

Quick Guide for Interfacing with Innovate LC-2 Wideband Controller

The SYL-2813 gauge can work with Innovate LC-1 or LC-2 controller to read air/fuel ratio (AFR). This quick guide will show you how to wire SYL-2813 gauge with LC-2 controller and read signal in Channel1.

Wiring:

The LC-2 has four wires, red (power), black (ground), yellow (analog output #1), and brown (analog output #2). To read LC-2 signal in Channel1 of SYL-2813 gauge, wire the sensor as showed in Figure 1. Connect 12VDC power from the car battery to terminal 6 (+) and 7 (-) of SYL-2813. Connect the ground wire (black) of LC-2 to terminal 1, power supply wire (red) to terminal 6 or directly to the positive side of car battery, and the wire for analog output #1 (yellow) to terminal 13 to read the signal in channel1 (wire it to terminal 14 if using channel2).

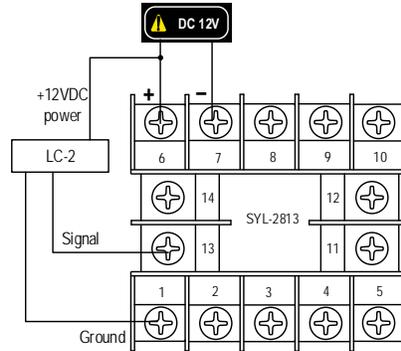


Fig 1. Wiring diagram of LC-2 with SYL-2813.

Parameter settings:

- 1) Configure the gauge input type. The input type "Int1" needs to be changed to "0 - 5V" before using LC-2. Press SET key, change the code 0089, and press SET again to enter the parameter setting mode. Use Up or Down key to show "Int1" on the top display window and press SET again. The value of "Int1" will be shown in the bottom display window. Use Up or Down key to change the value until you see "0-5V". Then press SET again to save the value and exit. Use Up or Down key to scroll the parameter list to "END" and then press SET again to exit the parameter setting mode. The details can be found in section D.1 of the instruction manual of SYL-2813.
- 2) Set the resolution "dot1". The default resolution of the gauge is set to "0". Please change "dot1" to "0.00" to display readings with two digits behind the decimal point. This is also the commonly used resolution for AFR or Lambda. If that is not the resolution you want to use, you can change the setting for "dot1".
- 3) Set the display scale "PuL1" and "PuH1". These two parameters determine which value corresponds to the minimum input signal (0V) and which corresponds to the maximum signal (5V). Most oxygen sensor does not output higher than 4.5V. You need to extend the factory provided data to find out what is the supposed AFR or Lambda value at 0 and 5V, assuming the output is linear in the range between 0-5V. For the LC-2 to display AFR, we need to set $PuL1 = 7.35$ and $PuH1 = 22.39$. (To display Lambda value, set $PuL1 = 0.5$ and $PuH1 = 1.5$.) Please check the product page and manual for LC-2 for detailed specs.
- 4) To set the alarm on at 17.0 and off at 16.9, enter code 0001 and set $AH1=17.0$ and $AL1=16.9$. The detail can be found in section D.2 of the instruction manual.
- 5) To display the peak value from the last run, or display the value in the peak holding mode continuously, press the Shift (">") key once. The PK1 LED will be on, indicating the display is in the Peak Value mode. Press ">" again to change back to display the current value. Press and hold Down ("V") key for 3 seconds will reset the memory. The detail can be found in section D.3 of the instruction manual.