AS330

metal oxide sensor management system

Precise management of 8 metal oxide sensors using advanced sensor algorithms

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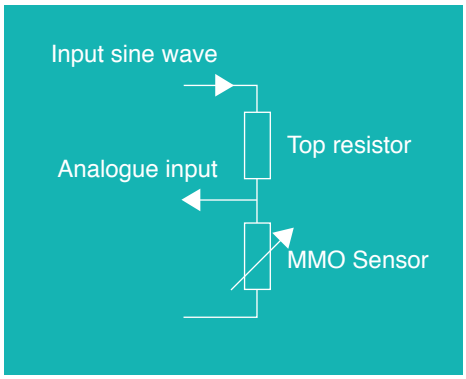
An additional advance in the case of metal oxide sensor technology is the use of AC rather than DC interrogation of the sensing material. This approach provides complementary atmospheric composition information from the real part and the imaginary part of the sensor impedance and introduces a marked enhancement in terms of sensitivity and selectivity.

The SMS is designed to work with up to 8 metal oxide gas sensors. It has circuits to accurately control sensor heater temperature based on digital control loops. The individual sensor heater 0°C resistance and temperature coefficients can be set, and there are a number of heater setpoint algorithms that can be selected as parameters. These include temperature ramps, timed temperature schedules and control by an external RS485 interface. Temperature setpoint algorithms can be set in pairs, or slaved to the first pair as required.

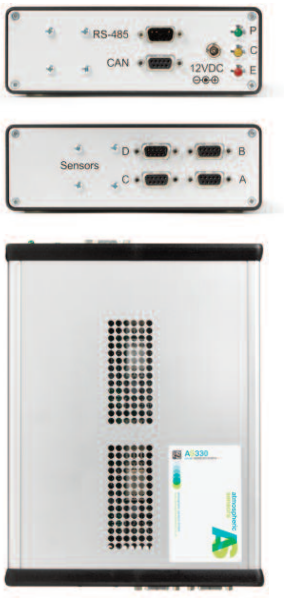
The SMS unit measures the impedance of the sensing element by applying a controllable synthesised sine wave to a potential divider formed by a top resistor (selectable between 100kR and1MR by an on-board jumper) and the sensor:

The sensor resistance is displayed by the PC monitor software, as is a measure of the quadrature (reactive) component.



Specification

- 4 or 8 MMO sensor channels, configurable for a wide range of MMO sensors.
- digital control of heater temperature using an adaptive algorithm and a number of heater temperature profiles to aid selectivity.
- measurement of real and imaginary sensing element impedance.
- usable with a wide range of sensors, to sense alternative gases.
- a range of interface options including CAN, RS485 and RS232.
- supplied with a suitable mains to 12V power supply plug.
- available with PC monitor software, or information to allow users to write their own interface software.



165 W x 237 D x 57 H – connectors extend outside the depth. Weight 1144g.

50W max electrical load (only with all heaters at maximum).

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