

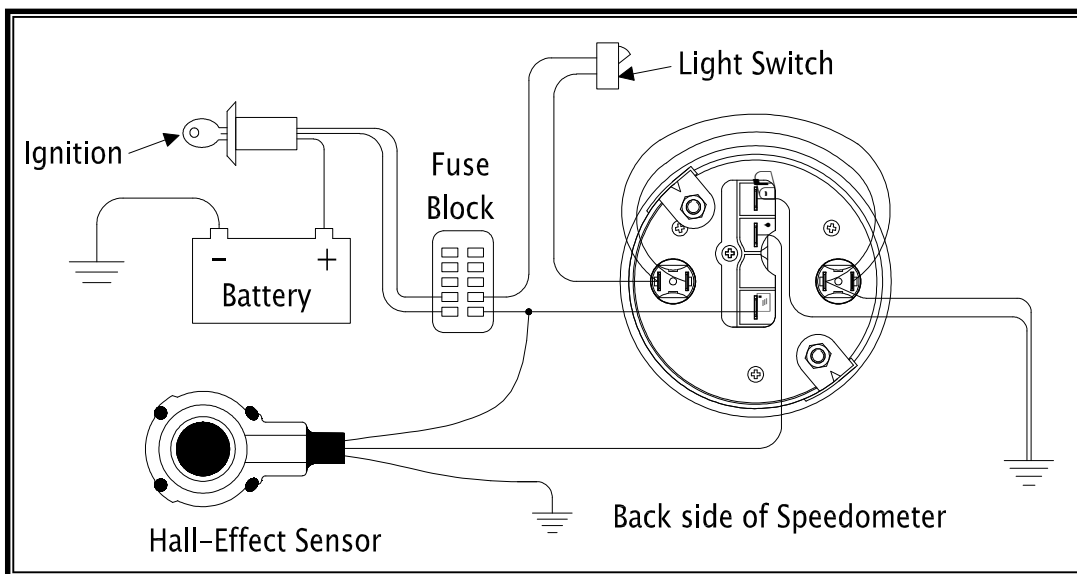


**3-3/8" (85 mm) Programmable Speedometer with LCD Display**

**1. Mounting The Speedometer**

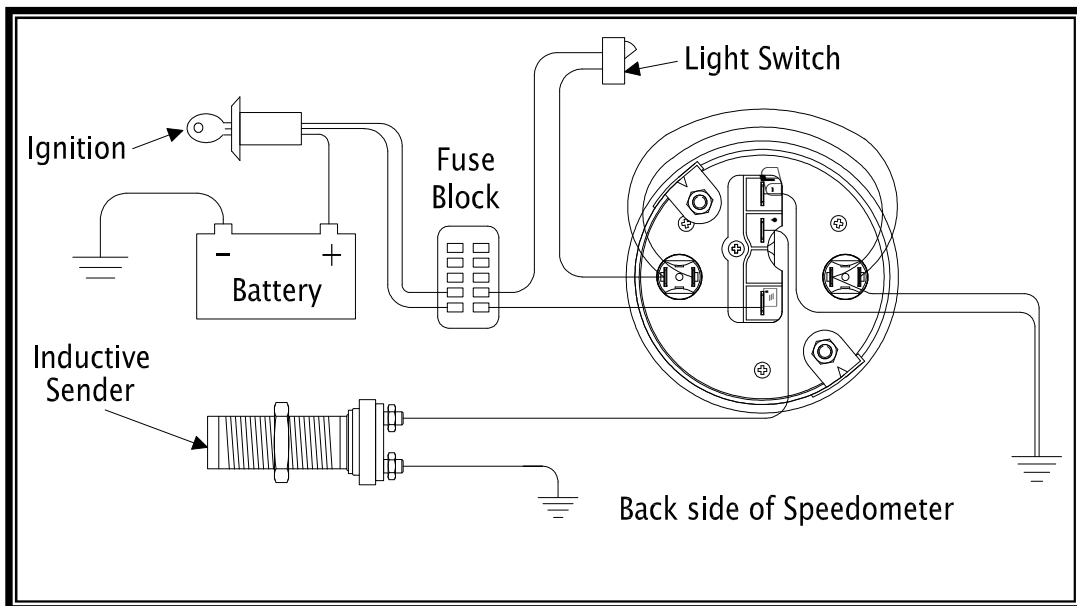
The 85 mm speedometer requires a dash panel hole diameter of 86mm. It can accommodate a maximum dash panel thickness of 7mm.

**2. Wiring The Speedometer**



**Diagram A**

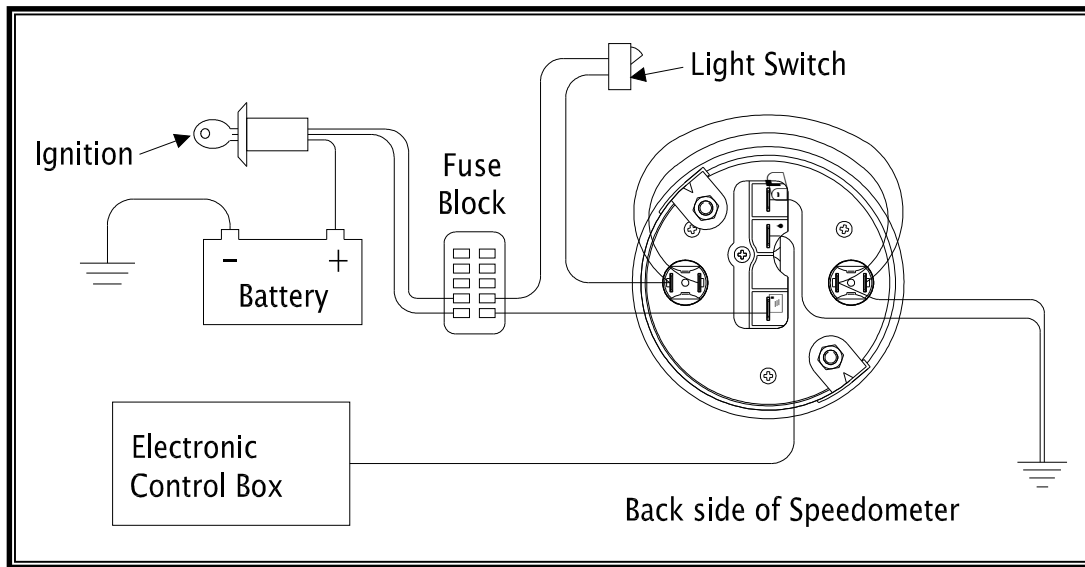
Wiring of the Speedometer with Hall-Effect Sensor



**Diagram B**

Wiring of the Speedometer with Inductive Sensor

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**Diagram C**

Wiring of the Speedometer with Electronic transmission (ECU)

The Diagram A, Diagram B, Diagram C shows the wiring of the speedometer with Hall effect sensor, Inductive sensor & ECU respectively. The mating terminal should be ¼" (6.35 mm) spade type terminal with insulation. Ensure all wires are long enough to reach the necessary positive and negative terminal and any wires from the sensor.

Reconnect the battery and turn on the ignition to make sure the speedometer is working. When the ignition is turned on the LCD display shows the word 'ODO' (or) 'TRIP A' (or) 'TRIP B', depending on which one was selected when the ignition was turned off. Since this is the first time power has been applied to the instrument, the LCD Display will be "ODO 0" (or) TRIP A 0.0 (or) TRIP B 0.0. If everything is working properly the installation is complete. If it isn't recheck the wiring.

### **3. Calibrating The Speedometer**

#### **3.1 Finding the programming number**

The programming number = The number of output pulses from the sensor per Kilometer

- If the programming number is indicated in the vehicle's user manual, Refer 4.2, "Setting the programming number" for calibration
- If the programming number is not available, connect a pulse-measuring counter to the sensor and find the number of pulse output by driving the vehicle for exact distance of 1 Kilometer. It is suggested to repeat the exercise a few times and average value shall be determined.
- **IT MAY BE WISE TO HAVE A SPEEDOMETER TECHNICIAN PROGRAM IT FOR YOU**

#### **3.2 Setting the programming number**

If you know the exact calibration value, you can program this speedometer from a value of 3000 to 30000 Pulse/Kilometer. The factory set value is 20000 Pulse/kilometer. It can be set either on a test table with a DC power supply or in the vehicle using the battery power.

Press and hold in the button on the front of the speedometer as you turn on the ignition. Hold in the button until the word 'PULSE' is displayed on the LCD readout. As soon as the word 'PULSE' is displayed, release the button and the factory set programmed number is displayed with first right digit blinking. e.g. if the speed sensor gives 4000 pulses per Kilometer. Here the speedometer has to be set to programming number 4000. Continuous pressing of the knob will increment this digit from '0' up-to '9' & roll over to '0' and continues. Once the required digit is displayed, stop pressing the knob. After 5 continuous blinks, the next digit to the left starts blinking.

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By repeating this process all the 4 digits can be set (Say, 4000) & the set value is memorized. *If the set value is below 3000, the minimum programming number i.e. 3000 will be set as default programming number. If wrongly set by mistake, the above procedure is to be repeated to set the correct programming number.*

**Caution: Do not apply more loads to the reset knob. It may damage the internal mechanism.**

### 4. Odo And TRIP Odometer

After setting the programming number the display switches to main 'ODO' as shown below.



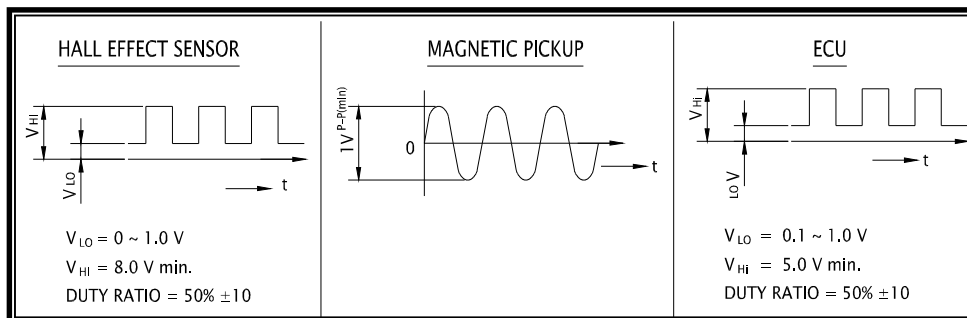
Check the function of speedometer and trip odometer by driving the vehicle. Pressing the reset switch for less than 2 seconds will change the display from main to trip A, trip B and vice versa as shown below.



At trip odometer display, pressing the set knob for more than 2 seconds will reset the trip odometer. The total odometer cannot be re-set. The display capacity of the total odometer is 999999. Once this value is reached, it rolls over to zero (0) & continues counting. Similarly the display capacity of the trip odometer is 99999.9 & once this value is reached, it rolls over to zero (0.0) & continues counting. Even if the battery is disconnected, the total and trip odometer readings and the set programming number will be in the memory for 5 years.

### 5. TECHNICAL DATA

Operating Voltage	:	11-17 V DC
Operating Temperature	:	-20°C to +70°C
Calibration Range	:	3000 to 30000 Pulses/Kilometer
LCD Display detail	:	Display unit - "Kilometer"
		ODO Length - 999999 (After 999999, it rolls over to 0 and continues counting)
		TRIP A Length - 99999.9 (After 99999.9, it rolls over to 0 and continues counting)
		TRIP B Length - 99999.9 (After 99999.9, it rolls over to 0 and continues counting)
Data Memory	:	5 Years after power off (Storage temperature : -40°C to +85°C)
Input Signal detail	:	Speedometer is compatible with the Hall effect sensor, Magnetic Pickup & ECU
		Refer 'Diagram D' for signal details.



**Diagram D**