

The available settings under the 'obd2' menu are:

ECU

This is the unique address the gauge should be set to for scanners to be able to accurately detect O2 readings. The actual hex address used will change depending on the 'bits' option (below.) The default value is ECU #6 and if using another 30-0333 the second gauge should be set to ECU #7.

ECU #	11-bit	29-bit
1	0x7E1	0x14F1
2	0x7E2	0x18F1
3	0x7E3	0x1CF1
4	0x7E4	0x20F1
5	0x7E5	0x24F1
6 (default)	0x7E6	0x28F1
7	0x7E7	0x2CF1

PID

This is the hexadecimal value for the PID that the gauge should emulate. The default value should be listed as O2 #1 and if a second gauge is used then O2 #2 should be selected. If your vehicle is equipped with OEM widebands and the factory powertrain ECU already outputs some of the PIDs in the following table then you will need to select a different PID. Listed below are the available options.

O2 #	Location	PID
1 (default)	Bank 1 Sensor 1	0x24
2	Bank 1 Sensor 2	0x25
3	Bank 2 Sensor 1	0x26
4	Bank 2 Sensor 2	0x27
5	Bank 3 Sensor 1	0x28
6	Bank 3 Sensor 2	0x29
7	Bank 4 Sensor 1	0x2A
8	Bank 4 Sensor 2	0x2B

bits

This is the size of the CAN bus message identifier used. The available values are 11 and 29 with the default value being 11. Most vehicles will have an 11 bit identifier.

rate

This is the bitrate of the CAN bus. The available values are: 250 and 500 kbps. The default value is 500 and is correct for most vehicles.

Calibration

Calibration

The supplied UEGO sensor is factory calibrated via a trim resistor, integral to the sensor connector, and requires no further calibration. The ability to perform a free air calibration is provided for users that wish to do so. A free air calibration can be used as a sensor ages, however, new sensors should use the resistor calibration for best accuracy.

Resistor Trim Calibration Mode (rCAL)

This is the X-Series UEGO controller's default mode as shipped from the factory. It is the recommended calibration mode and, for most users, no further action or calibration is required.

Free Air Calibration Mode (ACAL)

Refer to the Operation section of this manual for instruction on how to navigate to the menu selection ACAL. The sensor MUST be removed from the exhaust for this procedure. The free air calibration process begins once the ACAL menu option selection is confirmed. The calibration will take approximately ten to fifteen seconds during which the sensor must be placed in a "fresh" air environment, i.e. an area without lingering exhaust or chemical fumes. The process will complete and the gauge will report PASS or FAIL on the display. If the gauge reports FAIL then the sensor detected too low a level of oxygen; this is typically indicative of a sensor being left in the exhaust pipe or in an environment with excess exhaust/chemical fumes.

30-0333 X-Series Wideband UEGO AFR Gauge w/ OBD CAN Integration

special, incidental or consequential damages or cost incurred due to the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12-month warranty period. Improper use or installation, accident, abuse, unauthorized repairs or alterations voids this warranty. AEM disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Product must be received by AEM within 30 days of the date the RMA is issued.

UEGO oxygen sensors are considered wear items and are not covered under warranty.

Please note that before AEM can issue an RMA for any electronic product, it is first necessary for the installer or end user to contact the EMS tech line at 1-800-423-0046 to discuss the problem. Most issues can be resolved over the phone. Under no circumstances should a system be returned or a RMA requested before the above process transpires.

AEM will not be responsible for electronic products that are installed incorrectly, installed in a non-approved application, misused, or tampered with.

Any AEM electronics product can be returned for repair if it is out of the warranty period. There is a minimum charge of \$50.00 for inspection and diagnosis of AEM electronic parts. Parts used in the repair of AEM electronic components will be extra. AEM will provide an estimate of repairs and receive written or electronic authorization before repairs are made to the product.

Specifications

Dimensions	diameter (bezel)	2.40 / 61	in / mm
	diameter (cup)	2-1/16 / 52	in / mm
	depth (incl. bezel)	0.825 / 21	in / mm
	depth (cup only)	0.200 / 5	in / mm
Sensor Installation	sensor/bung	M18 x 1.5	thread
	sensor to bung torque	30 / 40.6	ft-lb / N-m
Supply Voltage	min	10	VDC
	max	18	VDC
Supply Current (13.8V)	nominal	1.5	A
	peak	3.0	A
Operating Temperature	min	-4 / -20	degF / degC
	max (16V Supply)	185 / 85	degF / degC
Sensor Temperature	max (sensor element)	1706 / 930	degF / degC
Display Range	min (outer LED)	0.55	lambda
	max (outer LED)	1.40	lambda
	min (inner numeric)	0.55	lambda
	max (inner numeric)	2.00	lambda
Response Time	typical	20.00	ms
Stoichiometric Constant		14.65	gasoline
Analog Output	resolution	10	bit
	update rate	500	hz
OBDII Output	bit rate	250/500	kb/sec
	format	11/29	bit ID
	DLC	8	
Serial Output	baud rate	9600	bps
	data bits	8	
	parity	None	
	stop bits	1	