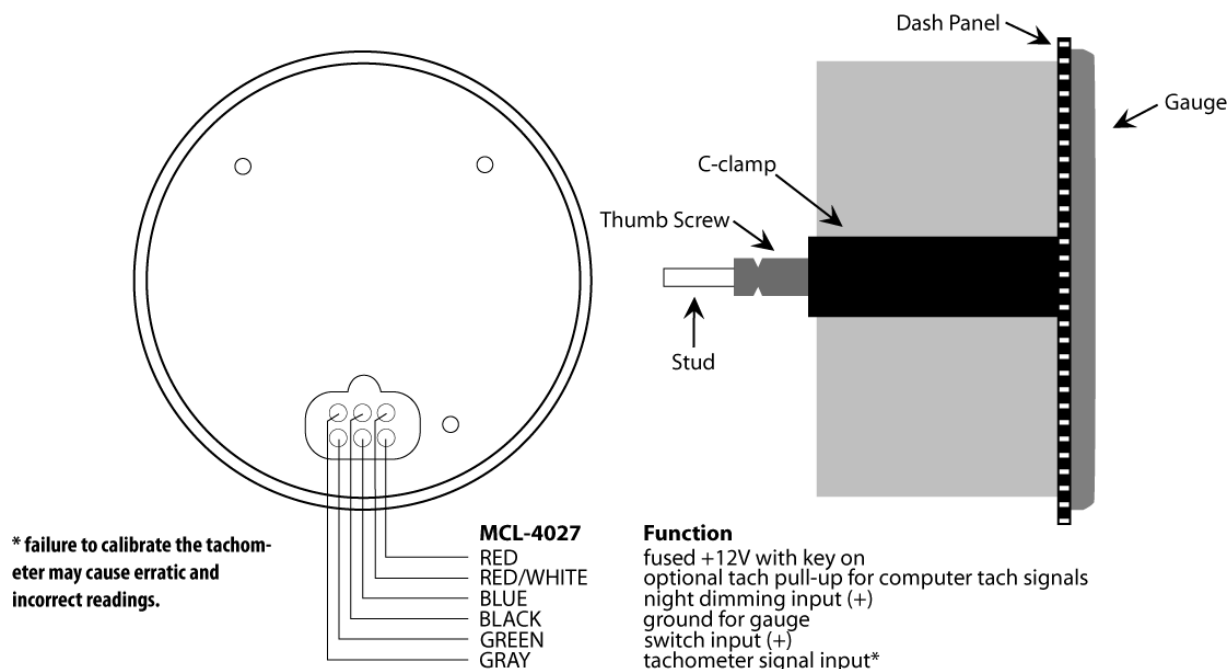


Dakota Digital

MCL-4000 SERIES 1-7/8" LED TACHOMETER MCL-4027S/R



- 10 rpm resolution. (100 rpm res. above 10,000)
- Adjustable warning point from 2200 – 14,600 RPM
- Hi RPM recall
- Fast or slow display update rates
- Optional display dimming feature

MOUNTING

The MCL-4000 series gauge requires a round hole 1-7/8" 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 approximately 1-3/8". Gauge depth including the mounting studs is about 2-1/8".

TACHOMETER SETUP

The MCL-4000 series tachometer has three setup menus; cylinder setting, update speed, and warning point. Setup is done using the green wire. There is a momentary push button switch supplied that can be mounted anywhere so setup and the hi rpm recall function can be easily accessed. Connect the green wire to one side of the push button switch and the other side to +12V. Default settings are 2 cylinder, slow update, 5000 RPM warning point.

TO ENTER SETUP:

1. start with the key off.
2. Press and hold the switch and turn the key on, the gauge should light and show "Lr1" as long as the switch is held. This is the software code and may be used to identify the product.
3. Release the switch and the gauge will automatically scroll through the setup menus "CYL" "SPd" "HI" "DnE"
 - a. "CYL" is the engine cylinder setting, selectable from 1 – 15 cylinders
 - b. "SPd" is the update rate of the display. Slow "SLo" is about 1/2 second and Fast "FSt" is 1/8 second.
 - c. "HI" is the warning point at which the gauge will flash to indicate redline, settable from 2200-14,600 RPM.
 - d. "DnE" end of setup menus
4. When the desired menu is displayed press and release the switch
5. The current value for the setting should be displayed
6. To change the settings press and release the switch
7. Once the desired value is displayed press and hold the switch to save the changes
8. the display will jump to "DnE" indicating the new setting has been saved
9. Press and release the switch when "DnE" is displayed to exit and return to normal operations, or
10. The gauge will remain in setup and keep looping through the menus until the power is cycled off then on.

POWER RED WIRE

Connect the red wire from the main harness to accessory power from the ignition switch.

*****Never connect this to a battery charger alone. It needs to have a 12 volt battery connected to it. Battery chargers have an unregulated voltage output that will cause the system to not operate properly.**

GROUND BLACK WIRE & RING TERMINAL

The black wire is the main ground for the gauge. A poor ground connection can cause improper or erratic operation.

Connect the ground to a good chassis ground directly to battery ground. Also connect the ring terminal on the main harness to one of the mounting studs after the clamp has been installed before the thumb nut is screwed on to secure the gauge. This provides a ground for the case of the gauge.

TACHOMETER SIGNAL GRAY WIRE

The gray wire connects to the vehicle tach signal. On point type and pointless distributors connect to the negative side of the coil. This will sometimes be labeled TACH or DIST. On distributorless ignition systems, connect to the tach output wire or to the negative wire of one of the coils. On MSD ignition systems connect to the tach output terminal.

For tach signals integrated into a vehicle wiring harness, consult a service manual to determine the color code and location of the tachometer signal. The tachometer signals from some engine computers require a weak 12 volt pull-up for correct operation of the gauge. Tie the gray and white/red wires together if this is needed.

The tachometer is adjustable from 1 to 15 cylinder signals and setup is discussed above.

The gauge displays the engine rpmx10 from 300 – 9990 and rpmx100 for 10,000 – 18,000. 2500 rpm would be displayed as “250” and 11,400 rpm would be displayed as “11.4”. The decimal point indicates the reading has changed from rpmx10 to rpmx100.

The gauge can be set for a slow update, which changes the displayed reading every 1/2 second, or for a fast update, which changes the displayed reading every 1/8 second. The slow update rate is recommended for most applications since rapidly changing numbers can be difficult to read.

*****The tach may not read properly with dual fire ignitions**

FUNCTION SWITCH & HI RPM RECALL GREEN WIRE

The function switch is connected with one wire to a +12 volt source and the other wire to the green wire from the tachometer harness. The function switch is used for calibration and to recall the highest rpm reached since the last reset. Pressing and releasing the function switch while the gauge is running will display “HI” and then the current high rpm. This will repeat every 2 seconds. Holding the function switch for about 2 seconds will reset the high rpm. Pressing and releasing the switch will return the gauge back to normal operation.

NIGHT DIMMING BLUE WIRE

Your display system has a dimming feature that reduces the display intensity. Normally the system is at full brightness for daytime viewing. When the blue wire has +12 volts the display intensity will be reduced. Connect this to switch able +12V to enable this feature. To have the system at full brightness all of the time, leave the blue wire disconnected.

TROUBLE SHOOTING GUIDE *Please read this before calling Dakota Digital for technical assistance*

Problem	Possible cause	Solution
Gauge will not light up	Red wire does not have power. Black wire is not getting a good ground. Gauge is damaged.	Connect to a location that has power. Connect ground to a different location. Return gauge for repair.
Gauge lights up but does not read correctly.	Cylinder setting is not set correctly Loose connection on signal input Poor ground connection. Voltage or wiring problem in vehicle harness. Failing ignition system component (more common on points style)	See “TACH SETUP” in manual to change setting. Check signal input wire (gray wire) Move gauge ground wire to different ground location. Check wiring harness for loose/damaged wires and check wire routing is not close to spark plug wires. Check or replace ignition system components
Gauge always flashes.	High warning point set too low.	Adjust the high warning points using setup menu.
Gauge will not dim.	Blue wire is not connected correctly.	Check wiring. Blue wire should have 12 volts when dimming is desired.
Gauge remains dim at all times.	Blue wire is getting power all of the time.	Connect blue wire to +12v through a switch or leave unconnected.
Gauge will not go into the SETUP mode.	Switch is not connected properly	Verify correct connection of switch to +12V and green wire.
Gauge displays “Er1”	Cylinder setting is invalid, 1-15 cylinders	See “TACH SETUP” in manual
Gauge displays “Er2”	Update speed error, slow or fast	See “TACH SETUP” in manual
Gauge displays “Er4”	High RPM warning point error, 2200-14.6k	See “TACH SETUP” in manual
Gauge displays “Er” followed by a number.	Multiple errors have occurred and the error numbers have been added.	For “Er3” see solutions for “Er1” and “Er2” For “Er5” see solutions for “Er1” and “Er4” For “Er6” see solutions for “Er2” and “Er4” For “Er7” see solutions for “Er1”, “Er2” and “Er4”

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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