

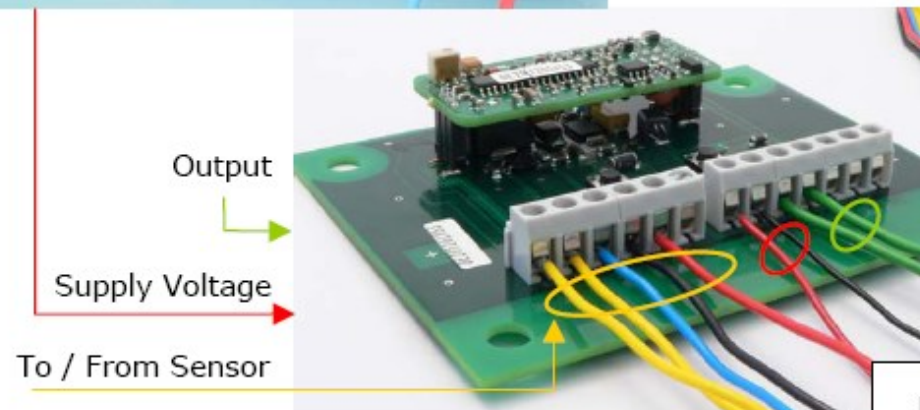
Application Note

DE800 Oxygen Sensor Interface Board Calibration

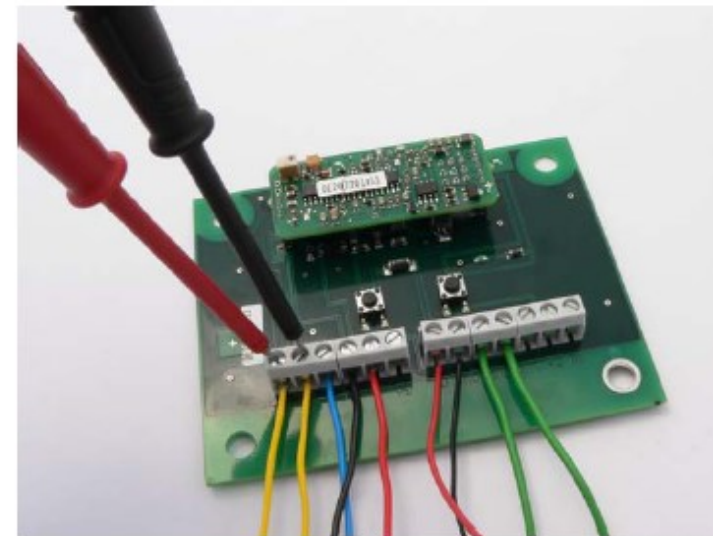
The following described all the steps that have to be done prior to using SST Sensing oxygen sensors with DE800 interface boards. A heater voltage of 4.35V is used here but this should be changed according to the sensor type (see individual sensor datasheets).

1.Heater adjustment

Connect sensor with interface board and apply supply voltage.



→ Measure the Heater voltage between H+ and H- (as close to the sensor as possible)



Reading $\neq 4.35 \pm 0.1V$

Heater voltage must be adjusted.
Description see below.

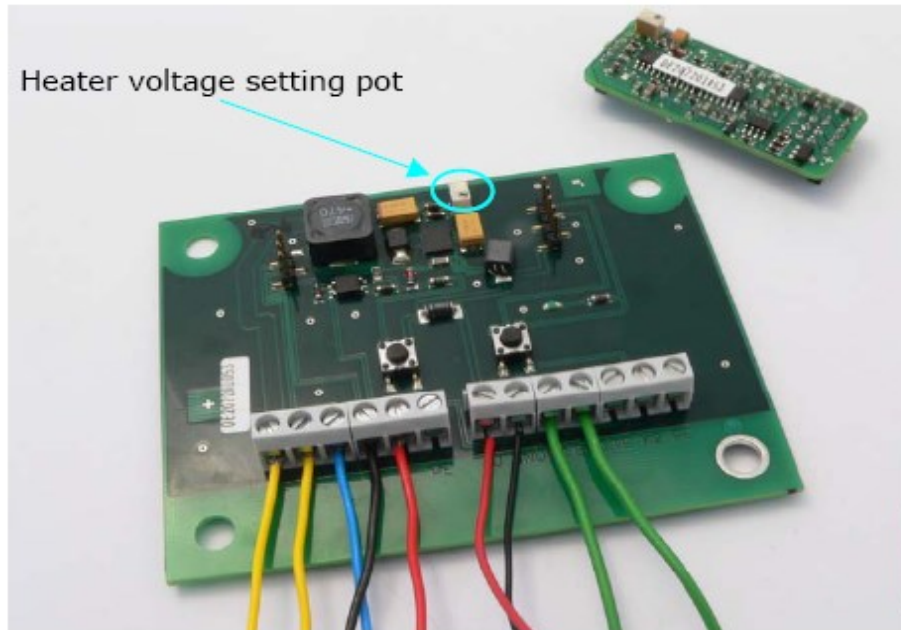
Reading $= 4.35 \pm 0.1V$

Heater voltage is ok.
Start with calibration process.

Application Note

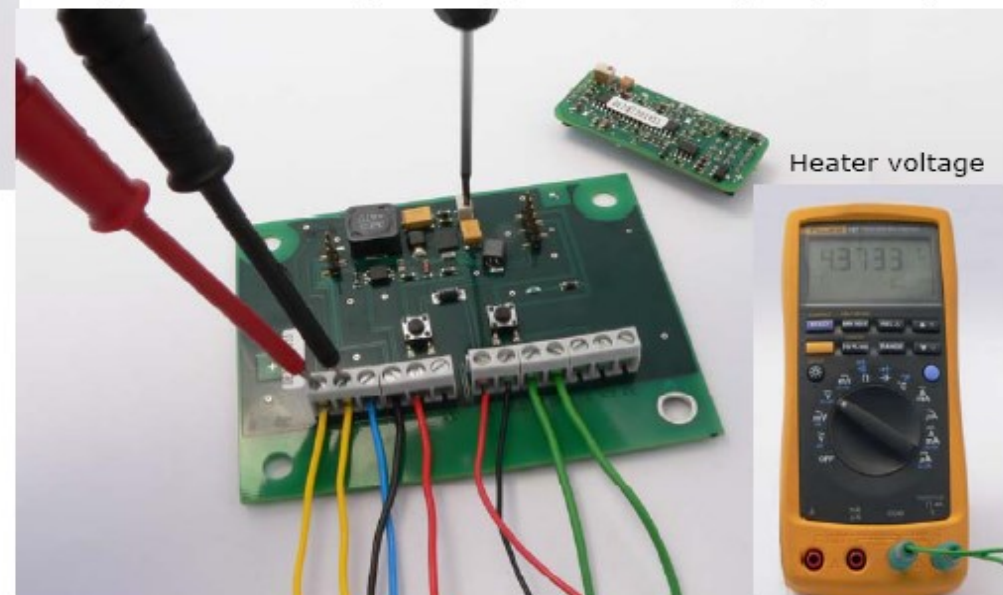
DE800 Oxygen Sensor Interface Board Calibration

→ Switch power off and remove daughter board.



→ Apply power to the board.

→ Adjust heater voltage setting pot until reading is $4,35 \pm 0,1V$



→ Switch power off and re-assemble the daughter board

→ Heater adjustment completed.

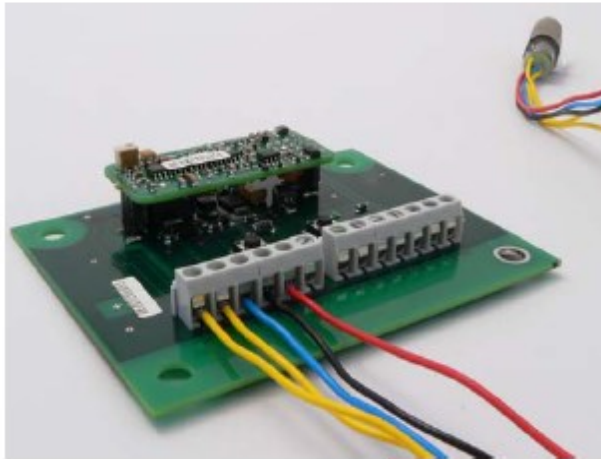
Application Note

DE800 Oxygen Sensor Interface Board Calibration

2. Calibration

2.1 Auto Calibration (Only for DE800.V.1, DE800.A.1, DE800.V.1.NF and DE800.A.1.NF, DO NOT use on 1 to 1000mbar versions of the DE800 interface board)

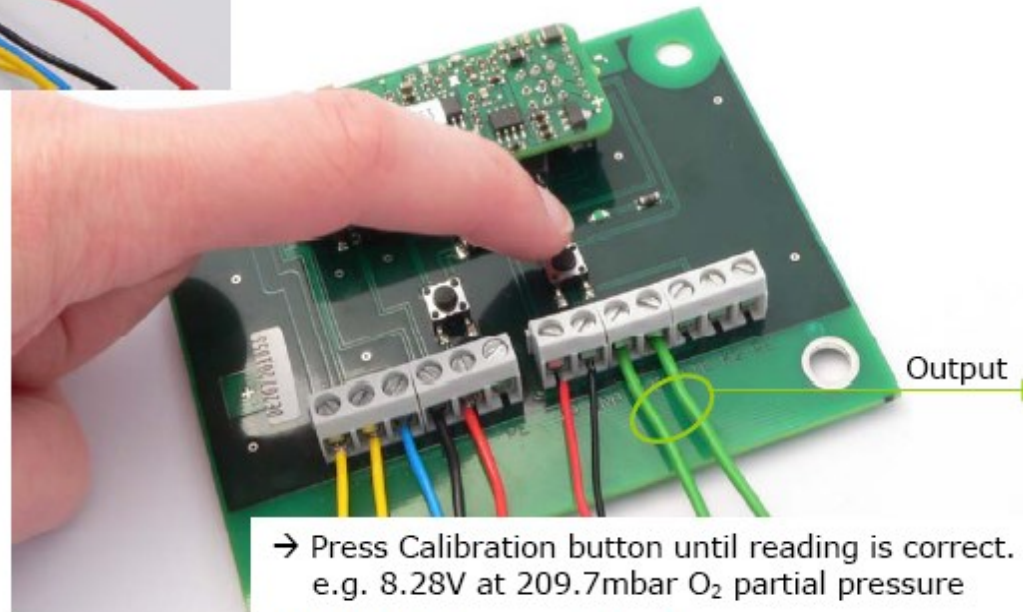
DE800.V.1.NF and DE800.A.1.NF versions hold auto calibration after power down.



Sensor has to be in a normal atmosphere and LED should be blinking.

Note: Calibration values given in the datasheet are only valid at a total pressure of 1013mbar!

→ Measure output between K1 and GND.
If reading is not correct ...



→ Press Calibration button until reading is correct.
e.g. 8.28V at 209.7mbar O₂ partial pressure

→ Calibration completed. (will be lost after power off!)



Application Note

DE800 Oxygen Sensor Interface Board Calibration

2.2 Manual Calibration

All versions hold calibration after power down.



Sensor has to be in an atmosphere with known oxygen content and the LED should be blinking.

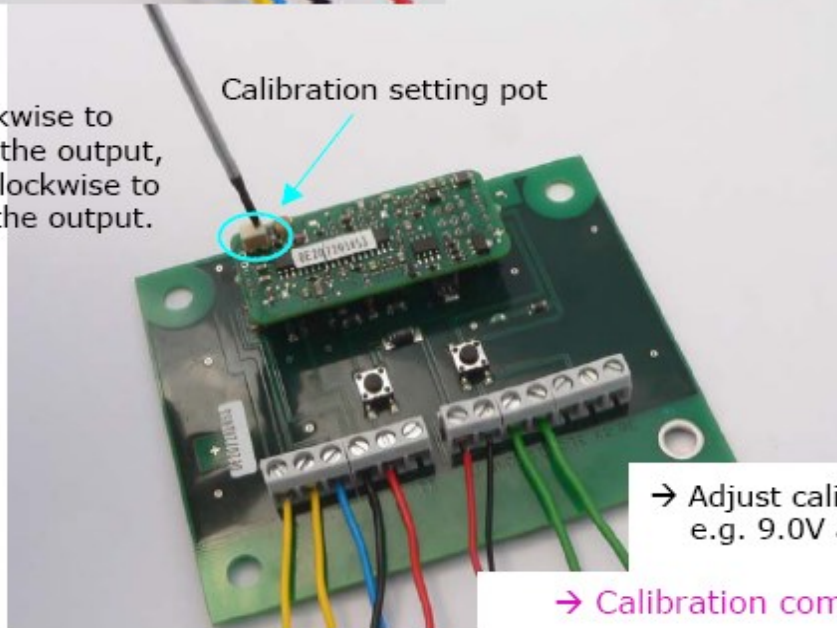
Note: Calibration values given in the datasheet are only valid at a total pressure of 1013mbar!

→ Measure output between K1 and GND.
If reading is not correct ...



Turn clockwise to decrease the output, counter-clockwise to increase the output.

Calibration setting pot



→ Adjust calibration setting pot until reading is correct.
e.g. 9.0V at 911.7mbar O₂ partial pressure

→ Calibration completed. (Retains after power off!)

WARNING

All SST Sensing Ltd products are tested under nominal operating conditions during the production process. Applications for our products are varied and, as these are outside our control, specification information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their intended application.

CAUTION

Do not exceed maximum ratings.
Carefully follow all wiring instructions, incorrect wiring can cause permanent damage to the device.
Do not use chemical cleaning agents.

Failure to comply with these instructions may result in product damage.

General Note: SST Sensing Ltd reserves the right to make changes in product specifications without notice or liability. All information is subject to SST's