

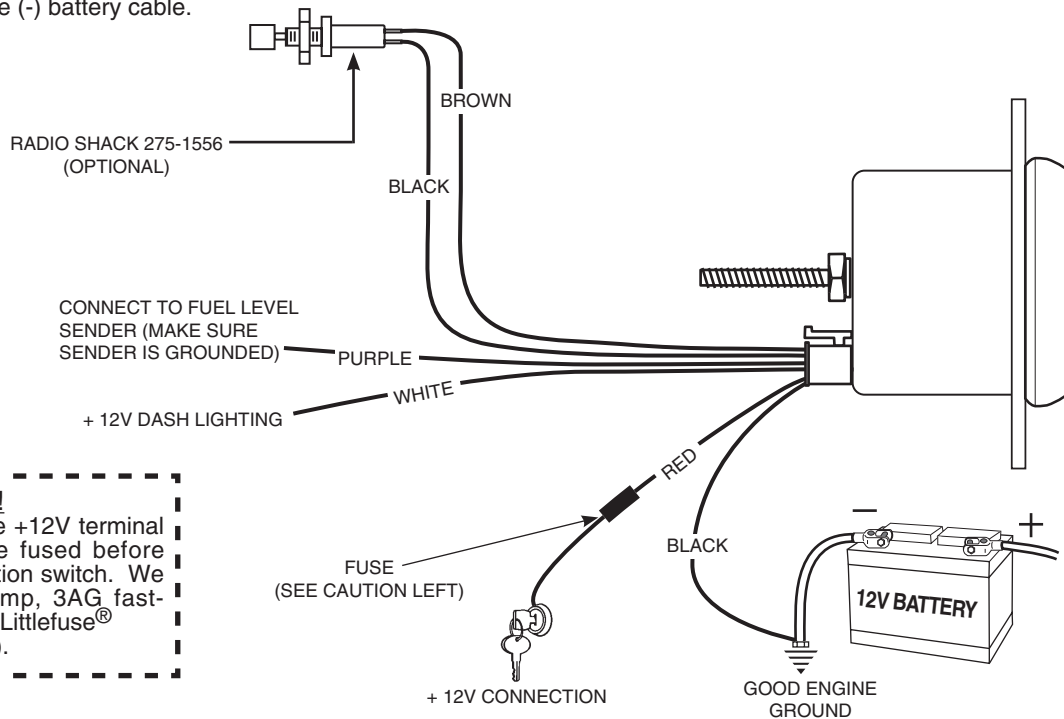
# INSTALLATION INSTRUCTIONS DIGITAL FUEL LEVEL

2650-1239-00



## Installation

1. Check that you have all parts required for installation, and that the engine is cool.
2. Disconnect the negative (-) battery cable.
3. Gauge mounts in a 2 $\frac{1}{16}$ " hole.
4. Connect the purple sender wire to the fuel level sender. Existing wires may be used, or route the purple sender wire to the fuel tank.  
(The stock fuel level gauge, if equipped, must be disconnected.)
5. Connect the white wire to dash lighting or switchable 12v light source. Digital display will dim when power is applied.
6. Connect one of the black wires to a good ground. (Either black wire, does not matter which one)
7. Connect the red power wire to a switched +12v source.
8. Reconnect the negative (-) battery cable.



### CAUTION!

As a safety precaution, the +12V terminal of this product should be fused before connecting to the 12V ignition switch. We recommend using a 1 Amp, 3AG fast-acting type cartridge fuse (Littlefuse® #312 001 or an equivalent).

## Setting the Existing Sender Type

1. The brown and black wires are used to set the sender type. The gauge ships pre-programmed to read GM 0-90 ohm senders. If using a 0-90 ohm GM sender, separately insulate the ends of the brown and black wires with electrical tape, and coil them up under the dash.
2. If any other sender type is required, connect a Radio Shack 275-1556 or equivalent momentary button to the black and brown wires (see illustration above), or alternately touch the stripped ends of the black and brown wires to simulate pushing the button.
3. Press and hold the button, and apply power to the gauge. After 10 seconds, the display will momentarily display a number with a dash on either side indicating the gauge is in sender select mode.
4. Allow the display to move to the appropriate number per the sender select chart (see next page), and release the push button. The display can be incremented to the next position by momentarily pressing the button.
5. Remove power from the gauge to store the new sender type by turning off the ignition switch.
6. Re-apply power to the gauge, and confirm that it reads the proper fuel level. If the proper fuel level is not read, return to step 3 and repeat the sender select process. If the proper fuel level is still not indicated, perform a Custom Sender Calibration.
7. Remove power from the gauge by turning off the ignition switch.
8. Remove the momentary button if it was used, and tape the ends of the brown and black wires so they will not touch.
9. Coil the wires up under the dash.

## Setting the Programmable Reserve Level

The Traditional Digital Fuel Level Gauge can be programmed to flash the display when the fuel level has reached a reserve level. When power is applied to the gauge, it will momentarily display rXX, where XX is the current reserve level. Setting the reserve level to 0% disables this feature.

1. The brown and black wires are used to set the reserve level. The gauge ships pre-programmed with the reserve set to 10%. If not changing the reserve level, separately insulate the ends of the brown and black wires with electrical tape, and coil them up under the dash.

2. If any other reserve level is desired, connect a Radio Shack 275-1556 or equivalent momentary button to the black and brown wires (see illustration on previous page), or alternately touch the stripped ends of the black and brown wires to simulate pushing the button.
3. Press and hold the button, and apply power to the gauge. Release the button before two seconds have elapsed. The gauge will display “-r-”, indicating that the gauge is in programmable Reserve Level select mode.
4. Press and hold the button. The display will increment from r00 to r25, indicating 0% to 25% allowable reserve level. Release the button when the display shows the desired reserve level. The display can be incremented to the position by momentarily pressing the button.
5. Remove power from the gauge to store the new reserve level by turning off the ignition switch.
6. Re-apply power to the gauge, and confirm that it reads the proper reserve level before it displays the current fuel level. If the proper reserve level is not read, return to step 3 and repeat the reserve level select process.
7. Remove power from the gauge by turning off the ignition switch.
8. Remove the momentary button if it was used, and tape the ends of the brown and black wires so they will not touch.
9. Coil the wires up under the dash.

## Custom Sender Calibration

The fuel level gauge can be custom calibrated to accurately display the output from any fuel level sender with an output between 0 and 270 ohms.

1. Make sure the fuel level sender is connected to the gauge and the fuel tank is empty, or nearly empty, before proceeding.
2. Connect a Radio Shack 275-1556 or equivalent momentary button to the black and brown wires (see illustration on previous page), or alternately touch the stripped ends of the black and brown wires to simulate pushing the button.
3. Press and hold the button, and apply power to the gauge. After 10 seconds, the display will momentarily display a number with a dash on either side indicating the gauge is in sender select mode. The display can be incremented to the next position by momentarily pressing the button. Allow the display to reach ‘-8-’ and release the push button.
4. Remove power from the gauge to enter custom calibration mode.
5. Re-Apply power to the gauge. The gauge will display CCØ indicating that the empty calibration point can be entered.
6. With an empty, or nearly empty tank, capture the empty calibration point by momentarily (less than one second) pushing the button. After 1 second, the gauge will display 100.
7. Fill the tank and momentarily (less than one second) push the button to capture the full calibration point. After approximately one second, the gauge will reset, and begin reading the fuel level per the custom calibration.
8. Confirm that the gauge reads the proper fuel level.
9. If the the proper fuel level is not indicated, return to step 3 and recalibrate.
10. Remove the momentary button if it was used, and tape the ends of the brown and black wires so they will not touch.
11. Coil the wires up under the dash.

## Sender Error

If no sender is connected, the gauge will display “EØ”. Approximately 4 seconds after the sender is connected, the gauge will display the fuel level and resume normal operation. If sender is hooked up and “EØ” is displayed, check sender for improper ground or open circuit.

## Power-Up

When power is applied to the gauge, the display will light up with all eights immediately followed by the gauge firmware version. After the firmware version is momentarily displayed, the gauge will display the reserve level (if enabled). After the reserve level is momentarily displayed, the gauge will begin normal operation and display real time sender readings

## Sender Select Chart

Sender Type		Display
Ford Pre-'89, Chrysler	73 - 10 ohms	-1-
Ford '89 - Present	16 - 158 ohms	-2-
GM Pre-'65	0 - 30 ohms	-3-
GM '65 - Present*	0 - 90 ohms	-4-
Auto Meter Sender	240 - 33 ohms	-5-
Eclipse '90 - '02, Civic '88 - '00	107.5 - 7 ohms	-6-
Civic '01 - Present	131 -12 ohms	-7-
Custom Calibration		-8-

\* Starting in '98, some GM models began using a different sender type.  
If this calibration is not accurate, perform Custom Sender Calibration as described above.