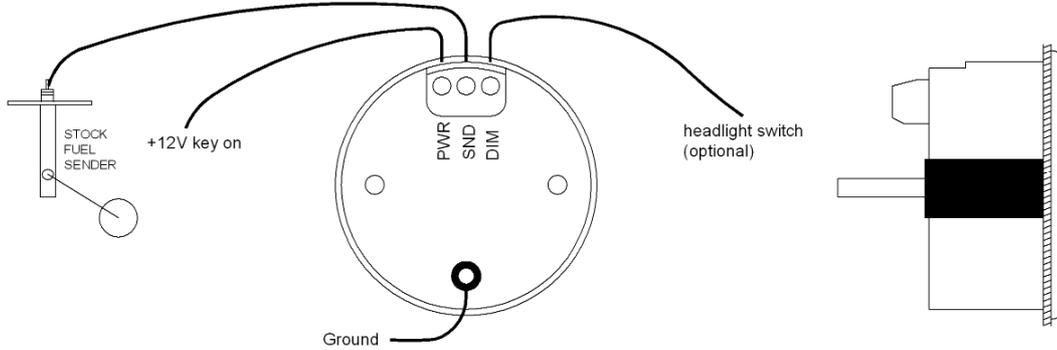


Dakota Digital

HLY-3061 ROUND FUEL LEVEL GAUGE REV. A (weather and vibration resistant for exposed environments)

Wiring:

- GND - connect to a main ground location
- PWR - connect to fused switched 12 volt power (an accessory terminal will work for this).
- DIM - Night Dimming: connect to the tail light circuit (when terminal as +12V gauge will dim).
- SND - connect to the fuel level sender. **SET THE SENDER TYPE FIRST**



Mounting:

The gauge requires a round hole 2-1/16" in diameter. It should be inserted into the opening from the front and the U-clamp will be installed from the back. Tighten the two nuts on the U-clamp so the gauge is secure. Gauge depth to the back of the case is 1". Gauge depth including the mounting studs is 1-7/8".

For handle bar mounting, a Dakota Digital mounting cup, CUP-3001(chrome) or CUP-3003(raw steel), may be used. Mounting cups also require a mounting bracket dependent on bar size.

Default settings:

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

- User adjustable for various senders.
- User selectable to display % full or gallons remaining; gallon option not typically used for motorcycle applications.
- The gauge will flash anytime 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 flash "00" when shorted to ground, not show the "---" since 0 ohms is a valid reading for the GM sender.

Harley fuel senders are typically the Ford 10 (73 ohms empty – 10 ohms full) or the Stewart Warner/Sun 33 (240 ohms empty and 33 ohms full). Most models through 2007 should use the Ford 10 setting, 2008 and newer should be the Stewart Warner 33, but please verify the resistance of your sensor. You can check the resistance of your fuel sending unit by measuring resistance from the fuel sender wire to ground. When checking resistance, the fuel sender wire should not be connected to anything else. Also note that fuel senders have a very “loose” tolerance and you should expect to see a 5 -15% tolerance in resistance measurements.

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 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. The ranges in **bold** are the ranges HD is known to use.
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, be sure to select this setting. The numbers 11.0-40.0 are full tank capacity in gallons, which will not typically work for motorcycle tanks.
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. GND terminal does not have a good ground. <u>Gauge is damaged.</u>	Connect to a location that has power. Connect to a different ground location. <u>Return gauge for service. (see instructions)</u>
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. <u>Sender is damaged.</u>	Check wire for damaged insulation. Replace if necessary. <u>Replace sender.</u>
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. <u>Gauge is damaged.</u>	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. <u>Return gauge for service. (see instructions)</u>
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. <u>Check sender resistance or type and gauge setting.</u>
<u>Gauge will not dim.</u>	<u>DIM terminal is not connected correctly.</u>	<u>Check wiring connections.</u>
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. <u>Return gauge for service. (see instructions)</u>

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 units.

Should you ever need to send the unit back for repairs, please 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 a complete description of the problem, your full name and address (street address preferred), and a telephone number where you can be reached during the day. An authorization number for products being returned for repair is not needed. Any returns for warranty work must include a copy of the dated invoice or bill of sale.

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

ODYSSEY SERIES DIGITAL GAUGE LIMITED WARRANTY

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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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