INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

Advanced Fast Idle System (AFIS)

Automatic High Idle System

Overview

- Automatic or manual elevation of the vehicle's RPM up to three customizable speeds
- Setting the Park brake is not required, but is a configurable feature
- The system will automatically engage if the battery voltage drops below 12.5 volts (configurable)
- Simple plug and play connections to the OEM chassis

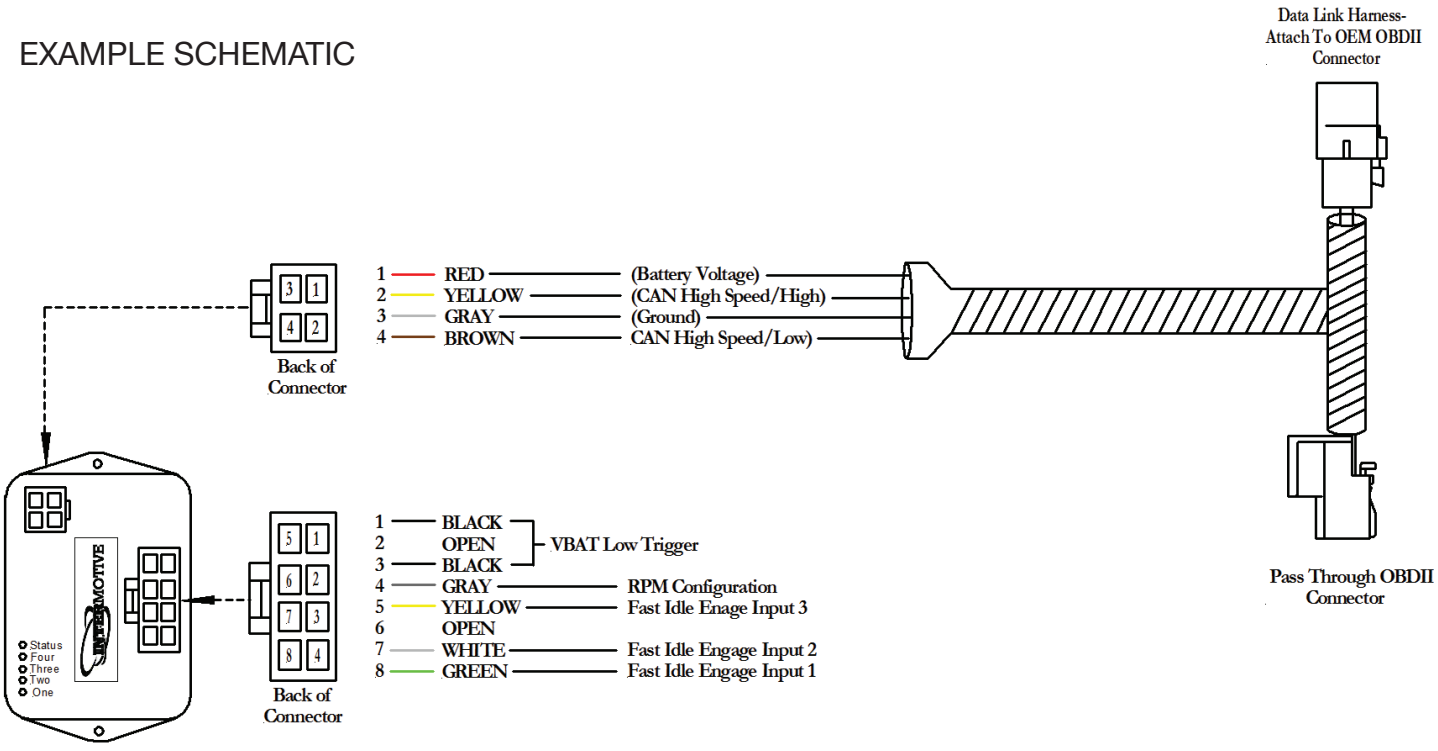
Features

- Dynamic Load Response (DLR) technology monitors engine RPM and maintains speed at all load conditions
- Includes on-board LED diagnostics
- CPU performs a self-diagnosis every time the vehicle is started
- The vehicle must be in Park for the system to engage
- High idle RPM levels are field programmable
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Details

Product features may vary by make, model or year. See instructions for complete details.

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Three
Current Draw	~ 60 mA
Quiescent Draw	~ 15 mA (sleep current)
CAN Speed	High speed
Temperature Range	-40°C to 80°C
Dimensions	3” L x 2” W x 1” H

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

Aftermarket Interface Module™

Combined High Idle with Upfitter Interface Module® Technology

Overview

- Passive CAN data acquisition
- High idle with park brake trigger (optional charge protect feature)
- Outputs can be programmed as momentary, latching, time-hold, time-delay or flashing
- Able to unlock doors via the OBDII interface
- Optional shift lock feature for theft protection locks the vehicle in Park while idling
- Simple plug and play connection for CAN data

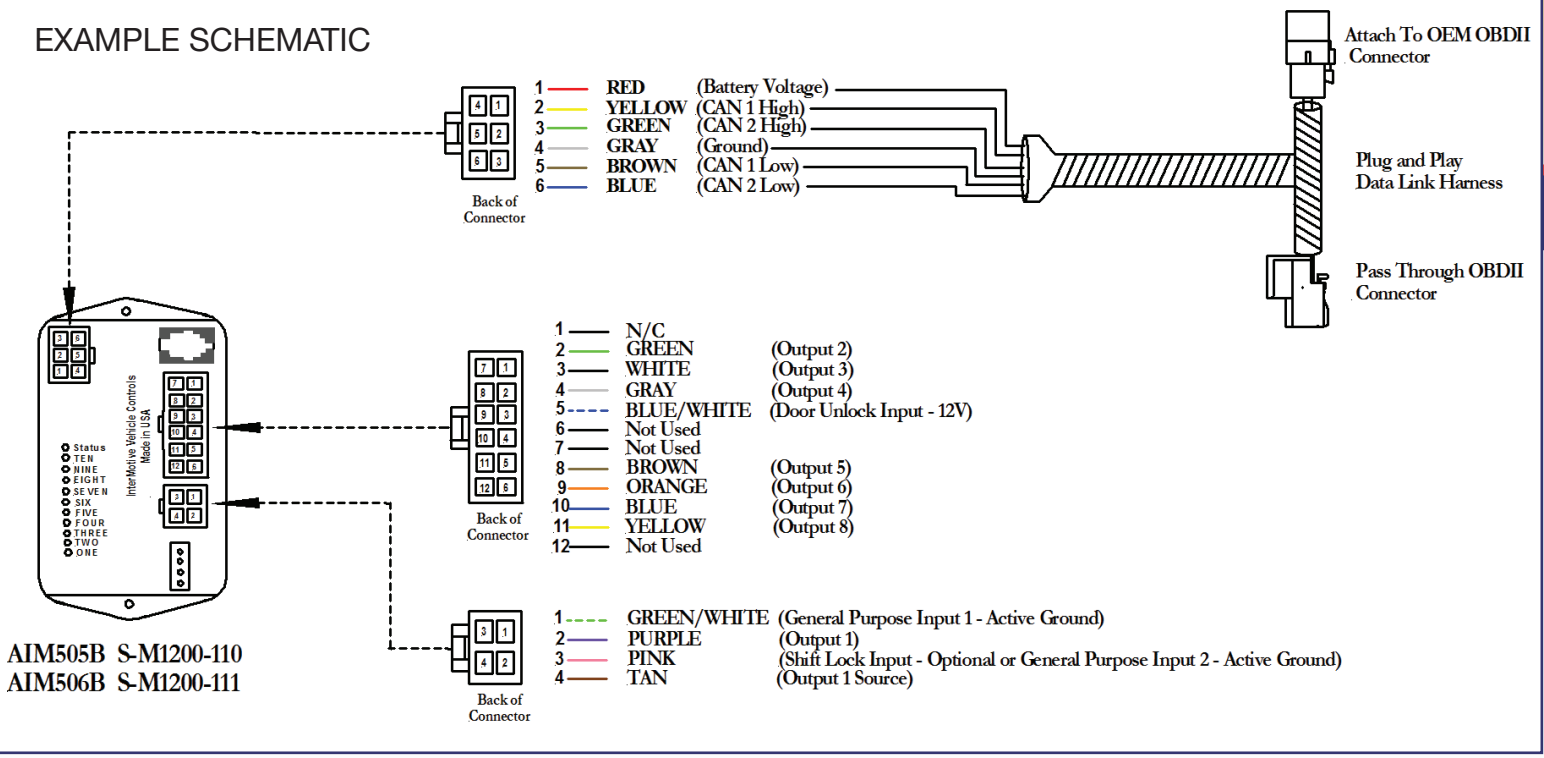
Features

- FLEXIBLE DESIGN: Saves time, cost and additional components; user interface makes programming output functions easy
- Multiple inputs can control a single output
- Eight high/low true outputs and two inputs
- Works with Ford, GM and RAM vehicle CAN, plus J1939 to provide real-time chassis data
- Warning LEDs offer easy troubleshooting
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Details

Product features may vary by make, model or year. See instructions for complete details.

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Two
Number of Outputs	Eight
Current Draw	150 mA
Quiescent Draw	< 2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

AVAILABLE DATA INCLUDES: (partial list)

- **Transmission:** Range | Fluid Temperature
- **Lights:** External Lights* | High and Low Beams | Turn Signals
- **Doors:** Lock | Unlock | Door Ajar
- **Brakes:** ABS Event | Park Brake | Service Brakes
- **Other:** Vehicle Speed | Seatbelt
- **Engine/Fuel:** Clean Tach Output | Check Engine Light (MIL)** | Coolant and Oil Temp.† | RPM | Engine Running | Ignition Switch Status | Fuel Level | Intake Air Temp. | Throttle Position | Vbat | VSS (2.2 Hz/mph)

* Daytime running lights only work with Ford vehicles
** Check Engine Light Output does not work with RAM vehicles
† Oil Temperature only works with Ford vehicles

REV_AE
U.S. Patent #9,469,261

INTERMOTIVE VEHICLE CONTROLS

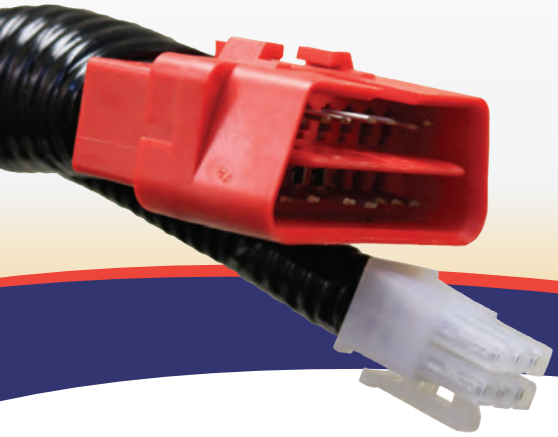
An ISO 9001:2015 Registered Company

Camera Controller Module

Vehicle Camera System

Overview

- Activates up to three cameras by providing three outputs to trigger system (left and right turn, and Reverse)
- Simple plug and play connections; no cutting of factory wires
- Reduces labor and warranty costs



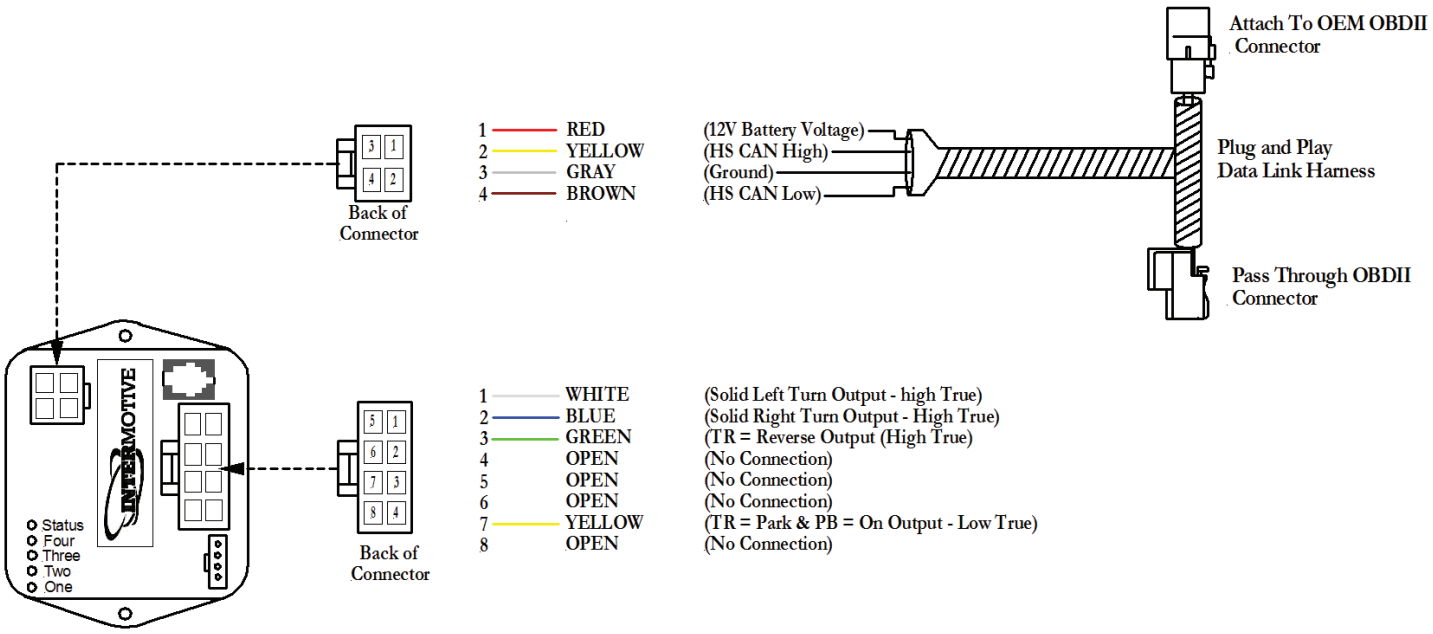
Features

- Enhances vehicle safety by expanding viewing area
- Cameras are continuously enabled when the turn signals are activated or when the transmission is in Reverse
- Provides additional safety interlock output that can be used for slide out or other vehicle function
- Built-in self diagnostics
- Perfect for vehicles with limited lines of sight including buses, work trucks and RVs
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Details

Product features may vary by make, model or year. See instructions for complete details.

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	0
Number of Outputs	Four (three high true outputs and one low true output)
Current Draw	~60 mA
Quiescent Draw	~2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	3” L x 2” W x 1” H

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

CAN Vehicle Controller

HVAC Control System

Overview

- Allows for separate controls for chassis and coach HVAC systems
- Designed specifically for Ford Super Duty ambulance application
- Meets Ford QVM (Qualified Vehicle Modifier) Q195 requirements
- Simple plug and play connections

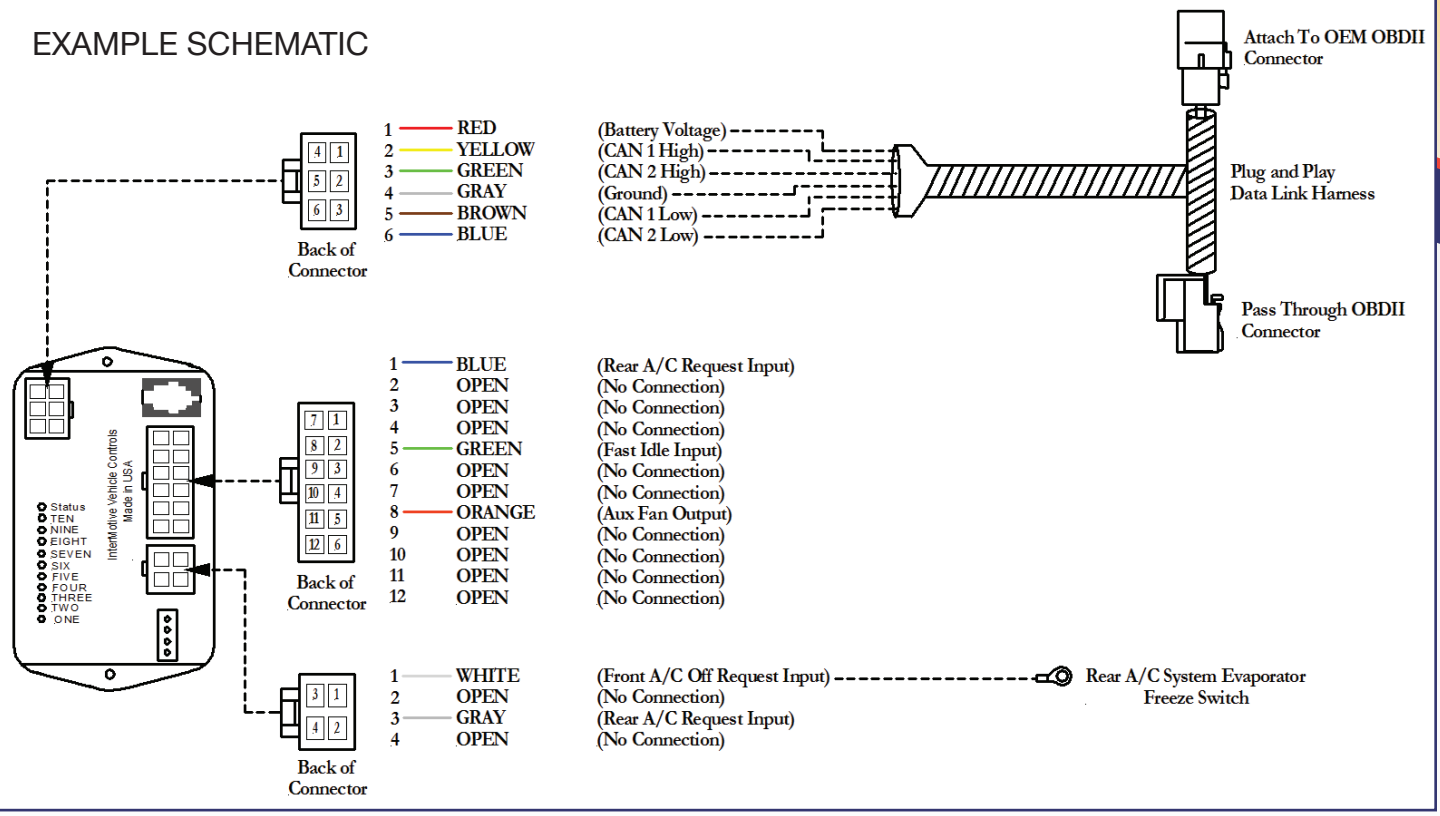
Features

- Optional high idle control
- Low VBAT charge protection
- Provides an auxiliary fan control output
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Four (three active low and one active high)
Number of Outputs	One (Aux fan output)
Current Draw	~60 mA
Quiescent Draw	~2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

REV_AD
U.S. Patent #9,469,261

Door Lock Module

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

Door Lock Module

Complete Chassis Security

Overview

- Provides the ability to lock/unlock all doors using a hidden switch, keypad or OEM fob to secure doors remotely
- Controls locks for both the cab and patient compartment
- Specifically designed for Ford Super Duty chassis

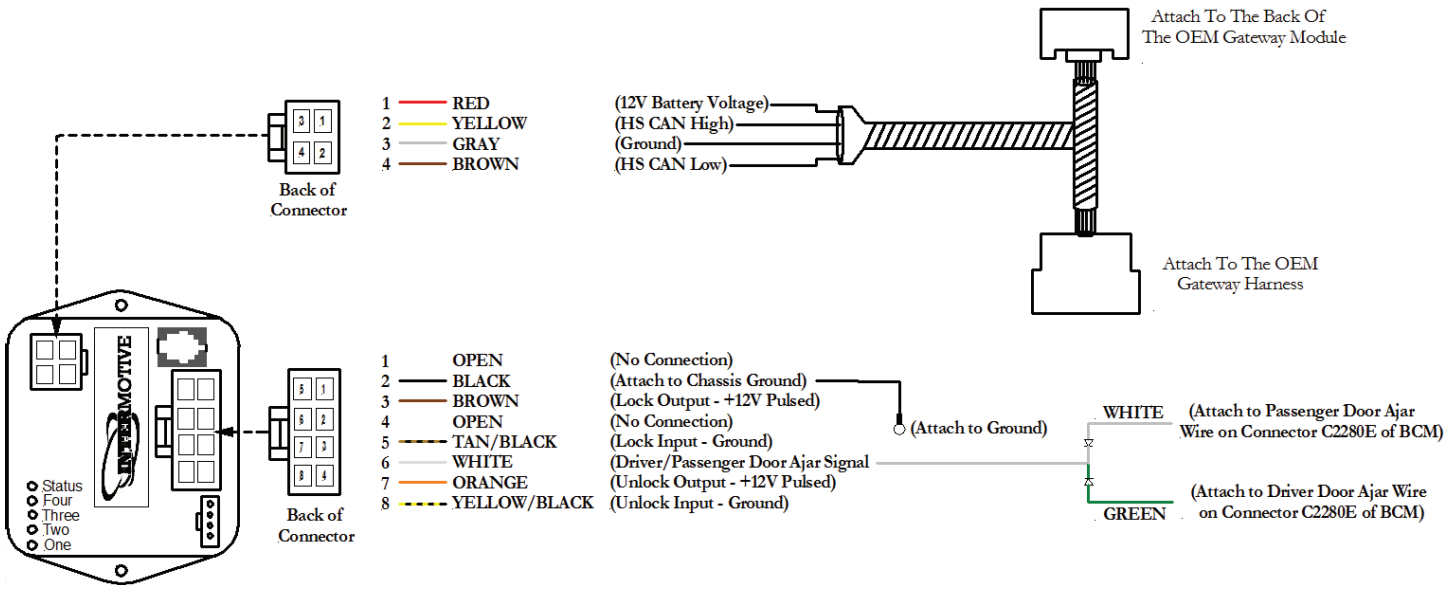
Features

- Module works on both OEM and aftermarket doors to lock complete chassis
- Triggers locks with ignition either on or off
- Requires minimal connections to OEM wiring
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Two active low inputs (lock and unlock)
Number of Outputs	Two active high outputs (lock and unlock)
Current Draw	40 mA
Quiescent Draw	1.2 mA (sleep current)
CAN Speed	High speed
Temperature Range	-40°C to 80°C
Dimensions	3” L x 2” W x 1” H

EcoStar

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

EcoStar™

Idle Reduction System

Overview

- Automatically turns the engine off and on when specific conditions are met to prevent continuous idling
- Configurable to custom conditions
- Helps meet anti-idling regulations
- Simple plug and play connections

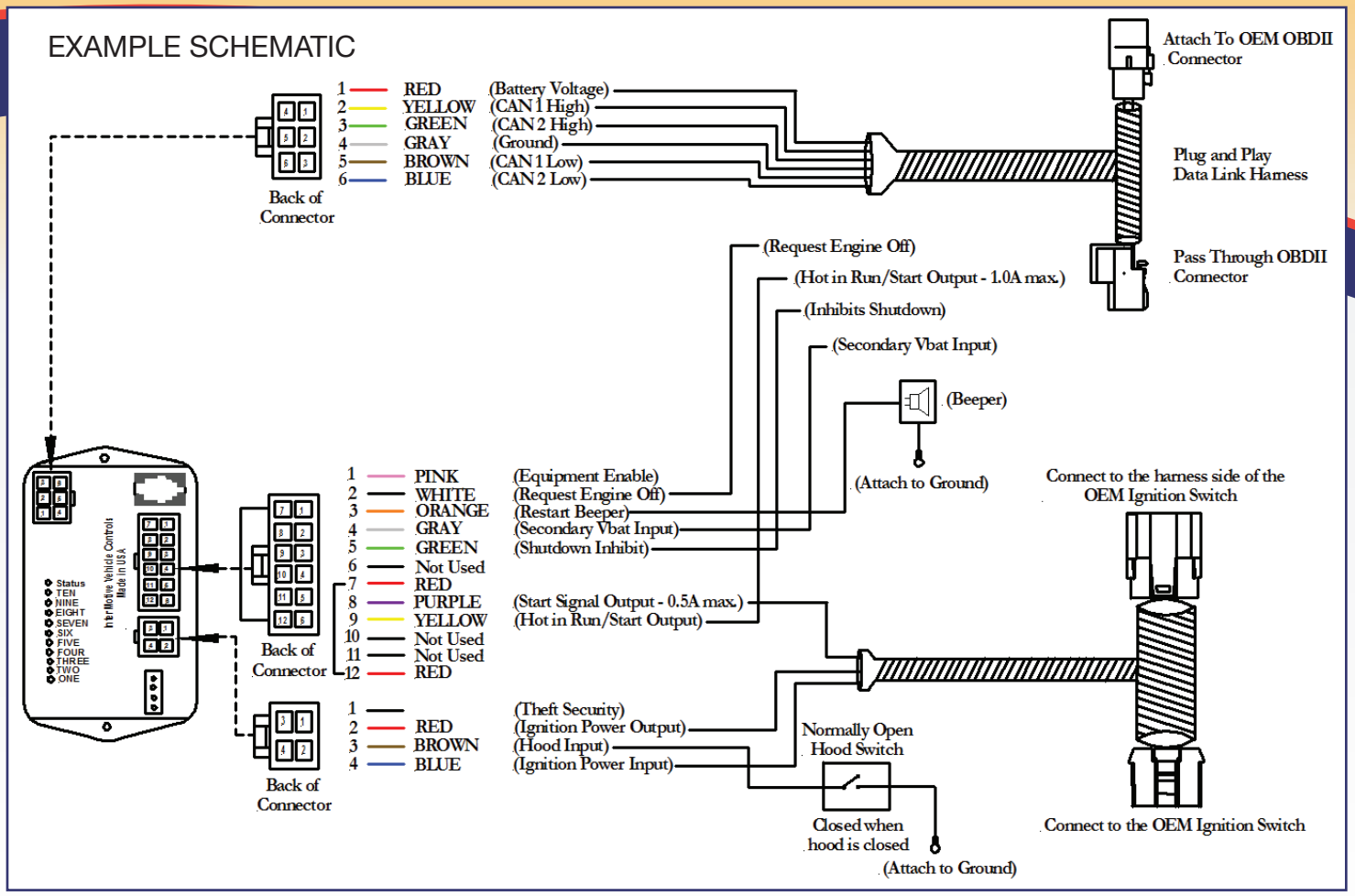
Ignition switch "T" harness shown

Features

- FUEL SAVINGS: Cuts idling fuel consumption nearly in half; pays for itself in a short period of time
- ECO-FRIENDLY: Reduces carbon dioxide emissions and saves 19 lbs per gallon burned while idling
- System leaves battery power on to operate lights, radio and auxiliary equipment
- Thermostat regulation option available to keep interior temperature comfortable for personnel or temperature-sensitive equipment
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details



SPECIFICATIONS

Number of Inputs	Four active low inputs, one analog input
Number of Outputs	Two active high outputs
Current Draw	60-120 mA
Quiescent Draw	< 2 mA (sleep current)
CAN Speed	High speed and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

REV_AE
U.S. Patent Pending

EcoStar III

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

EcoStar™ III

Idle Reduction System with Key In/Out

Overview

- Automatically turns the engine off and on when specific conditions are met
- Configurable to custom conditions via Bluetooth and a free mobile app
- System works with the key in or out of the ignition*; keeps vehicle secure with the key out and transmission locked in Park
- Simple plug and play connections

Custom gateway connector shown

Features

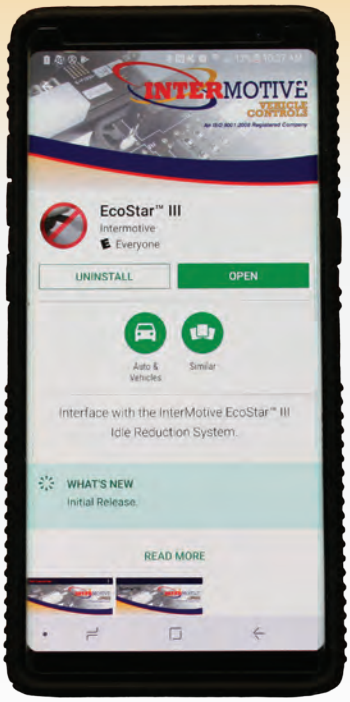
- Optimizes fuel economy; may cut idle time by as much as 50 percent
- Reduces engine wear caused by idling
- Lowers harmful carbon dioxide emissions and helps meet anti-idling regulations
- Uses Bluetooth and a mobile app to program module settings and pull data for tracking idle time reduction and fuel savings
- Thermostat regulation option available to keep interior temperature comfortable for personnel or temperature-sensitive equipment
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

**Ford Transit vehicles with PATS (Passive Anti Theft Systems) will need to install a security bypass system for key-out operation to function. See instructions for details.*

Visuals

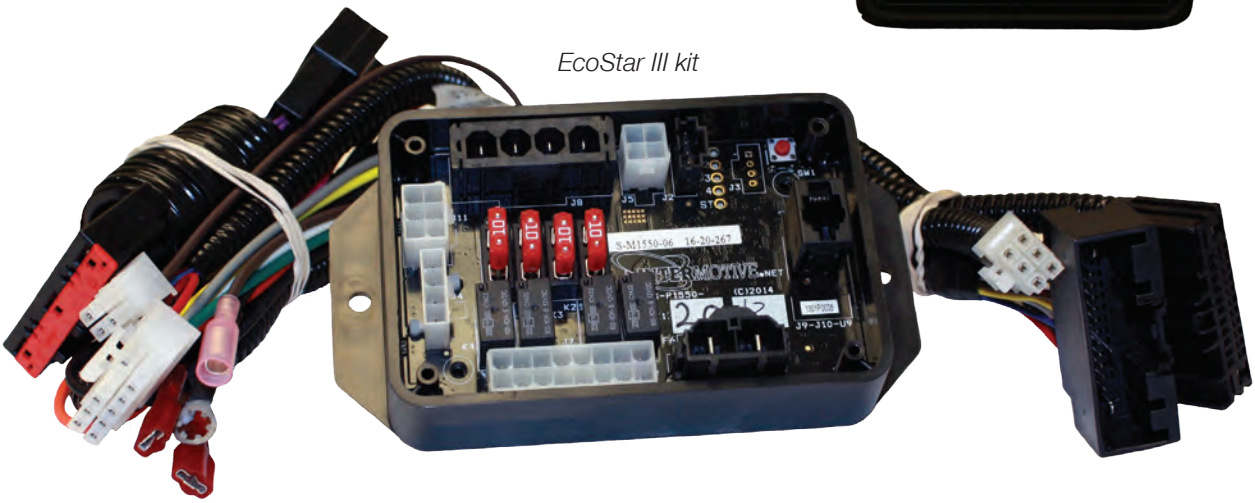
Watch EcoStar III in action

Product features may vary by make, model or year. See instructions for complete details.



Sample mobile app screenshots

EcoStar III kit



REV_AD
U.S. Patent Pending

INTERMOTIVE VEHICLE CONTROLS

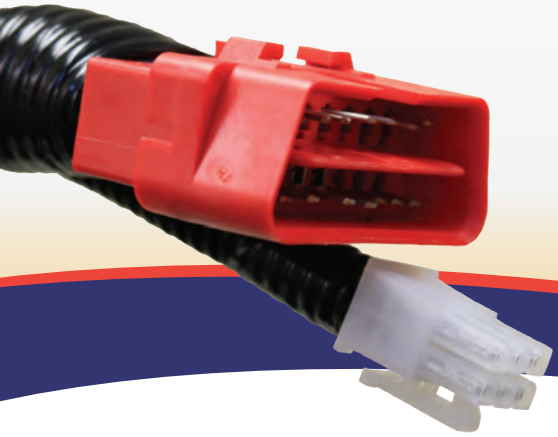
An ISO 9001:2015 Registered Company

Emergency Door Module

Ensures Door Safety and Operation

Overview

- Prevents the vehicle from being started unless the emergency exit door (or window) is closed and unlocked
- Inexpensive safety enhancement solution for state requirements



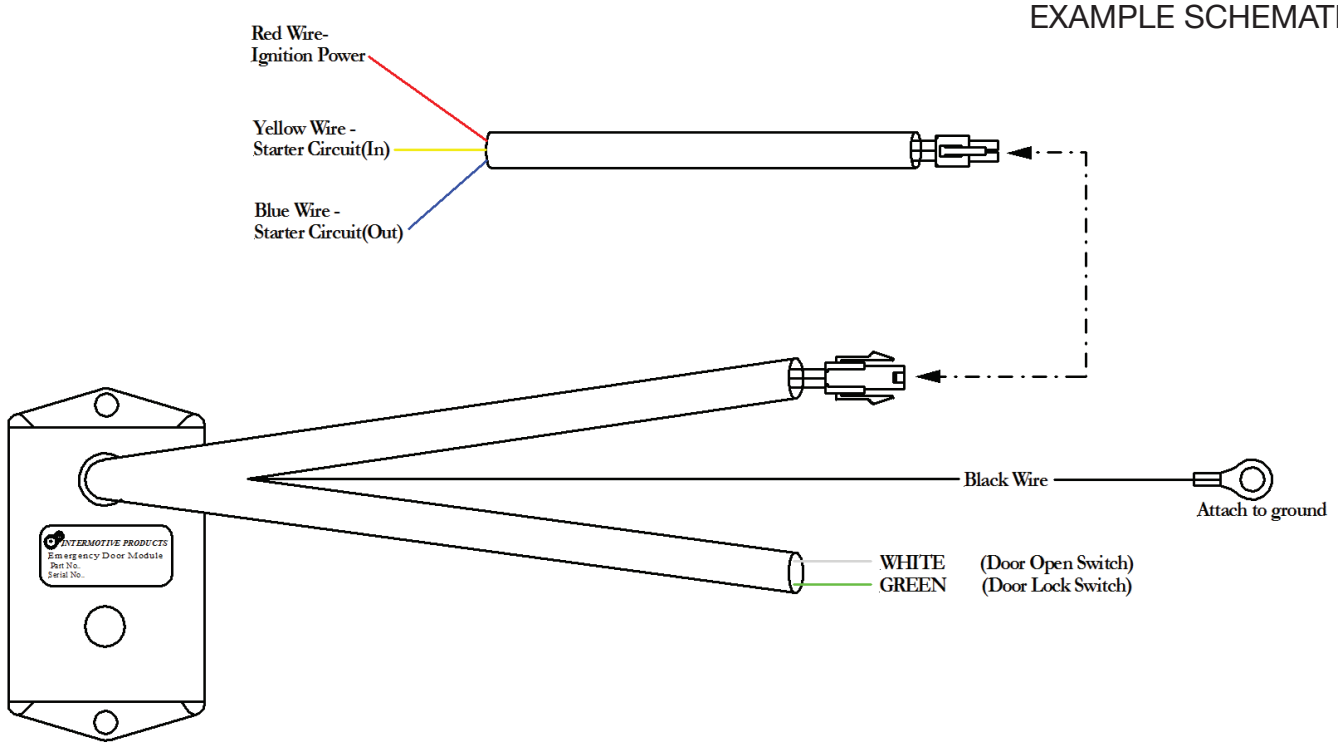
Features

- Provides an audible alert to warn the driver if the emergency door is open and the engine is running
- Works in conjunction with electronics already in the vehicle
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS	
Number of Inputs	Five inputs (ajar switch, lock switch, ignition switch, power and ground)
Number of Outputs	One output
Current Draw	<100 mA
Quiescent Draw	<1 mA (sleep current)
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1.5” H

Engine Monitoring & Shutdown System

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

Engine Monitoring & Shutdown System

Automated Powertrain Protection

Overview

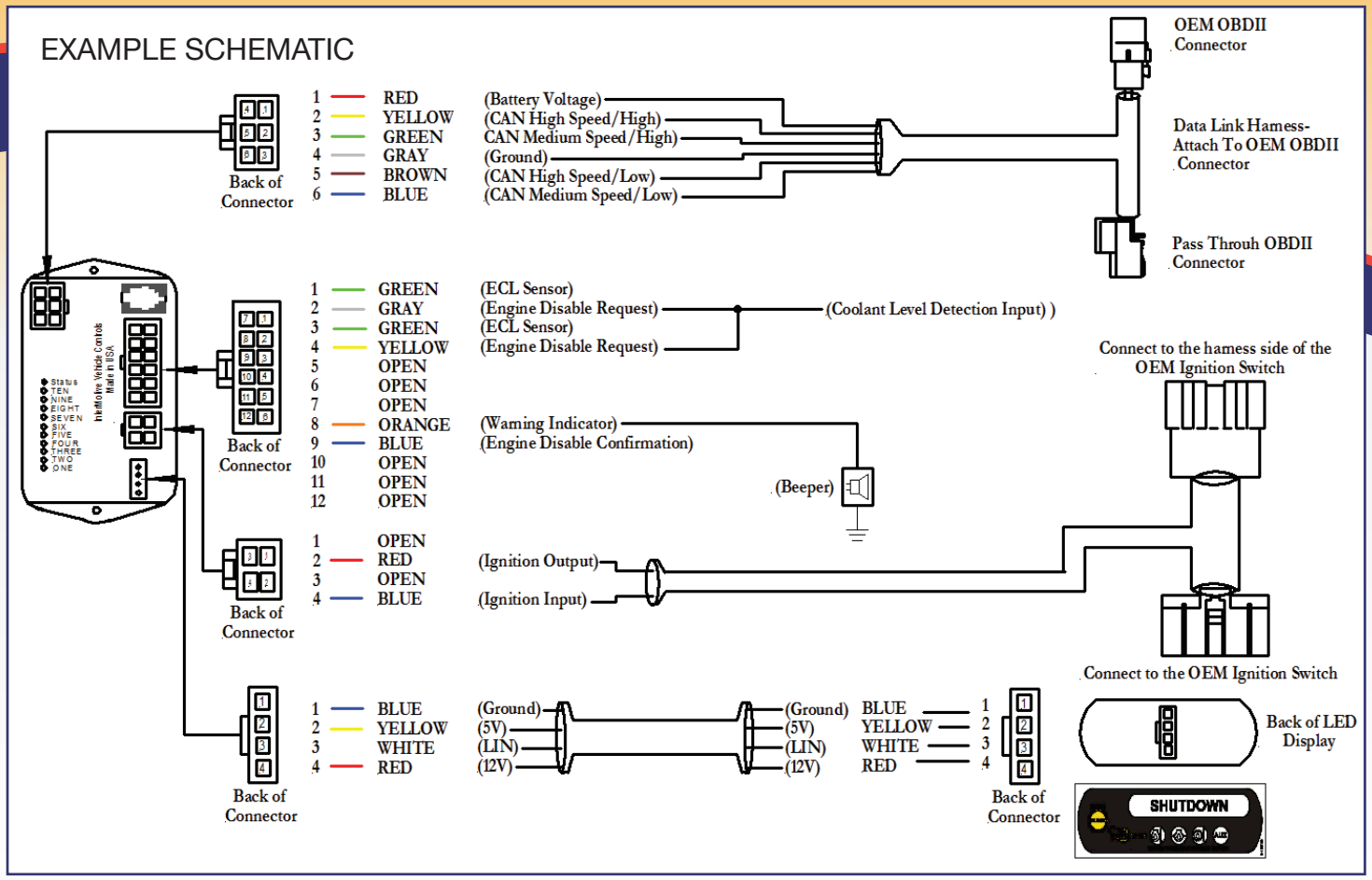
- Monitors specific powertrain conditions and initiates a warning and engine shutdown sequence if parameters are exceeded
- Once the vehicle is stopped, the ignition power and fuel pump are automatically disabled to prevent engine and transmission damage
- Reduces catastrophic powertrain failures, which could lead to expensive repairs
- Simple plug and play connections for CAN data

Features

- The system will not shut the engine off if the vehicle is in motion
- DUAL ALERTS: Audible and visual warnings with a dash-mounted LED panel
- Designed to work in conjunction with a fire suppression system
- HISTORICAL EVENT TRACKING: The system records the shutdown event and activation trigger, up to 10 events
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Details

Product features may vary by make, model or year. See instructions for complete details.



SPECIFICATIONS	
Number of Inputs	Two engine disable request inputs (12V and ground) and one analog engine coolant level input
Number of Outputs	One engine disable confirmation (12V) and one warning indicator (12V)
Current Draw	60-120 mA
Quiescent Draw	~ 2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

FlexTech

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

FlexTech™

Programmable Electrical System

Overview

- Foundation of the system is a Programmable Relay Power Center
- Can add optional modules to create an entire custom control system
- Connects electronic modules through the overall vehicle network, reducing the need for wiring
- Uses real-time chassis data to control loads
- Simple plug and play connections to the OEM chassis

Features

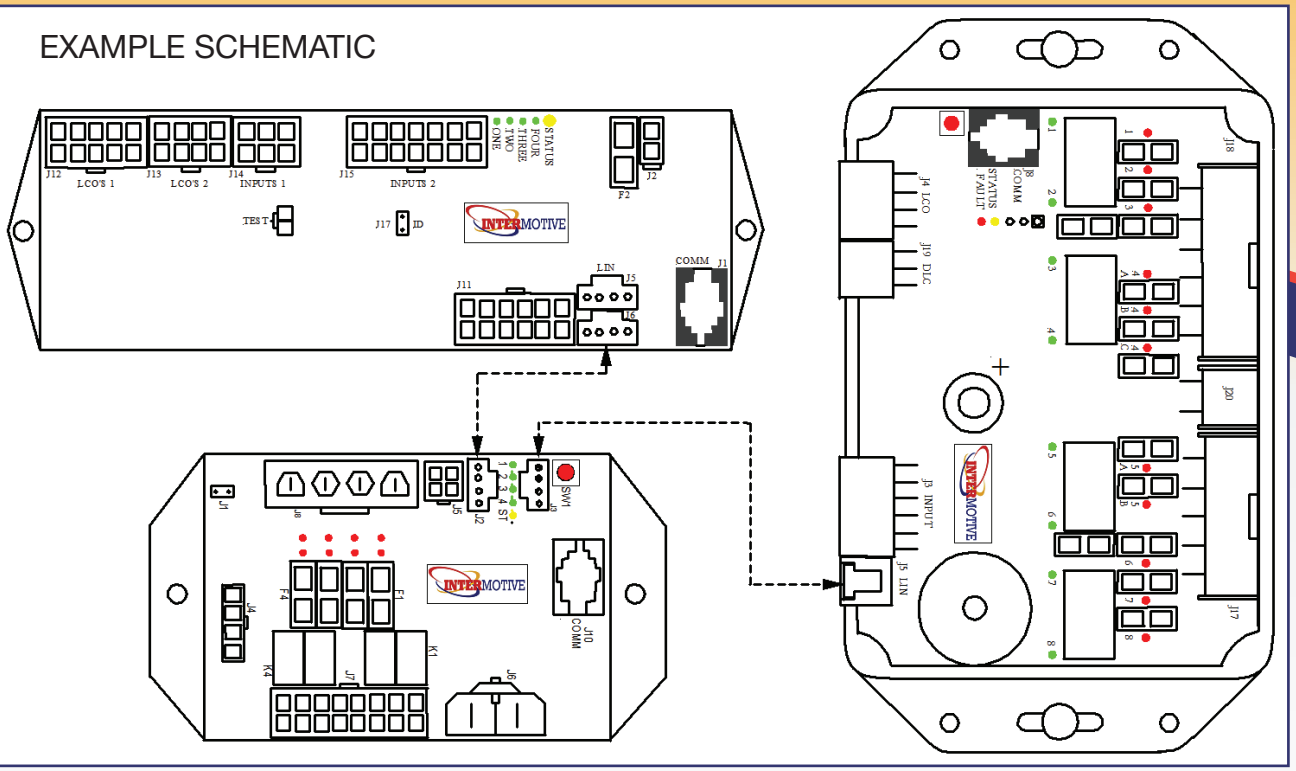
- Centralizes and improves diagnostic capabilities; eliminates the need for timers, flashers, latching relays and multi-relay logic
- Access to InterMotive's graphical interface allows for customization of the entire system
- Communicates with Ford and Chevy CAN as well as J1939
- Warning LEDs offer easy troubleshooting
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Watch FlexTech in action

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



COMPONENTS

Programmable Relay Power Board (PRPC)

- Eight programmable relay power outputs
- Ten separate digital inputs
- Eight programmable low-current outputs: Seven sourcing (0.5 A), one sinking (0.5 A)
- Outputs can be configured as momentary, latching, flashing or timed
- Easy diagnostics with LED indicators
- Programmable audible patterns for multiple uses

Expansion Board (Optional)

- Four 10 A relay fused outputs
- Four 1 A low-current outputs
- Four active low outputs
- Loads controlled by the PRPC

Switch Backer Board (Optional)

- Controls system inputs and outputs
- Eight switches and eight light outputs
- Two switch backer boards can be used together
- Six outputs: Two 1 A and four 0.5 A
- Compatible with any brand of switches

Other Module Options

- Gateway: Compliant FMVSS 403/404 wheelchair interlock and high idle system
- Advanced Fast Idle System (AFIS): Adjustable system with battery charge protection and optional air conditioning auto trigger
- BrakeMax: Tow haul mode for reduced brake wear

REV_AD
U.S. Patent #9,469,261

Gateway

INTERMOTIVE VEHICLE CONTROLS

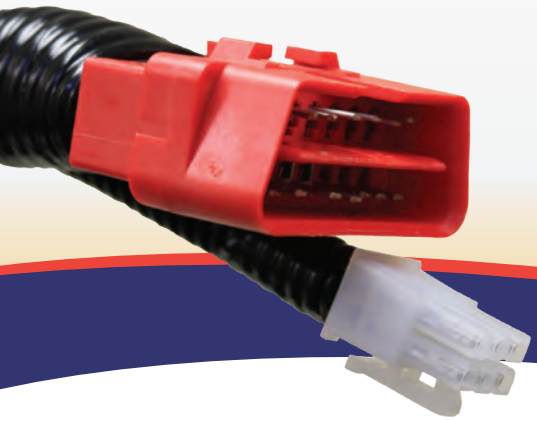
An ISO 9001:2015 Registered Company

Gateway

High Idle and Shift Interlock System

Overview

- All-in-one wheelchair interlock and high idle system to ensure full functionality of the vehicle's systems while using the lift
- Provides battery charge protection and improves air conditioning performance
- System is fully compliant with FMVSS 403/404 and the Americans with Disabilities Act (ADA) for wheelchair lift interlocks
- Simple plug and play connections to the OEM chassis



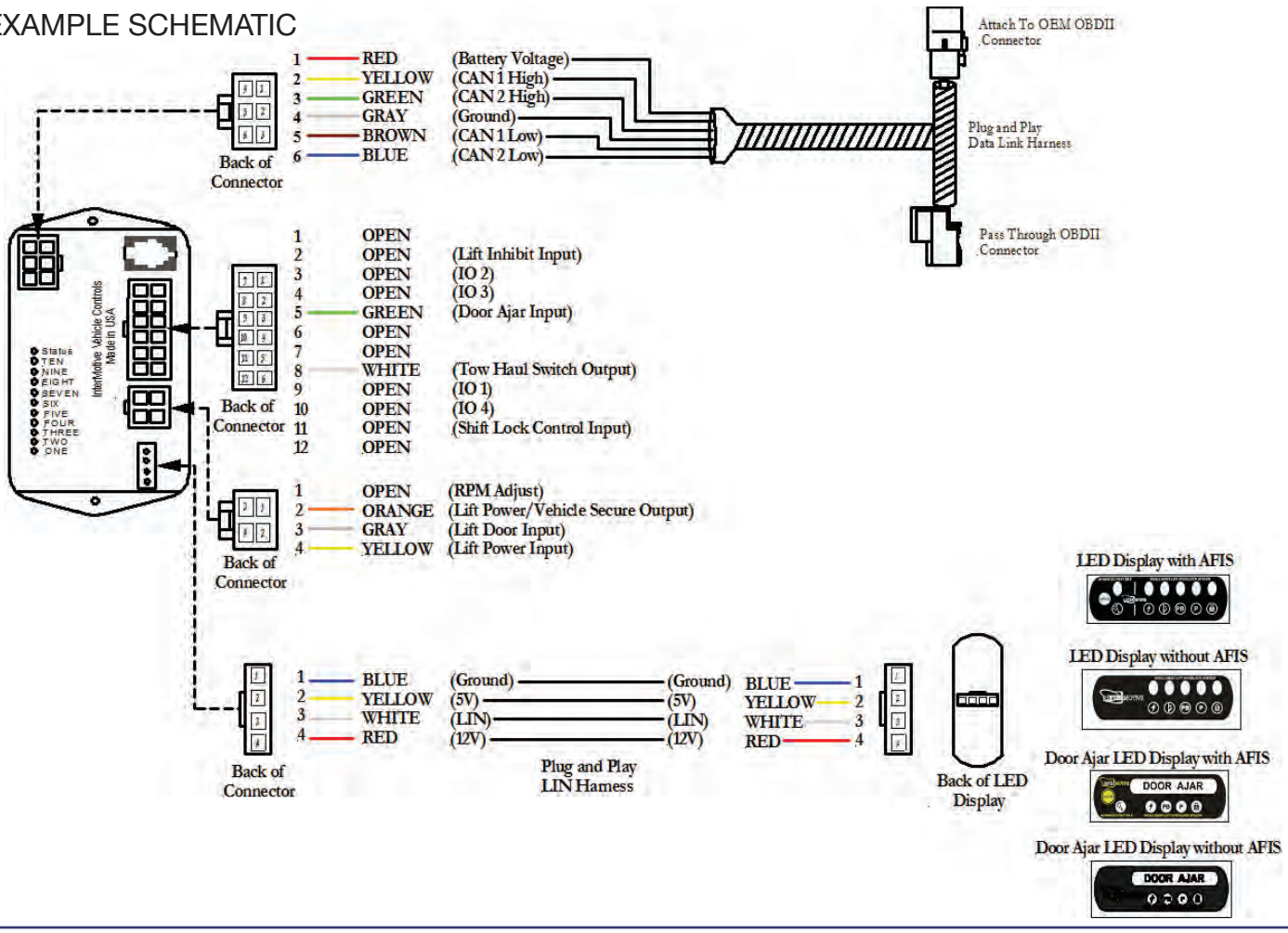
Features

- Prevents vehicle movement while the lift is in use by locking the shifter in Park
- Monitors OEM sensor inputs from the transmission, engine, charging system and ambient air temperature
- Programmable RPM for high idle
- Prevents driving with the park brake set
- Can provide real-time chassis data
- Diagnostic trouble codes available
- Uses Intermittent Fault Filter™ (IFF) technology to eliminate erroneous lift door signals

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS	
Number of Inputs	Five inputs (lift inhibit, door ajar, shift lock, lift door and RPM adjust)
Number of Outputs	Four configurable outputs, plus one lift power/vehicle secure output and one tow haul switch output
Current Draw	~120 mA
Quiescent Draw	~2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

REV_AC
U.S. Patent #9,469,261

Hawkeye

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

Hawkeye™

Front/Rear Object Detection System with Camera Option

Overview

- Alerts the driver with both visual and audible warnings of an object in the front or rear of the vehicle
- Displays distance and location of the object being detected
- Contains up to eight ultrasonic sensors mounted in the front and rear bumpers
- Available with or without camera/LCD display
- Provides multiple viewing options with coinciding quadrants on the LCD display
- Interfaces with the vehicle's CAN network to read chassis signals for automatic activation

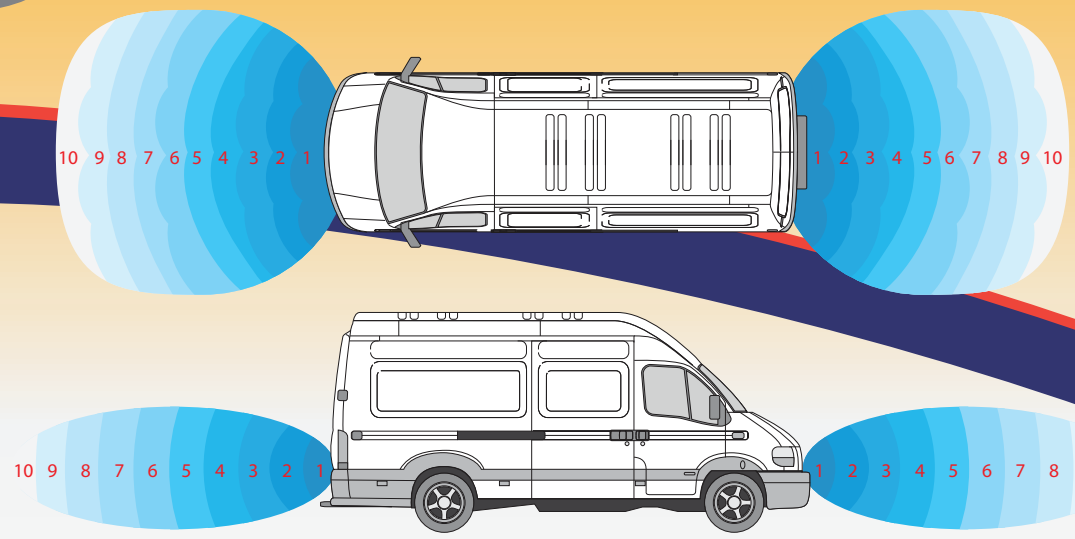
Features

- System automatically activates when the vehicle is stopped (foot on brake and transmission in Drive) or when in Reverse
- Object detection distance range is 4 to 10 feet based on the density of the object
- Audible rate pulses more rapidly as the object gets closer
- Camera can be manually activated at any time
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Camera and LCD display option

Details

Product features may vary by make, model or year. See instructions for complete details.



CAMERA SPECIFICATIONS

Resolution	>480 TVL | 270,000 pixels
Viewing Angle	120 degrees (results may vary depending on installation)
Insulation Resistance (IR)	18 high output IR LEDs, 30’ range
Microphone	Integrated SNR (sensor dynamic range) greater than 48 dB
Operating Temperature	-25°C to 70°C
Dimensions	3” L x 2.5” W x 2” H (with adjustable mounting bracket)

LCD DISPLAY SPECIFICATIONS

Display | Screen Ratio	Color, 480x320 | 16:9
Camera Inputs	Up to four (left, right, front, rear)
Screen Dim	Night/Day button
Speaker	Built in, 8Ω impedance
Operating Temperature	-20°C to 65°C
Dimensions	7” L x 5” W x 1” H (with adjustable mounting bracket)

HighLock

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

HighLock

High Idle and Shift Interlock System

Overview

- All-in-one wheelchair interlock and high idle system to ensure full functionality of the vehicle's systems while using the lift
- Provides battery charge protection and improves air conditioning performance
- System is fully compliant with FMVSS 403/404 and the Americans with Disabilities Act (ADA) for wheelchair lift interlocks
- Simple plug and play connections to the OEM chassis

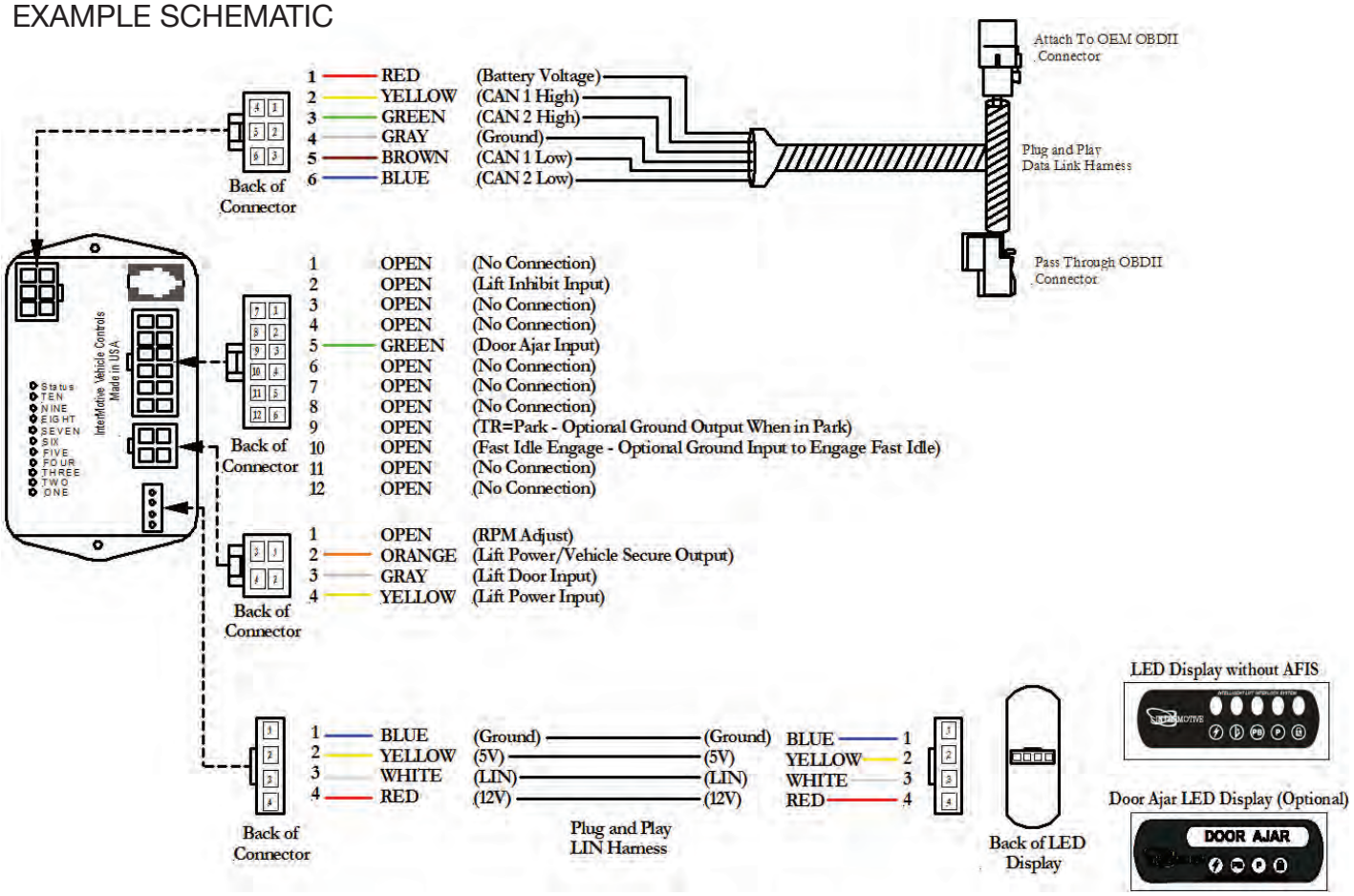
Features

- Prevents vehicle movement while the lift is in use by locking the shifter in Park
- Monitors OEM sensor inputs from the transmission, engine, charging system and ambient air temperature
- Automatic high idle
- Prevents driving with the parking brake set
- Diagnostic trouble codes available
- Uses Intermittent Fault Filter™ (IFF) technology to eliminate erroneous lift door signals
- Dash-mounted LED display panel

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS	
Number of Inputs	Five inputs (lift inhibit, door ajar, lift door, fast idle and RPM adjust)
Number of Outputs	Two outputs (Park and lift power/vehicle secure)
Current Draw	~120 mA
Quiescent Draw	~2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

REV_AC
U.S. Patent #6,594,565

IdleLock

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

IdleLock™

Secure Idling with Key Removed

Overview

- Theft prevention system that allows the vehicle to idle with the key removed from the ignition and the transmission locked in Park
- Activated by pressing an enable switch and removing the key; inserting the key and turning it to run restores normal operation
- Simple plug and play connections
- Easy to install; no cutting of factory wires

Ignition switch "T" harness shown

Features

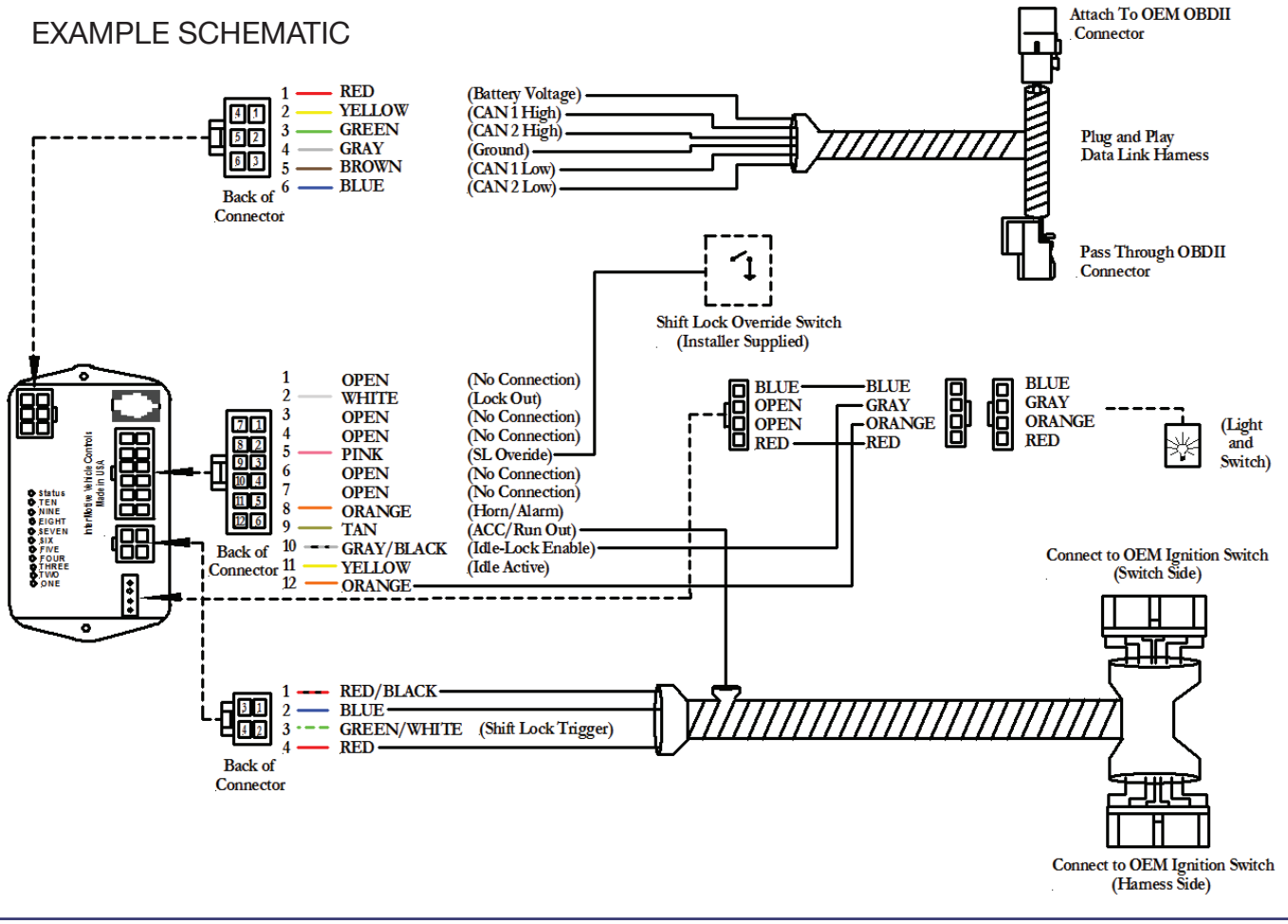
- SAFE: Walk away from your idling vehicle with confidence that everything is safely locked
- FULL FUNCTIONALITY: All lights, equipment and HVAC are still fully functional while engaged
- SECURE: The engine shuts off if an attempt is made to shift out of Park without the key in the ignition
- Also provides a shift lock that can be used as an interlock for the rear door, or to secure the trunk or weapons rack for law enforcement vehicles
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

Watch IdleLock in action

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Three active inputs (one high, two low)
Number of Outputs	Three active outputs (two high, one low)
Current Draw	120 mA
Quiescent Draw	< 2 mA (sleep current)
Temperature Range	-40°C to 80°C
Dimensions	3” L x 2” W x 1” H

REV_AH
U.S. Patent Pending

ILISC: Intelligent Lift Interlock Sytem

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

Intelligent Lift Interlock System™

ILISC: Shift Interlock for Manual Doors

Overview

- Prevents the vehicle from shifting out of Park if the wheelchair lift or ramp is in use or until properly stowed
- Prohibits lift operation unless the vehicle is in a secure state
- System is fully compliant with FMVSS 403/404 and the Americans with Disabilities Act (ADA) for wheelchair lift interlocks
- Simple plug and play connections to the OEM chassis

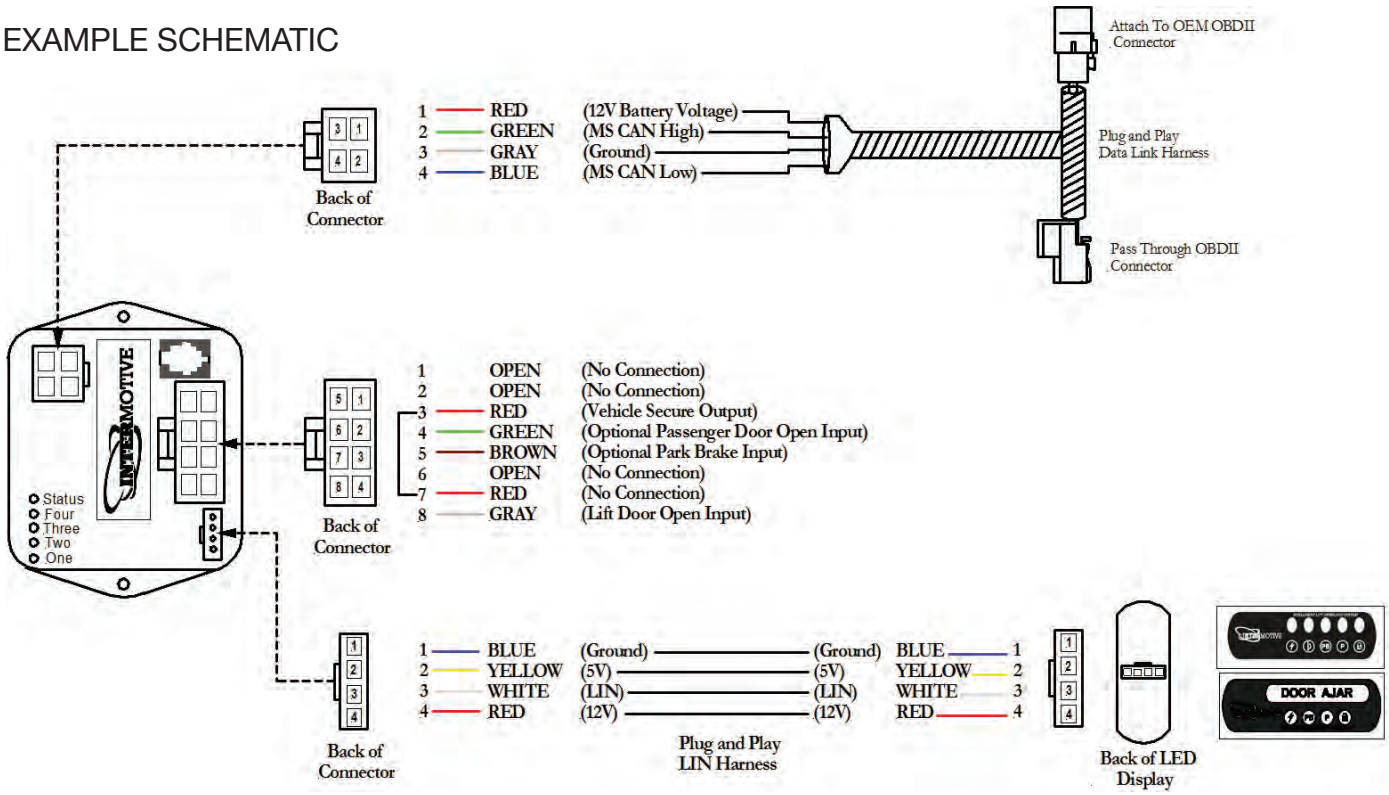
Features

- Dash-mounted LED display panel provides system status
- Allows the lift to be operated from outside with the engine off
- Optional vehicle lockdown while passenger door is open
- Uses Intermittent Fault Filter™ (IFF) technology to eliminate erroneous lift door signals

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS	
Number of Inputs	Three active low (lift door open, Park Brake and passenger door open)
Number of Outputs	Two high/low (vehicle secure and shift lock)
Current Draw	70 mA
Quiescent Draw	3 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	3” L x 2” W x 1” H

REV_AC
U.S. Patent #9,469,261

INTERMOTIVE VEHICLE CONTROLS

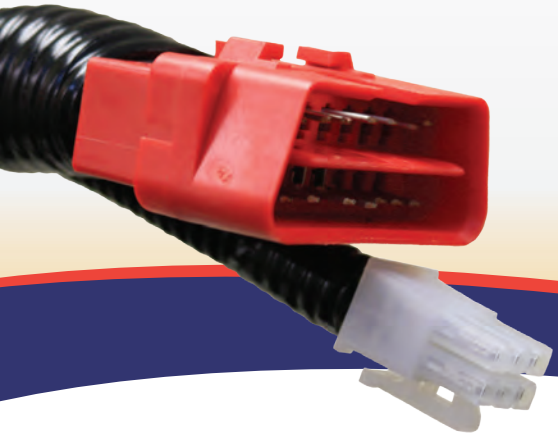
An ISO 9001:2015 Registered Company

Intelligent Switch Module

Configurable Steering Wheel Buttons

Overview

- Allows for custom programming of the AUX or radio buttons on the steering wheel
- Increases the functionality of the vehicle
- Simple plug and play connections

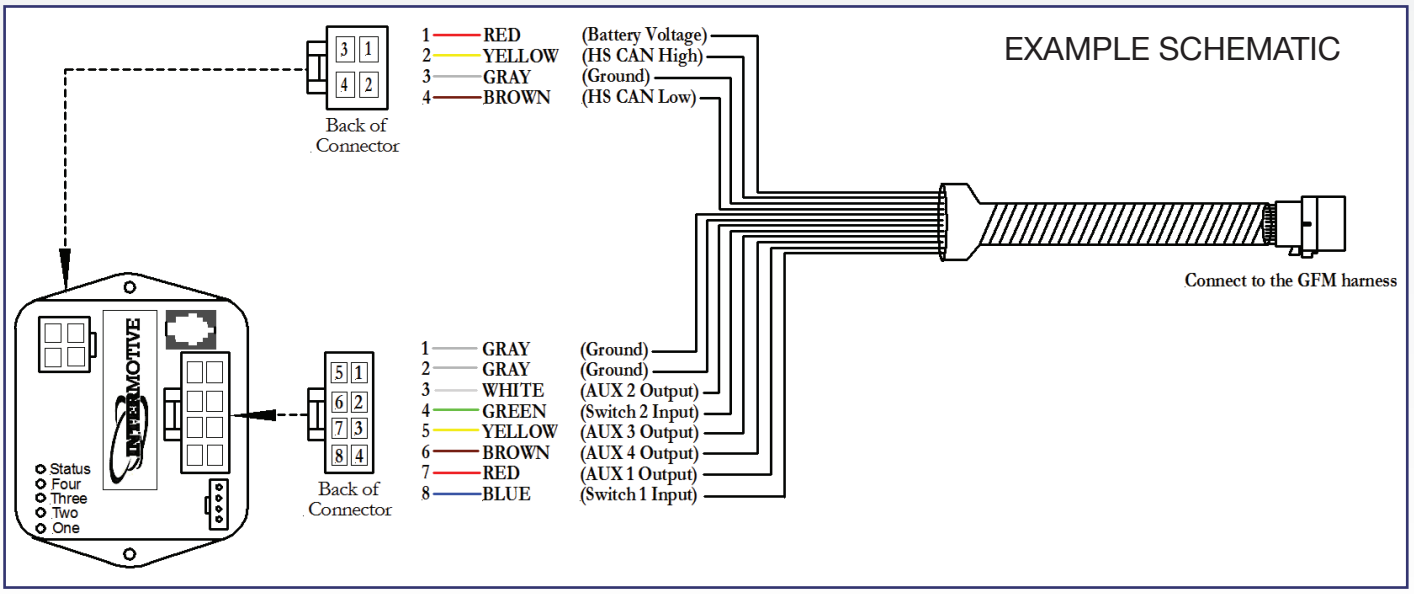


Features

- Configurable for multiple functions as latching, momentary, radio or timed
- Can be used to activate lights, sirens, spotlights and push-to-talk radio
- Also activates installed features such as Surveillance Mode, Blackout Mode and other InterMotive products
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details



SPECIFICATIONS

Number of Outputs	Four outputs (two power or ground and two ground)
Current Draw	~60 mA
Quiescent Draw	~15 mA (sleep current)
CAN Speed	High speed
Temperature Range	-40°C to 80°C
Dimensions	3” L x 2” W x 1” H

Idle Timer Controller

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Idle Timer Controller

Idling Engine Shutdown System

Overview

- Programmable automatic engine shutdown after a set period of time in Park
- Easy to override if equipment is in use
- Simple plug and play connections
- ECO-FRIENDLY: Helps meet state and local anti-idling laws

Features

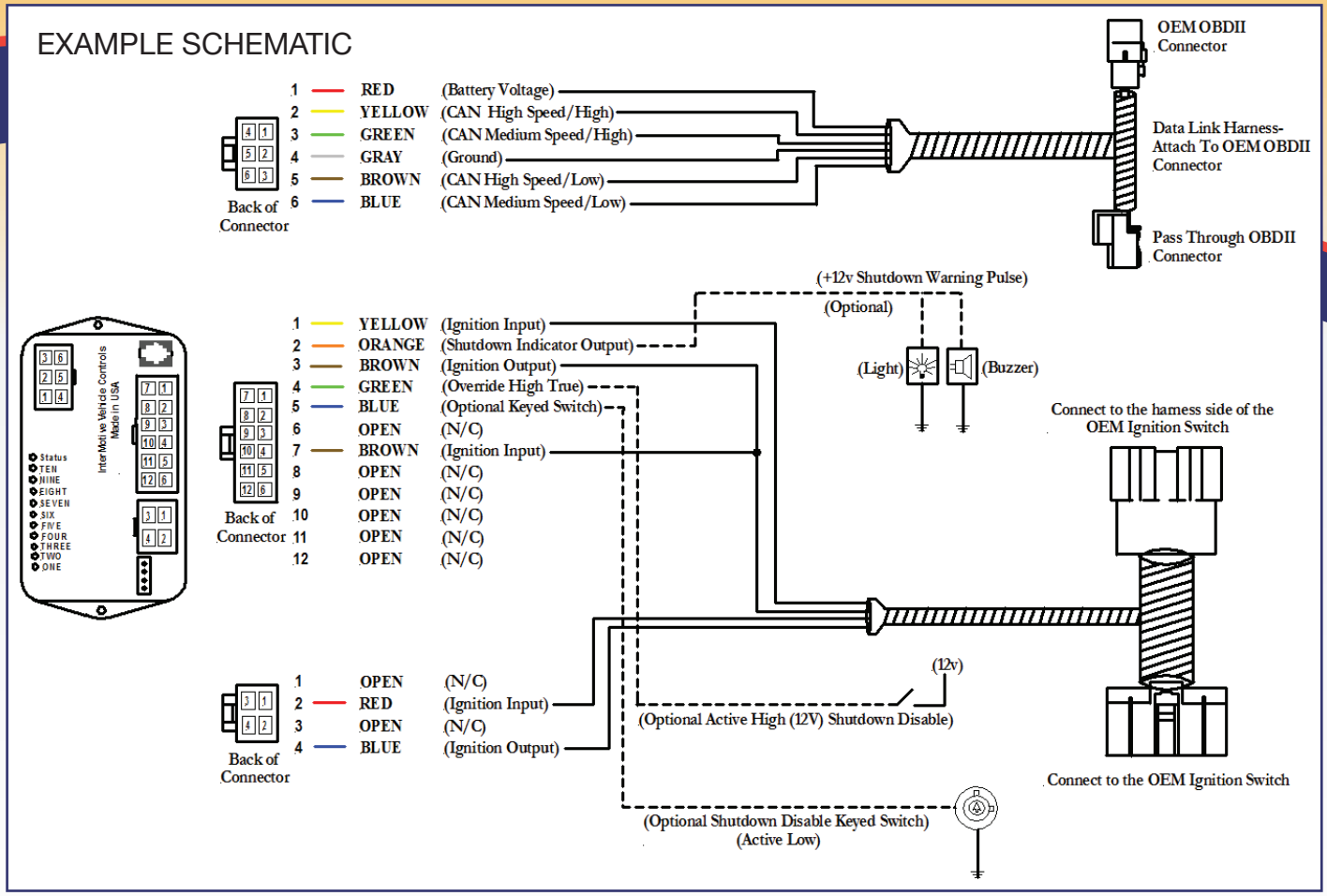
- FUEL SAVINGS: Automatically turns the engine off after 5 to 15 minutes (timer can be modified)
- Microprocessor performs diagnostic tests every time the system is used
- Shutdown warning buzzer/light output
- Override high and low inputs to prevent engine shutdown
- Optional override keyed switch
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Watch ITC in action

Details

Product features may vary by make, model or year. See instructions for complete details.

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	One active low override input, one active high override input
Number of Outputs	One active high shutdown indicator output
Current Draw	60 mA
Quiescent Draw	2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

REV_AD
U.S. Patent #9,469,261

Lift Interlock (LOCK)

INTERMOTIVE VEHICLE CONTROLS

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Lift Interlock (LOCK)

Wheelchair Lift Safety System

Overview

- Prevents the vehicle from shifting out of Park if the wheelchair lift is not properly stowed
- Works with the ignition on or off
- System is fully compliant with FMVSS 403/404 and the Americans with Disabilities Act (ADA) for wheelchair lift interlocks
- Does not require cutting into OEM wires

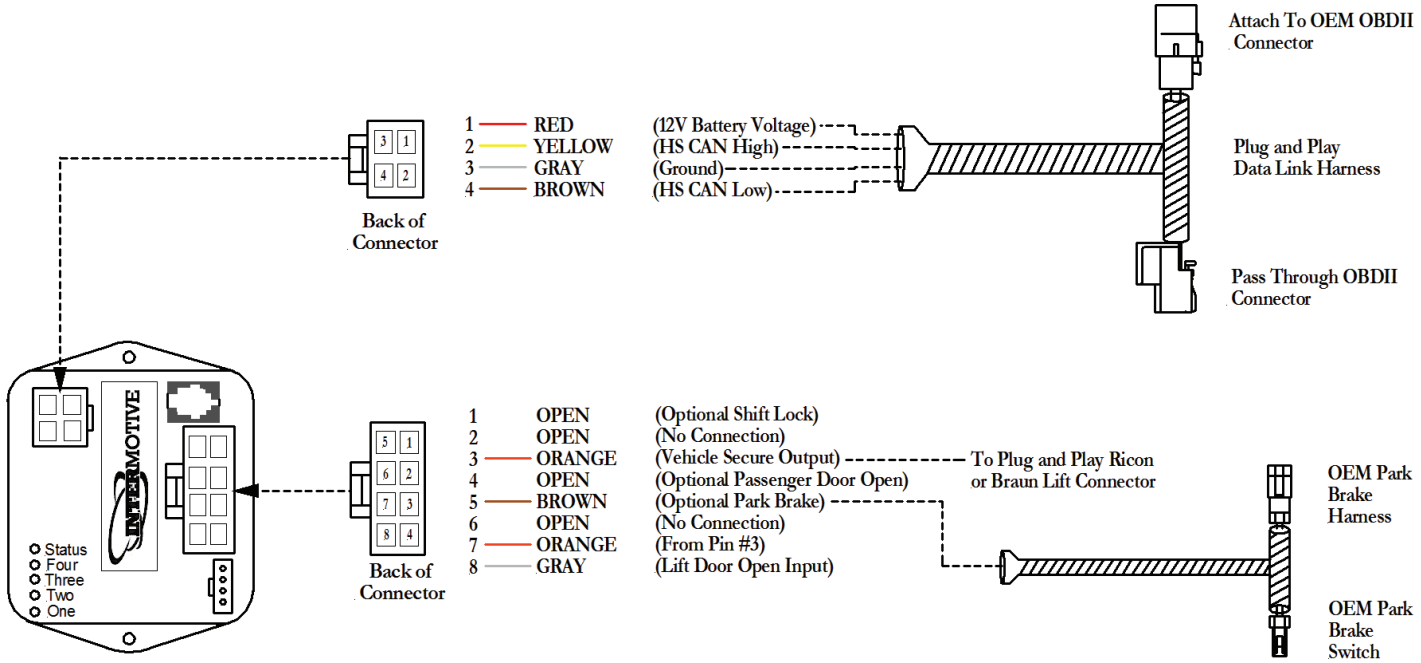
Features

- Allows the lift to be operated from outside with the engine off
- Optional vehicle lockdown while the passenger door is open
- Requires the parking brake to be set for safe lift operation
- Uses Intermittent Fault Filter™ (IFF) technology to eliminate erroneous lift door signals

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS	
Number of Inputs	Three active low (lift door open, Park brake and passenger door open)
Number of Outputs	Two high/low (vehicle secure and shift lock)
Current Draw	50 mA
Quiescent Draw	3 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	3” L x 2” W x 1” H

REV_AC
U.S. Patent #9,469,261

INTERMOTIVE VEHICLE CONTROLS

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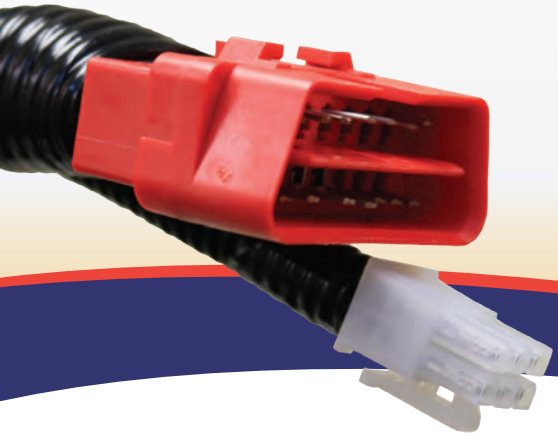
Park Crank Only Module

Prevents Engine Start-up in Unsafe Gears

Overview

- Ensures the engine will only start when the transmission is in Park
- Inexpensive safety enhancement, required by some states
- Compact unit is easy to install



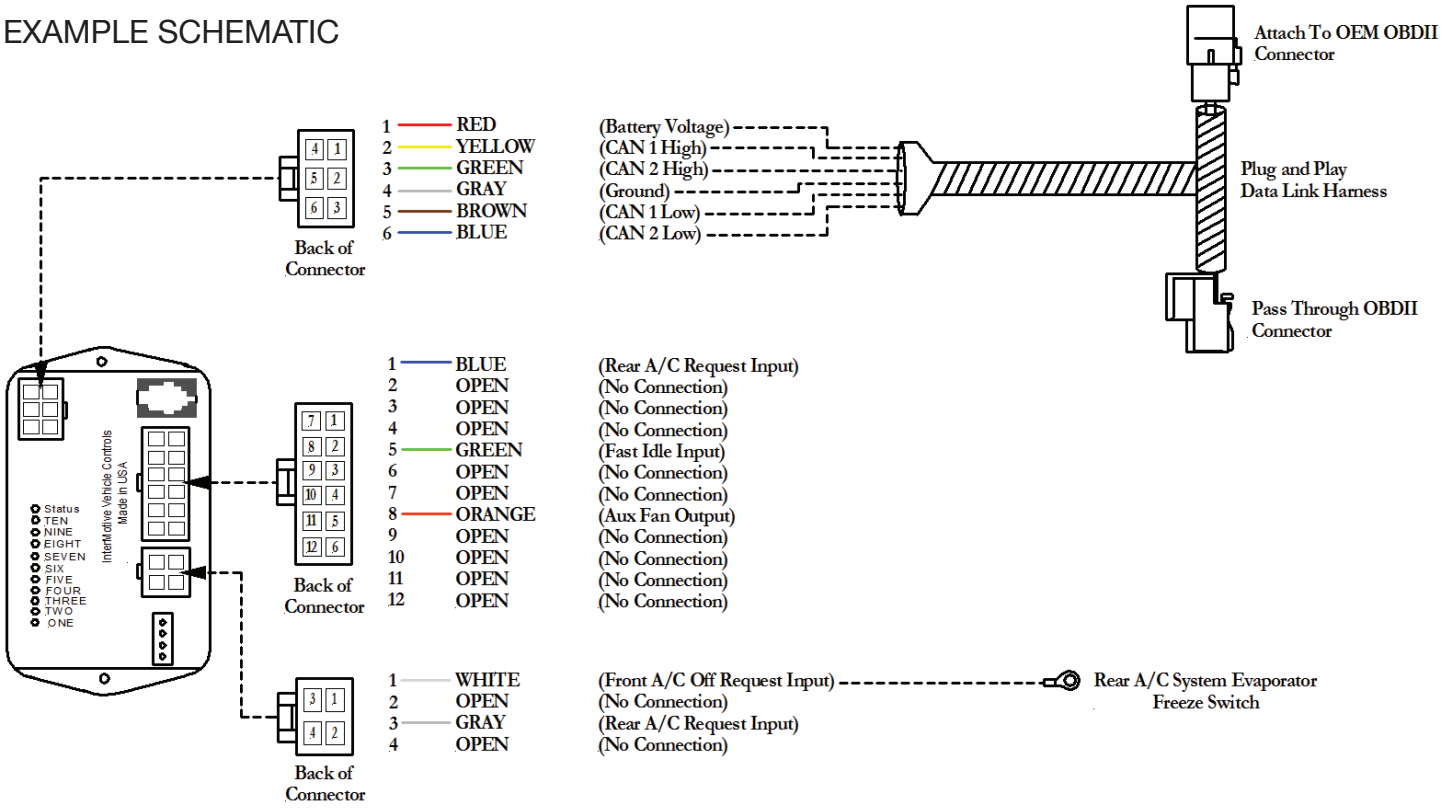
Features

- Prevents engine start-up in any other gear to avoid unintended vehicle movement
- Detects transmission gear without any additional switches or sensors
- Works in conjunction with InterMotive's Intelligent Lift Interlock System™ to prevent vehicle movement while lift/ramp is in use
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Two (engine crank request and transmission Park status)
Number of Outputs	One (engine crank)
Current Draw	200 mA maximum
Quiescent Draw	0 mA (sleep current) when key off
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

INTERMOTIVE VEHICLE CONTROLS

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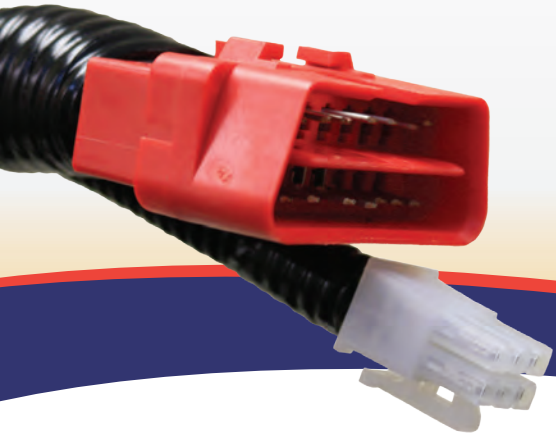
Pre-Trip Module

Light Cycling and Bluetooth CAN Data

Overview

- Automatically rotates through all the exterior lights including brake and reverse
- Allows for a single person to complete a pre-trip inspection
- Simple plug and play connections for CAN data
- Some wire connections required to cycle exterior lights



Features

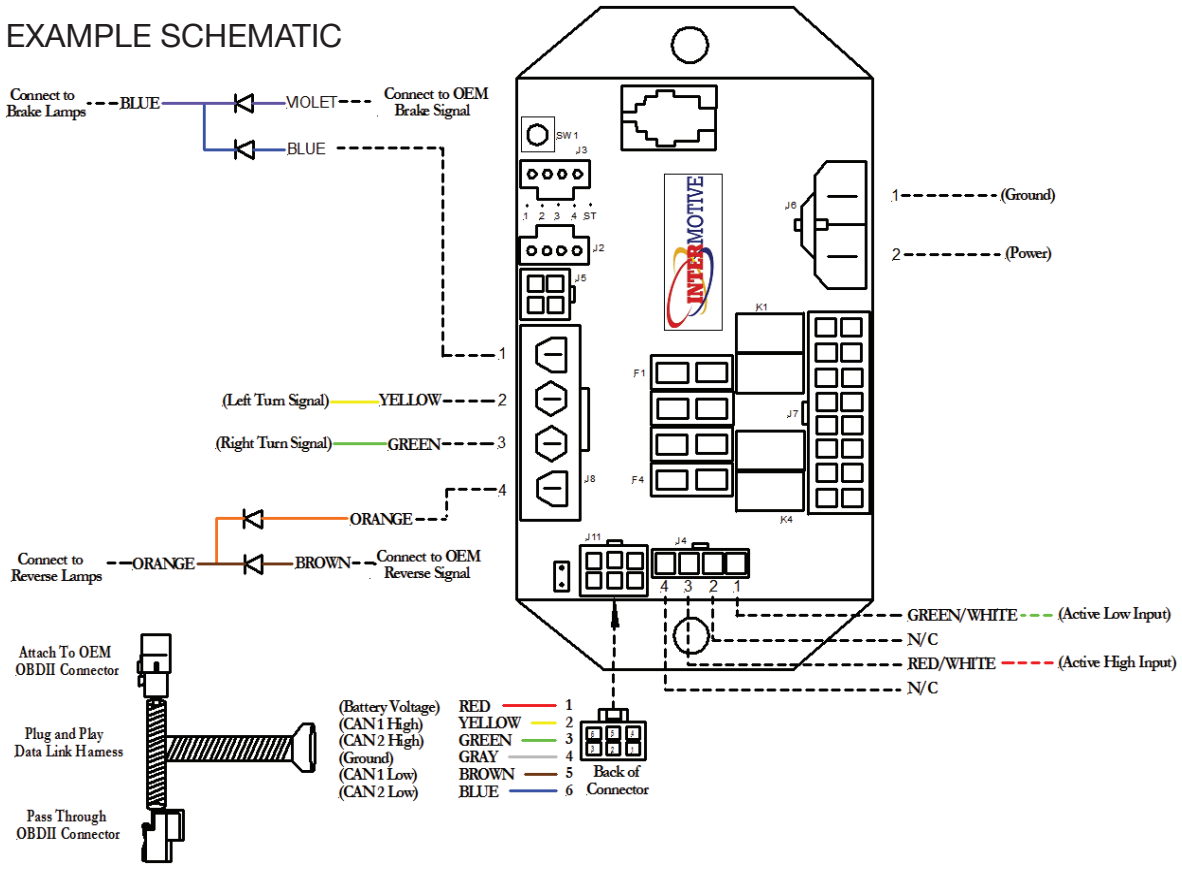
- RELIABLE: Easily determine if all exterior lights are working properly
- EFFICIENT: Exterior lights are activated in a pre-determined repeating sequence, so an inspector can walk around the entire vehicle
- Customizable timer for the light sequence
- Works with Revecorp's TransitCheck for electronic pre-trip and post-trip inspections
- Works with Bluetooth-enabled devices to provide vehicle data for third-party software packages
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

Watch Pre-Trip Module in action

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	One active high input, one active low input
Number of Outputs	Four
Current Draw	120 mA
Quiescent Draw	< 2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	5” L x 2.75” W x 1” H

INTERMOTIVE VEHICLE CONTROLS

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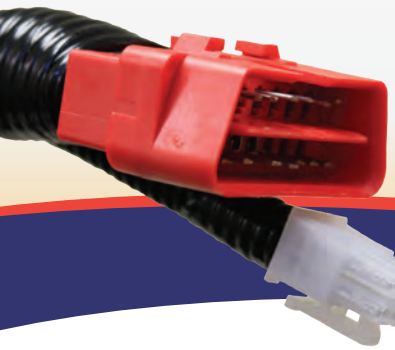
Remote Start

High Idle and Shift Lock with Optional Idle Reduction and Idle Timer Controller

Overview

- Remote start/stop the engine from outside of the cab (e.g., bucket)
- Operates with the key out of the ignition
- System locks the vehicle in Park when equipment is in use
- High idle system is configurable as automatic or manual
- Simple plug and play connections to the OEM chassis

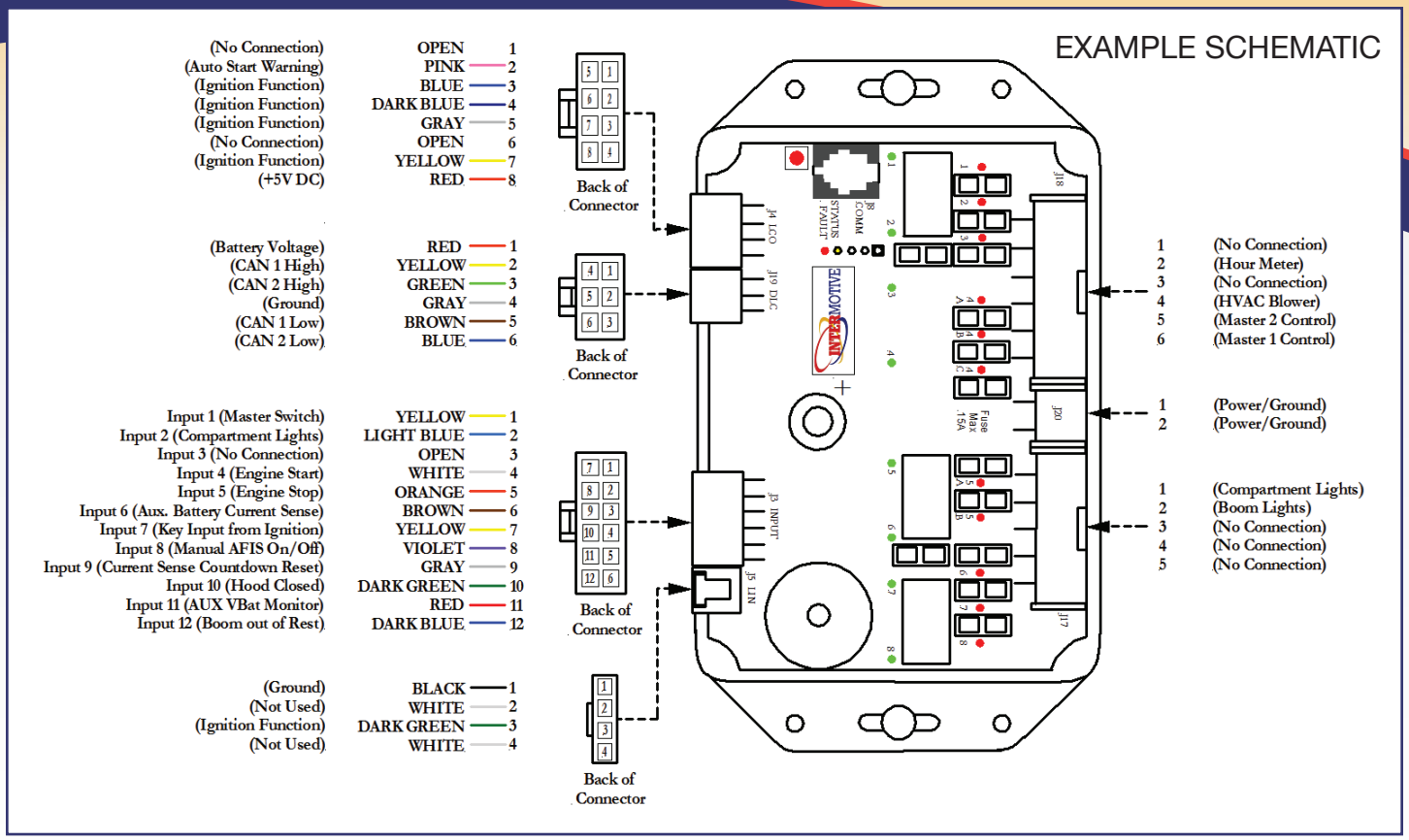


Product features may vary by make, model or year. See instructions for complete details.

Features

- Low power output can be used to drive a warning device when the engine is about to auto-start
- Battery charge protection feature will engage if the battery voltage drops below a predetermined level (configurable)
- Optional EcoStar™ idle reduction system may cut idle time by as much as 50 percent
- Optional Idle Timer Controller system will automatically shut the engine down after a set period of time in Park (programmable)
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Details



SPECIFICATIONS

Number of Inputs	Twelve (seven low true, three high/low true and two analog)
Number of Outputs	Nineteen (eight low current sourcing/sinking, seven high current sourcing, two high current sourcing/sinking, one 3-way sourcing and one 2-way sourcing)
Current Draw	85 mA
Quiescent Draw	3 mA (sleep current)
Temperature Range	-40°C to 80°C
Dimensions	7.5” L x 4.5” W x 1” H

REV_AD
U.S. Patent Pending

INTERMOTIVE VEHICLE CONTROLS

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Surveillance Mode Module™

Detects Movement Behind Law Enforcement Vehicles

Overview

- Increases an officer's situational awareness when parked and working inside the vehicle
- Detects movement behind the vehicle and alerts the driver with audio and visual warnings
- Uses the vehicle's OEM reverse sensing system, camera and cross traffic sensors (if equipped)
- Simple plug and play connection (for most applications)
- Available for the Ford Interceptor, Chevy Tahoe, Dodge Charger Pursuit and Durango

Features

- When the sensors are tripped, Surveillance Mode Module will automatically:
  - Sound an alert chime
  - Raise the front windows
  - Lock the doors
  - Turn on or flash the reverse lights and/or tail lights
- Option to activate the light bar and/or siren
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

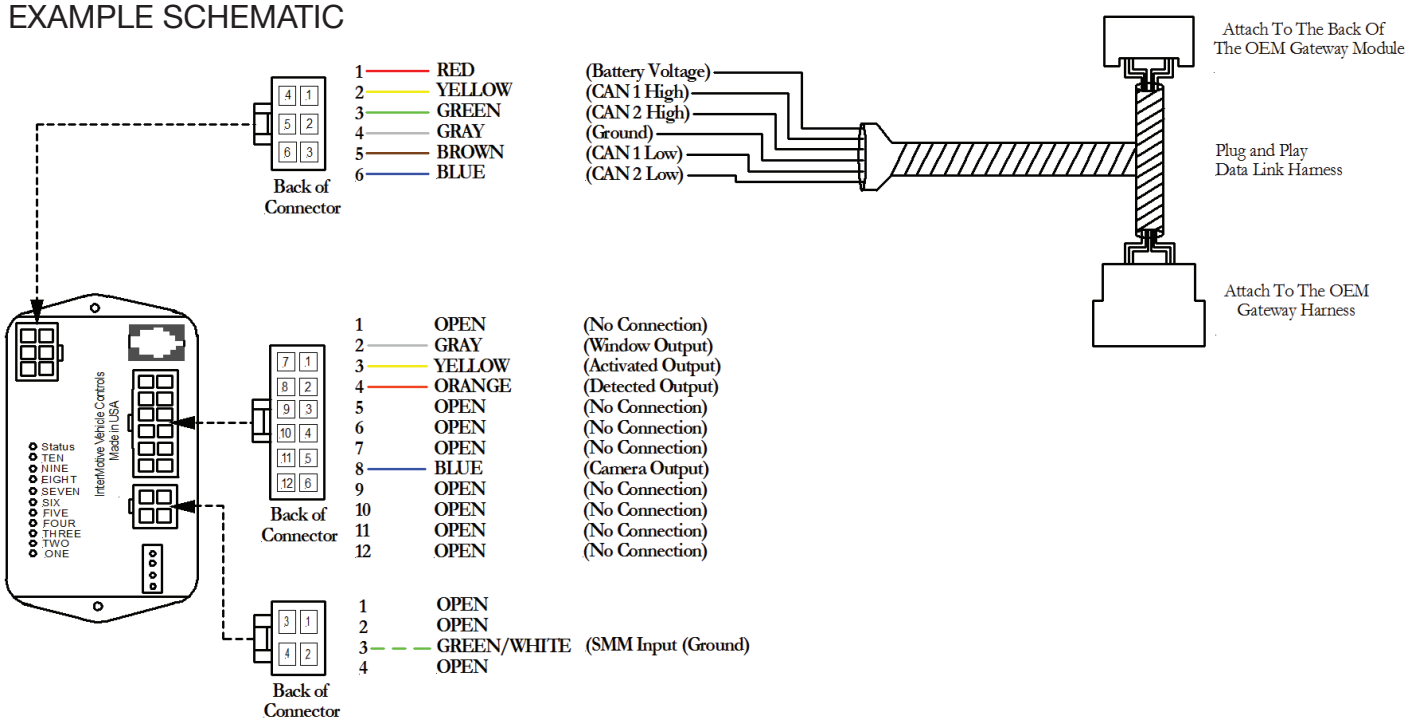
Product features may vary by make, model or year. See instructions for complete details.

Details

"It works great. ...Thank you for helping us stay alive!"
~ Captain Jim Benton, Scott County Sheriff's Office

Watch SMM in action

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	One active low input (for system activation)
Number of Outputs	Four outputs (one enabled, one tripped, one camera and one window)
Current Draw	~60 mA
Quiescent Draw	~2 mA (sleep current)
CAN Speed	High speed
Temperature Range	-40°C to 80°C
Dimensions	4" L x 2" W x 1" H

REV_AG
U.S. Patent #9,469,261

INTERMOTIVE VEHICLE CONTROLS

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Speed Sentinel™

Road Speed Limiter

Overview

- Field programmable device that prevents vehicles from being driven at unsafe speeds
- Maximum speeds can be set from 10-80 mph in single mph increments
- Simple plug and play connections

SPEEDING STATISTICS

- Every 5 mph a vehicle travels over 60 mph reduces fuel economy by 7 percent
- In major studies, speeding is the No. 1 factor in traffic fatalities and nearly triples the odds of an accident

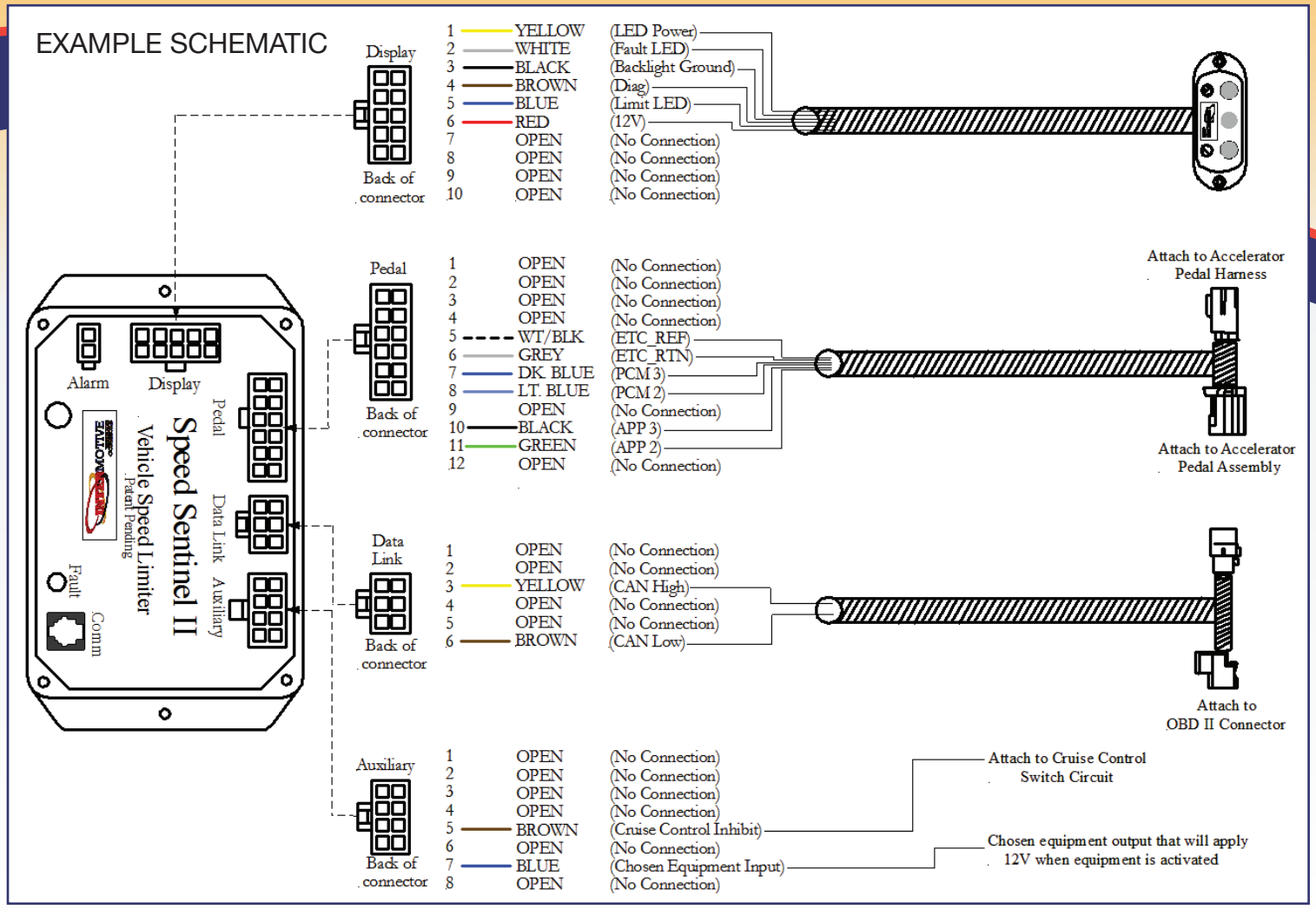
Features

- INCREASED FUEL SAVINGS: Can save as much as $0.21/gallon in effective fuel costs (speeding increases fuel usage)
- Does not limit the engine output below the maximum speed setting
- Multi-mode: Single or dual speed, Forward/ Reverse max speed
- Includes passing mode, emergency response override and theft deterrent mode
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

Watch Speed Sentinel in action



SPECIFICATIONS

Number of Inputs	Two user inputs
Number of Outputs	One user output
Current Draw	75-85 mA
Quiescent Draw	0.5 mA (sleep current)
Temperature Range	-40°C to 80°C
Dimensions	5” L x 3” W x 1.25” H

REV_AD
U.S. Patent #9,469,261

INTERMOTIVE VEHICLE CONTROLS

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Starter Disable

Prevents Engine Start-up in Unsafe Conditions

Overview

- Prevents the vehicle's engine from starting if certain customizable safety conditions are not met
- Unsafe condition examples include: emergency exit locked or open, vehicle not in Park or passenger/roll-up door open
- Inexpensive security enhancement for state or safety requirements

Features

- Provides an audible alert when the disable function has been activated
- Includes a switch input for custom setup
- Works in conjunction with electronics already in the vehicle
- Simple plug and play connections; easy to install with no cutting of factory wires

Product features may vary by make, model or year. See instructions for complete details.

Tail Light Controller

INTERMOTIVE VEHICLE CONTROLS

An ISO 9001:2015 Registered Company

Tail Light Controller

Interface between OEM and Aftermarket LEDs

Overview

- Ensures FMVSS 108 compliance
- Detects turn signal malfunctions
- Provides combined turn/brake outputs
- Simple plug and play connections

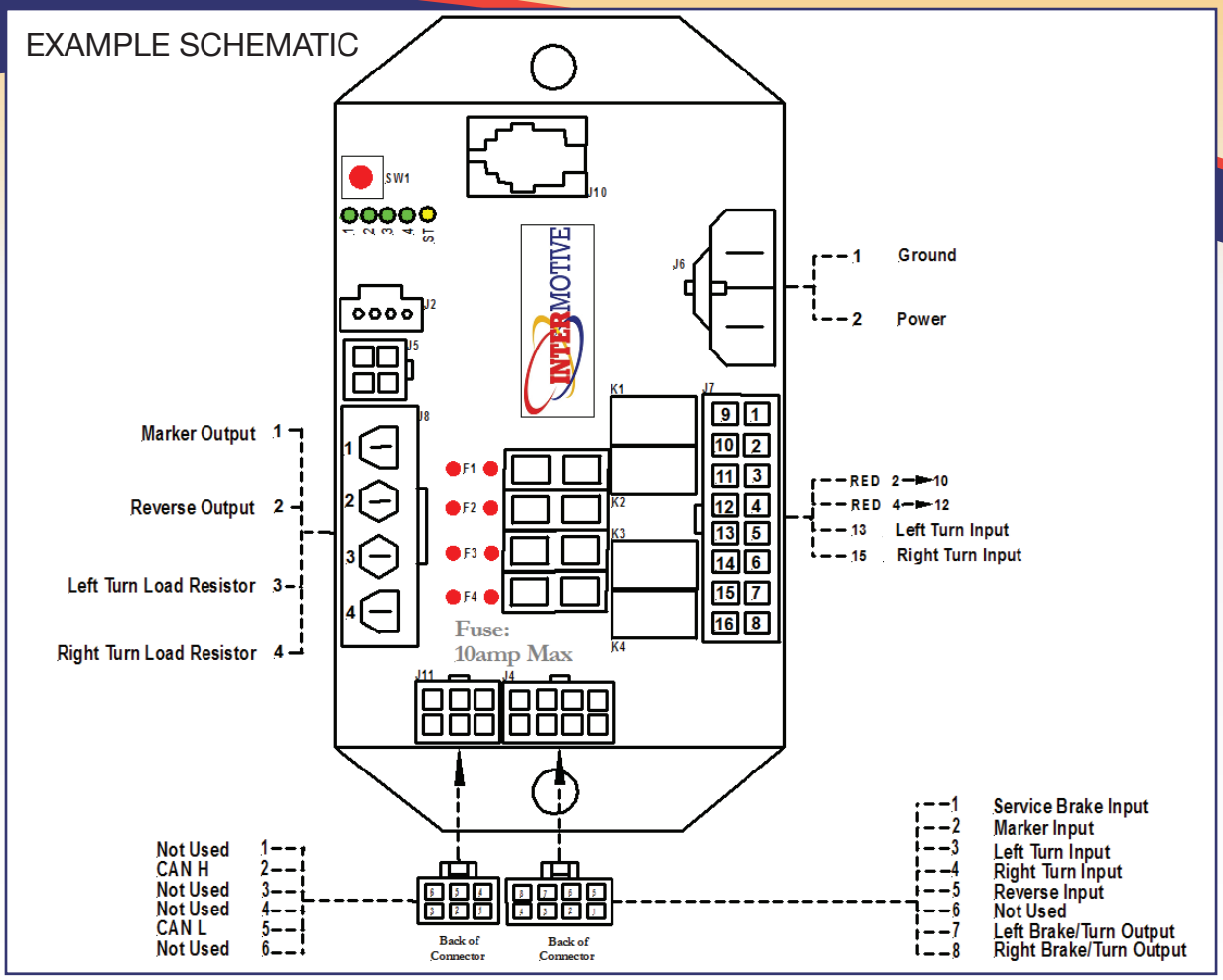
Features

- Triggers OEM “fast flash” if there is a signal malfunction
- Provides redundant tail light outputs in case of failure
- Communicates with the Vehicle Interface Module via the chassis CAN network
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	Five active high input
Number of Outputs	Four active high outputs
Current Draw	120-200 mA
Quiescent Draw	< 2 mA (sleep current)
Temperature Range	-40°C to 80°C
Dimensions	5” L x 2.75” W x 1” H

INTERMOTIVE VEHICLE CONTROLS

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Vehicle Interface Module

Interface between OEM and Aftermarket Radio

Overview

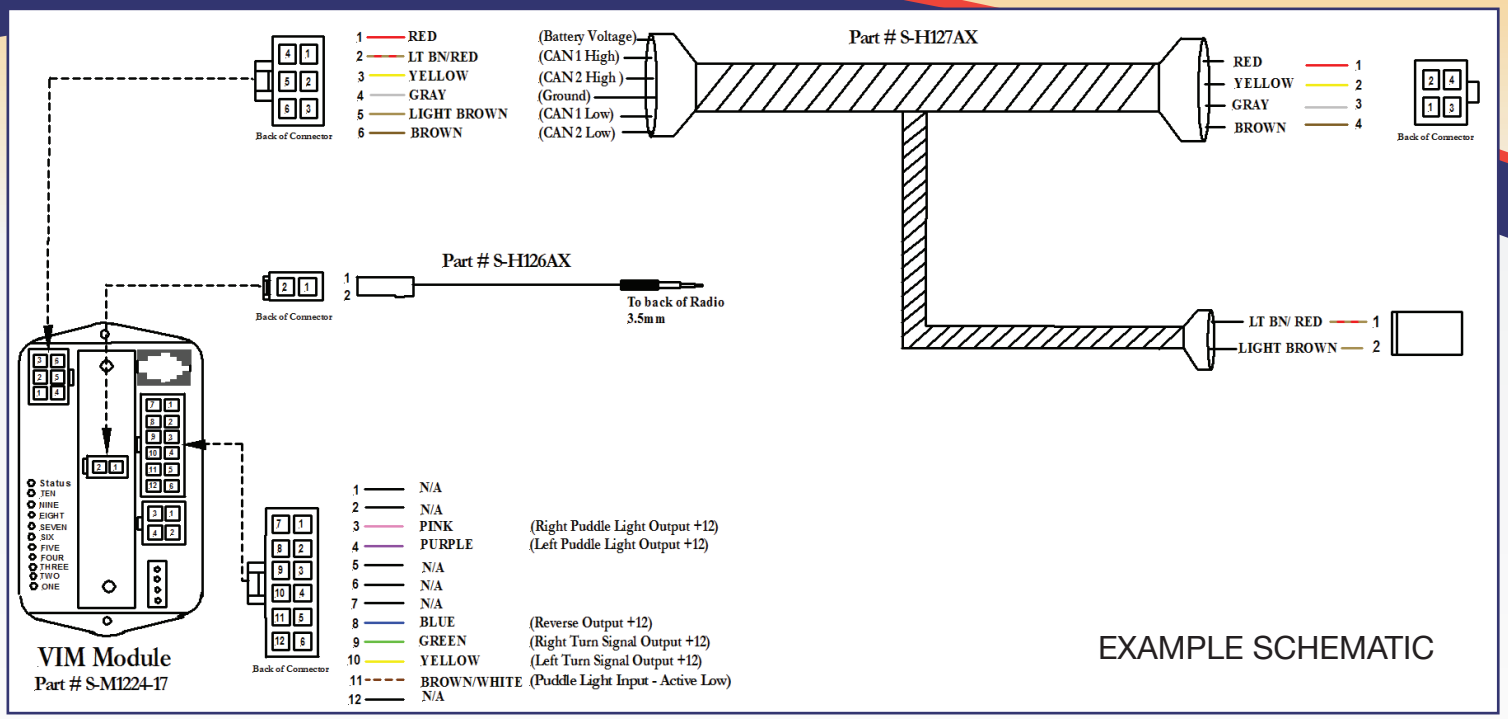
- Allows an aftermarket radio to be controlled with the OEM steering wheel radio buttons
- Communicates with the chassis network to provide real-time chassis signals
- Simple plug and play connections eliminate cutting or splicing chassis wiring

Features

- Eliminates the need for the Mercedes PSM (Programmable Special Module) to add an aftermarket radio to steering wheel controls
- Provides chassis signals to other devices such as camera and slide-out systems
- Multiple chassis signals can be used with “and/or” logic to control a single output
- Can be used with Tail Light Controller to provide redundant tail light signals in case of chassis Signal Acquisition Module failure
- Includes Intermittent Fault Filter™ (IFF) technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details



SPECIFICATIONS

Number of Inputs	One active low input
Number of Outputs	Five +12V outputs, two +5V analog outputs
Current Draw	120 mA
Quiescent Draw	< 1.2 mA (sleep current)
CAN Speed	Mercedes I-CAN
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H

INTERMOTIVE VEHICLE CONTROLS

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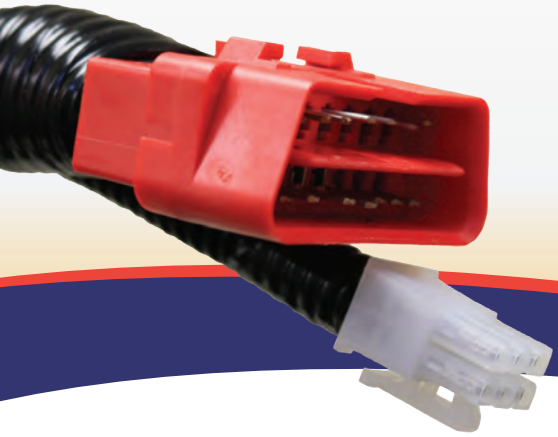
Work Truck Shift Interlock

Automatic Shift Interlock System

Overview

- Fully automatic system prevents the vehicle from shifting out of Park if equipment is not in a secure position
- Compact unit is easy to install
- Simple plug and play connections to the OEM chassis



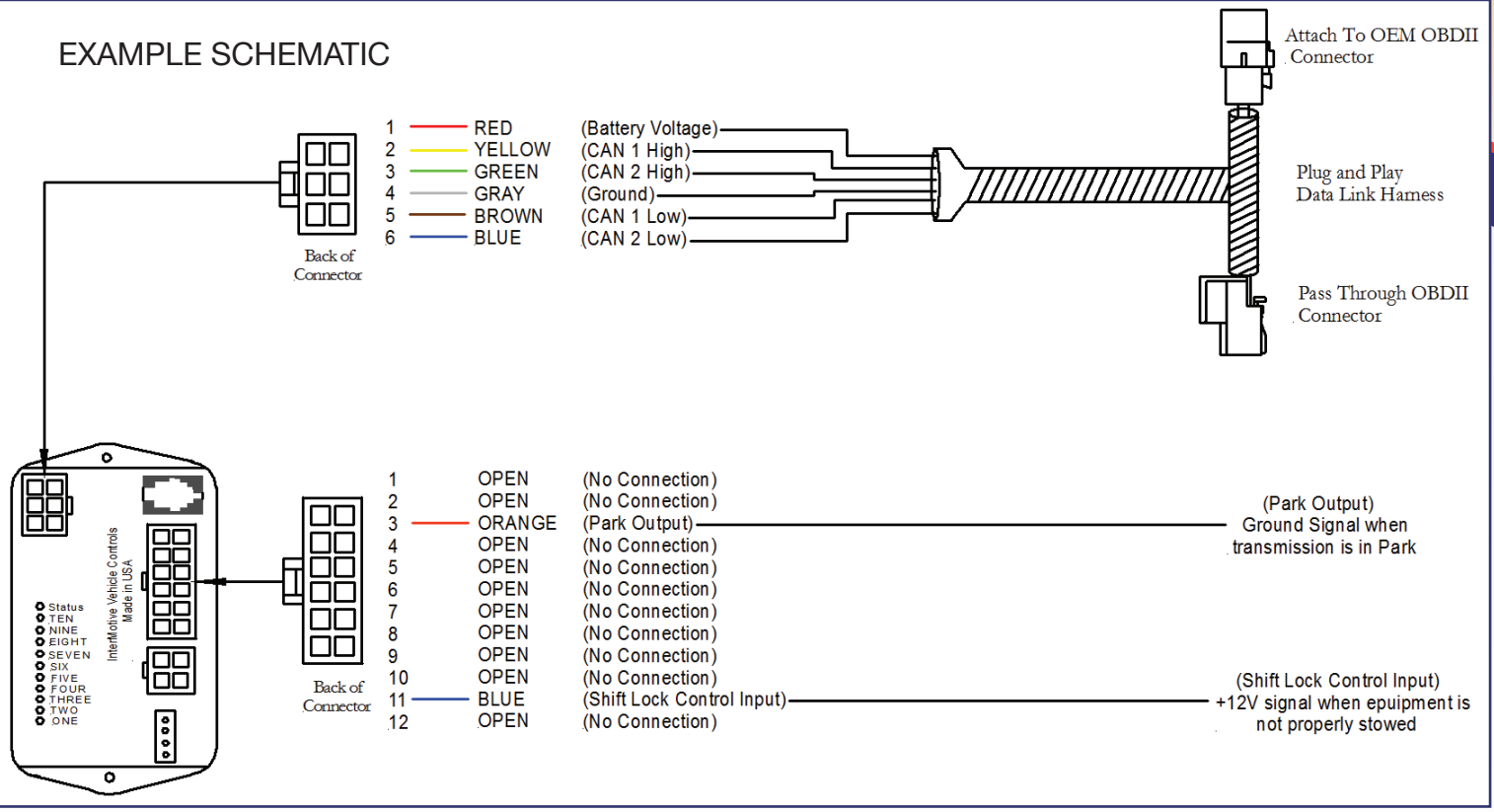
Features

- IMPROVES SAFETY: Reduces the potential for personal injury or equipment damage that could occur if the vehicle is driven with equipment not properly stowed
- While operating any lift equipment, the interlock engages the OEM shift lock to stay in Park until equipment has been secured
- CPU performs self-diagnosis every time the vehicle is started
- Includes Intermittent Fault Filter® technology to eliminate false readings

Product features may vary by make, model or year. See instructions for complete details.

Details

EXAMPLE SCHEMATIC



SPECIFICATIONS

Number of Inputs	One
Number of Outputs	One (ground signal when transmission is in Park)
Current Draw	~ 60 mA
Quiescent Draw	~ 1.2 mA (sleep current)
CAN Speed	High and medium speed
Temperature Range	-40°C to 80°C
Dimensions	4” L x 2” W x 1” H