EFI Technology Inc.

Xw Wideband Lambda Kit

Installation Guide

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Installation Instructions

Description

The Xw lambda amp is a compact NGK lambda amplifier with built in heater control circuit and 0-5 volt output

The enclosure is extruded machined 6061 aluminum that is environmentally sealed and features an automotive grade connector.

The Xw amp has a lambda range of 0.60 to 1.875 (8.82 to 17.5 AFR) in gasoline. The Xw can also be used with Methanol by simply changing the ECU calibration table.

Features

The Xw has the following features:-

- NGK/NTK compatible
- Compact design
- Self-calibrating input
- Reverse polarity protection
- 0-5 volt output
- Battery status LED
- Heater circuit indicator
- Low power consumption

Figure 1: Xw Lambda Amp

Installation Instructions

Wire Harness

The lambda harness connects to the sensor and amplifier as shown below. If connecting to an EFI ECU the DTM 6 pin chassis mate will already be in place on the engine harness.

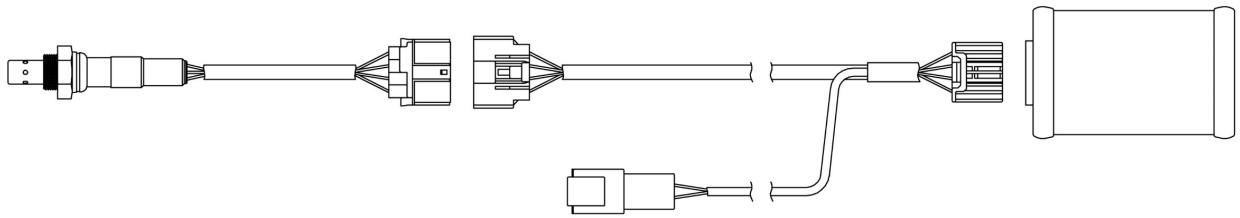

Figure 2: Harness

Chassis Connector

The connection to the engine harness is via the 6 pin DTM connector shown below.

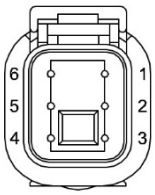

Figure 3: DTM Pinout

Pin Functions

1. VBATT
2. NGK 1
3. NGK 2
4. Heater
5. GND
6. N/C

Amplifier Connector

The connection to the amplifier is via the 20 pin DTM connector shown below.

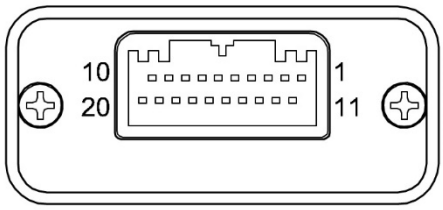

Figure 4: Amplifier Pinout

Pin Functions

1. VBATT
2. NGK 1
3.
4. VS+
5. VS-
6. IP+
7. CR1
8. CR2
9. Heater
10. –
11. –
12. –
13. –
14. –
15. –
16. –
17. –
18. Signal ground
19. Power ground
20. Power ground

Sensor Connector

The connection to the sensor is via the 6 pin DTM connector shown below.

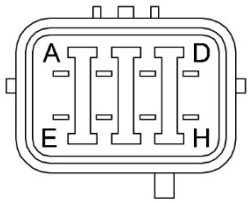

Figure 5: NGK Sensor

Pin Functions

A. Heater +
B. Heater –
C. CR1
D. CR2
E. N/C
F. VS+
G. IP+
H. VS-

Calibration

Your ECU should already have the correct sensor calibration values in the map for the NGK sensor. The values below are for reference and/or can be used if connecting to a dyno or external data logger.

The Xw lambda amp is self-calibrating and does not require any free air calibration methods. It will integrate with any EFI Technology ECU directly for closed loop control and/or lambda monitoring.

Pos	Bits	Volts	Ratio
1	80	0.39	0.635
2	120	0.59	0.645
3	160	0.78	0.660
4	200	0.98	0.675
5	240	1.17	0.690
6	280	1.37	0.710
7	320	1.56	0.730
8	360	1.76	0.755
9	400	1.95	0.780
10	440	2.15	0.810
11	480	2.34	0.845
12	520	2.54	0.895
13	560	2.73	0.945
14	600	2.93	1.000
15	640	3.13	1.055
16	680	3.32	1.140
17	720	3.52	1.260
18	760	3.71	1.495
19	800	3.91	1.875
20	840	4.10	1.875

Note:

To convert the lambda ratio to AFR multiply by ratio column 14.7.

Part Numbers

60-655	Single
60-656	Dual
60-659	4 Channel