INFRARED GAS SENSORS GASCARD RANGE

# GASCARD NG

## FOR $CO_2$, CO, $CH_4$


# Reliable gas detection at the heart of your system

The Gascard range of OEM infrared gas sensors is now further enhanced with the introduction of the next generation model, the Gascard NG. The Gascard NG is backward compatible with the existing models and is intended as a "plug and play" replacement offering excellent quality detection and measurement of many gases with improved functionality, future extendibility and configuration options.

Automatic Temperature and Pressure corrections are included as standard with real-time environmental condition measurements via on-board sensors, thus providing true concentration readings and reliable measurement of target gases, whilst offering easy integration with our present and future clients' systems.

These versatile instruments are based on well established proven technology with enhanced features and options as detailed:

- Backwards compatible with outputs from existing Gascard generations.
- Real-time Temperature and Pressure correction via on-board sensors.
- On-board RS232 communication.
- Field Replaceable IR source.
- Windows data logging software.
- TCP/IP communications protocol option.
- Flexibility to incorporate additional gas detection technologies.

ISO 9002 certificate No. 96/7913

GAS SENSORS

ANALYTICAL INSTRUMENTS

LASERS AND ELECTRO-OPTICS

QUANTUM DIVISION

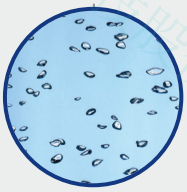
• TRIED •
• TESTED •
• TRUSTED •

EDINBURGH INSTRUMENTS

TECHNICAL SPECIFICATIONS

# GASCARD NG

## FOR $CO_2$, CO, $CH_4$



| MODEL | Gas | Accuracy [3] | Stability | Repeatability @ zero [3] | Repeatability @ span [3] |
|---|---|---|---|---|---|
| Gascard NG (0-500ppm) | $CO_2$ | +/- 8% of range | +/- 8% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-1000ppm) | $CO_2$ | +/- 4% of range | +/- 4% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-2000ppm) | $CO_2$ | +/- 2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-3000ppm) | $CO_2$ | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-5000ppm) | $CO_2$ | +/- 2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-1%) | $CO_2$ | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-3%) | $CO_2$ | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-5%) | $CO_2$ | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-10%) | $CO_2$ | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-30%) | $CO_2$ | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-100%) | $CO_2$ | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| | | | | | |
| Gascard NG (0-3%) | CO [2] | +/- 6% of range | +/- 6% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-10%) | CO [2] | +/- 3% of range | +/- 6% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-30%) | CO [2] | +/- 2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-100%) | CO [2] | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| | | | | | |
| Gascard NG (0-5%) | $CH_4$ [1] | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-10%) | $CH_4$ [1] | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-30%) | $CH_4$ [1] | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| Gascard NG (0-100%) | $CH_4$ [1] | +/-2% of range | +/- 2% of range over 12 months | +/- 0.3% | +/- 1.5% |
| | | | | | |
| Gascard NG (0-1000ppm) | $N_2O$ | +/- 5% of range | +/- 5% of range over 12 months | | |
| | | | | | |
| Gascard NG (0-2000ppm) | $C_6H_{14}$ | +/-2% of range | +/- 2% of range over 12 months | | |

| | |
|---|---|
| Response Time: | $T_{90}$ = 10 seconds (= 3 seconds, 90 seconds or programmable) |
| Operating Temperature: | 0-45ºC |
| Operating Pressure: | 800-1150mbar |
| Zero Drift at Constant Temp: | +/- 2% per year |
| Zero Drift due to Ambient Temp: | <+/- 0.03% of range per ºC (Standard Head)<br><+/- 0.1% of range per ºC (Plus Head) |
| Warm-up Time: | 1 minute (operation), 30 minutes (full specification) |
| Humidity: | Measurements are unaffected by 0-100% relative humidity, non-condensing |
| Output Signal: | 4-20mA or 0-20mA (bitswitch selectable) load dependent on supply voltage |
| Controls Fitted: | Zero and span adjustment buttons<br>Bitswitch selection of various parameter options |
| Bitswitch Parameters: | Analogue (current) output: 0 - 20mA or 4 - 20mA<br>Response time/type: RC filter (programmable time constant) or Adaptive filter |
| Expansion Facilities: | LCD display, Remote zero and span buttons, RS232, Ethernet |
| Power Requirements: | 12V DC (7-30V) |
| Power Consumption: | 6 Watts |
| Weight: | 0.3Kg |
| Dimensions: | 160 x 100 x 40mm |

[1] Methane is flammable above ~4.5% in Air and Methane/Nitrogen mixtures above 14.3% will form flammable mixtures with air which require special precautions to be taken to prevent explosion. If in doubt consult the appropriate MSDS for methane or methane mixtures.

[2] CO is flammable above ~12.5% in Air and is extremely toxic, see MSDS for Carbon Monoxide.

[3] At 1013mbar, 25ºC and standard filter setting

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• TRIED •
• TESTED •
• TRUSTED •

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