GasTech Australia has used the latest low power switch mode technology for the detection of Combustible gas in LEL and ppm levels.

This unique amplifier has a built in capabilities to be either a 4-20mA Source or sink, simply by the positioning of 2 jumpers. It has a head voltage operation from 1.4Vdc to 14Vdc, which will cover the full range of low voltage and high voltage sensors. It is also designed for set gain control for extra low sensitivity for ppm detection.

The use of a precise amplifier and precise offset voltage allows this to be one of the most stable amplifiers on the market.

Advanced calibration minimises interference between zero and span adjustment, which enables quicker and more accurate calibrations.

All components are low profile surface mount designed for ease of installation and years of trouble free operation.

**Specifications**

- **Analog Output**: 4-20mA
- **Input Power**: 10-30VDC
- **Head volts**: 1.4-14VDC
- **Response Time**: 90% full response in less than 40 seconds
- **Operating Temperature**: -20°C to +60°C
- **Humidity Range**: 10-95% non condensing
- **Accuracy**: ±2% of reading
- **Repeatability**: 1% of reading
- **Drift**: Less than 5% signal loss per year
- **Certification**: IEC Ex IIC 85degC
- **Weight**: 800g
- **Dimensions**: 160mm x 110mm x 80mm
- **Enclosure**: IP66/IP67
- **Warranty**: 2 Years on electronics 1 year on sensor

**Ordering details**

- Amplifier part number 57-7056A
- Sensor part number 61-0303
- Order code: 65-5001A
- Splash guard/cal cup: 81-0303-01
All Gastech Australia’s amplifiers are designed to make calibration as simple and easy as possible and are designed so that no special tools are required.

Requirement for calibration

- Standard Multimeter capable of measuring in mV
- Calibration cup/Splash guard part number 81-0303-01
- Calibration gas
- Zero air gas part number 81-9987
- Regulator, 1Lpm part number 81-9998
- Small screw driver

1) Power up the amplifier with the sensors connected for at least 1 hour to fully stabilised.

2) Measure the voltage between Active (A) and the Reference (R) wires on the sensor terminal block.

3) GasTech sensors:
   - 61-0303 sensors head voltage 2.5Vdc
   - 61-0203 sensors head voltage 2.4Vdc
   - 61-0103 sensors head voltage 6Vdc

4) Adjust P1 (Head Volt) pot to the required head voltage. The pot to the right of the field connection terminal strip pot by itself.

5) Plug multimeter into TP1 and TP2 with the meter set to measure mV (0 to 200mV)

6) Apply zero air gas to the sensor and wait 30 seconds for the reading to stabilise.

7) Adjust P2 (Zero) pot till you obtain 40mV on the multimeter.

8) Apply Span gas to the sensor and wait 30 seconds for the reading to stabilise.

9) Adjust P3 (Span) pot till you obtain the desired output See Calibration Calculations

10) Repeat set 6 to confirm Zero setting

Calibration calculations

MV test point calculations measuring at TP1 and TP2.

- 4mA = 40mV
- 12mA = 120mV
- 20mA = 200mV

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\begin{align*}
\text{Full Range} & = \frac{160\text{mV}}{100\%\ \text{LEL}} \\
\text{Full Range} \times \text{Span gas} + 40 & = \text{mV output}
\end{align*}
\]

\[
\begin{align*}
160\text{mV} & \times 50\% \ \text{LEL} + 40 = 120\text{mV}
\end{align*}
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Specifications subject to change without notice (Jan 12)