

## SPECIFICATION SHEET for AMMONIA SENSOR with FAST RESPONSE TYPE NH3/SR-1000-S

### PERFORMANCE CHARACTERISTICS

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Nominal Range                       | 0 – 1000 ppm                        |
| Maximum Overload                    | 2000 ppm                            |
| Expected Operation Life             | 2 years in air                      |
| Output Signal                       | 25 ± 8 nA/ppm                       |
| Resolution                          | 4 ppm                               |
| Temperature Range                   | - 10 °C to 40 °C                    |
| Pressure Range                      | Atmospheric <sup>1)</sup>           |
| Pressure Coefficient                | No data                             |
| T <sub>90</sub> Response Time       | < 35 sec                            |
| Relative Humidity Range             | 15 % to 90 % R.H.<br>non-condensing |
| Baseline                            | 0 ppm ± 16 ppm                      |
| Maximum Zero Shift (+20°C to +40°C) | -32 ppm                             |
| Typical Long Term Output Drift      | < 5% per 6 months                   |
| Recommended Load Resistor           | 10 Ohm                              |
| Bias Voltage                        | Not allowed                         |
| Repeatability                       | < 3 % of signal                     |
| Output Linearity                    | < 5 % full scale                    |
| Humidity Effect <sup>2)</sup>       | < 16 ppm                            |

<sup>1)</sup> no data for deviations

<sup>2)</sup> abrupt changes in rel. humidity causes a short term transient signal

### CROSS-SENSITIVITY DATA

| Interfering Gas                | Concentration | Reading |
|--------------------------------|---------------|---------|
| CO                             | 300 ppm       | 0 ppm   |
| H <sub>2</sub>                 | 200 ppm       | 0 ppm   |
| SO <sub>2</sub> <sup>3)</sup>  | 20 ppm        | -7 ppm  |
| H <sub>2</sub> S <sup>3)</sup> | 20 ppm        | 7 ppm   |
| NO <sup>3)</sup>               | 20 ppm        | -1 ppm  |
| NO <sub>2</sub> <sup>3)</sup>  | 20 ppm        | -20 ppm |
| Cl <sub>2</sub>                | 20 ppm        | -55 ppm |
| CO <sub>2</sub>                | 2 %           | 0 ppm   |
| SiH <sub>4</sub>               | 10 ppm        | 0 ppm   |

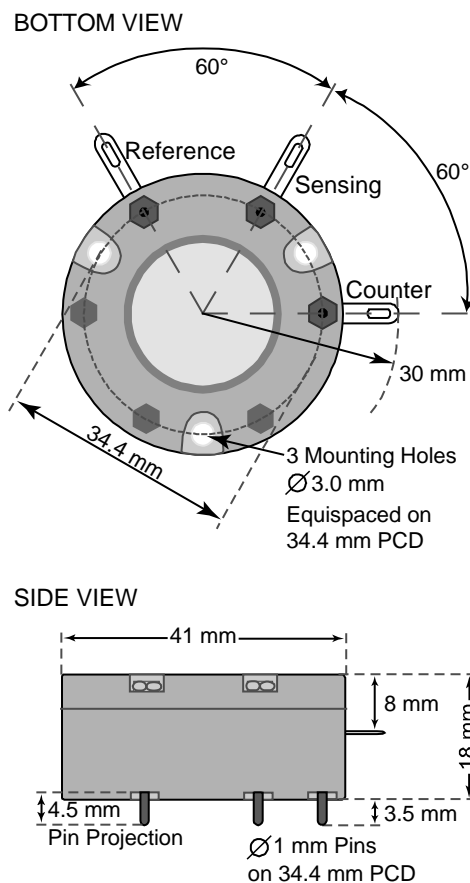
<sup>3)</sup> Long term exposures and high concentrations may affect the performance characteristics

Performance data conditions:  
20 °C, 50% RH and 1013 mbar

### PHYSICAL CHARACTERISTICS

|                                 |                                 |
|---------------------------------|---------------------------------|
| Weight                          | ~ 27 g                          |
| Position Sensitivity            | None                            |
| Storage Life                    | Six months in container         |
| Recommended Storage Temperature | 5 °C – 20 °C                    |
| Warranty Period                 | 12 months from date of dispatch |

### Slim-Size Outline Dimensions



### APPLICATIONS

Leak Detection  
Safety and Environmental Control

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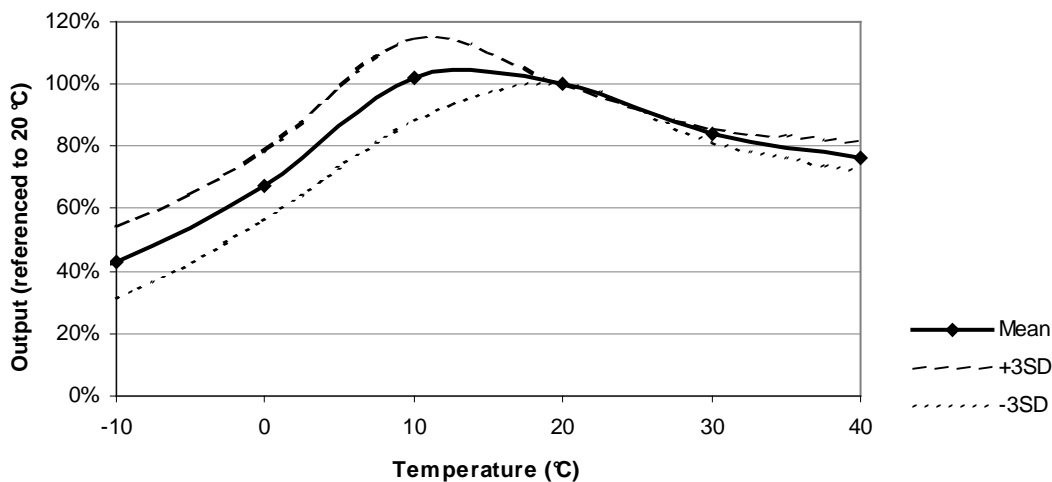
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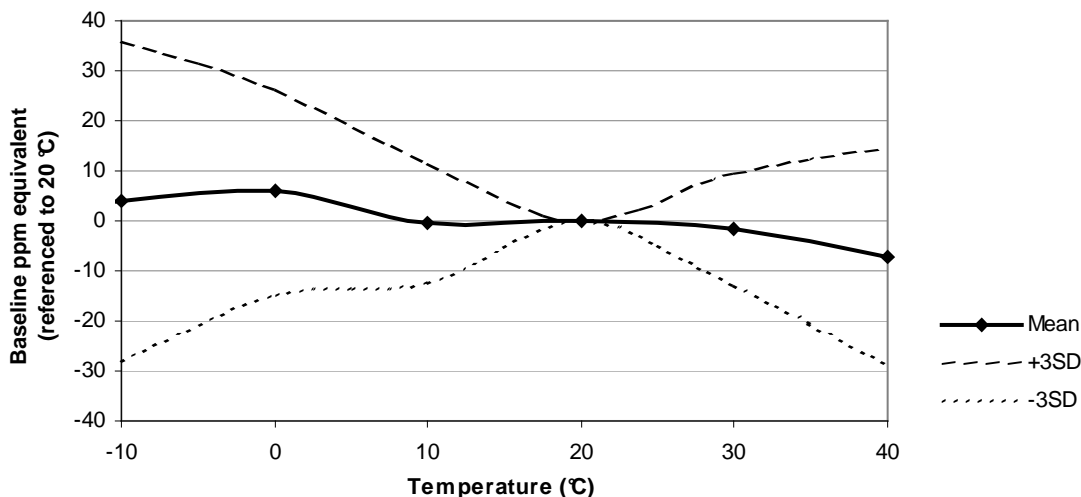
### TEMPERATURE DEPENDENCE

The output of an electrochemical sensor varies with temperature. The graphs below show the variation in output with temperature for this type of sensor. The results are shown in the graphs as a mean for a batch of sensors, along with confidence intervals corresponding to  $\pm 3$  times the standard deviation. The sensitivity dependence is expressed as a percentage of the signal at 20 °C. The shift in baseline is shown in ppm referenced to 20 °C.

Sensitivity Temperature Dependence



Baseline Temperature Dependence



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