We use surface mount sensors MiCS-2614 and MiCS-2714 to detect ozone and nitrogen dioxide respectively.

Both design an internal resistor as a sensor element. The sensor resistor is connected between the pins (G) and (K) in the above diagram. Use an ohmmeter to check if you have found the right pins. The resistance should be on the order of 10-20 kOhm.

Both devices also have a heating element between the pins (A) and (H). This heating element holds the sensor element at the corresponding temperature. The resistance of the heating element is 50-60Ω.

Ideally, this equipment surface should be mounted on a circuit board. In the absence of a printed circuit board printer, however, it is still possible to carefully solder to the rear of these devices with very low temperature soldering and lots of care.

As in the solder board circuit diagram, we put 82Ω resistor and the 131Ω resistor in series with the heating elements of the MICS-2614 and MiCS-2714 units. These ensure that the heating elements maintain the right level of power. If you do not have access to a 131Ω resistor (it is not a standard value) with a 120Ω resistor and a 12Ω resistor in series.

We put the detection resistors in both devices in series with 22kΩ resistors a voltage divider to create. From the voltage at the output of the voltage divider, we can calculate the sensor resistance.

Rsenor = 22kΩ \* (5V / Vout-1)

http://www.clickoslo.com/air-pollution-detector.html

http://image.clickoslo.com/upload/b/38/b3897790b0a16a5581109d01b11ac6f6\_thumb.jpg