

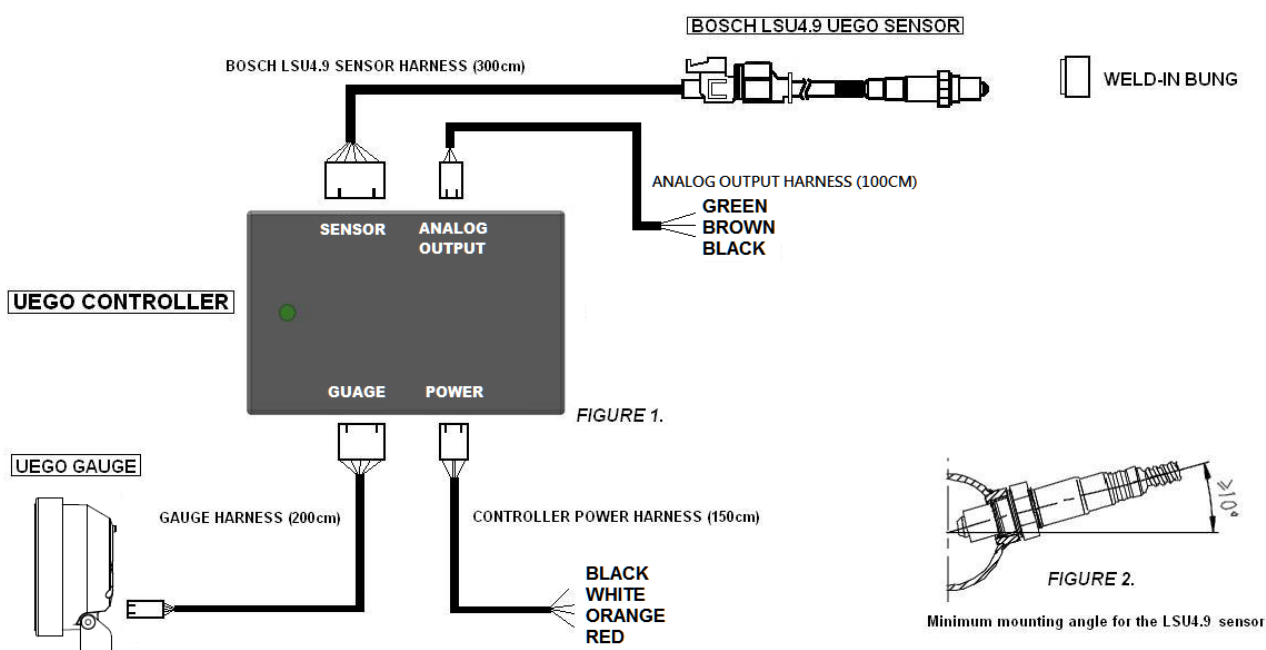
## 52mm PREMIUM SERIES

### ANALOG WIDEBAND AIR/FUEL RATIO GAUGE

(WITH OUTPUT SIGNAL)

#### UEGO CONTROLLER INSTALLATION INSTRUCTIONS:

- RED - (+) 12v CONSTANT POWER
- WHITE - 12V (+) IGNITION POWER
- BLACK - ENGINE GROUND (-)
- ORANGE - CONNECT TO +12v HEADLIGHTS SWITCH.



A WELD-IN M18 X 1.5 BUNG IS SUPPLIED FOR SENSOR INSTALLATION. MOUNT THE O<sub>2</sub> SENSOR IN THE EXHAUST SYSTEM AT LEAST 18 INCHES DOWNSTREAM FROM THE EXHAUST PORT. IF YOU ANTICIPATE HIGH EGT'S (OVER 1450 °F), RUN A TURBOCHARGER, RUN AT HIGH RPM FOR EXTENDED PERIODS OF TIME OR PLAN ON RUNNING LEADED RACE FUEL THEN YOU MUST MOUNT THE SENSOR AT LEAST 36 INCHES OR MORE DOWNSTREAM OF THE EXHAUST PORT AS ALL OF THESE CAN CAUSE THE SENSOR TO OVERHEAT. ON TURBOCHARGED ENGINES THE UEGO SENSOR MUST BE INSTALLED AFTER THE TURBO CHARGER, IF NOT, THE PRESSURE DIFFERENTIAL WILL GREATLY AFFECT THE ACCURACY OF THE UNIT. FOR ACCURATE READINGS, THE SENSOR MUST BE MOUNTED BEFORE CATALYTIC CONVERTERS AND/OR AUXILIARY AIR PUMPS. TO PREVENT COLLECTION OF LIQUIDS BETWEEN THE SENSOR HOUSING AND SENSOR ELEMENT DURNING THE COLD START PHASE, THE INSTALLATION ANGLE SHOULD BE INCLINED AT LEAST 10° FROM HORIZONTAL WITH THE ELECTRICAL CONNECTION UPWARDS, SEE ABOVE (FIGURE 2)

## Linearity Scale

<b>VOLT</b>	<b>LAMBDA</b>	<b>GASOLINE AFR</b>
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	11.8
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

**1. CALIBRATION MODE:**

PRESS THE BUTTON ON UEGO CONTROLLER FOR 3 SECONDS TO CALIBRATE THE CONTROLLER. WHEN THE NEEDLE LIGHT IS FLASHING, THE CONTROLLER IS CALIBRATING..

**2. SENSOR ERROR DIAGNOSIS:**

WHEN THE FACEPLATE BACKLIGHT AND THE NEEDLE LIGHT ARE FLASHING SIMULTANEOUSLY, IT IS A SENSOR ERROR SIGN. PLEASE CHECK IF THE SENSOR IS DISCONNECTED OR DEFECTIVE.

**3. ORIGINAL MANUFACTURE SETTING MODE:**

PRESS THE BUTTON ON UEGO CONTROLLER FOR 8 SECONDS TO OPERATE THE ORIGINAL MANUFACTURE SETTING OF THE CONTROLLER. THE NEEDLE LIGHT WILL FLASH FIRST. THEN THE FACEPLATE BACKLIGHT AND NEEDLE LIGHT WILL BE OFF SIMULTANEOUSLY. AFTER THEY ARE ALL OFF, THE ORIGINAL MANUFACTURE SETTING IS PROGRAMMED.

**4. SENSOR WARM UP:**

THE UEGO SENSOR NEEDS TO WARM UP FOR 30 SECOND EVERY TIME BEFORE USING THE GAUGE OR AFTER OPERATING THE SETTINGS. WHEN UEGO SENSOR IS WARMING UP, THE TWO COLORS OF FACEPLATE LED WILL BE FLASHING ALTERNATELY.

**5. ANALOG OUTPUT WIRE HARNESS INSTRUCTION:**

**BLACK** – ENGINE GROUND

**BROWN** – WIDE BAND ANALOG OUTPUT 0-5V (0V → 10AFR, 5V → 20AFR)

**GREEN** – NARROW BAND ANALOG OUTPUT 0-1V (0V → 20AFR, 1V → 10AFR)

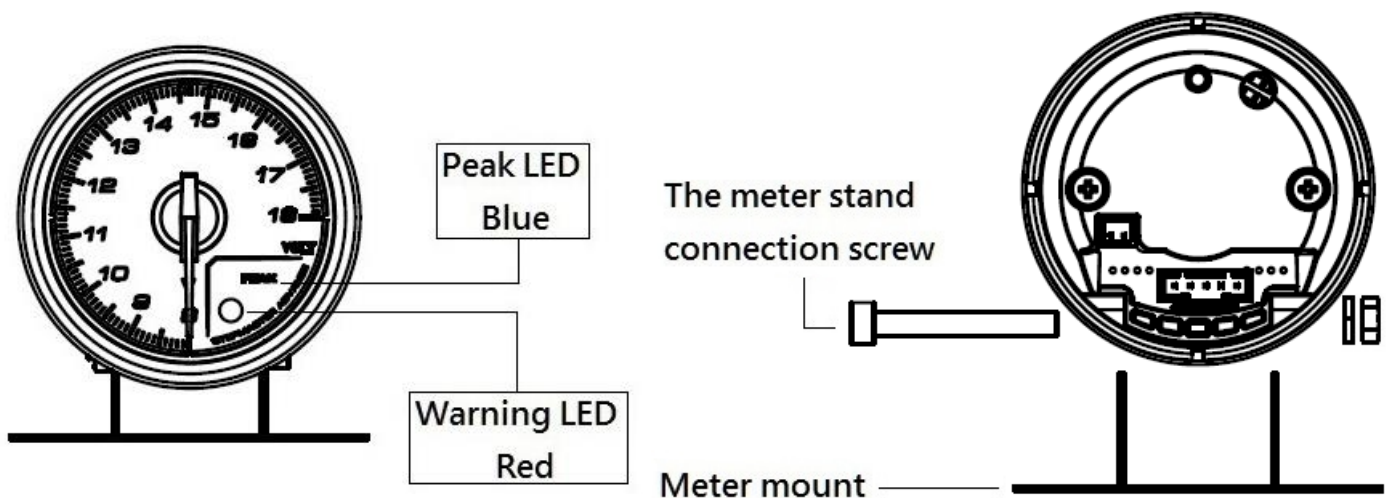
**6. ABOUT BOSCH LSU 4.9 WIDEBAND O2 SENSOR, PLEASE READ CAREFULLY:**

IMPORTANT INSTRUCTION OF WIDEBAND AIR/FUEL RATIO GAUGE.

WE ENSURE TO THE CUSTOMER THAT ALL WIDEBAND GAUGE (EXCLUDE SENSOR , SENSOR WIRE AND BLOT & WELD IN BUNG) WILL BE COME WITH ONE YEAR WARRANTY FROM THE PURCHASE DATE IF THE FAIL GOODS IS NOT BY IMPROPER OPERATION, ALL APPLICABLE THE CLAUSE OF WARRANTY.

A.) THIS GAUGE IS SOLD FOR RACING USE ONLY AND THERE IS NO WARRANTY ATTACHED OR IMPLIED ON THE BOSCH 4.9 SENSOR. ALL SALES AND PURCHASES ARE MADE ON THIS BASIS.

B.) WE & BOSCH ARE FREE FROM RESPONSIBILITY OR LIABILITY IN THE EVENT OF A MALFUNCTION OF THE BOSCH 4.9 SENSOR.



## OPERATING INSTRUCTION

WARNING: IT IS DANGEROUS TO OPERATE THE SETTING OF THE GAUGE WHEN YOU ARE DRIVING, CONSIDERING YOUR AND OTHERS SAFETY, PLEASE OPERATE THE SETTING BEFORE DRIVING.

### **Selectable Brightness Levels**

Two colors available: Amber / White. Both have six stages of brightness level.

The Premium Gauge Series selectable brightness settings for both day and night lighting modes. Below are the instructions on how to program each lighting mode.

#### **Day mode**

- Press the button located on back of the gauge to adjust backlight.
- Press the button to cycle through the 12 dimming modes.
- Once you selected your ideal setting release the button and the gauge will save your selection.

#### **Night mode**

- This mode is only available if the orange dimmer wire is connected and your headlights are powered.
- Press the button to cycle through the 12 dimming modes.
- Once you selected your ideal setting release the button and the gauge will save your selection.

### **Peak Mode**

- 1.) Hold the button for 3 seconds to enter peak mode and the "PEAK" light will come on. The pointer will rise to the highest level attained by the gauge and remain there approximately 5 seconds.
- 2.) To reset peak level: Hold the button while in peak mode ("PEAK" light is on).
- 3.) The gauge will back to normal mode after 5 seconds inactivity.

### **Warning Settlement**

Hold the button for 5 seconds until the pointer begins to blink. Push and hold the button to move across the scale or toggle button to move pointer in small increment. Once you have the pointer you want, then wait 5 seconds and pointer will stop blinking.

### **Mute Feature**

- 1.) With ignition key in off position, hold the button – Turn ignition on, wait for pointer to come to a rest then release button.
- 2.) To turn sound on – Repeat step 1.