

ITM126/127

Platform Lift Interlock

Ford Platform Lift Interlock



Ford Interlock System for monitoring platform lift door and up to three auxiliary doors

Technical Description

InPower's Models ITM126 and ITM127 interlock systems provide the required FMVSS 403/404 interlock functions for public-use platform lifts installed in Ford E-series* van and cutaway chassis. The systems consist of a combined driver's display and control module as well as an easy-to-install plug-and-play chassis wiring harness.

The wiring harness includes a set of blunt cut wires for connecting to the platform lift system door switches and 12 volt power and T-cables for interfacing with the Ford shift lock solenoid, park signal and parking brake switch. The interlock's Lift Enable output is rated at +12 volts @ 1.8 amps, and it is compatible with current production platform lifts manufactured by Braun, Ricon and Maxon.

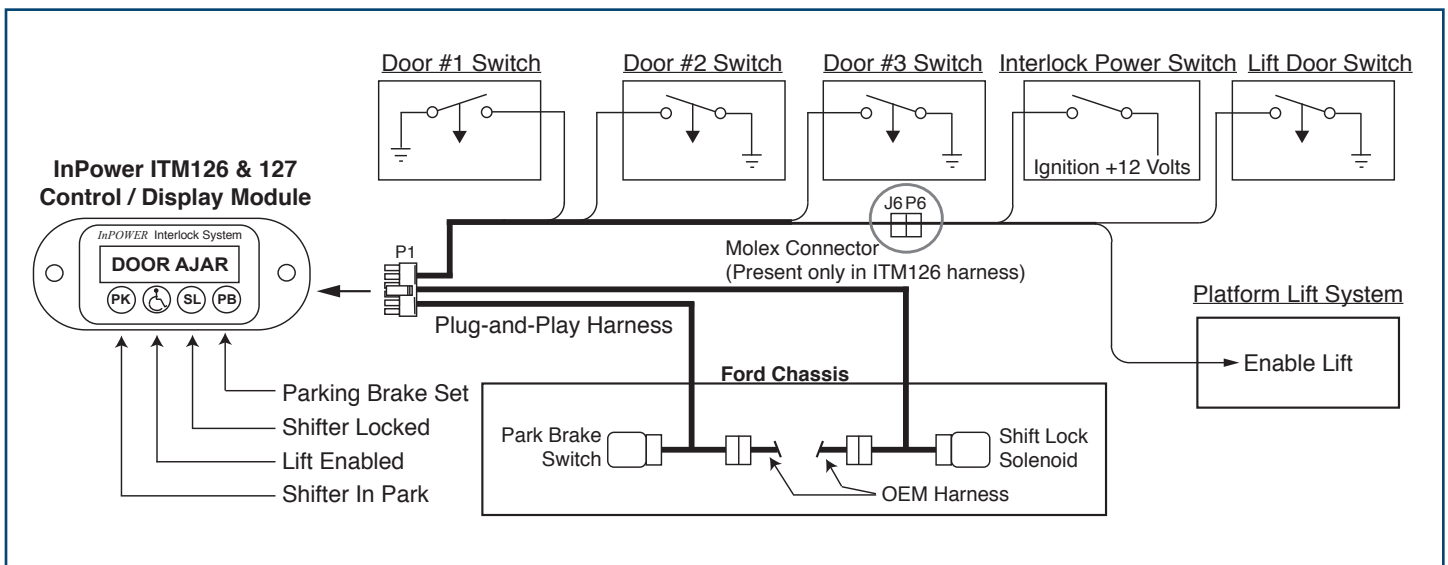
The driver display includes a two-inch flashing Door Ajar indicator as well as indicators for Park, Park Brake, Shifter Locked and Lift Enabled. The interlock monitors the lift door and up to three auxiliary doors. For model ITM127, if any of these doors are not fully closed, the display's Door Ajar indicator will flash. For model ITM126, the Door Ajar indicator will flash *and* the shift lock will activate.

Key Features

- Supports Ford Van, Cutaway and Transit Chassis
- Combined Driver Display and Control Module
- Large Flashing Door Ajar Indicator
- Status / Diagnostic Indicators
- Monitors up to Four Door Switches
- Plug-and-Play Wiring Harness
- Direct Interface to Platform Lift Systems

System Diagram

*Additional models are available for F-Series and Transit vehicles.



Specifications

Module Inputs

Power Input:	+8.0 Volts to 16 Volts @ 2 amps. Requires a fused power source that is powered when the ignition switch is on. (ITM126: PG-2) (ITM127: Blunt-cut Red)
Lift Door In:	From lift door closed switch. Ground when door is open/ajar. (ITM126: P6-4) (ITM127: Blunt-cut Violet)
Door #1 In:	From Door #1 closed switch. Ground when door is open/ajar. (Blunt-cut Blue)
Door #2 In:	From Door #2 closed switch. Ground when door is open/ajar. (Blunt-cut Orange)
Door #3 In:	From Door #3 closed switch. Ground when door is open/ajar. (Blunt-cut Green)

Module Output

Lift Enable:	+12 volts @ 1.8 amps to allow platform switch operation. (ITM126: P6-1) (ITM127: Blunt-cut Yellow)
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Mechanical

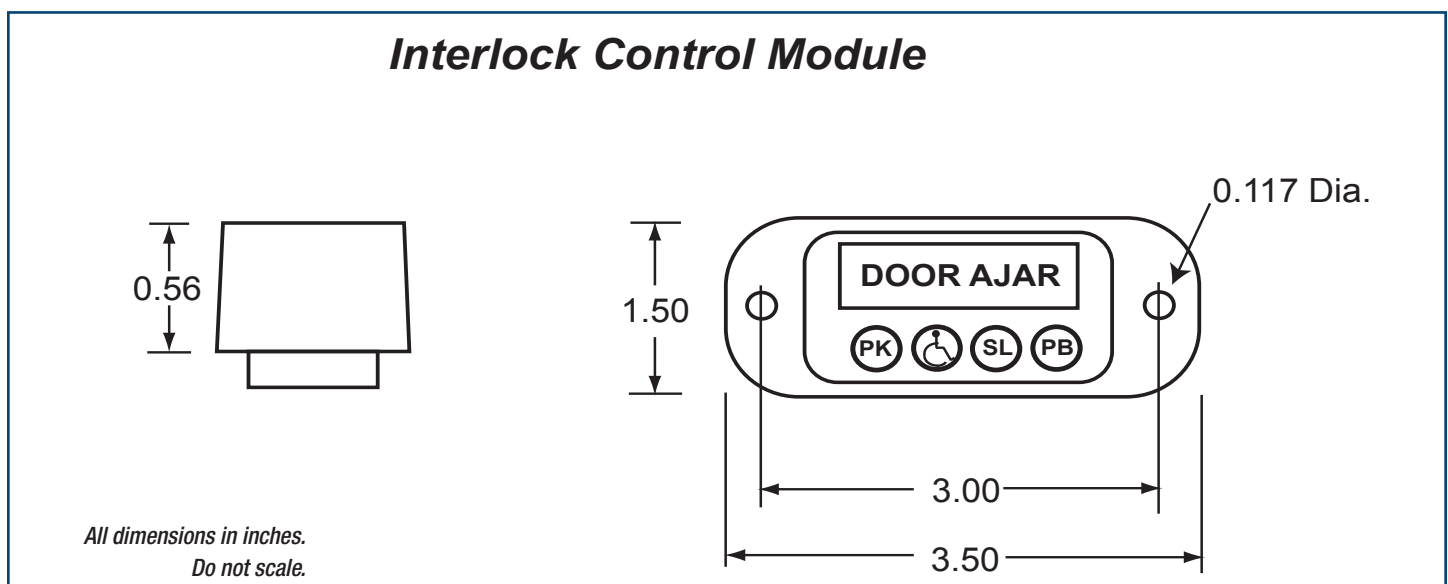
Dimensions:	3.50 W x 1.50 H x 0.56 D inches
Weight:	0.15 lbs
Operating Temperature:	-40° C to +85° C

Available Models

ITM126/127	Ford E-Series van and cutaway. Note: chassis cabs require a different harness
ITM126/127-F	Ford F-Series
ITM126/127-T	Ford Transit

Please see owner's manuals for detailed cable information.

Mechanical Drawing





Ford Interlock system for monitoring platform lift door and up to four auxiliary doors.

Technical Description

InPower's Models ITM129 and ITM129ADL interlock systems provide the required FMVSS 403/404 interlock functions for public-use platform lifts installed in Ford Transit chassis. The system consists of a combined driver's display and control module as well as an easy-to-install plug-and-play chassis wiring harness.

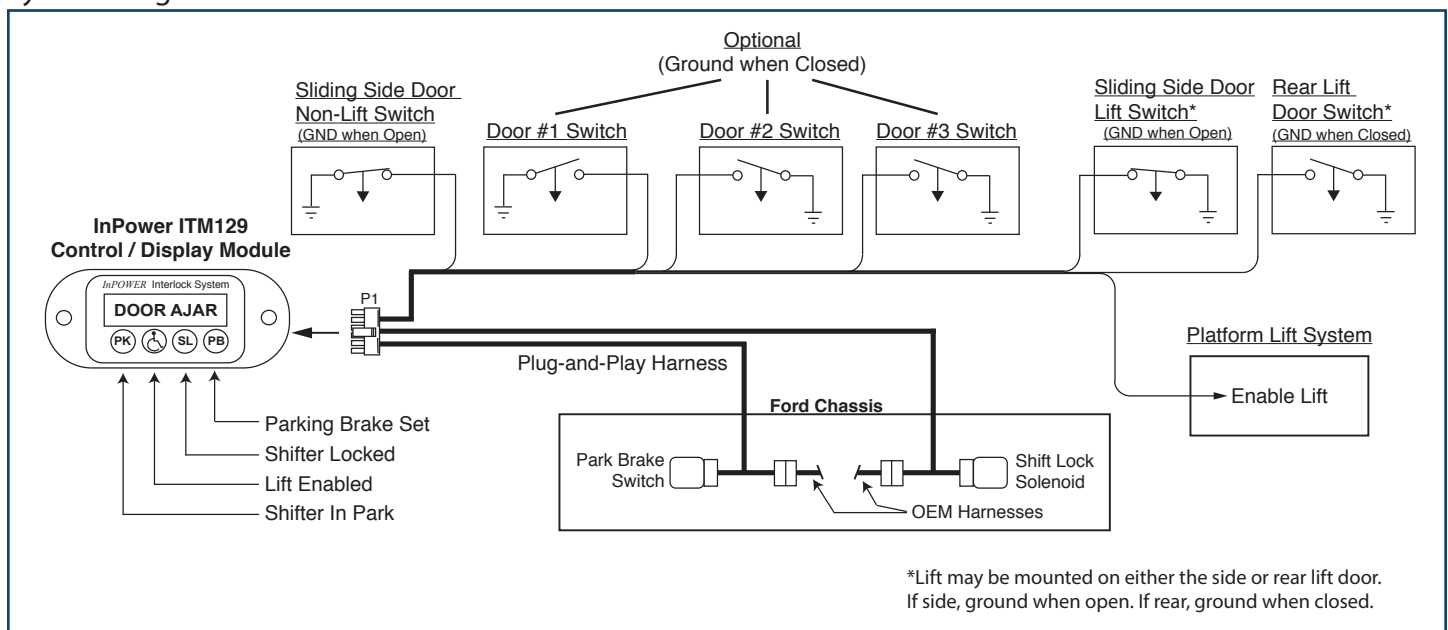
The wiring harness includes a set of blunt cut wires for connecting to the platform lift system door switches and 12 volt power and T-cables for interfacing with the Ford shift lock solenoid, park signal and parking brake switch. The interlock's Lift Enable output is rated at +12 volts @ 1.8 amps, and it is compatible with current production platform lifts manufactured by Braun, Ricon and Maxon.

The driver display includes a two-inch flashing Door Ajar indicator as well as indicators for Park, Park Brake, Shifter Locked and Lift Enabled. The interlock monitors the lift door and up to four auxiliary doors. With the standard ITM129 model, if any of these doors are not fully closed, the display's Door Ajar indicator will flash. Only the lift door input will set the shift lock. With the ITM129ADL, if any door is not fully closed, the Door Ajar indicator will flash and the shift lock will set.

Key Features

- Supports Ford Transit Chassis
- Combined Driver Display and Control Module
- Works for both rear and side doors
- Status / Diagnostic Indicators
- Monitors up to Four Door Switches plus Lift Door
- Plug-and-Play Wiring Harness
- Direct Interface to Platform Lift Systems

System Diagram



Specifications

Module Inputs

Power Input:	Power and ground are obtained from Shifter T-Harness
Rear Lift Door* In:	From lift door closed switch. Ground when door is Closed. (Blunt-cut Violet)
Side Lift Door* In:	From lift door closed switch. Ground when door is open/ajar. (Blunt-cut Tan)
Side Door* In:	From side door closed switch. Ground when door is open/ajar. (Blunt-cut Orange)
Door #1 or Rear Door* In:	From Door #1 closed switch. Ground when door is closed. (Blunt-cut Blue)
Door #2 In:	From Door #2 closed switch. Ground when door is closed. (Blunt-cut Blue)
Door #3 In:	From Door #3 closed switch. Ground when door is closed. (Blunt-cut Blue)

* Lift may be installed on either the side door or the rear door. When installed in the side door, use the Tan wire for the lift door and one of the Blue wires for the rear door. When installed in the rear door, use the Violet wire for the lift door and the Orange wire for the side door.

Module Output

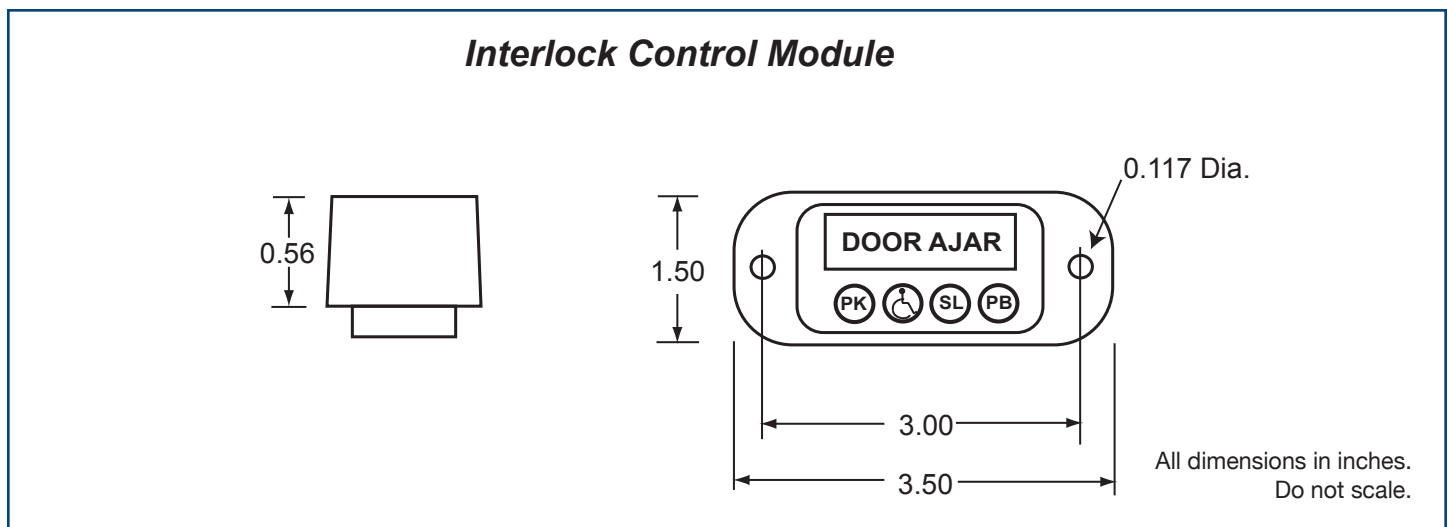
Lift Enable: +12 volts @ 1.8 amps to allow platform switch operation. (Blunt-cut Yellow)

Mechanical

Dimensions:	3.50 W x 1.50 H x 0.56 D inches
Weight:	0.15 lbs
Operating Temperature:	-40° C to +85° C

Please see owner's manual OM-190 for the ITM129 and ITM129ADL for detailed cable information.

Mechanical Drawing



ITM136/137

Platform Lift Interlock

Chevy and GMC Platform Lift Interlock System



Chevy and GMC Interlock System for monitoring platform lift door and up to three auxiliary doors

Technical Description

InPower's Models ITM136 and ITM137 interlock systems provide the required FMVSS 403/404 interlock functions for public-use platform lifts installed in Ford E-series van and cutaway chassis. The systems consist of a combined driver's display and control module as well as an easy-to-install plug-and-play chassis wiring harness.

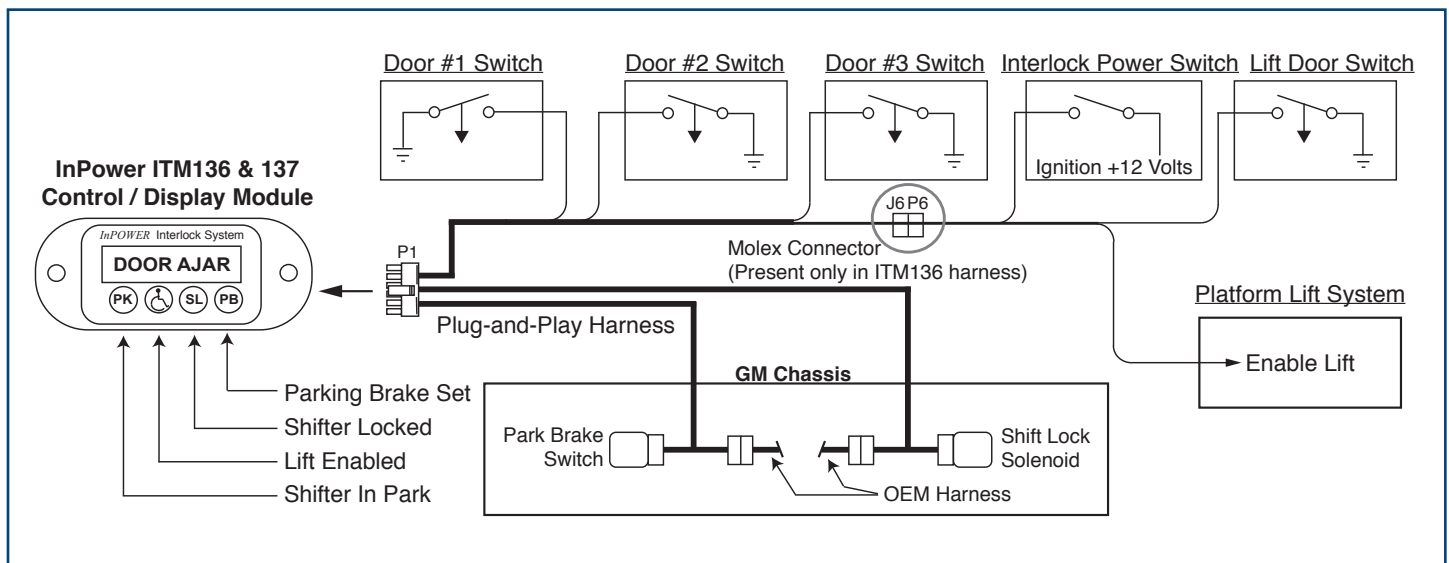
The wiring harness includes a set of blunt cut wires for connecting to the platform lift system door switches and 12 volt power and T-cables for interfacing with the GM shift lock solenoid, park signal and parking brake switch. The interlock's Lift Enable output is rated at +12 volts @ 1.8 amps, and it is compatible with current production platform lifts manufactured by Braun, Ricon and Maxon.

The driver display includes a two-inch flashing Door Ajar indicator as well as indicators for Park, Lift Enabled, Shifter Locked and Lift Enabled. The interlock monitors the lift door and up to three auxiliary doors. In model ITM137, if any of these doors are not fully closed, the display's Door Ajar indicator will flash. In model ITM136, the Door Ajar indicator will flash *and* the shift lock will activate.

Key Features

- Supports Chevy & GMC Van and Cutaway Chassis
- Combined Driver Display and Control Module
- Large Flashing Door Ajar Indicator
- Status / Diagnostic Indicators
- Monitors up to Four Door Switches
- Plug-and-Play Wiring Harness
- Direct Interface to Platform Lift Systems

System Diagram



Specifications

Module Inputs

Power Input:	+8.0 Volts to 16 Volts @ 2 amps. Requires a fused power source that is powered when the ignition switch is on. (ITM136: PG-2) (ITM137: Blunt-cut Red)
Lift Door In:	From lift door closed switch. Ground when door is open/ajar. (ITM136: P6-4) (ITM137: Blunt-cut Violet)
Door #1 In:	From Door #1 closed switch. Ground when door is open/ajar. (Blunt-cut Blue)
Door #2 In:	From Door #2 closed switch. Ground when door is open/ajar. (Blunt-cut Orange)
Door #3 In:	From Door #3 closed switch. Ground when door is open/ajar. (Blunt-cut Green)

Module Output

Lift Enable:	+12 volts @ 1.8 amps to allow platform switch operation. (ITM136: P6-1) (ITM137: Blunt-cut Yellow)
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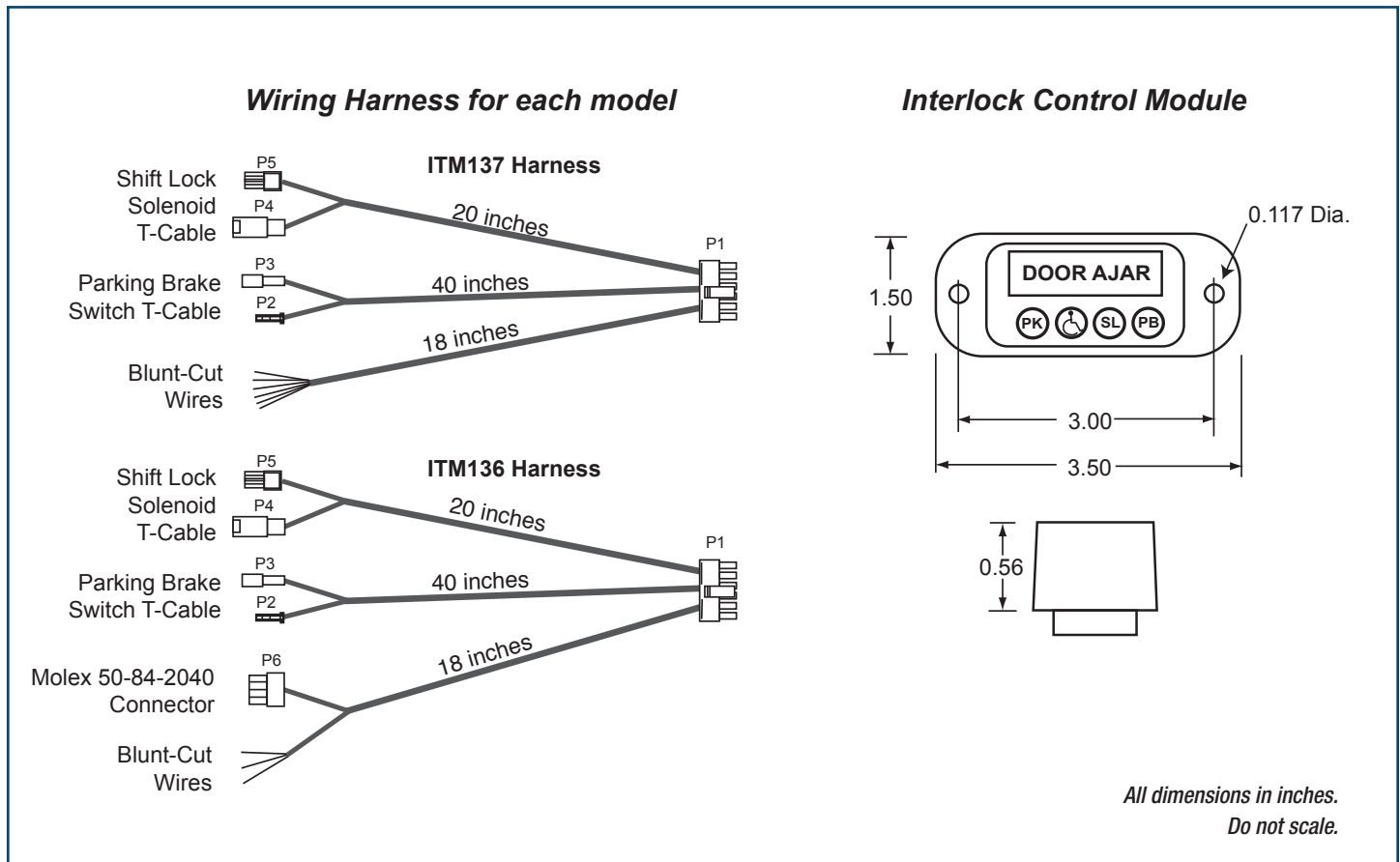
Mechanical

Dimensions:	3.50 W x 1.50 H x 0.56 D inches
Weight:	0.15 lbs
Operating Temperature:	-40° C to +85° C

Chassis Supported

Chevy:	Express passenger van and cutaway
GMC:	Savana Passenger van and cutaway

Mechanical Drawing



ITM150

Platform Lift Interlock

2014+ RAM ProMaster
(Gas Engine Only)



ITM RAM ProMaster Interlock System for monitoring platform lift and door

Technical Description

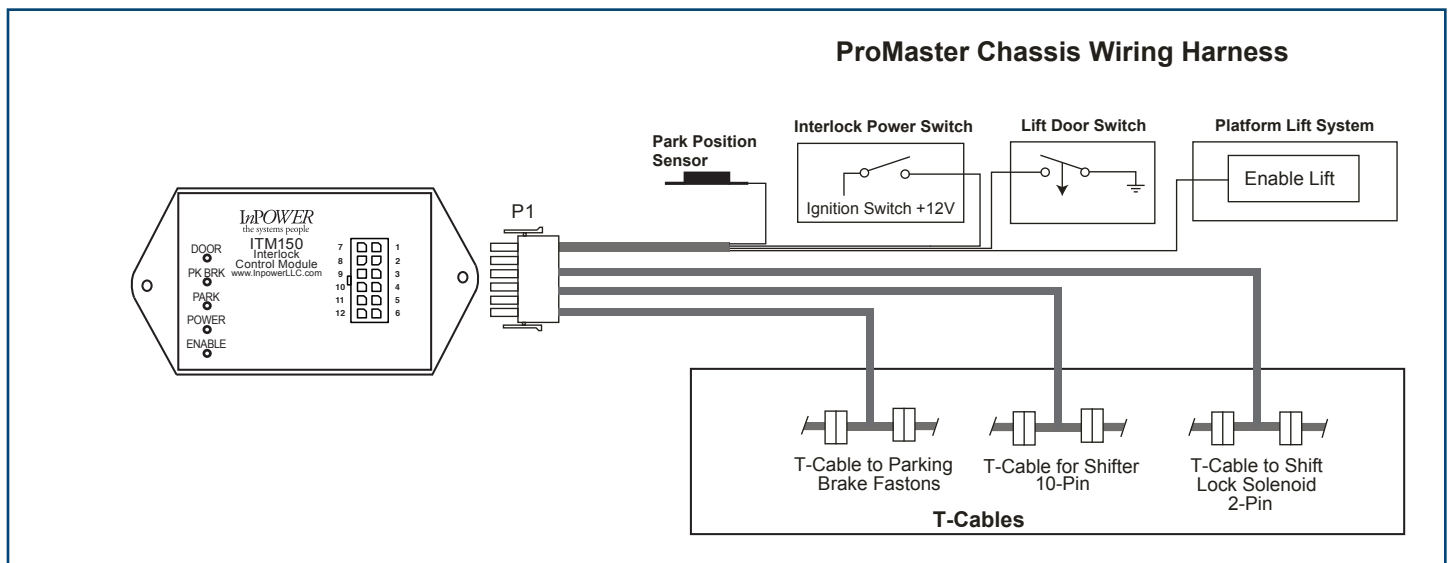
InPower's ITM 150 interlock system provides the required FMVSS- 403/404 interlock functions for public use platform lifts on Dodge RAM ProMaster Vans with gas engine. The ITM 150 System consists of an interlock control module, easy-to-install cables and a Park Position sensor.

The wiring harness includes two blunt cut wires (72") for connecting the platform lift system door switch (Violet) and 12V power (Yellow) to the lift ; a "T" cables for shift lock solenoid (20"), a "T" cable for the shifter connector (22") that supplies power and ground to the system; parking brake faston terminals (84") and a Park Position sensor and cable (30"). The control module has one 12 pin primary connector and five diagnostic status LED's (Power, Lift enable, Park Brake, Park and Lift Door ajar) to aid in system troubleshooting. The interlock system provides +12V @ 1.8 amp to enable the platform lift to be operated.

Key Features

- Supports Dodge RAM ProMaster (gas Engine) 2014+
- Status / Diagnostic Indicators
- Complies with FMVSS 403/404 regulations
- Monitors Lift Door Ajar and sets shiftlock during lift operation
- T-Cables provided for shift Interlock and Power Ground Connections
- Compatible with Braun, Ricon, and Maxon Lifts

System Diagram



Specifications

Module Inputs

Power Input: +8Vdc to 16 Vdc @ 5 amps (???)

Lift Door In: From lift door switch. Ground when door is open/ajar (violet)

Module Output

Lift Enable: +12V @ 1.8 amp to allow platform operation. (Yellow)

Mechanical

Dimensions: 4" L X 2.05" W X .5" H (add for connector)

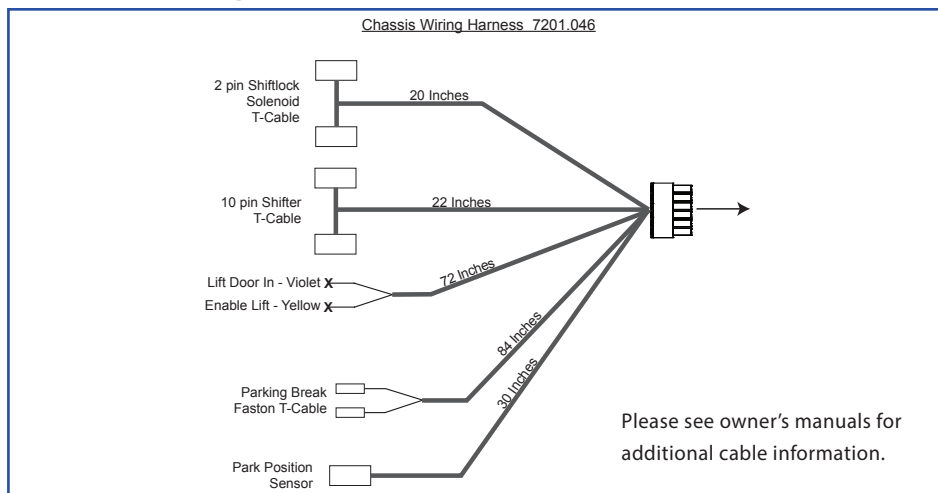
Weight: 0.15 lbs

Operating Temperature: -40 degreeC to +85" C

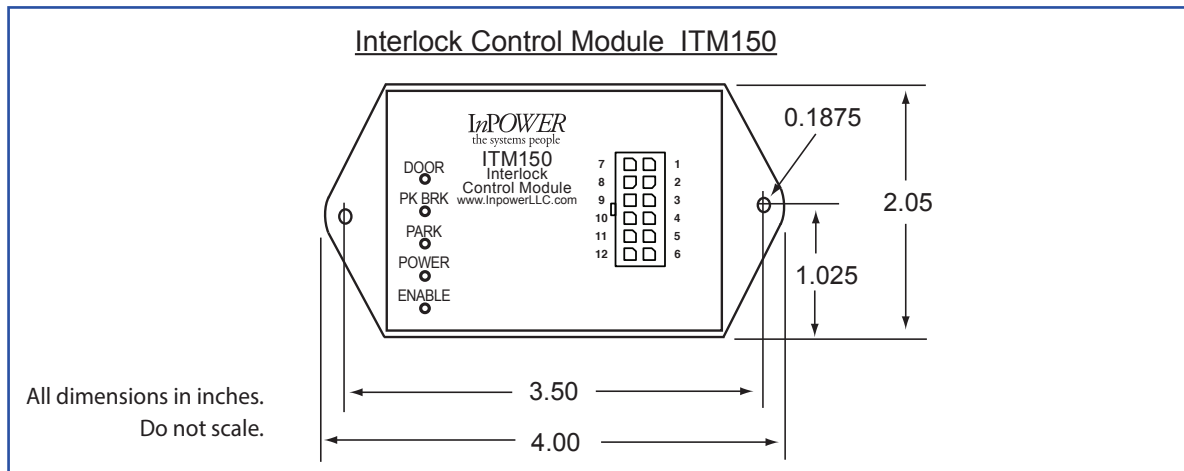
Available Models

ITM150 Dodge RAM ProMaster Gas Engine Only 2014+

Harness Diagram



Mechanical Drawing





BST-FD-E Boom Out of Stow Interlock system For Ford E Series

InPower's BST-FD-E Boom Out of Stow Interlock is designed for easy integration into a Ford E Series 2010-2016 F250-F550 Truck with an installed Boom or Bucket.

Technical Description

The BST-FD-E Boom Interlock System consists of a control module with integral driver's status display and a chassis wiring harness (See Interlock System Diagram on below).

The system's control/display module is intended to mount on the dash with its wiring harness routed through the dash. The harness contains two T-cables that connect to the shift lock solenoid and parking brake switch for ease of integration. The harness also contains a Molex connector for connection to +12 volt ignition power and the Boom Out of Stow switch input.

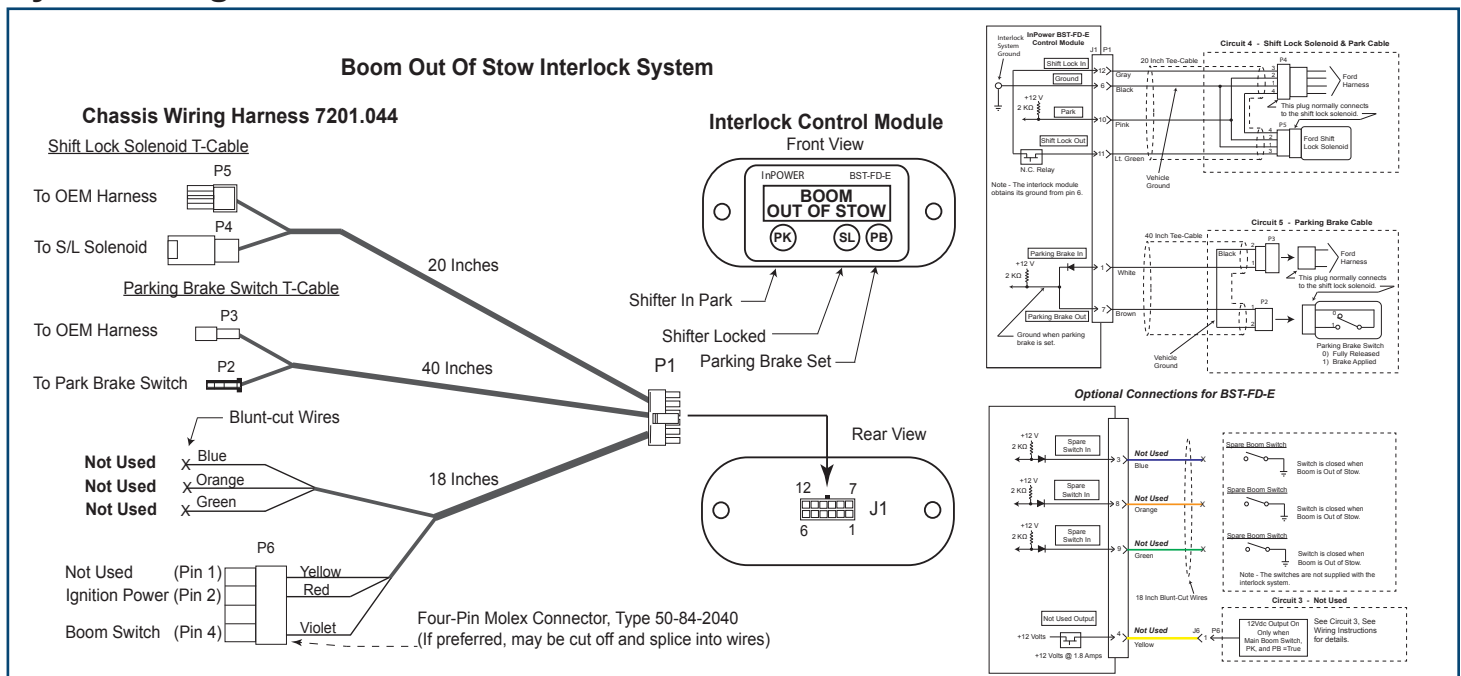
The Interlock System will lock the shifter for Park Brake set or Boom Out of Stow. The SL indicator lights red when the interlock is locking the shifter.

Please Contact InPower for assistance in fully defining your particular application of the BST-FD-E for easy integration with your systems.

Key Features

- Microprocessor Programmable Operation
- The BST-FD-E provides a clean, reliable Boom Out of Stow Alert and Interlock
- Plug-and-Play Wiring Harness
- Direct Interface to Booms
- Optional Aux contacts available for Boom interface
- Compact Size with Panel-Mount case
- Fits Ford E Series 2010-2016 Chassis

System Diagram



Specifications

Power Input (BAT): +11 to 17 Vdc
 Dimensions: 3.50 W x 1.50 H x 0.56 D inches
 Weight: 0.15 lbs
 Operating Temperature: -40° C to +85° C

Description of Operation

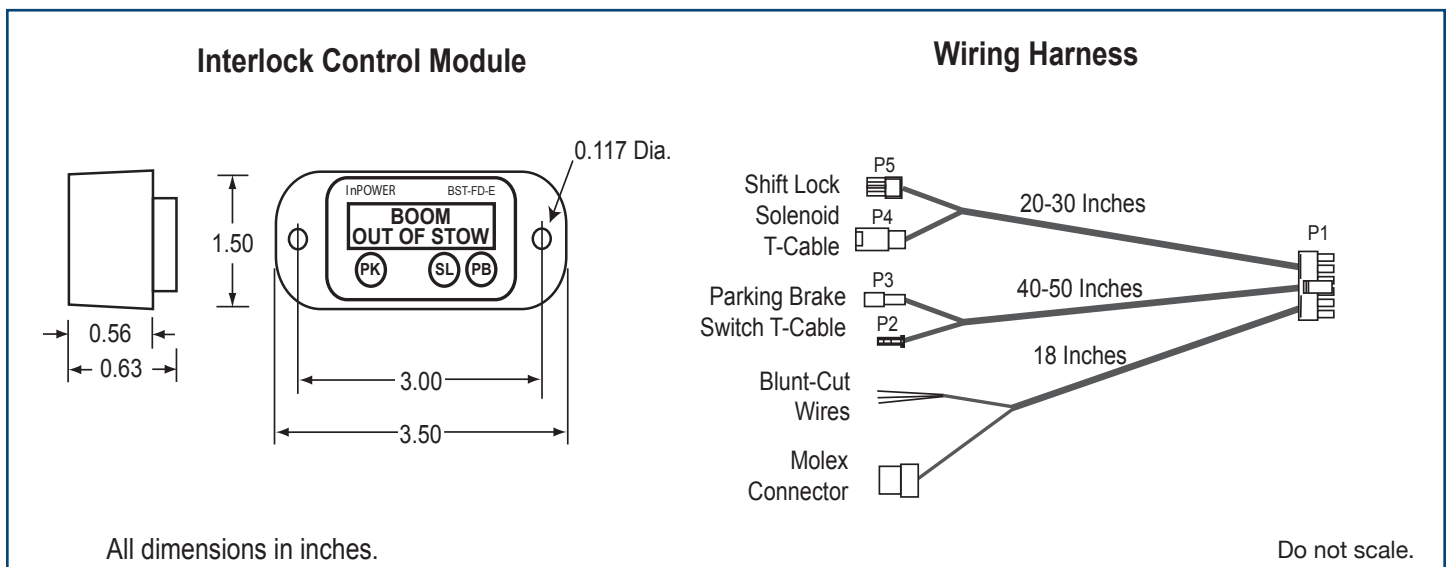
The interlock system is powered only when the Ignition Switch is on. The following is the system's sequence of operation:

- Step 1 - Turn the Ignition switch on and start the engine.
- Step 2 - Press the service brake and place shifter in Park if it is not already there.
 - The Park (PK) indicator will activate red.
- Step 3 - Set the parking brake.
 - Both the Park Brake (PB) and Shift Lock (SL) will indicators will activate red.
- Step 5 - Move the Boom Out of Stow.
 - The Boom Out of Stow indicator will flash yellow.
- Step 6 - When the use of the boom is completed, return the Boom to its fully stowed position.
 - The Boom Out of Stow indicator will stop flashing yellow.
- Step 7 - Release parking brake.
 - Both the Park Brake (PB) and Shift Lock (SL) will indicators will go off.
- Step 8 - At this point the Park (PK) indicator is the only indicator that is on so the vehicle can be taken out of Park.

Installation

1. We recommend that the module be installed by a person trained and skilled in vehicle electrical systems. The installation should comply with SAE (Society of Automotive Engineers) and the vehicle manufacturer's electrical wiring procedures (e.g. Ford, General Motors, etc.).
2. The module should be installed on the inside of the vehicle in a dry, protected environment.
3. The 12 volt power input must be from a properly fused +12 volt power source.
4. Wiring must be of the proper gage and type to handle the intended load currents.
5. If you are experiencing problems with the installation or need troubleshooting assistance, contact InPower Customer Service at 740-548-0965.

Mechanical Drawing



CIM Series

Chassis Interface Modules



Key Features

- Supports Ford, GM and Dodge Chassis
- Output Indicates the Vehicle is in Park
- Input Locks the Transmission in Park
- Simple Plug and Play Installation
- Small Size for Under Dash Location

Technical Description

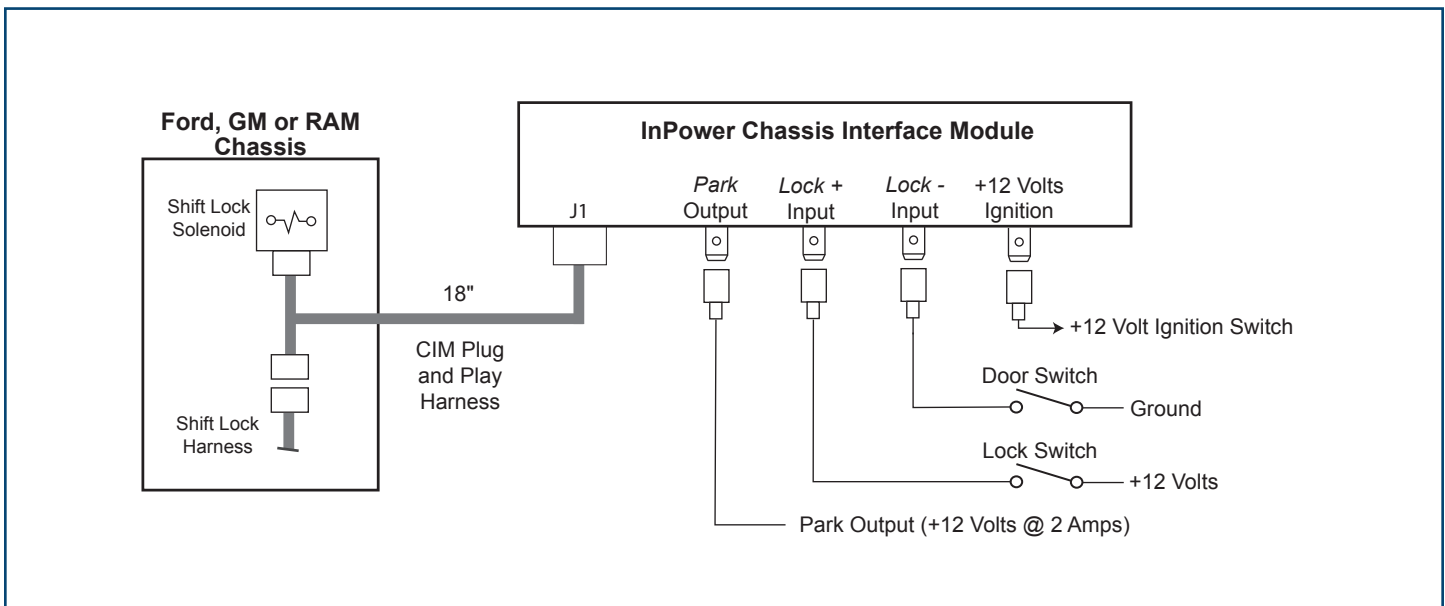
InPower's CIM Series Chassis Interface Modules provide a low cost and easy to install Park detection and transmission lock. These control functions are frequently required to ensure the vehicle is stationary and locked before operating equipment such as a lift, boom or outrigger. While equipment is in operation, the CIM locks the vehicle in Park to prevent vehicle movement. A plug and play harness is supplied with the CIM.

Operation:

The Park output is activated (+12 volts @ 2 amps) when the ignition switch is On AND the transmission is in Park. The Lock- input will lock the transmission in Park when a ground is applied. The Lock+ input will lock the transmission in Park when +12 volts is applied.

Part Number	Make	Model	Year
CIM1	Ford	E-Series	2009+
CIM1-F	Ford	F-Series	2009+
CIM1-R	RAM	C2500 C5500	2013+
CIM2	GM		2009+

System Diagram



Specifications

Operating Voltage Range:	+9.5 to 18.5 Volts
Control Terminals:	0.25 inch male Faston blade terminal
Connector:	Amp/Tyco Mate-N-Lock
Lock Shifter Input Voltage:	
Lock -	Ground to activate
Lock +	>+1 Vdc to activate
Park Output:	+12 Vdc @ 2 Amps
Weight:	0.17 lbs
Dimensions:	1.55 x 3.00 x 0.75 inches

Mechanical Drawing

