



# Revel VLS 52mm Digital OLED Wideband Air/Fuel Ratio Gauge Part Number: 1TR1AA005R

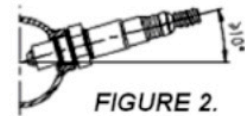
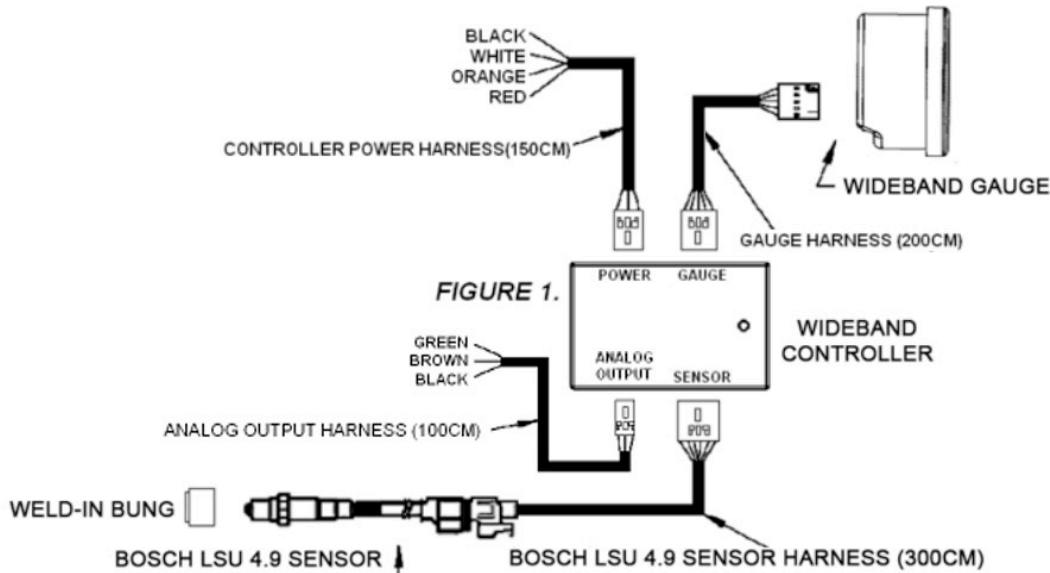
## Parts Included:

(1) 52mm Wideband Air/Fuel Ratio Gauge, (1) Power Harness, (1) Electronic Control Unit, (1) Gauge Signal Harness (Control Unit to Gauge), (1) Analog Output Harness, (1) Oxygen Sensor and wiring, (1) Weld-In Oxygen Sensor Bung, (1) Bung Plug, (1) Mounting Pod, (1) Sun Shade (hood), (1) 3M double sided tape, (2) Mounting Bracket Threaded Extension, (2) Washers, (2) Nuts, (1) Mounting Bracket

## Power Harness:

RED - 12V CONSTANT FUSED POWER (+)  
BLACK - GROUND (-)

WHITE - IGNITION SWITCH (ACCESSORY) (+)  
ORANGE - CONNECT TO HEADLIGHT SWITCH (DIMMER) 12V(+)



**FIGURE 2.**  
MINIMUM MOUNTING ANGLE FOR LSU 4.9 SENSOR

## Installation Instructions:

A weld-in M18x1.5 oxygen sensor bung and cap are supplied for sensor installation. Mount the sensor in the exhaust system no less than 18 inches downstream from the closest exhaust port. If you anticipate high exhaust gas temperatures (over 1500F), if your car is equipped with a turbocharger, is operated at high RPM for extended periods of time or if leaded race fuel is used, the sensor must be mounted no less than 36 inches downstream of the closest exhaust port as any/all of these factors can cause the sensor to overheat and read incorrectly. The sensor must be installed downstream of the turbo charger (if applicable) and upstream of any catalytic converters and/or auxiliary air pumps to ensure accurate readings. To prevent collection of any liquids between the sensor housing and sensor element caused by condensation during cold starts, the angle of the sensor should be inclined upwards at least 10° with the electrical connection facing up, see figure 2.

1. **CALIBRATION MODE:**  
Press the button on the controller for 3 seconds to calibrate the controller. When the LED screen displays [2], the controller is calibrating.
2. **SENSOR ERROR DIAGNOSIS:**  
When the LED screen displays [3], it is a sensor error code. Please check if the sensor is disconnected, damaged, or defective.
3. **ORIGINAL MANUFACTURE SETTING MODE:**  
Press and hold the button on the controller for 8 seconds to operate the original manufacture setting of the controller. The LED screen will display [2] first. After the LED screen displays [4], the original manufacture setting is programmed.
4. **ANALOG OUTPUT WIRE HARNESS INSTRUCTION:**  
Black - Engine ground  
Brown - Wideband analog output 0-5V (0V -> 10AFR, 5V -> 20AFR)  
Green - Narrowband analog output 0-1V (0V -> 20AFR, 1V -> 10AFR)

VOLT	LAMBDA	GASOLINE AFR
0.00	0.683	10.00
0.16	0.705	10.32
0.31	0.725	10.62
0.47	0.747	10.94
0.62	0.768	11.24
0.78	0.790	11.56
0.94	0.811	11.80
1.09	0.832	12.18
1.25	0.854	12.50
1.40	0.874	12.80
1.56	0.896	13.12
1.72	0.918	13.44
1.87	0.939	13.74
2.03	0.960	14.06
2.18	0.981	14.36
2.34	1.003	14.68
2.50	1.025	15.00
2.65	1.045	15.30
2.81	1.067	15.62
2.96	1.087	15.92
3.12	1.109	16.24
3.28	1.130	16.54
3.43	1.152	16.86
3.59	1.173	17.18
3.74	1.194	17.48
3.90	1.216	17.80
4.06	1.236	18.10
4.21	1.258	18.42
4.37	1.280	18.74
4.52	1.301	19.04
4.68	1.322	19.36
4.84	1.343	19.66
4.99	1.356	19.98

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