

0.02-4.8V / DIGITAL I²C-BUS BOARD FOR 4 SERIES & MICRO SENSORS



A pluggable transmitter offering 0.02-4.8 Vdc and digital i²C-bus output, suitable for 4 series and Micro size sensors and for the measurement of a variety of gas types including Carbon Monoxide CO, Hydrogen H₂, Hydrogen Sulphide H₂S, Nitrogen Dioxide NO₂ and Oxygen O₂. Also provides onboard temperature measurement and Capa test compatibility.

Part Number: 2112B019900

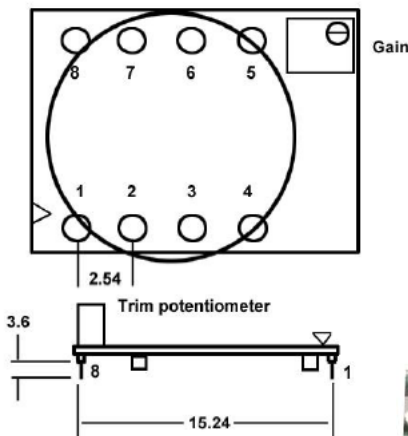
0.02-4.8 Vdc and digital i²C-bus output pluggable transmitter suitable for sensors in 4 series and Micro sizes.

Power supply: 3.0-5.0V d.c.

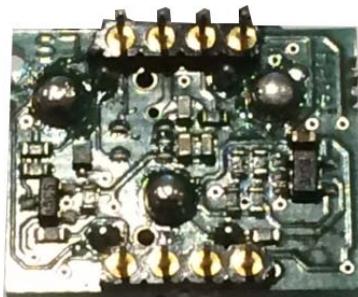
Please order compatible 4 series or Micro sensor separately. This will them be calibrated with the board at required gas range.

All performance specifications are based upon the following environment conditions: +20°C, 50% relative humidity and 1 atm (1013 mBar or ambient pressure).

View: Side Connector from top



SS transmitter view from underside



SPECIFICATION

Suitable for:

SS sensors in 4 series or Micro sizes. Please order compatible sensor separately. The board will be precalibrated with the chosen sensor

Gases Available:

Ammonia NH₃, Carbon Monoxide CO, Chlorine Cl₂, Chlorine Dioxide ClO₂, Ethylene Oxide ETO, Hydrogen H₂, Hydrogen Chloride HCl, Hydrogen Cyanide HCN, Hydrogen Fluoride HF, Hydrogen Sulphide H₂S, Nitric Oxide NO, Nitrogen Dioxide NO₂, Oxygen O₂, Ozone O₃, Phosphine PH₃, Sulphur Dioxide SO₂.
Other gases available on request

Measuring Ranges:

See individual sensor datasheets

Measuring Principle:

Electrochemical with electronic amplification

Contacts:

8 pins solderable with care or socket connector details available

Temperature Measurement:

-40°C to 125°C
-40°C = 100mV
125°C = 1750mV

Warranty Period:

6 months from date of despatch for electronics. Sensor warranty – see individual sensor datasheets.

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SPECIFICATIONS

Input Voltage: + 5 Vdc maximum

The board can be operated with a supply voltage of 3.0 - 5.0 Vdc. If a supply voltage of <5.0 Vdc is used, the output voltage will reduce correspondingly. Please advise us if you intend to use <5.0 Vdc supply voltage.

Note: please do not use voltages above 5.0Vdc or this will destroy the circuit.

Signal Out: 0.02 – 4.8 Vdc (Output signal is adjustable between 0.02-4.5 Vdc)

Signal Offset: 0.02 Vdc

Adjustment: 3.0 Vdc = sensor measurement range (for example, for CO: 3 Vdc = 500ppm)

Current consumption: Typically 0.8mA (electronics without sensor; total current is sensor/gas dependent).

Digital Output: i²C-bus output. This option is available for pins 1 and 2.

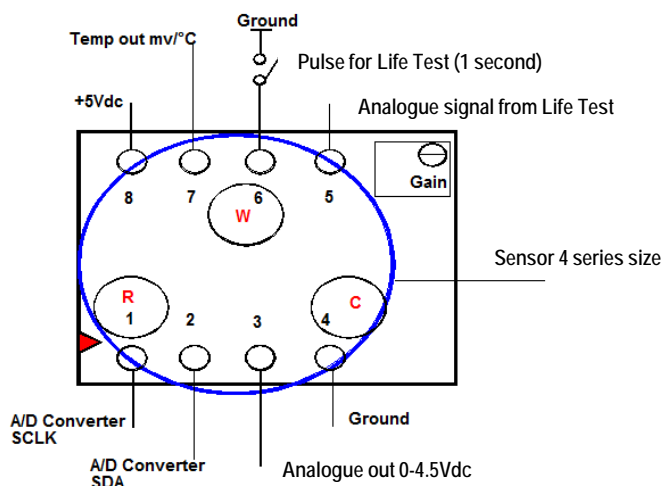
AD Converter: Microchip MCP 3221 AOT-EOT. Address Bits 000. Microchip datasheet available on request.

Amplification: Available with trim potentiometer. If changing the gain, adjust the potentiometer slowly and carefully. After adjustment, allow a warm-up time until the new signal has stabilised.

Life Test: The Life Test signal checks sensor functionality and sensitivity. The test can be manual or triggered by a downstream processor. If Pin 6 contacts 'Ground', a current signal is generated in the sensor. The signal can be measured at Pin 5. This pulse generator runs for 1 second. Please note that during Life Test process, no gas will be measured.

Pin	Connections
1	Digital output - i ² C-bus SCL signal (where optional i ² C-bus digital output is requested)
2	Digital output - i ² C-bus SDA signal (where optional i ² C-bus digital output is requested)
3	Analogue output 0-4.5Vdc as standard
4	Ground
5	Life Test signal
6	Start Life Test
7	Temperature output (0.1-1750mV dc)
8	Input voltage +5Vdc

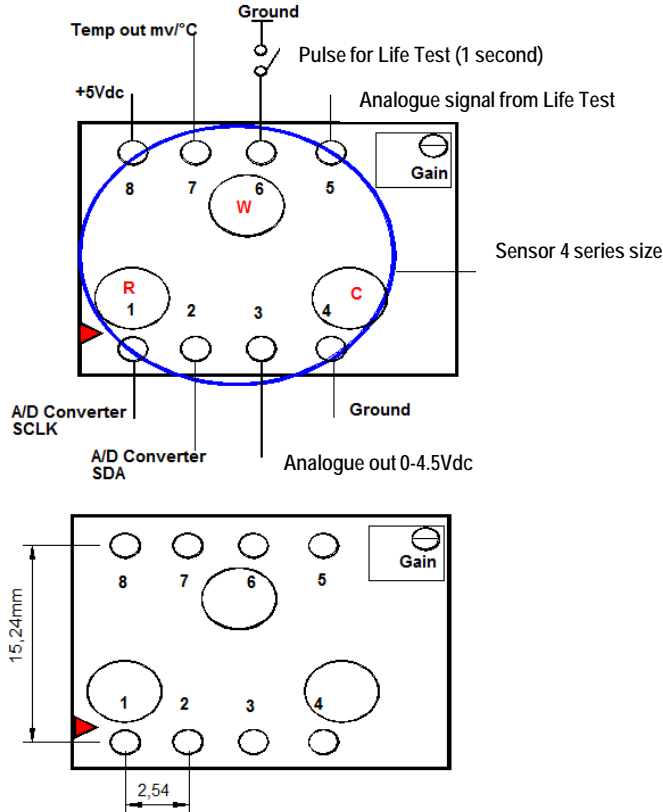
Side View: Connector from Top



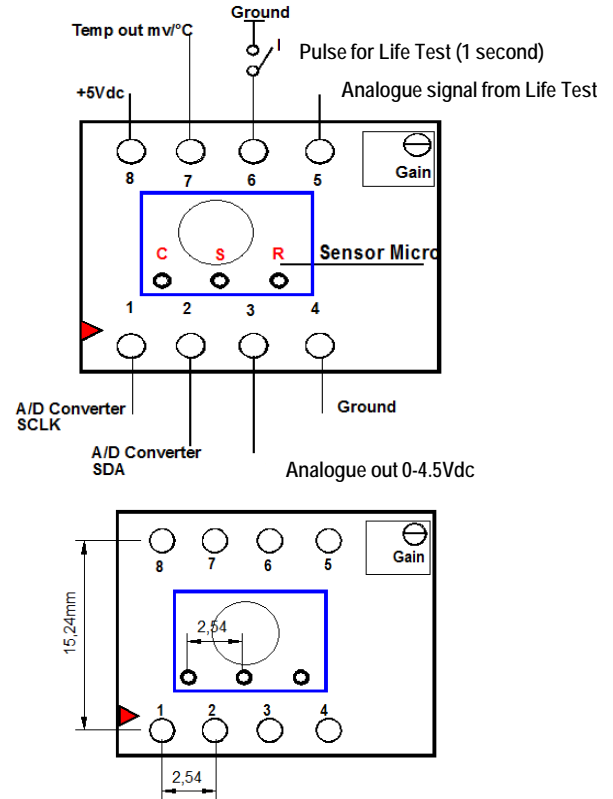
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PIN SPECIFICATIONS

Side View: Connector from Top – with 4 Series size sensor



Side View: Connector from Top – with Micro size sensor



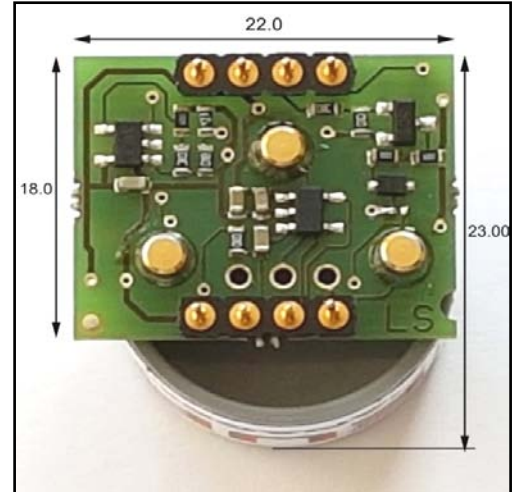
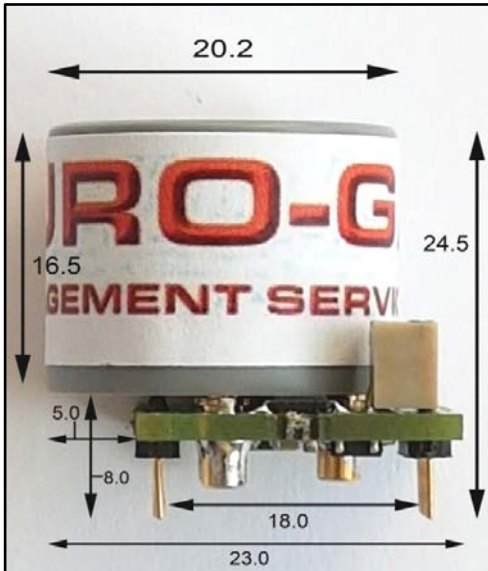
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4	Ground
5	Life Test signal
6	Start Life Test
7	Temperature output (0.1-1750mV dc)
8	Input voltage +5Vdc

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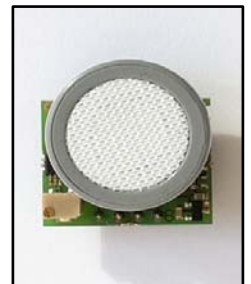
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PRODUCT DIMENSIONS - WITH 4 SERIES SIZE SENSORS



Please note: All measurements are in millimetres .
Dimensions are approximate and may vary.

PRODUCT IMAGES



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