. This could be caused by a true low voltage condition (<8V) or a high impedance supply that dips in voltage when the current draw spikes due to modem transmit.
- **1-3:** Allocated data usage exhausted. Contact IntelliShift Technical Support for further instructions.

## 2-X Error Codes: Modem Related Error Codes

- **2-1:** Modem module fault. Contact IntelliShift for failure analysis and repair.
- **2-2:** No SIM inserted. Make sure the SIM drawer contains a SIM and that it is correctly seated in the socket. If it is, then contact

## Troubleshooting:

The Green and Red LEDs are intended to aid in troubleshooting installations. Below is a summary of their behavior.

### Green LED

- See Installation Guidelines.

### Red LED

- The red LED flashes two-digit codes. The first digit indicates which general area is having a problem (hardware, modem, GPS, end-end service). The second digit gives specific error information. Since there can be more than one error condition, the device rotates through the error codes (e.g. if the GPS is tracking no satellites and the modem is not registered).

IntelliShift for failure analysis and repair.

- **2-3:** No signal. Check that the cellular antenna is correctly attached. Try to substitute a known-good cellular antenna to see if the antenna may be broken. If this fixes the problem, then reinstall a new antenna. If not, then RMA the unit to IntelliShift for failure analysis and repair.
- **2-4:** Network not found. Contact IntelliShift.
- **2-5:** Last data session failed. This means that an attempt to establish a data session failed. This failure will occasionally happen in a working unit, but if the problem is persistent Contact IntelliShift.
- **2-6:** Network is not available.

### **3-X Error Codes: GPS Related Error Codes**

- **3-1:** GPS module fault: Contact IntelliShift for failure.
- **3-2:** GPS antenna fault: try replacing the GPS antenna with a known good antenna. If the condition is not corrected after 2 minutes, contact IntelliShift for failure analysis.
- **3-3:** GPS not tracking any satellites. Check that the GPS antenna has a clear, unobstructed view of the sky and has been operating for at least five minutes. Check that the GPS antenna is facing the correct way up. If the condition

persists contact IntelliShift for failure analysis.

- **3-4:** GPS no fix (less than three satellites). If the antenna only has a partial view of the sky due to the position of the vehicle (e.g. under a cover, close proximity to a building, etc.) then try to move the vehicle to ensure that it will be able to make fixes when standing in the open. If the vehicle has a full view of the sky and the error condition persists then try to reposition the GPS antenna to reduce any obstructions from its view of the sky.
- **3-5:** GPS has no time. The GPS receiver sets its internal clock from the satellite signals. If the GPS receiver has no time, then it has never seen a single satellite since the device was last power cycled.

### **4-X Error Codes: End-to-End Application Error Codes**

- **4-2:** Data transfer failed. If the condition persists then contact IntelliShift Technical Support.

**Before finalizing installation, please contact our technical support department at 631-670-1623 to have them verify the vehicle is visible in IntelliShift and is registering properly.**