Odyssey

Manufactured by **Dakota Digital**

ODY-18-1
MULTI FUNCTION TEMPERATURE DISPLAY

Introduction:

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

- Microprocessor accuracy.
- Night dimming feature.
- Can display temperature from 1 to 4 different sensors.
- High temp mode which will automatically switch display to hottest sensor.
- Sensors have a "label" stored internally which is displayed beside temp.
- Temperature is switchable between Fahrenheit and Celsius readouts.
- High Visibility full character VFD display.

The Odyssey series multi function temperature display will show the temperature at 1, 2, 3, or 4 different locations. Each of the sensors has a three character label stored inside it which is displayed to the right of the temperature on the display. A switch on the front of the bezel selects which temperature is currently displayed.

The mode select wire is used to determine whether the gauge operates normally or automatically switches to the sensor with the highest temp. In normal operation the currently selected sensor is shown until the front select button is pressed. In high temp mode, if the select button is not pressed for 2 1/2 seconds then the display will automatically switch to the sensor with the highest temperature. The mode select is only checked at power up, so the mode cannot be changed while the unit is operating. The high temp mode is very useful when monitoring stereo amplifiers or other electronic equipment for overheating.

The F/C select wire is used to switch between Fahrenheit and Celsius. This can be hard wired for one or the other or connected to a switch. The display can be changed back and forth at any time while the gauge is powered.

Operation:

The gauge needs the red and black wires connected to light up. The red wire should have switched 12 volt power from an ACC. point on the fuse panel. The black wire should be connected to a good ground point. When the blue wire has 12 volts, it will dim the display for night viewing. The short black wire is a ground for the sensors. The four gray wires are for the sensors.

If less than four sensors are used then tape up the extra gray wires. The sensors must be Dakota Digital SEN-18-X. Any other sensor will not work and could damage the gauge. The display will show "-NO TEMP" briefly during startup as it checks what sensors are connected and begins getting information from them. If no sensors can be found at any of the gray wires, then the display will continue to show "-NO TEMP". It does not matter which gray wires are used, as long as no more than one sensor is connected to a single gray wire.

The green wire can be connected to a switch to allow the display to change back and forth between F or C. The orange wire should be connected for the type of operation that is desired (normal or high temp).

Sensor Mounting:

    Since the sensor measures the temperature at its probe end, you need to make sure it is mounted properly.

    If you are measuring air temperature, secure the probe a couple of inches below the tip, making sure the probe tip is not touching any metal or body parts. If the sensor has sunlight shining on it this will cause it to read higher than the actual air temperature.
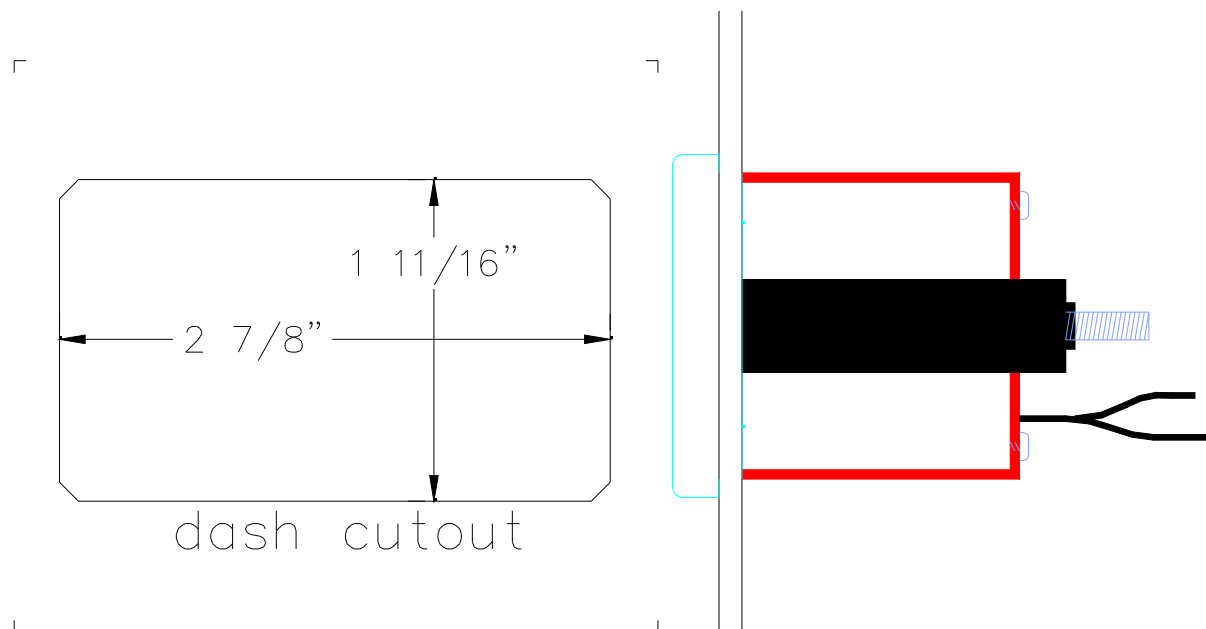
    If you are measuring the temperature of a stereo amplifier or other enclosed device secure the probe tip to the case or heat sink fins. Use of a heat sink grease will provide a better thermal connection. This is available from Radio Shack or other electronic/stereo stores.

Wiring:

BLACK	-	connect to a good ground point in the vehicle.
RED	-	connect to switched 12 volt power point.
		(An accessory terminal will work for this.)
BLUE	-	connect to the tail light circuit.
ORANGE	-	Mode select. Do not connect for normal operation.
		Connect to 12 volt for high temp select mode.
GREEN	-	F/C select. Do not connect for Fahrenheit reading.
		Connect to 12 volt for Celsius reading.
short BLACK	-	Connect to black wire from all sensors.
GRAY	-	Connect to red wire from one sensor.

Mounting:

    The gauge requires a rectangular cut out that is about 2 7/8" 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. Figure 2 shows the required cut out for the gauge. Figure 3 shows how the gauge mounts.

1 11/16"

2 7/8"

dash cutout

Troubleshooting guide.

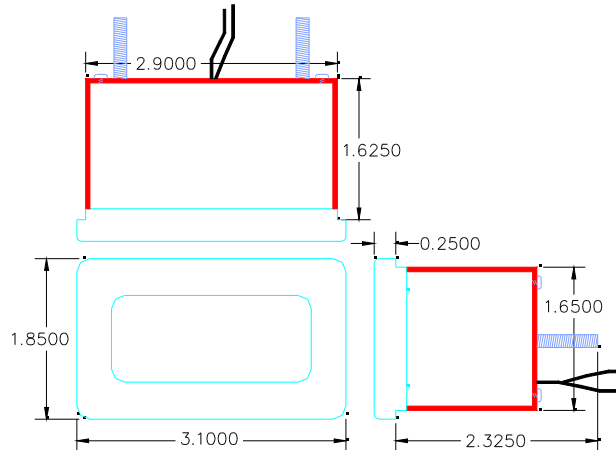| Problem	Possible cause	Solution
Gauge will not light up	Red wire does not have power.	Connect to a location that has power when the key is on.
	Black wire is not getting a good ground.	Connect ground to a different location.
	Fuse is blown.	Replace in line fuse. (2 amp only.)
	Gauge is damaged.	Return gauge for repair. (see instructions)
Gauge lights up, but does not read correctly.	Loose connection on red power wire.	Reconnect red wire.
	Poor ground connection.	Move ground to different location
	Sensor not connected properly.	Check signal and ground connections to sensor.
	Sensor probe end is not contacting area to be monitored.	Make sure that the probe end is secured against area to be monitored. (see instructions)
	Sensor is damaged.	Return sensor for repair. (see instructions)
	Gauge is damaged.	Return gauge for repair. (see instructions)
Display will only read "-NO TEMP"	No sensors are connected.	Connect one or more sensors to the gauge.
	Sensor is not connected properly.	Check ground (black-to-black) and check signal (red from sensor to gray from gauge).
	Poor ground connection.	Move ground to different location
	Signal wire is grounded or broken.	Inspect sensor wire for cuts or abrasions.
	Sensor is wrong type.	Make sure sensor is SEN-18-X.
	Sensor is damaged.	Return sensor for repair. (see instructions)
	Gauge is damaged.	Return gauge for repair. (see instructions)
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 repair. (contact factory)

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	-	18 volts
	(operating at or near maximum rating for an extended time can damage unit)	
Minimum temperature reading	-	-67 °F (-55°C)
Maximum temperature reading	-	255 °F (125°C)
Gauge Resolution	-	1° F (1°C)
Gauge accuracy	-	±2° F (±3°C)
Temperature update rate	-	2 - 2.5 seconds
Typical current draw (@ 13.8V)	-	0.13 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 MERCHANTABLITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HEREUNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABLITY 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 that 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 if 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.