



Series II
ODYR-09-1 & SLX-09-1 VACUUM/BOOST GAUGE
ODYR-09-2 & SLX-09-2 VACUUM GAUGE
ODYR-09-3 & SLX-09-3 BOOST GAUGE
SEN-09-3 SENSOR

Introduction:

The Odyssey Series II gauges from Dakota Digital, Inc. incorporates the reliability and quality of our standard gauges, along with several unique features and easy mounting. These features include:

- Industry standard 2-1/16" gauge size.
- A warning feature that flashes the gauge readout when outside operating limits.
- User adjustable warning points.
- User adjustable display update rate.
- Microprocessor stabilized readings.
- Quick-Start feature to provide accurate readings quickly after being powered up.
- Night dimming with lens label lighting.
- Non-Glare, high contrast lens.
- High Visibility VFD display for sunlight readability.

Operation:

The PWR terminal should be connected to a 12 volt accessory feed. The case provides the gauge ground. Connect a ground wire to the screw at the bottom rear of the case. When the DIM terminal has 12 volts, it will dim the display for night viewing. The SND terminal is the vac/bst sender input. **The sender must be Dakota Digital part SEN-09-3.** Sending units from other manufacturers will cause incorrect readings. If a sender is not connected properly, the display will show "---". If the SND terminal is shorted to power, the display will show "EE".

A manifold vacuum line should be connected to one of the ports on the SEN-09-3. For a Vac/Bst gauge connect to the Vac/Bst port. For a Vacuum gauge connect to the Vac only port. Leave the unused port open to the air. The SEN-09-3 circuitry is not environmentally sealed so it should not be mounted in the engine compartment. Some possible mounting locations are under the dash and to the interior of the fire wall. A flexible rubber hose can be routed from the engine to the SEN-09-3. The sensor ports have 1/8" hose fittings.

The vac/bst gauge will operate and read correctly between the pressure range of 30 inHg vacuum to 30 psi boost. The vacuum gauge will operate and read correctly between 0 – 60 inHg. The gauge has a user adjustable high warning level and update rate.

Typical gauge readout:

Gauge Setting	zero pres.	15 psi boost	20 inHg vacuum
Vac/Bst	0.0	15.0	-20
Vacuum	0.0	---	20.0

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 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".

Setting the warning limits, gauge setup, and update speed:

The SND terminal is used to enter and change the warning settings. You will need a wire connected to the SND terminal that can be momentarily powered 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 touching anything. The gauge will display "SET".
2. Power the SND wire. The gauge will display "typ". (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 type. "bSt" is for Vac/Bst or Boost, "VAC" is for Vacuum only.
4. Each time you momentarily power the SND wire the setup will change.
5. When the desired setup value is displayed, keep the SND wire powered for about 2 seconds. The gauge will display "SPd".
6. Release the SND wire. The gauge will display the current update speed. ("SLO" for slow, "FS" for fast, and "HLd" for peak hold)
7. Each time you momentarily power the SND wire the setting will change.
8. When the desired update speed is displayed, keep the SND wire powered for about 2 seconds. The gauge will display "HI".
9. Release the SND wire. The gauge will display the current high warning value.
10. Each time you momentarily power the SND wire the number will change.
11. When the desired high warning value is displayed, keep the SND wire powered for about 2 seconds. The gauge will display "--".
12. Turn the key off.

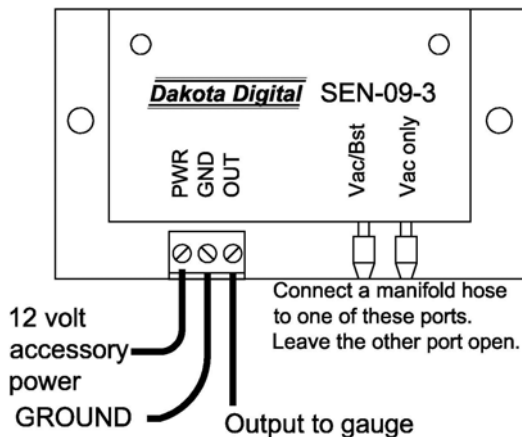
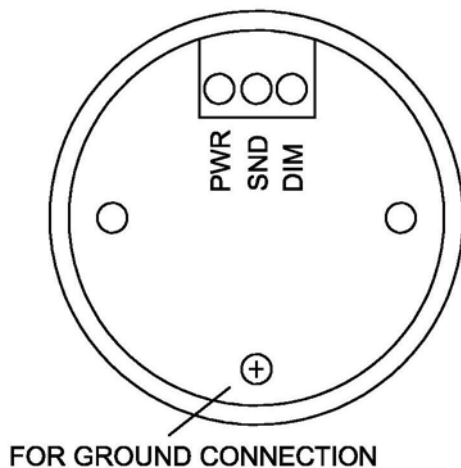
Wiring:

ODYR-09

- PWR - connect to 12 volt power. (An accessory circuit will work for this.)
- DIM - connect to the tail light circuit.
- SND - connect to the SEN-09-3 OUT terminal.
- Gauge case - connect to a main ground location

SEN-09-3

- PWR - connect to accessory power
- GND - connect to gauge ground
- OUT - connect to the gauge SND terminal



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.	Connect to a location that has power. Connect the ground to a different location.
Gauge lights up, but does not read correctly.	Gauge is damaged. Loose connection on SND terminal. Poor ground connection. Gauge is sender setup is incorrect. Voltage or wiring problem in vehicle wiring harness.	Return gauge for service. (see instructions) 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 SEN-09-3 "----".	Sender is not connected to gauge. SND terminal is shorted to ground. Sensor is not getting power.	Connect SND terminal on gauge to OUT terminal. Check wire for damaged insulation. Replace if necessary. Connect the SEN-09-3 PWR terminal to a circuit with 12 volt power.
Gauge lights up, but displays "EEE".	Sender is damaged. Wire between gauge and sender is broken. Sender is not grounded.	Replace sender. Test and replace wire. Connect the SEN-09-3 GND terminal to the same ground as the gauge ground.
Gauge lights up, but displays "Er4".	Sender is damaged. Gauge is damaged. Gauge is sender setup needs to be reset.	Replace sender. Return gauge for service. (see instructions) See "Setting sender setup" in the manual.
Gauge lights up, but displays "Er5".	Gauge warning points need to be reset.	See "Setting the warning limits" in the manual.
Gauge flashes constantly.	Warning limits are not set properly.	Reset warning limits.
Gauge will not dim.	Pressure is too low or too high. DIM terminal is not connected correctly.	Check filters and engine. 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)

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. Do not send any money. We will bill you for the repair charges. 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)				
		Vac/Bst	Vacuum	Boost
Maximum pressure reading	-	30 psi	0 psi	30 psi
Maximum vacuum reading	-	30 inHg	60 inHg	30 inHg.
Gauge Resolution	-	.2psi/1inHg	.4 inHg	.2psi/1inHg
Typical gauge accuracy	-	±1%		
Typical current draw (@ 13.8V)	-	0.2 A		

ODYSSEY SERIES DIGITAL GAUGE LIMITED WARRANTY

DAKOTA DIGITAL (the Company) 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 the Company's option) without charge for parts or labor directly related to repairs of the defect(s).

To obtain repair or replacement within the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), name, address, phone number, and specification of defects, transportation prepaid, to the factory. This Warranty is valid for the original purchaser only and may not be transferred.

This warranty does not cover nor extend to damage to vehicle electrical system. 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 express 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. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

The Company does not warrant that this product cannot be compromised or circumvented. THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID TO THE PURCHASER FOR THE PRODUCT.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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