Odyssey

Manufactured by **Dakota Digital**

ODYR-19-5 & SLX-19-5
DUAL, TRIPLE, or QUAD AIR PRESSURE GAUGE

Features:
- All bag pressure readings displayed at once on a 2-line display.
- Optional storage tank pressure readout.
- A warning feature that flashes the gauge readout when outside operating limits.
- An output for an external warning light or buzzer.
- User adjustable warning points.
- Individual settings for front, rear, and tank warning points.
- Microprocessor stabilized readings.
- Quick-Start feature to provide accurate readings quickly after being powered up.
- Automatic Night dimming.
- High Visibility, full character VFD display.
- Automatic display selection for two, three, or four bag operation.

The air pressure gauge will read wet or dry air pressure. The sender used for this gauge is an oil pressure sending unit, so it is compatible with air, water, oil, and fuel. The air pressure gauge will operate and read correctly between the pressure range of 0 - 145 psi using the SEN-03-1 senders and 0-400 psi using the SEN-03-5 senders. The sender for tank pressure is always the SEN-03-5 400 psi unit. The gauge has a user adjustable low and high warning level.

Operation:

The gauge needs only the PWR and GND terminals connected to light up. When the DIM terminal has 12 volts, it will dim the display for night viewing. The R-R, L-R, R-F, L-F, and TNK terminals are for the pressure senders. **The senders must be Dakota Digital part SEN-03-1 or SEN-03-5.** Sending units from other manufacturers will cause incorrect readings. SEN-03 has 1/8" NPT threads. If other thread sizes are needed, an adapter fitting should be used to change the thread size. If a sender is giving an incorrect reading, the display will show "EE". If the sender is shorted to ground, the display will show "--".

The display will flash and the warning output will be set whenever one of the displayed pressures is out of the warning set limits.

Using external warning indicators:

The WRN terminal provides a ground trigger whenever any of the senders are outside the set limits. Low current indicators (less than 1/4 A) can be activated directly by connecting their power wire to 12 volts and connecting their ground wire to the WRN terminal.

For higher current buzzers or lights, a relay will need to be used to switch the indicator on. Dakota Digital's RLY-1 30A relay may be used for this. One of the coil wires should be connected to 12 volts and the other coil wire connected to the WRN terminal. When the gauge is outside its limits, the relay will turn on. The relay contact wires can be used to switch the higher current.

> WARNING! - CONNECTING A HIGH CURRENT INDICATOR DIRECTLY TO THE WARNING OUTPUT WILL DAMAGE THE UNIT.

Setting the warning limit and sender type:

The low and high warning limits can be set to different values, also the front bag, rear bag, and tank warnings can each be set differently. The push button switch on the front of the display is used for setting the warning limit. The procedure for setting the warning limit is as follows:

1. Hold the switch while you turn the key on. The display should light up and show "SETUP" "MODE".
2. Release the switch. The display should show "xxx SNDER" "TYPE" where is xxx is 150 for the 150 psi senders and 400 for 400 psi senders.
3. Each time the switch is pressed the type will change.
4. When the desired sender type is shown press and hold switch.
5. The display will now show "xxx FRONT" "HIGH" where xxx is the current front bag high pressure warning point. Release the switch.
6. Each time the switch is momentarily pressed the high warning point will increase.
7. When the desired high warning point is displayed press and hold the switch. The display will change to " xx FRONT" "LOW " where xx is the current front bag low pressure warning point.
8. Release the switch. Use the switch to increment through the low warning values until the desired value is shown.
9. Press and hold the switch. The display will change to "xxx REAR" " HIGH" where xxx is the current rear bag high pressure warning point.
10. Release the switch. Each time the switch is momentarily pressed the high warning point will increase.
11. When the desired high warning point is displayed, press and hold the switch. The display will change to " xx REAR" " LOW" where xx is the current rear bag low pressure warning point.
12. Release the switch. Use the switch to increment through the low warning values until the desired value is shown.
13. Press and hold the switch. The display will change to "xxx TANK" "HIGH" where xxx is the current tank high pressure warning point.
14. Release the switch. Use the switch to increment through the high warning values until the desired value is shown.
15. Press and hold the switch. The display will change to "xxx TANK" "LOW" where xx is the current tank low pressure warning point.
16. Release the switch. Use the switch to increment through the high warning values until the desired value is shown.
17. Press and hold the switch. The display will show "SETUP" "DONE".
18. Release the switch. The gauge will restart with the new warning points.

Wiring:
PWR - connect to 12 volt accessory power.
GND - connect to a good ground point in the vehicle.
TNK - connect to tank pressure sender (optional).
DIM - connect to the tail light circuit.
WRN - can connect to the negative side of a relay, light, or buzzer.

The TNK terminal should be left open if the tank pressure is not being monitored.

Sender Wiring for 4 bag systems:
R-R - connect to the right rear pressure sender.
L-R - connect to the left rear pressure sender.
R-F - connect to the right front pressure sender.
L-F - connect to the left front pressure sender.

Sender Wiring for 3 bag systems:
R-R - DO NOT CONNECT.
L-R - connect to the rear pressure sender.
R-F - connect to the right front pressure sender.
L-F - connect to the left front pressure sender.

Sender Wiring for 2 bag, front/rear systems:
R-R - DO NOT CONNECT
L-R - connect to the rear pressure sender.
R-F - DO NOT CONNECT
L-F - connect to the front pressure sender.

Sender Wiring for 2 bag, left/right systems:
R-R - connect to the right pressure sender.
L-R - connect to the left pressure sender.
R-F - DO NOT CONNECT
L-F - DO NOT CONNECT

Sender Wire Connection:
      The SEN-03-1 has just a single terminal on top. Connect this to a wire that goes back to the controller. The sender case is the ground connection. Screw the sender into a grounded fitting to attach a ground wire to the case.
      The SEN-03-5 has two terminals on top. Connect one to a wire that goes back to the sender input on the controller. Connect the other to a wire that goes back to the ground connection for the controller. The polarity of the two wires on the sender does not matter.

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".
      The controller can be mounted to wood, metal, or plastic using screws with the four mounting holes, double sided tape, or hook and loop fasteners.

Troubleshooting guide.

Problem	Possible cause	Solution
Gauge will not light up	PWR terminal does not have power.	Connect to a location that has power.
	GND terminal is not getting a good ground.	Connect ground to a different location.
	Display harness is unplugged.	Seat connectors in tightly at both ends.
	Gauge is damaged.	Return gauge for repair. (see instructions)
Gauge lights up, but displays "EE".	Sender is not connected to gauge.	Connect wires from gauge to sender terminals.
	Wire between gauge and sender is broken.	Test and replace wire.
	Sender is not grounding properly.	Sender grounds through it's mounting threads. Make sure the threads are clean. **Do Not Use Tape or Sealant on Sender Threads.**
	Gauge is damaged.	Return gauge for repair. (contact factory)
	Sender is damaged.	Return for replacement. (see instructions)
Gauge lights up, but displays "--".	Sender wire is shorted to ground.	Check wire for damaged insulation, replace if necessary.
	Gauge is damaged.	Return gauge for repair. (contact factory)
Gauge lights up, but does not read correctly.	Loose connection on power wire.	Reconnect wire going to PWR terminal.
	Poor sender ground.	Make sure sender case is getting a solid ground.
	Poor ground connection.	Move ground to different location
	Incorrect sender type.	Make sure sender has been replaced with the correct type (SEN-03-1 or -5).
	Gauge is set for the wrong sender type.	Reset the sender type.
Gauge flashes constantly.	Warning limits are not set properly.	Reset warning limits.
	Vehicle has improper air pressure.	Check air level and air pump.
External warning indicator does not work.	Indicator not connected properly.	Check indicator wiring connections.
	Indicator does not work.	Repair or replace indicator.
	Gauge output has been damaged.	Return gauge for repair. (see instructions)
Gauge will not dim.	DIM terminal is not connected correctly.	Check wiring connections.
	Gauge is damaged.	Return gauge for repair. (contact factory)
Gauge remains dim at all times.	DIM terminal is getting power all of the time.	Connect DIM terminal to location that only has power when the headlights are on.
	Battery is very low.	Recharge or replace vehicle battery.
	Gauge is damaged.	Return gauge for repair. (contact factory)

Technical specifications

Minimum operating voltage   -   7 volts
Maximum operating voltage   -   18 volts
      (operating at or near maximum rating for an extended time can damage unit)

	with sender	SEN-03-1	SEN-03-5	
Maximum pressure reading	-	150 psi	400 psi	
Gauge Resolution	-	1 psi	2 psi	
Accuracy (lower 2/3)	-	4 psi	8 psi	(gauge and sender combined)
Accuracy (upper 1/3)	-	8 psi	16 psi	(gauge and sender combined)
Typical current draw (@ 13.8V)	-	0.25 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.

Dakota Digital

4510 W. 61ST St. N., Sioux Falls, SD 57107
Phone: (605) 332-6513   FAX: (605) 339-4106
www.dakotadigital.com
dakotasupport@dakotadigital.com

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