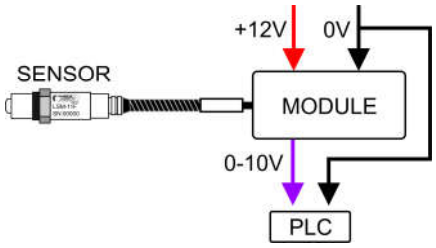
Lambdapower O2 Lineariser module draft instructions

** may be subject to change **

Overview and Function:
Converts raw O2 sensor signal to linear 0 to 10V output for industrial PLC.

Wiring Colours:
Pin1) RED +12VDC; Pin2) BLACK 0V GND; Pin3) VIOLET 0-10V analogue output (Vout)



Requires stable 12.0VDC power supply, to avoid output drift. Peak 1.5A, Const 0.6A
Requires Lambdapower O2 sensor (for industrial uses only). After initial setup, warmup time for LSM11F sensor: 3 minutes, during initial setup recommended warmup time 30 minutes.
Max cable run: 15 metres, wires are polarity protected and EM filtered and can be run in the same conduit as other power and signal cables.

Module dimensions:
Weight 325g approx, Supplied harness length approx 1.5m
Resin Potted ABS enclosure 68 x 110 x 35mm incl mounting lugs, Moisture and dust resistant to IP55

Installation Notes:
Ensure module has 12.0VDC at its power connector once draw has stabilised. Expect long power cables to show volt drop.
Module has manual adjustment to allow for manufacturing tolerances between different sensors.
If output is below 10.0V, with sensor warmed up and in free air, adjust so Vout just sits at its maximum output. Max output will be above 10.0V, this headroom is required, please treat all values above 10.0V as maximum (Full Scale Deflection).
Recommended screwdriver size 2.0mm x 0.4mm flat blade, eg. Wera 118006
Sensor can be quick tested at tip to check response by using a flame eg. pocket lighter, blowtorch.
Continuous gas temperatures above 800°C will require an air jet directed over the sensor body.

Interpreting the output:
Example output table, Multiplication factor is always 2.09

Vout	Mult Factor	% O2
10v or more than 10v	2.09	20.90%
5v	2.09	10.45%
0.1v	2.09	0.21%

Average output accuracy is within 0.7% O2

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