

## TEXAS INSTRUMENTS

### 4GS Preliminary Specification

<b>Sensing method</b>	Non-dispersive Infrared, reference channel design
<b>Gas sampling mode</b>	Pump and/or diffusion capability
<b>Sensing Range</b>	0-2000 ppm or user adjustable to 0- 5000 ppm
<b>Accuracy</b>	<ul style="list-style-type: none"> <li>• &gt; 1500 ppm: +/- 5%</li> <li>• 0-1500 ppm: +/- 75 ppm (readings @ standard pressure 760 mm Hg &amp; 25°C)</li> </ul>
<b>Resolution:</b> 0-10V output 0-5V output 0-1V output	<ul style="list-style-type: none"> <li>• Less than 2 ppm</li> <li>• Less than 4 ppm</li> <li>• Less than 16 ppm</li> </ul>
<b>Pressure effect</b>	0.19% of reading per mm Hg
<b>Repeatability</b>	+/- 16 ppm nominal
<b>Warm up time</b>	< 90 seconds
<b>Response time</b> @ 500 ml/min flow rate	<20 seconds to 83% of step change <60 seconds to 100% of step change
<b>Drift measured at 800 ppm</b>	+/- 15 ppm per year
<b>Output voltage</b>	Linearized 0-10V standard, 2K Ohm output impedance
<b>Output options</b>	<ul style="list-style-type: none"> <li>• 0-1, 0-5, 0-10V software adjustable linear outputs</li> <li>• LCD: two line, alpha-numeric ppm display</li> <li>• User defined upper ppm setting from 300 ppm to 5000 ppm, software adjustable in 100 ppm increments via LCD or TI Interface Keypad (TIK).</li> <li>• Relay output; trip point software adjustable in 100 ppm increments from 300 to 5000 ppm using LCD or TIK (factory set at 1000 ppm)</li> </ul>
<b>Output relay de-actuation</b>	100 ppm below relay set point
<b>Output relay rating</b>	10 mA - 500mA @24 VAC or 30 VDC,
<b>Power requirements</b>	18-30 VAC standard or 18-40 VDC , both < 3W
<b>Gas flow rate range</b> (pumped air samples)	<ul style="list-style-type: none"> <li>• 500 ml/minute nominal</li> <li>• Range 300 ml/minute to 1000 ml/minute</li> </ul>
<b>Calibration interval</b>	3 years recommended, NO calibration on installation
<b>Field calibration adjustment, quick</b>	Zero ppm gas calibration via keyswitch on PWB
<b>Field calibration interface, full-up</b>	Zero and Span calibration: user definable via menu driven software at LCD or TI Interface keypad
<b>Operating temperature range</b>	0°C to +50°C
<b>Maximum temperature variation</b>	5 ppm/°C over operating temperature
<b>Operating humidity range</b>	5-95 %, non-condensing
<b>Storage temperature range</b>	-40°C to +70°C. Display version: -20°C to +70°C
<b>Dimensions (case)</b>	3.84" x 3.84" x 1.5"
<b>Duct Mount</b>	Optional accessory configuration
<b>Materials</b>	Case - ABS, UL94V0
<b>Patents</b>	Pending



## NEW FROM TI GAS SENSORS

### 4GS CARBON DIOXIDE SENSOR

*TI's next generation CO<sub>2</sub> Sensor, the 4GS, is going to radically alter your perception of infrared gas sensing....*

Long considered too costly and complex, albeit unfriendly for users like installation and field service personnel, infrared CO<sub>2</sub> sensors nevertheless have generally been regarded by engineers as highly accurate, reliable, long life instruments.

*Now, because of Texas Instrument's innovative reference channel design and self-contained calibration/output selection software, you can have the inherent capabilities of infrared sensing integrated into a small, convenient, economical package that will set new industry standards.*



TI-4GS

- Housed in an ABS case sized for both European and U.S. electrical boxes, or for standard drywall mounting configurations
  - Does *not* require calibration upon installation (unlike most IR sensors)
  - No need to handle the PCB or make physical adjustments of 4GS electronic components
  - Computer and RS-232 Interface are not needed for 4GS.....
  - Unique two-pushbutton scheme on the 4GS provides simple means to fully calibrate the unit with menu driven software at the LCD
- or -
- Select & Set span requirements and output options in software based on your needs
- or -
- Do a quick zero-cal with a single pushbutton stroke for periodic service calls. 4GS cal cycle recommendation is every three years

(see 4GS specifications on reverse page)