

SBM550-B Seat Belt Minder **2011-2013 Ford F-250 through F-550** **All Engines**



Introduction

The SBM550 Seat Belt Minder monitors the driver's seat belt buckle whenever the vehicle's ignition key is in Run. It provides two complimentary outputs which indicate the status of the drivers seat belt. One output is high true (12V) and the other is low true (ground) when the drivers seat belt is buckled. Either output can be connected to monitoring equipment as desired. These outputs are capable of sourcing/sinking 0.5 Amps.

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.

Installation Instructions

The module plugs into the vehicle's OBDII connector, which is located on the bottom edge of the lower left dash panel. Remove the lower dash panel below the steering column area and find a suitable location to mount the module. Actual mounting is the last step in the installation. Find a location away from heat, etc., where the harnessing won't be damaged by the tilt steering wheel, or Park Brake mechanism. Plan to leave the module hanging down until installation and testing is completed so the diagnostic LEDs can be observed if needed. Screws, Velcro or double backed tape may be used to mount the module when post installation testing is complete

Data Link Harness Installation

1. Locate the vehicle OBDII Data Link Connector, mounted below the lower left dash panel.
2. Remove the OEM mounting screws for the OBDII connector. Plug the red connector from the Data Link Harness into the vehicle's OBDII connector. Ensure the connection is fully seated and secure connectors together with the supplied wire tie.
3. Mount the Black pass-through connector from the Data Link Harness in the former location of the vehicle's OBDII connector.
4. Secure the SBM550 Data Link harness so that it does not hang below the lower dash panel.



8 Pin Connector

1. **Pin 3**, Orange wire on the 8 pin connector will provide a ground output whenever the driver's seat belt is buckled and the key is in the On position. When the driver's seat belt is unbuckled, pin 3 will output a VBAT signal (key in Run). This VBAT signal is suppressed by 0.7 Amps due to a 1N4005 diode included in the harness
2. **Pin 7** (no wire installed, see last page for connector pin definitions) of the 8 pin connector will output VBAT (12V) whenever the driver's seat belt is buckled and the key is in Run. When the driver's seat belt is unbuckled, pin 7 will provide a ground output. This pin is considered optional usage and has no wire installed in this position of the connector.
3. Extend the output wire as needed and connect to monitoring equipment.
4. Plug the 8 pin connector into the SBM550 module.



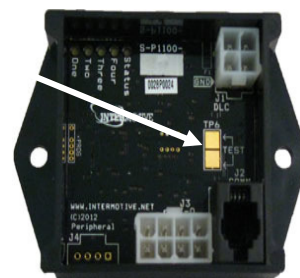
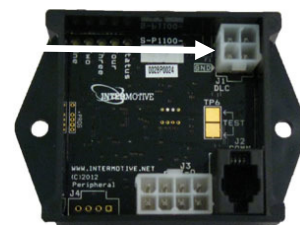
Post Installation Test

Energize the SBM module by plugging in the 4-pin Data Link connector into the module.

Turn the ignition switch to Run (engine off).

Enter the module's Diagnostic Mode by shorting the two Test pads together on the module. This can be done carefully with a screwdriver or other metallic object. The LED's on the module will become active in Diagnostic Mode:

- The amber "Status" LED will be On when in Diagnostic Mode.
- LED 3 will be On when the ignition switch is in Run/Crank.
- LED 4 will be On when the drivers seat belt is buckled.
- Cycling the ignition switch will exit Diagnostic Mode.

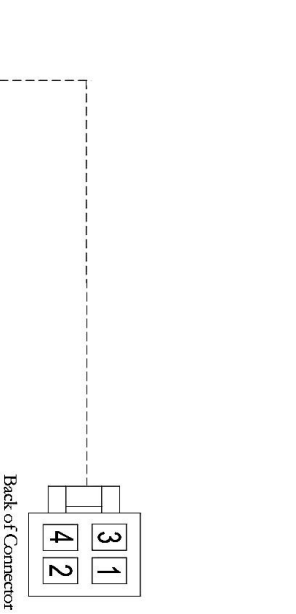


If the SBM fails to respond with the correct LEDs or the output pins do not track the seat belt buckle properly,

- Ensure that you are installing the system in the correct make and model year vehicle listed at the top of page 1.
- Recheck wiring and if necessary, call **Intermotive Technical Support 1-530-823-1043**

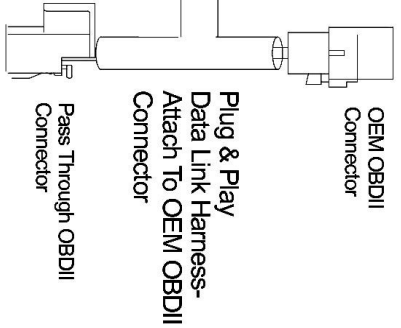
Mount the SBM550 Module

If the module works properly as described above, then route and secure the harnesses under the dash, ensuring they do not hang below the dash area. Mount the SBM module as described on page one with screws, Velcro, or double sided tape.



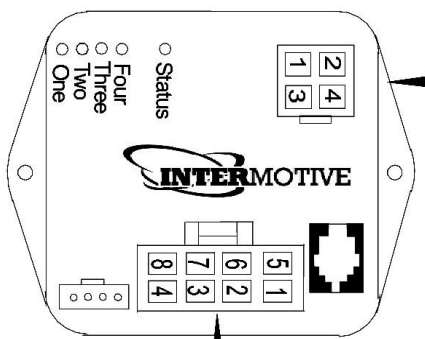
- 1 — RED
- 2 — GREEN
- 3 — GRAY
- 4 — BLUE

(12V Battery Voltage)
 (MS CAN High)
 (Ground)
 (MS CAN Low)

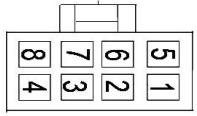


Plug & Play
 Data Link Harness-
 Attach To OEM OBDII
 Connector

Part# S-H07DX



- Status
- Four
- Three
- Two
- One



- 1 — Not Used
- 2 — Not Used
- 3 — ORANGE
- 4 — Not Used
- 5 — Not Used
- 6 — Not Used
- 7 — N/C (VBAT (12V) output when seatbelt buckled and key is in run. Ground output when seatbelt is unbuckled and key is in run)
- 8 — Not Used

Part# S-H50BX



SBM550
Part# S-M1100-52

If the SBM550 fails any step in the Post Installation Test, review the installation instructions and check all connections. If necessary, call InterMotive Technical Support at (530) 823-1048.