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.

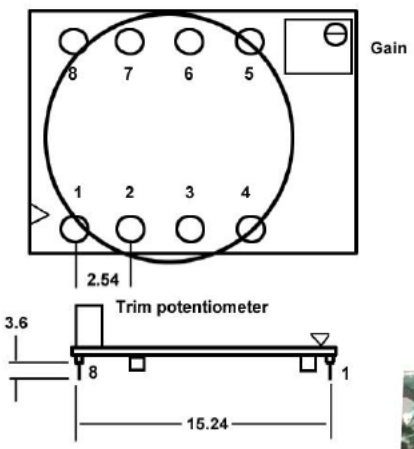
Part Number: 2112B019900

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: +20ºC, 50% relative humidity and 1 atm (1013 mBar or ambient pressure).

View: Side Connector from top



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:	-40ºC to 125ºC -40ºC = 100mV 125ºC = 1750mV
Warranty Period:	6 months from date of despatch for electronics. Sensor warranty – see individual sensor datasheets.

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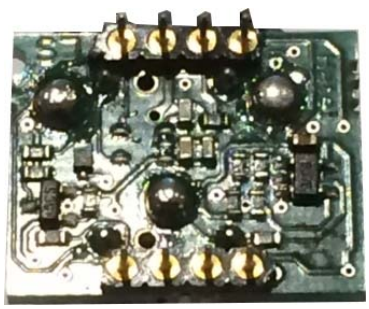

SS transmitter view from underside

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SPECIFICATIONS

Input Voltage: + 5 Vdc maximum

The boards 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 - and clearly mark this on your purchase order.

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.

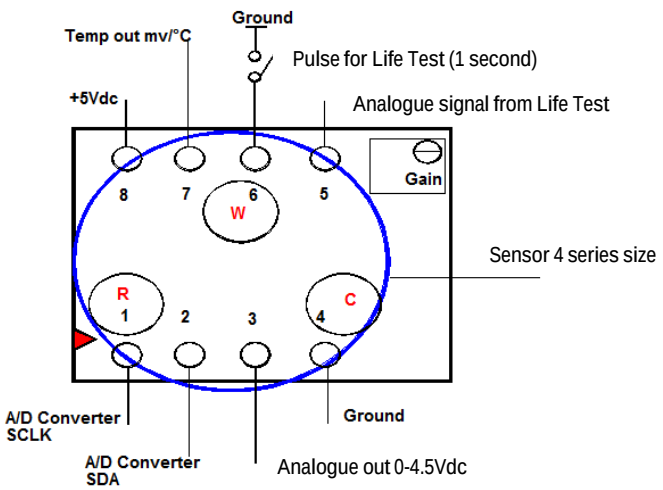
AD Converter: Microchip MCP 3221 AOT-EOT. Address Bits 000. Microchip datasheet available on request.

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 - i²C-bus SCL signal (where optional i²C-bus digital output is requested)
2	Digital output - i²C-bus SDA signal (where optional i²C-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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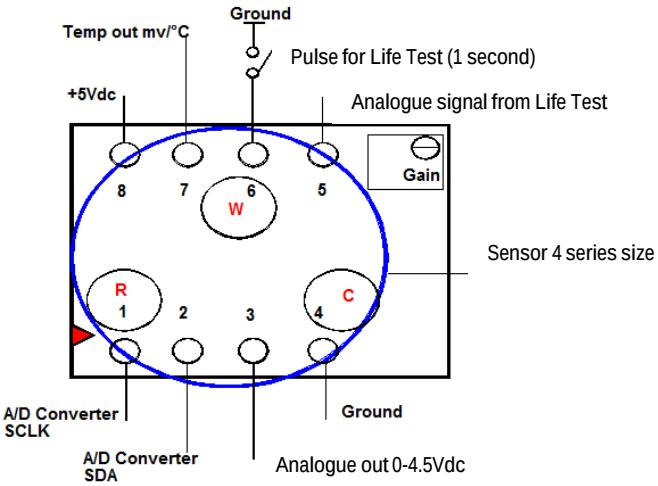
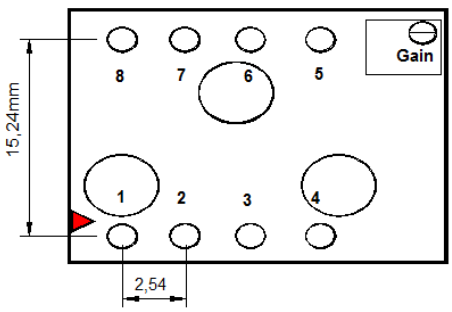
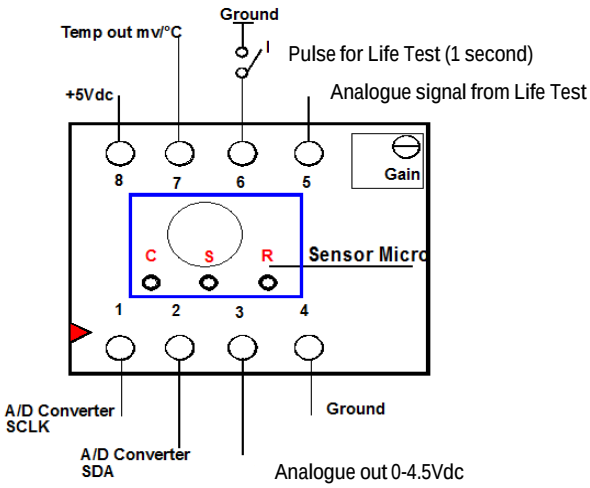
PIN SPECIFICATIONS

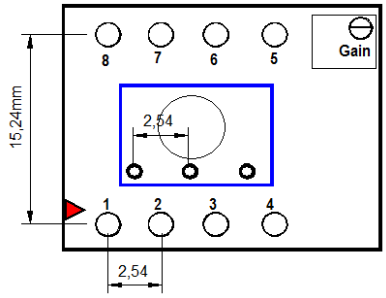
Side View: Connector from Top – with 4 Series size sensor





Side View: Connector from Top – with Micro size sensor





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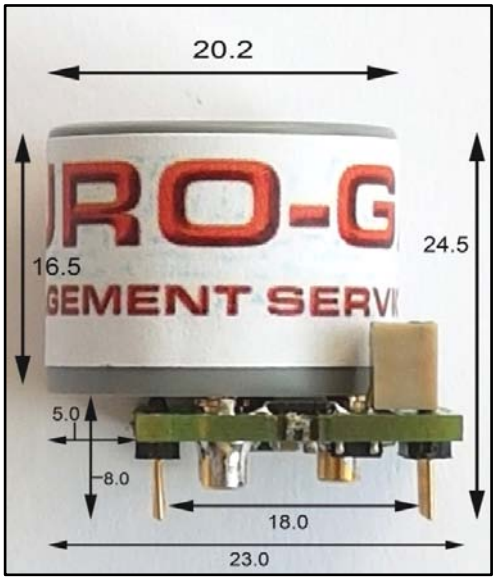
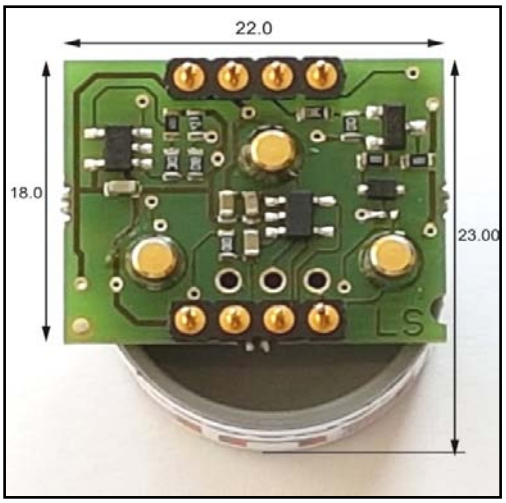
PRODUCT DIMENSIONS – WITH 4 SERIES SIZE SENSORS





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

PRODUCT IMAGES

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