

INSTALLATION INSTRUCTIONS PROGRAMMABLE SPEEDOMETER

2650-1140



QUESTIONS:

If after completely reading these instructions you have questions regarding the operation or installation of your instrument(s), please contact Auto Meter Technical Service at **815-899-0801**.

You may also email us at service@autometer.com.

Additional information can also be found at http://www.autometer.com/tech_faq.aspx

General Information

This electronic speedometer utilizes a LCD to display odometer and trip odometer mileage. Momentarily pressing the Trip/Reset button on the dial window toggles the odometer/trip odometer information displayed on the LCD. Pressing the button, while in trip mode, for more than two seconds will reset the trip odometer. The odometer cannot be reset.

Auto Meter electronic speedometers are pre-calibrated. When converting from a cable driven speedometer, no further calibration is needed if:

1. The transmission's speedometer cable take off is 1000 RPM at 60 MPH (97 km). Most vehicles meet this requirement.
If the vehicle's tire size and/or differential ratio has changed, the speedometer needs to be recalibrated.
2. The vehicle is equipped with a 16-pulse/revolution sender.
3. The speedometer that includes a 2-wire sender is pre-calibrated to 8 pulses/revolution to match this sender.

If the above conditions have not been met, the speedometer must be recalibrated (see calibration section).

NOTE: The odometer on this speedometer will show some mileage less than 5 miles (8 km). This is a result of factory testing to insure optimum quality.

Speedometer Senders

The speedometer is designed to operate with an electrical speed sender. The speed sender signal range must be between 500 and 400,000 pulses/mile (310 and 248,500 pulses/km). Any speed sender or electronic module that meets the following two conditions can be used:

1. Pulse rate generated is proportional to vehicle speed.
2. Output voltage within the ranges listed below:
 - 4 to 16V (Hall effect sender, 3-wire)
 - 4 to 120V peak to peak into a 10K ohm load (Sine wave generator, 2-wire)
 - 5V Square wave (TTL)

Recommended – Auto Meter Hall effect sender, 3-wire 16 pulses/revolution.

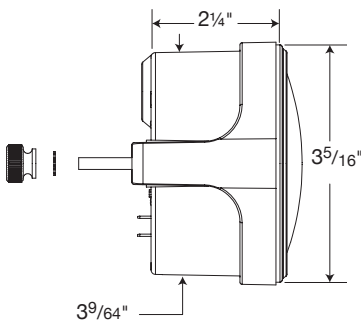
5291 Standard 7/8 – 18 thread

5292 Ford, plug in

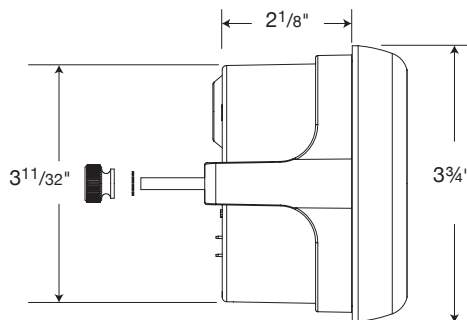
Mounting

1. Mount a 3 1/8" tachometer in a 3 5/32" dia. hole, a 3 3/8" tachometer in a 3 3/8" dia. hole and a 5" tachometer in a 4 5/8" dia. hole. Be careful not to cut the hole too large.
2. Cut a 3/8" dia. hole in the firewall for the tachometer wires. Place a rubber grommet in the hole and route the wires through the grommet to the engine compartment.
3. Connect the tachometer wires as shown in the wiring sections.
4. Secure the tachometer to the dashboard using the provided bracket and hardware.

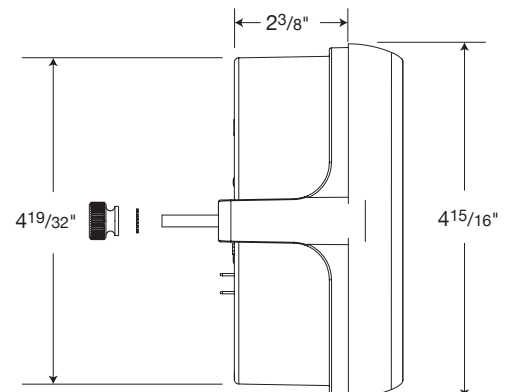
3 1/8" Models



3 3/8" Models



5" Models



Testing

Once the speedometer is mounted and wired into the vehicle (see following page), the speedometer should be tested to verify that the electrical connections are working properly. First, watch the speedometer's pointer as the power is applied. The pointer should first move to a midrange position, then down to the zero box on the dial. This action verifies that power is properly connected to the speedometer. The vehicle should be driven some distance to verify the Vehicle Speed Sender (VSS) is connected properly and that the pointer moves. If the pointer does not move out of the zero box, verify that the VSS is connected properly.

Calibration (Electronic Speedometer calibration made easy!)

To calibrate your electronic speedometer:

- 1) With the power off, push and hold the calibration button (trip/reset button when equipped). While holding the button, start the vehicle and continue to hold the button until the pointer sweeps to full scale and stays at full scale. You may now release the button.
- 2) Drive to the beginning of a pre-marked 2 mile distance and come to a stop. It does not matter how far away it is to get to this pre-marked 2 mile distance. Do NOT shut the engine off. Push and release the button. The pointer will drop to half scale.
- 3) Drive the 2 mile distance. The pointer will remain at the half scale mark no matter what speed you drive. If the speedometer has a LCD display odometer, it will be normal to see it counting rapidly as it is receiving a speed signal. If you have to stop during the calibration, that is o.k. The speedometer will simply stop counting pulses during this time.
- 4) At the end of the 2 mile distance, come to a complete stop and push and release the button. The pointer will drop to 0 and the calibration is stored. You are now finished. Remember the accuracy of your 2 mile distance will directly affect the accuracy of your speedometer.

The following list contains factors that can affect speedometer accuracy and how to minimize them during calibration.

1. Tire diameter increases slightly as vehicle speed increases. To minimize this error drive at an average speed of 45 MPH (175 KPH) during calibration.
2. Tire diameter increases slightly as tire air pressure is increases. To minimize this error, check the vehicle's tires to ensure correct air pressure.
3. Tire diameter changes with vehicle load. Minimize this error by having an average load in the vehicle during calibration.
4. Minimize tire slippage error by not breaking traction during calibration.

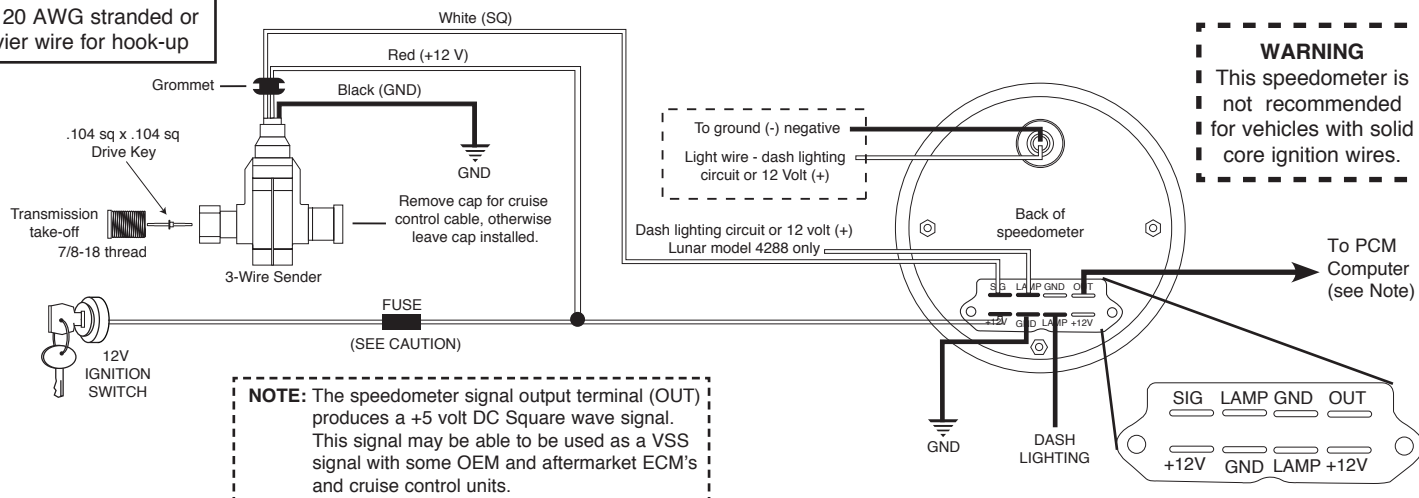
Note: Always recalibrate speedometer after any tire size or differential ratio change.

Wiring

Auto Meter Hall-Effect senders (Square Wave)

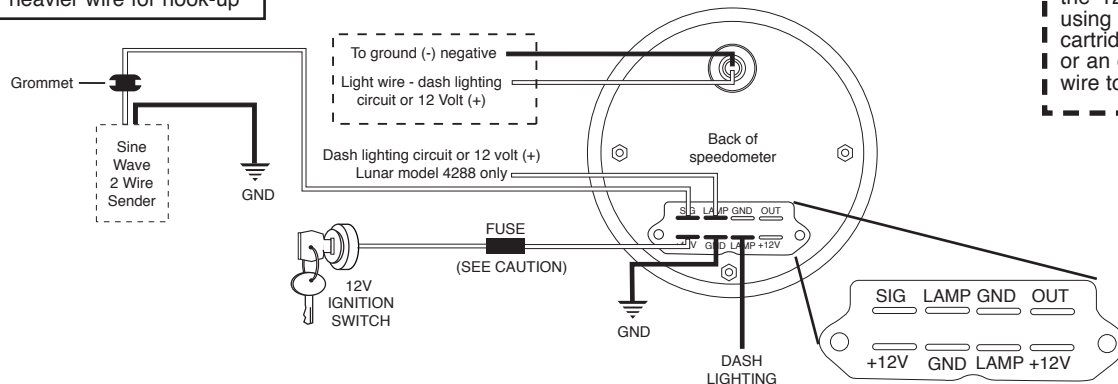
- Models 5291 (standard 7/8-18 thread) & 5292 (Ford Plug in Sensor), 3 wire sender, cruise.

Use 20 AWG stranded or heavier wire for hook-up



Most OEM style or Factory Installed, 2 wire senders (Sine Wave)

Use 20 AWG stranded or heavier wire for hook-up



SERVICE

For service send your product to Auto Meter in a well packed shipping carton. Please include a note explaining what the problem is along with your phone number. Please specify when you need the product back. If you need it back immediately mark the outside of the box "RUSH REPAIR," and Auto Meter will service product within two days after receiving it. (\$10.00 charge will be added to the cost of "RUSH REPAIR.") If you are sending product back for Warranty adjustment, you must include a copy (or original) of your sales receipt from the place of purchase.

12 MONTH LIMITED WARRANTY

Auto Meter Products, Inc. warrants to the consumer that all Auto Meter High Performance products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12 month warranty period will be repaired or replaced at Auto Meter's option to the consumer, when it is determined by Auto Meter Products, Inc. that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of parts in the Auto Meter instruments. In no event shall this warranty exceed the original purchase price of the Auto Meter instruments nor shall Auto Meter Products, Inc. be responsible for special, incidental or consequential damages or costs incurred due to the failure of this product. Warranty claims to Auto Meter must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12 month warranty period. Breaking the instrument seal, improper use or installation, accident, water damage, abuse, unauthorized repairs or alterations voids this warranty. Auto Meter Products, Inc. disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by Auto Meter.

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