



# LSM11B - Lambda Sensor - Industrial Uses

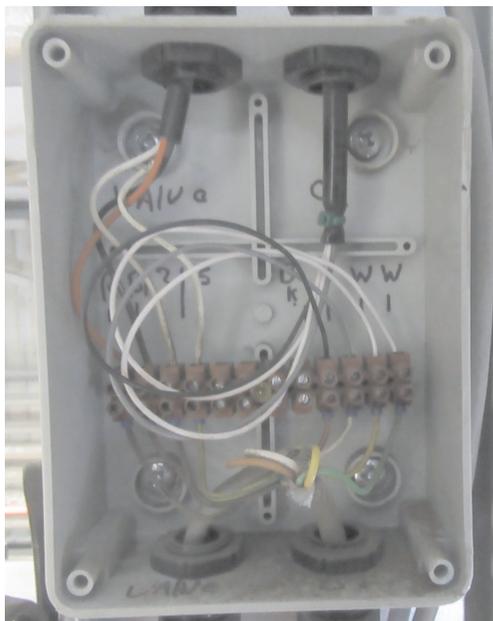
## Introduction

The Lambdapower LSM11B has been developed as a direct plug-in replacement for all discontinued Bosch LSM11 types including 0258104002 and 0258104005. The sensor is suitable for wood burning boilers and other combustion processes that use biomass and renewable fuels.

## Fitment notes

- 1) The Lambdapower LSM11B sensor is supplied with a plug-in extension cable - do NOT chop the plugs off. On some sensors the connector has a calibration resistor built-in
- 2) Use the bare ends of the extension cable to connect into your existing wiring junction box
- 3) If custom connectors are required, please contact us
- 4) Once the extension cable is fitted, it can be reused many times. Sensor replacement is just a matter of unplug old, then plug-in new

## Reference images



Typical remote junction box installed near flue. Extension cable is to the right. Feed the wires through cable gland. Connect wires into choc-bloc screw terminal block as you would any LSM-11



Remove protective plastic cap before fitting. This provides drop protection to the end of the sensor during transit



You will require a 22mm open ended spanner for fitment. Make sure the sensor is tightly fitted. If the boss on the flue has a damaged thread it will require replacement. Hand tools only, 60Nm is OK. Metal washer will be crushed slightly during tightening to form a seal

## Installation Tips

- Replacing the sensor regularly will reduce fuel consumption and stabilise boiler output. Once the heat output becomes erratic, check if the sensor requires replacing.
- Always tighten the sensor fully. The sealing washer needs to be tightly fitted, or air leaks will occur and adversely affect accuracy.
- Vibrations from fans or other machinery will try to loosen the sensor given enough time - make sure it is tight and the integral sealing washer is fully home. Once tightened it is vibration-proof.
- Fluctuating fan speed is a sign of a failing sensor.
- If making output measurements remember Black is signal, Grey is earth. This is the opposite of what you may expect.

## Specification

Thread	M18 x 1.5
Torque	60Nm
Hex Size	22mm
Vibration Max	30G
Heater Supply preferred	12VAC
Heater Alternative	12VDC
Accuracy	better than 1.5%
Minimum Range	0-21% O2

## Typical Test Values

Heater resistance open circuit with sensor cool 2.5 ohm +/- 20%

Warmup time 2 - 5 minutes

Wire coding WHT - WHT - BLK - GREY  
Heater - Heater - Signal - Ground

WHITE wires non-polarised, connect whichever way around you like

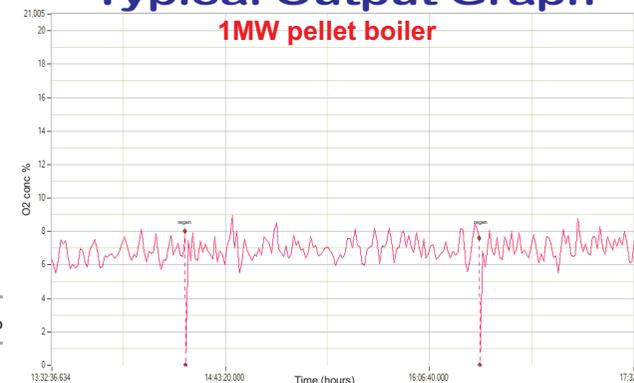
Typical output range Measured across BLK (+ve) and GREY (-ve) -15mV (lean) to +20mV (rich)

Typical ambient air set point for LSM11B calibrated to standard tolerance (GREEN tolerance band) -5mV to -10mV  
new sensor at operating temp and in free air

GREEN tolerance band corresponds to the most commonly found Bosch-LSM11 set point. Other LSM11B tolerance bands are available from us (RED, BLUE, GREEN, YELLOW, BLACK, BROWN)  
Pull back cable sheath near sensor to find tolerance band of your sensor  
Original Bosch-LSM11 had 3 main tolerance bands. GREEN is most common.



## Typical Output Graph



After installing sensor, push connectors together. Use nylon cable ties to tidy any loose cable

