

Printed Circuit Board for Oxygen-Sensor O2/M-100

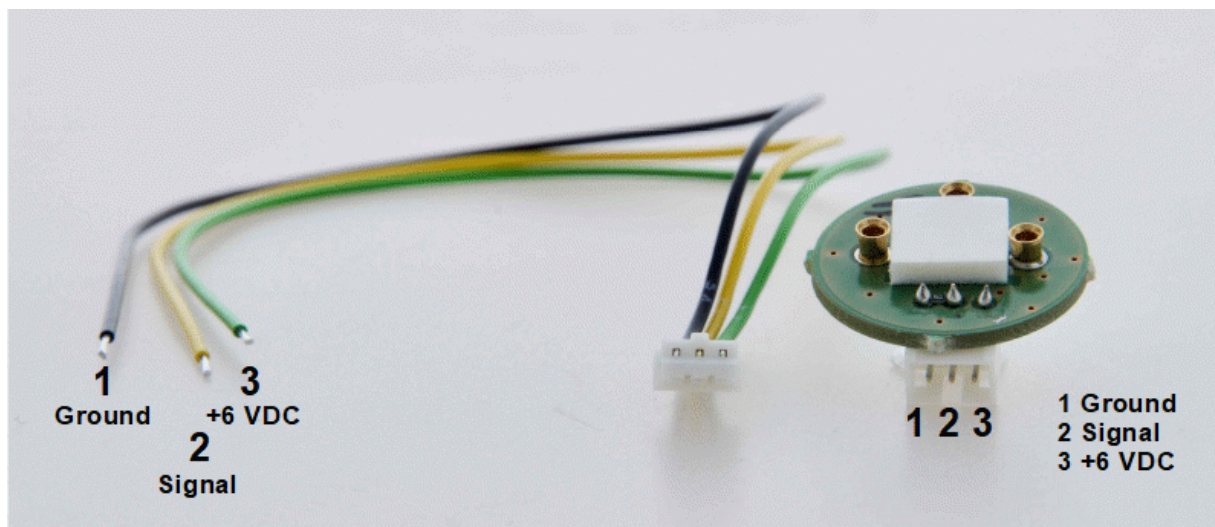
1) Specification

Input voltage required	+6 Volts DC (minimum +3 V)
Compliance	RoHS Compliant
Connection	Connector plug with wires included

The PCB contains a potentiostatic circuitry, similar as described in *MEM2 Application Note Oxygen Sensor*, and has at the output a resistor of 10 Ohm where the current output of the sensor is converted into a voltage signal. Equipped with an **O2/M-100** sensor, with a sensitivity of 90 $\mu\text{A} / \%$, the PCB gives the following output:

Output at ambient air (~21 % O ₂)	18.9 mV (*)
Signal / O ₂ -concentration	0.9 mV / % (*)
Output at zero oxygen concentration	0.1 mV
Overload	> 50 % O ₂

(*) Calculated with a sensitivity of 90 $\mu\text{A}/\%$. Depending on the single sensor these values may vary as specified in the data sheet of the O₂-sensor.



2) Operation

The PCB needs a power supply of 6 V DC to operate. Connect the power source to the connector: Pin1 (black) to Ground, Pin 3 (green) to +6 V as shown in the picture. Pay attention to the correct polarity.

The voltage output signal can be collected between pin 1 (Ground, black) and 2 (Signal, yellow). The output signal has a linear range from 0 - 30 mV.

A connector plug with wires (length: 200 mm) as shown in the picture above, is included in the delivery.