Odyssey

Manufactured by **Dakota Digital**

Series I
ODY-12 EXHAUST GAS TEMPERATURE rev. C

Wiring:

RED EGT probe
YELLOW EGT probe

RED fused +12V with key on
BLUE night dimming input (+)
BLACK ground for gauge
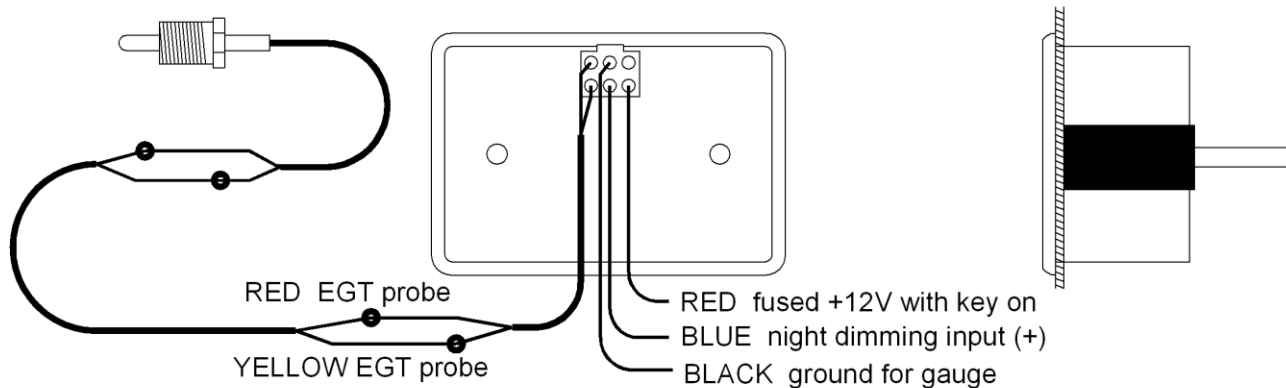
Mounting:

The Series I gauge requires a rectangular hole 2-9/16" x 1-11/16". . 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".

Factory settings:
Unit type: °F.
Hi warning point: 1460 °F.

- The gauge can be set to ready in °F or °C. (see page 2 for setup instructions)
- The EGT gauge will read correctly between the temperature range of 150 - 1750° F (65 - 955°C).
- This gauge has a user adjustable high temperature warning point. (see page 2 for setup instructions)

The red and yellow wires with ring terminals are for the temperature sender input. **The sender must be Dakota Digital part SEN-12-4, SEN-12-5, or SEN-12-6.** Sending units from other manufacturers will cause incorrect readings. The SEN-12-4 has a 6' extension; SEN-12-5 has a 10' extension; and the SEN-12-6 has a 14' extension. These cables cannot be extended with standard wire. If a sender is not connected properly, the display will show "EEE".

The EGT gauge uses a thermocouple sensor to measure the temperature. A thermocouple actually measures the temperature difference between the ends of its wire. The thermocouple consists of screw-in exhaust sensor and the cable which connects it to the gauge. Because the thermocouple only measures the temperature difference, the gauge has a temperature sensor so that the temperature at the gauge end of the thermocouple wire is known. The gauge then adds the two temperatures together to display the actual exhaust temperature.

The EGT gauge will operate and read correctly between the temperature range of 150 - 1750° F(65 - 955°C). Because of the nature of the sensor used, the gauge will not read cold temperatures. The power circuitry inside the gauge will elevate the internal gauge temperature to 90°-150°F. This is the lowest temperature the gauge will be able to display. The gauge has a user adjustable high warning level. This can be set to indicate when the engine is beginning to overheat. The temperature reading is displayed as x10. When the temperature unit is Fahrenheit, the ones digit is dropped. 1320°F is displayed as "132". When the temperature unit is Celsius, a decimal point will be displayed. 715°C is displayed as "71.5".

Setting the warning limits and temperature setup:

The red and yellow sensor wires are used to enter and change the warning settings. The wires will need to be disconnected from the sensor before proceeding with this. The headlights should be off or the blue wire unhooked so that it does not interfere with the setup.

1. To enter the set mode, turn the key on with the red and yellow sensor wires not connected. The gauge will display "SEt".
2. Touch the red and yellow sensor wires together. The gauge will display "F" or "C". (If you wait too long the gauge will exit the setup routine and you will need to repeat step #1).
3. Release the sensor wires. The gauge will display the current temp unit. "F" is for °F and "C" is for °C.
4. Each time you momentarily touch the sensor wires together the setup will change.
5. When the desired setup value is displayed, keep the wires touching for about 2 seconds. The gauge will display " HI".
6. Release the sensor wires. The gauge will display a number between 116 - 176 (62.6 – 96.0C).
7. Each time you momentarily touch the sensor wires together the number will change.
8. When the desired high warning value is displayed, keep the wires touching 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.	Connect to a location that has power.
	GND terminal does not have a good ground.	Connect to a different ground location.
	Gauge is damaged.	Return gauge for service. (see instructions)
Gauge lights up, but does not read correctly.	Loose connection on sensor cable terminal.	Reconnect cable wire.
	Poor ground connection.	Move ground to different location
	Red and yellow wires in sensor cable are shorted	Check all splice connections and inspect cable for pinched or damaged insulation.
	Temperature unit is not set correctly (F or C)	See "Setting temperature setup" in the manual.
	Voltage or wiring problem in vehicle wiring harness.	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 "EEE"	Sender is not connected to gauge.	Connect red and yellow sensor wires from gauge harness to sensor harness.
	Sensor wire between gauge and sender is broken.	Test and repair wire.
	Sender is damaged.	Replace sender.
	Gauge is damaged.	Return gauge for service. (see instructions)
Gauge lights up, but displays "Er3".	Gauge is not calibrated correctly.	Gauge must be recalibrated. (contact factory)
Gauge lights up, but displays "Er4".	Temp unit setup (F or C) needs to be reset.	See "Setting temperature 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.
	Vehicle is overheating.	Check fuel mixture.
Gauge will not dim.	Blue wire is not connected correctly.	Check wiring connections.
Gauge remains dim at all times.	Blue wire is getting power all of the time.	Connect blue wire 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 service. (see instructions)

MAN#650127

Technical specifications

Minimum operating voltage	-	7 VDC
Maximum operating voltage	-	17 VDC
		(operating at or near maximum voltage for an extended time can damage unit)
Maximum temperature reading	-	1750-1850°F (955-999°C) *dependent on gauge temp.
Gauge Resolution	-	10 °F (4-5°C)
High Warning Range	-	1160 – 1760 °F (626 – 960 °C)
Gauge accuracy	-	±15°F (±9°C)
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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