

# Siemens VDO®

## Speedometer Installation and Operation Instructions

for Programmable Speedometers with LCD Display

Instruction Sheet # 0 515 012 051  
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INSTRUCTIONS FOR THE INSTALLATION AND OPERATION OF THE PROGRAMMABLE SPEEDOMETER ARE CONTAINED HEREIN. USE IS RESTRICTED TO 12-VOLT OR 24-VOLT NEGATIVE GROUND ELECTRICAL SYSTEMS.

### CAUTION!!!

These instructions contain information about gauges of different sizes. **You must determine the size of your gauge before cutting any holes!**

### Tools and Materials Needed For Installation:

- Hole saw or jigsaw (may not be needed)
- 1/4" spade terminals
- Miscellaneous electrical connectors
- Philips and/or flathead screwdriver
- Pliers and/or wrenches
- Crimping tool and/or soldering iron (may not be needed)

## Parts List

Item	Description	Quantity
1.	Speedometer	1
2.	Lamp Socket (Push in, wedge-type)	2
3.	Light Bulb (12-volt / G.E. #158 or equivalent)	2
4.	VDO Spin-Lok™ Mounting Clamp	1
5.	Installation/Operation Instructions	1

## General Information

The VDO Programmable Speedometers featured in this installation manual are available in three diameters: 3 1/8" (80 mm); 3 3/8" (85 mm), and 4" (100 mm). The speedometers are also available with different dial faces: (MPH, Km/h or MPH-Km/h).

Incorporated into each speedometer is the latest VDO microprocessor technology for measuring speed and distance. These versatile instruments can be used in Original Equipment Manufacturer applications as well as in aftermarket installations.

VDO Programmable Speedometers can be used with *inductive, hall-effect, reed* and on manual transmissions, with *OEM sensors*. Use with electronic transmissions requires the speedometer to be hooked up to the electronic transmission control box. Intermittent shifting may occur when connecting directly to OEM sensors in *electronic transmissions*.

These instructions describe the installation, wiring, calibration and operation of all VDO Programmable Speedometers with LCD display.

**CAUTION;** Read these instructions thoroughly before installing the speedometer. Do not deviate from assembly or wiring instructions. Always disconnect the battery ground before making any electrical connections. In if doubt, please contact your dealer or VDO North America at (800)265-1818.



Diagram A

All VDO Programmable Speedometers with LCD Display feature auto-calibration

## Sensor Installation

The speed sensor necessary to provide the signal to your new VDO Speedometer is not included. This sensor is available from your auto parts dealer. (Part numbers for VDO Hall Effect Sensors are: 340 011; 340 012; 340 013; and 340 014. The VDO Generator Sensor is Part #340 001. VDO's Inductive Sensor is Part #340 020 or 340 021.)

### I. Mounting the Speedometer

- Refer to Diagram B for dimensions. The 3 1/8" (80 mm) speedometer requires a hole diameter of 3 1/8" (80mm); the 3 3/8" (85 mm) speedometer requires a hole diameter of about 3 3/8" (85 mm); and the 4" (100 mm) speedometer requires a hole diameter of about 4" (100 mm). If you are mounting the speedometer into an existing panel, remember that the panel cannot be more than 3/4" (20 mm) thick. Minimum mounting depth is 3 9/16" (91mm).
- Careful measuring is a must for proper mounting of your speedometer. An improperly placed hole would be a costly mistake, so measure everything twice. **REMEMBER: THERE ARE NO SECOND CHANCES ONCE YOU HAVE MADE YOUR HOLE! MEASURE TWICE... CUT ONCE!**
- Cut the hole. If you do not have a hole saw the exact size needed, use the closest **SMALLER** size, and carefully widen the hole with a half-round file or other similar device.
- Place the speedometer in the opening and secure it with the supplied VDO Spin-Lok clamp as shown in Diagram C. You may also mount the speedometer with a VDO mounting bracket and nuts [optional – must be purchased separately; they are available from your VDO dealer].

### II. Wiring the Speedometer

- Prepare insulated 1/4" spade terminals for use with the speedometer. Make sure all wires are long enough to reach the necessary positive and negative terminals and any wires from the sensor.
- Connect the wire from pin #4 to a switched +12 volt or +24 volt source. A switched +12 or 24 volt wire can be found coming from the ignition switch. Follow this wire to a junction, and attach the wire from the speedometer. Refer to Diagram D for the proper wiring of the speedometer.
- Attach the wire from pin #3 to a ground (negative) source. One such source can always be found where the battery is attached to the metal frame of the vehicle. Use an appropriate electrical connector to ground this wire.
  - If you are using a hall effect speed sensor, attach the three hall effect sensor wires to the speedometer head as follows:
    - RED** to Terminal #2;
    - BLACK** to be piggy-backed to Terminal #3 and on to a suitable ground;
    - the **OFF-WHITE** wire to a butt-splice with two wires coming out of the butt-splice going to Terminals #6 and #8.
  - If you are using an inductive speed sensor, connect one terminal to pin #7. Connect the other terminal to pin #8.
  - If you are using an electronic transmission, connect its speed signal wire to pin #8.

[text continues at #8] ➔

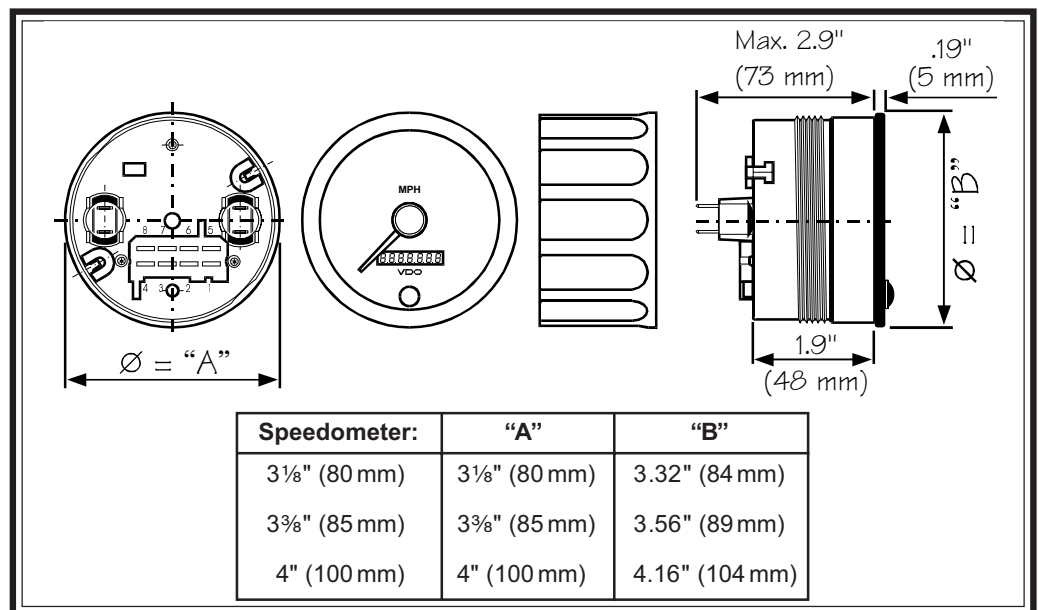
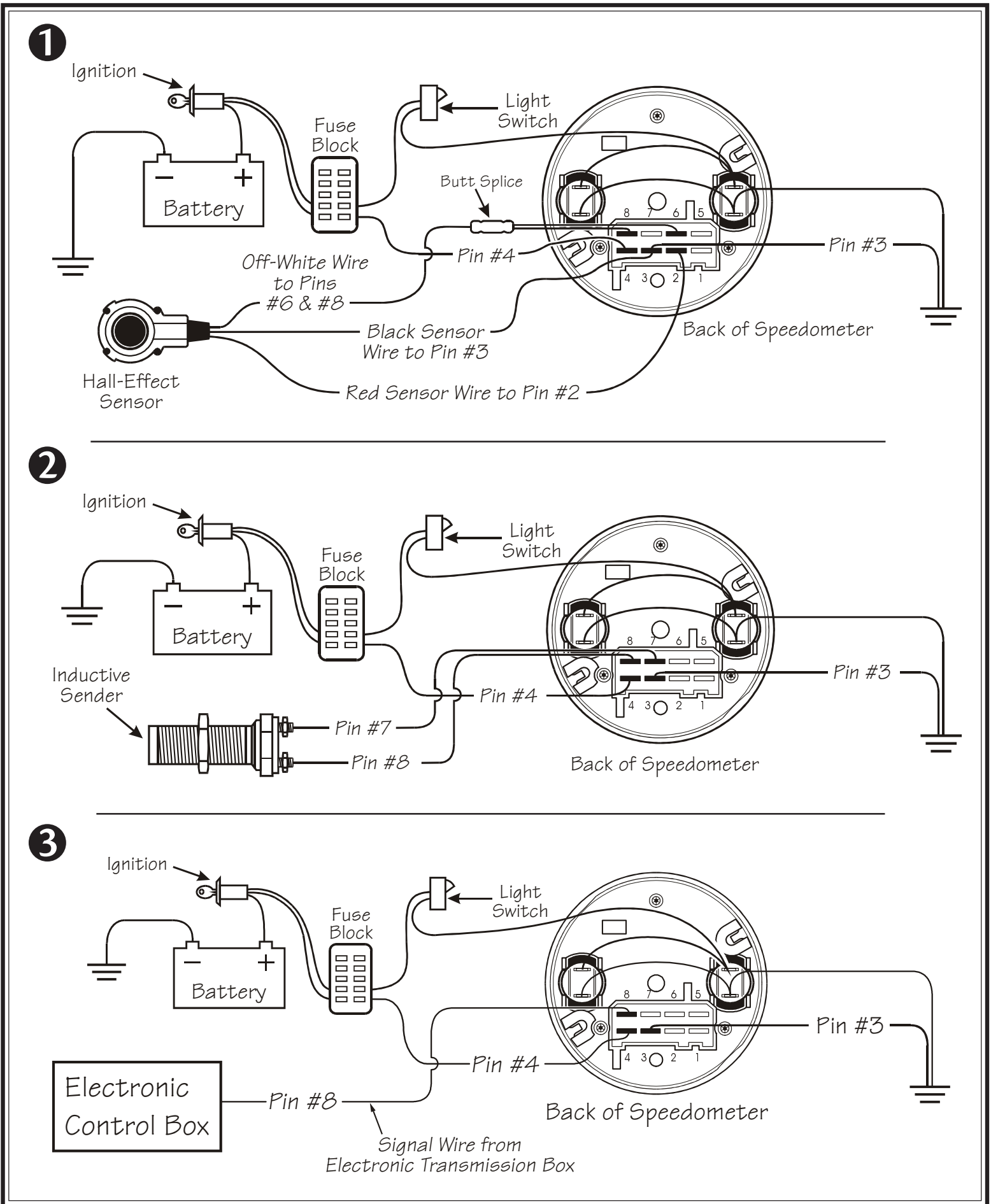


Diagram B

VDO Programmable Speedometer Dimensional Drawings



**Diagram D**

Proper wiring of the speedometer with: ❶ Hall-Effect sensors; ❷ Inductive sensors; or ❸ Electronic transmissions