

# D-GUARD<sup>2</sup>G



Fixed Digital Gas Detector for General Purpose

Designed from the ground up to provide reliable, accurate and flexible gas detection, the D-Guard<sup>2</sup>G incorporates leading edge technology. From the basic design philosophy that includes functional safety compatible techniques, through to the advanced functionality that provides repeatable and dependable performance. D-Guard<sup>2</sup>G is powerful, yet simple to use, making it an ideal single solution detector with low ownership cost.

The D-Guard<sup>2</sup>G includes HART communications which enables access to a greater depth of information than is possible over a basic current loop signal. Real time gas readings, diagnostic information and sensor testing are available via the HART link. Remote current loop rescaling and test mode triggering is also possible via the HART link.

D-Guard<sup>2</sup>G includes a high resolution ultra low power display with super clear text and graphics. The display offers visibility in low light spaces right through to use in direct sunlight. The user interface is intuitive and provides on screen guidance for carrying out calibration and configuration tasks.

Response time testing functionality is integral to D-Guard<sup>2</sup>G to give a true measurement of dynamic gas monitoring performance. As standards begin to emerge requiring such testing to be carried out, D-Guard<sup>2</sup>G is equipped to make the task simple.

D-Guard<sup>2</sup>G has been designed to efficiently allow the use of a single

board to cover all detector types and ranges for toxic gases, oxygen, flammable gases and carbon dioxide. Configuration is simple and quick via the user interface and supplied service tool with magnetic stylus built in.

D-Guard<sup>2</sup>G is housed in a specialised highly impact resistant non-conductive plastic, static preventing enclosure, which is UV stable.



## KEY FEATURES

- Available with or without HART 7.0 communications
- Leading edge NDIR methane detection
- Wide range of toxic gases monitored
- Ultra - Clear high resolution display
- Display illumination
- Integrated dynamic response testing
- Timed/HART triggered sensor self-test
- Continuous operating condition monitoring
- Non-intrusive setup and calibration
- Guided intuitive user interface
- Detector isolate feature
- High impact anti-static housing
- IP66 and IP68 certified

**D-GUARD<sup>2</sup>G****RANGE OF GASES DETECTED**

| Gas Name                         | Ordering Code with HART | Ordering code without HART | Range      | Temperature Range |
|----------------------------------|-------------------------|----------------------------|------------|-------------------|
| Ammonia                          | 65-1080G-NH3-100        | 65-1080GH-NH3-100          | 0-100 ppm  | -20 to +40 °C     |
| Ammonia                          | 65-1080G-NH3-500        | 65-1080GH-NH3-500          | 0-500 ppm  | -20 to +40 °C     |
| Ammonia                          | 65-1080G-NH3-1000       | 65-1080GH-NH3-1000         | 0-1000 ppm | -20 to +40 °C     |
| Carbon Dioxide                   | 65-1080G-CO2            | 65-1080GH--CO2             | 0-1.5 %vol | -20 to +40 °C     |
| Carbon Monoxide                  | 65-1080G-CO-100         | 65-1080GH-CO-100           | 0-100 ppm  | -30 to +50 °C     |
| Carbon Monoxide                  | 65-1080G-CO-500         | 65-1080GH-CO-500           | 0-500 ppm  | -30 to +50 °C     |
| Carbon Monoxide                  | 65-1080G-CO-1000        | 65-1080GH-CO-1000          | 0-1000 ppm | -30 to +50 °C     |
| Carbon Monoxide<br>(H2 Tolerant) | 65-1080G-COH-200        | 65-1080GH-COH-200          | 0-200 ppm  | -30 to +50 °C     |
| Carbon Monoxide<br>(H2 Tolerant) | 65-1080G-COH-2000       | 65-1080GH-COH-2000         | 0-2000 ppm | -30 to +50 °C     |
| Chlorine                         | 65-1080G-CL2            | 65-1080GH-CL2              | 0-10 ppm   | -20 to +40 °C     |
| Ethylene Oxide                   | 65-1080G-ETO            | 65-1080GH-ETO              | 0-100 ppm  | -30 to +50 °C     |
| Hydrazine                        | 65-1080G-N2H4           | 65-1080GH-N2H4             | 0-1 ppm    | -10 to +40 °C     |
| Hydrogen Chloride                | 65-1080G-HCL            | 65-1080GH-HCL              | 0-100 ppm  | -20 to +40 °C     |
| Hydrogen Cyanide                 | 65-1080G-HCN-25         | 65-1080GH-HCN-25           | 0-25 ppm   | -40 to +40 °C     |
| Hydrogen Cyanide                 | 65-1080G-HCN-50         | 65-1080GH-HCN-50           | 0-50 ppm   | -40 to +40 °C     |
| Hydrogen Fluoride                | 65-1080G-HF             | 65-1080GH-HF               | 0-10 ppm   | -20 to +40 °C     |
| Hydrogen Sulphide                | 65-1080G-H2S-10         | 65-1080GH-H2S-10           | 0-10 ppm   | -30 to +50 °C     |
| Hydrogen Sulphide                | 65-1080G-H2S-25         | 65-1080GH-H2S-25           | 0-25 ppm   | -30 to +50 °C     |
| Hydrogen Sulphide                | 65-1080G-H2S-100        | 65-1080GH-H2S-100          | 0-100 ppm  | -30 to +50 °C     |
| Hydrogen Sulphide                | 65-1080G-H2S-200        | 65-1080GH-H2S-200          | 0-200 ppm  | -30 to +50 °C     |
| Methane                          | 65-1080G-CH4-5          | 65-1080GH-CH4-5            | 0-5 %vol   | -20 to +40 °C     |
| Methane                          | 65-1080G-CH4-100        | 65-1080GH-CH4-100          | 0-100 %vol | -20 to +40 °C     |
| Nitrogen Dioxide                 | 65-1080G-NO2            | 65-1080GH-NO2              | 0-10 ppm   | -20 to +50 °C     |
| Nitric Oxide                     | 65-1080G-NO             | 65-1080GH-NO               | 0-100 ppm  | -30 to +50 °C     |
| Oxygen                           | 65-1080G-O2             | 65-1080GH-O2               | 0-25 %vol  | -30 to +55 °C     |
| Ozone                            | 65-1080G-O3             | 65-1080GH-O3               | 0-2 ppm    | -20 to +40 °C     |
| Phosphine                        | 65-1080G-PH3            | 65-1080GH-PH3              | 0-5 ppm    | -20 to +40 °C     |
| Propane                          | 65-1080G-C3H8           | 65-1080GH-C3H8             | 0-100 %LEL | -550 to +60 °C    |
| Sulfur Dioxide                   | 65-1080G-SO2            | 65-1080GH-SO2              | 0-10 ppm   | -30 to +50 °C     |

| Range in PPM | Displayed Resolution in PPM |
|--------------|-----------------------------|
| 0-1          | 0.01                        |
| 0-99         | 0.1                         |
| 0-999        | 1                           |
| 0-1000+      | 1                           |

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## SPECIFICATIONS

Specifications subject to change without notice

|                          |                                                                                             |
|--------------------------|---------------------------------------------------------------------------------------------|
| Analogue output          | 2 wire 4-20mA                                                                               |
| Digital Communication    | HART 7.0 on selected models                                                                 |
| Indication               | 2.7" (68.6mm) Monochrome LCD                                                                |
| Relay Output 1           | Low Alarm - Single Pole Double Throw (SPDT)                                                 |
| Relay Output 2           | High Alarm - Single Pole Double Throw (SPDT)                                                |
| Relay Output 3           | Fault - Normally Energised                                                                  |
| Input Power              | 13-28V DC                                                                                   |
| Response Time            | Typical response T90 in less than 40 sec (Toxic) and less than 10 sec (CH4), cell dependent |
| Operating Temperature    | -20°C to +55°C                                                                              |
| Humidity Range           | 15-90% non-condensing                                                                       |
| Accuracy / Repeatability | Less than AS2290.3, ANZ60079.29 and AS4641                                                  |
| Sensor Style             | 4 series sized plug in sensors                                                              |
| Calibration              | Non-intrusive, magnetic stylus                                                              |
| Drift                    | Less than 3% signal loss per year                                                           |
| Dimensions               | 120mm x 120mm x 95mm                                                                        |
| Enclosure                | Anti-static / UV stable chemical resistant acetal plastic                                   |
| Gland                    | 20mm nylon (IP68 Rated)                                                                     |
| IP Rating                | IP66 (1.2m for 1.5 hrs)                                                                     |
| Warranty                 | 2 Years on Instrument<br>Sensor warranty varies with cell                                   |



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