

## SGX-4NH3

### Industrial Ammonia Sensor

(Application : Portable Gas Detectors)

#### PERFORMANCE

Range	0 – 100 ppm
Output Signal	100 ± 30 nA/ppm
Typical Baseline Range (pure air)	< ±1 ppm equivalent
Linearity	Linear
Response time (T <sub>90</sub> )	<40 s
Maximum Overload	200 ppm
Long-Term Output Drift	<20% per Annum
Recommended Load Resistor	10 ohms
Repeatability	±10%
Resolution	1 ppm
Warranty	1 year
Bias	No Bias

#### OPERATING CONDITIONS

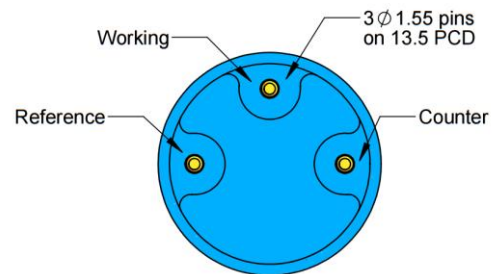
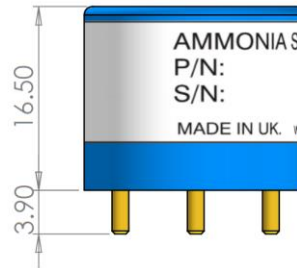
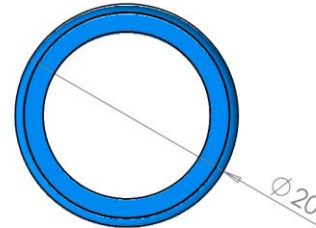
Temperature Range	-40°C to +50°C
Operating Humidity	15 – 90% RH
Pressure range	800 to 1200 mbar
Operating Circuit	See Application Note 2
Recommended Storage Temperature	0°C to 20°C
Storage life	6 months in original packing (0 – 25°C)
Expected Operating Life	> 24 Months in Air

#### INTRINSIC SAFETY DATA

Maximum at 2000 ppm	0.3 mA
Maximum o/c Voltage	1.3 V
Maximum s/c Current	<1.0 A

#### PRODUCT DIMENSIONS

All dimensions in mm  
 All tolerances ±0.15 mm



#### IMPORTANT NOTES

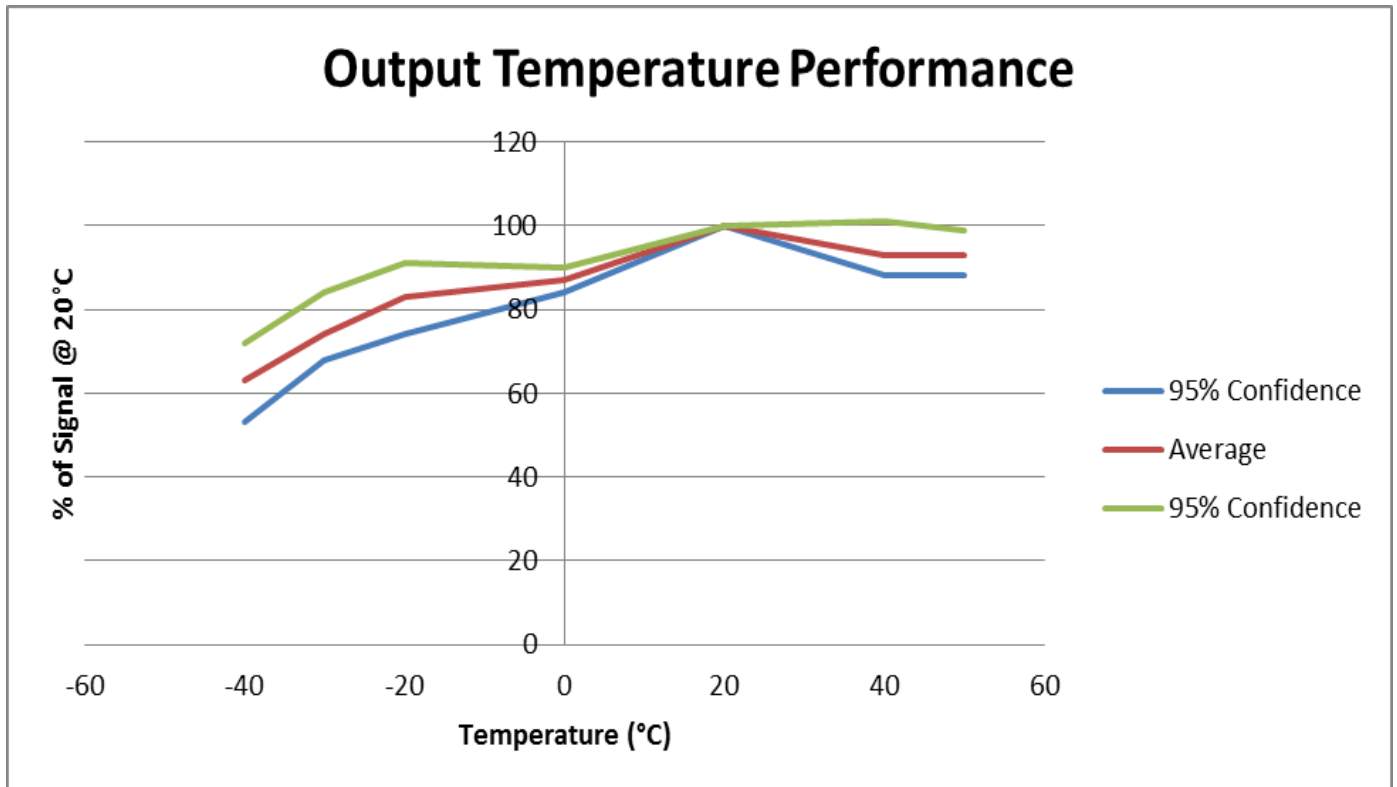
- All performance is based on conditions at 20°C, 50% RH and 1 atm, using SGX recommended circuitry.
- Sensor performance is temperature dependant; please contact SGX for temperature performance other than 20°C.
- Do not solder to the connector pins as this may damage the sensor and thereby invalidate the warranty.
- Details on recommended connector pins can be found in the Frequently Asked Questions within the Gas Sensor section of the SGX website.
- This device is designed to be RoHS compliant.

### CROSS-SENSITIVITY DATA

GAS	CONCENTRATION	SGX-4NH3
Hydrogen Sulfide	25 ppm	30 ppm
Sulfur Dioxide	20 ppm	-6 ppm
Hydrogen	100 ppm	0 ppm
Nitric Oxide	50 ppm	0 ppm
Carbon Monoxide	500 ppm	0 ppm
Nitrogen Dioxide	5 ppm	-7.5 ppm
Ethanol	100 ppm	0 ppm
Carbon Dioxide	5000ppm	0 ppm

*Note: This table is for reference only and are typical values. Cross Sensitivities may not be linear and should not be scaled. Calibration should be carried out with the actual gas at a known concentration.*

### TEMPERATURE



### POISONING

SGX sensors are designed to operate in a wide range of harsh environments and conditions. However it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instrument and operation. When using sensors on printed circuit boards (PCBs), degreasing agents should be used prior to the sensor being fitted.