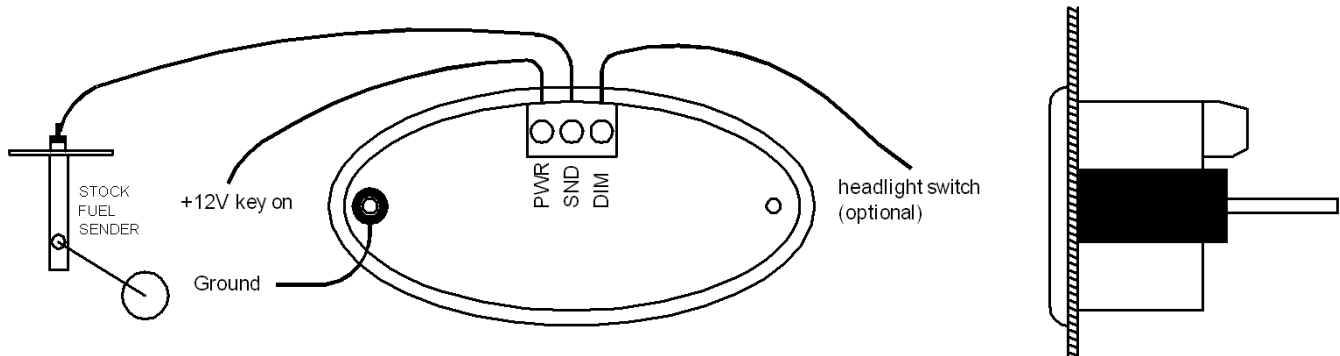


Dakota Digital

ION-06 FUEL LEVEL GAUGE

Wiring:

- PWR - connect to fused switched 12 volt power. (An accessory terminal will work for this.)
- DIM - Night Dimming: connect to the head light switch.
- SND - connect to the fuel level sender. **SET THE SENDER TYPE FIRST**
- Gauge case - connect to a main ground location



Mounting:

The gauge requires an oval hole 1-7/16" high x 3-1/16" wide. It should be inserted into the opening from the front and the 2 L-clamps will be installed from the back. Tighten a nut on each of the L-clamps so that the gauge is secure. Gauge depth to the back of the case is 1". Gauge depth including the mounting studs is 1-7/8".

Factory settings:

Sender type: 240 – 33 ohms **GO THROUGH SETUP TO CHANGE THIS TO MATCH YOUR SENDER.**
 Full tank reading: 100%.

- User adjustable for GM, Ford, VDO, or Stewart Warner senders.
- User selectable to display %full or gallons remaining.
- The gauge will flash any time the fuel level is below 10% to warn of low fuel.

Fuel sender resistances:

Sender type	empty resistance	full resistance .
GM 30	0 ohms	30 ohms
GM 90	0 ohms	90 ohms
GM 250	40 ohms	250 ohms
Ford 10	73 ohms	10 ohms
Ford 150	20 ohms	150 ohms
VDO 180	10 ohms	180 ohms
Stewart Warner/Sun 33	240 ohms	33 ohms
Import 4	112 ohms	4 ohms

If a sender is not connected properly or the gauge is not set for the sender, the display will show "EEE". If the SND terminal is shorted to ground, the display will show "---". When the gauge is set for a GM sender the gauge will not show "--" since 0 ohms is a valid reading from the sender.

Setting the full tank reading and sender type setup:

The SND terminal is used to enter and change the gauge settings. You will need a wire connected to the SND terminal that can be momentarily grounded while you watch the gauge. The headlights should be off or the DIM terminal unhooked so that it does not interfere with the setup.

1. To enter the set mode, turn the key on with the SND wire not grounded. The gauge will display "SEt".
2. Ground the SND wire. The gauge will display "Snd". (If you wait too long the gauge will exit the setup routine and you will need to repeat step #1).
3. Release the SND wire. The gauge will display the current setup. "33" is for Stewart Warner/Sun, "180" if for VDO, "10" is for Ford-10, "150" is for Ford-150, "90" is for GM-90, "250" is for GM-250, "30" is for GM-30, and 4 is for Import.
4. Each time you momentarily ground the SND wire the setup will change.
5. When the desired setup value is displayed, keep the SND wire grounded for about 2 seconds. The gauge will display "FUL".
6. Release the SND wire. The gauge will display a number from 100 or 11.0-40.0. 100 is for %full and 11.0-40.0 is full tank capacity in gallons.
7. Each time you momentarily ground the SND wire the number will change.
8. When the desired full tank reading is displayed, keep the SND wire grounded for about 2 seconds. The gauge will display "--".
9. Turn the key off.

Troubleshooting guide.

Problem	Possible cause	Solution
Gauge will not light up	PWR terminal does not have power. The gauge case is not getting a good ground. Gauge is damaged.	Connect to a location that has power. Connect the ground to a different location. Return gauge for service. (see instructions)
Gauge lights up, but does not read correctly.	Loose connection on SND terminal. Poor ground connection. Gauge sender setup is incorrect. Voltage or wiring problem in the vehicle wiring harness.	Reconnect wire. Move ground to different location See "Setting sender setup" in the manual. Check wiring harness for loose or damaged wires.
Gauge lights up, but displays "Er0".	Gauge is damaged.	Gauge must be returned for service. (see instructions)
Gauge lights up, but displays "---".	SND terminal is shorted to ground. Sender is damaged.	Check wire for damaged insulation. Replace if necessary. Replace sender.
Gauge lights up, but displays "EEE".	Sender is not connected to gauge. Wire between gauge and sender is broken. Sender is not grounding properly. Sender is damaged. Gauge is damaged.	Connect SND terminal on gauge to sender terminal. Test and replace wire. Sender grounds through it's mounting plate. Make sure the mounting plate has a good ground Replace sender. Return gauge for service. (see instructions)
Gauge lights up, but displays "Er3".	Gauge sender setup needs to be reset.	See "Setting sender setup" in the manual
Gauge lights up, but displays "Er4".	Gauge full tank reading needs to be reset.	See "Setting the gauge setup" in the manual.
Gauge flashes constantly.	Fuel level is below 10%. Gauge sender setup is incorrect.	Fill gas tank. Check sender resistance or type and gauge setting.
Gauge will not dim.	DIM terminal is not connected correctly.	Check wiring connections.
Gauge remains dim at all times.	DIM terminal is getting power all of the time. Battery is very low. Gauge is damaged.	Connect DIM wire to location that only has power when the headlights are on. Recharge or replace vehicle battery. Return gauge for service. (see instructions)

Technical specifications

- Minimum operating voltage - 7 volts
- Maximum operating voltage - 17 volts
(operating at or near maximum voltage for an extended time can damage unit)
- Compatible fuel senders - SW/Sun, VDO, GM, Ford, and some import
- Gauge accuracy - depends on sender
- typical current draw (@ 13.8V) - 0.1 A

SERVICE AND REPAIR

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical consultation is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems.

Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number. Package the product in a good quality box along with plenty of packing material. Ship the product by UPS or insured Parcel Post. Be sure to include the RMA number on the package, and include a complete description of the problem with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day. Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase. Send no money. We will bill you after repair.

Dakota Digital 24 Month Warranty

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship within 24 MONTHS FROM THE DATE OF PURCHASE, such defect(s) will be repaired or replaced at Dakota Digital's option.

This warranty does not cover nor extend to damage to the vehicle's systems, and does not cover removal or reinstallation of the product. This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. Any action for breach of any warranty hereunder, including any implied warranty of merchantability, must be brought within a period of 24 months from date of original purchase. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.

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