

Easy Gas Sensor

ES1-HCHO-5 Formaldehyde



Part Number:
01-ES1-HCHO-5-01

Features

- Extreme linear response up to high concentration
- Fast response
- Low noise
- No electrolyte leakage
- Low cost at large volumes
- Individually calibrated including test report

Typical applications

- TLV monitoring
- Indoor Air Quality

Technical Specification

Performance

| | |
|------------------------|---------------|
| Sensitivity | 35±20 nA /ppm |
| Zero current | ± 2 nA |
| Response time | |
| -T ₅₀ | < 20 s |
| -T ₉₀ | < 120 |
| Range | 5ppm |
| Repeatability | 1% Lower |
| Detectable Limit (LDL) | ≤0.05 ppm |
| Resolution (16Bit ADC) | 0.01 ppm |
| Maximum overload | 100ppm |
| Linear range | 5 ppm |

Environment

| | |
|---------------------------------|----------------|
| Temperature Range | -20 to 50°C |
| Humidity Range (non condensing) | 10 to 95% R.H |
| Pressure Range | 800 to 1200hPa |

Operation

| | |
|---------------------------|---------------------------|
| Operating principle | amperometric, 3-electrode |
| Bias voltage | 0mV |
| Recommended load resistor | 100 Ω |
| Warm up time | < 20s |

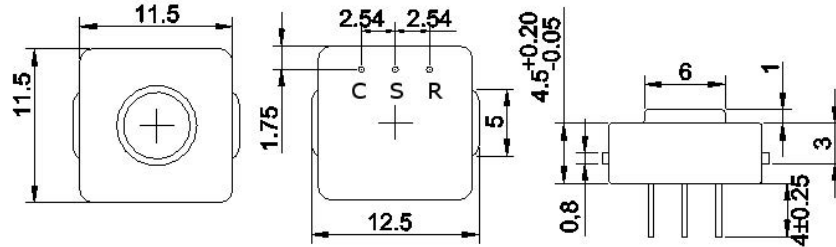
Lifetime

| | |
|-----------------------------|------------|
| Long Term Sensitivity Drift | < 1%/month |
| Zero Drift in clean air | < 0.2ppm |
| Storage conditions | 0-20°C |
| Storage life | 6 month |
| Expected Life Time | > 3 years |
| Warranty | 12 month |

Housing

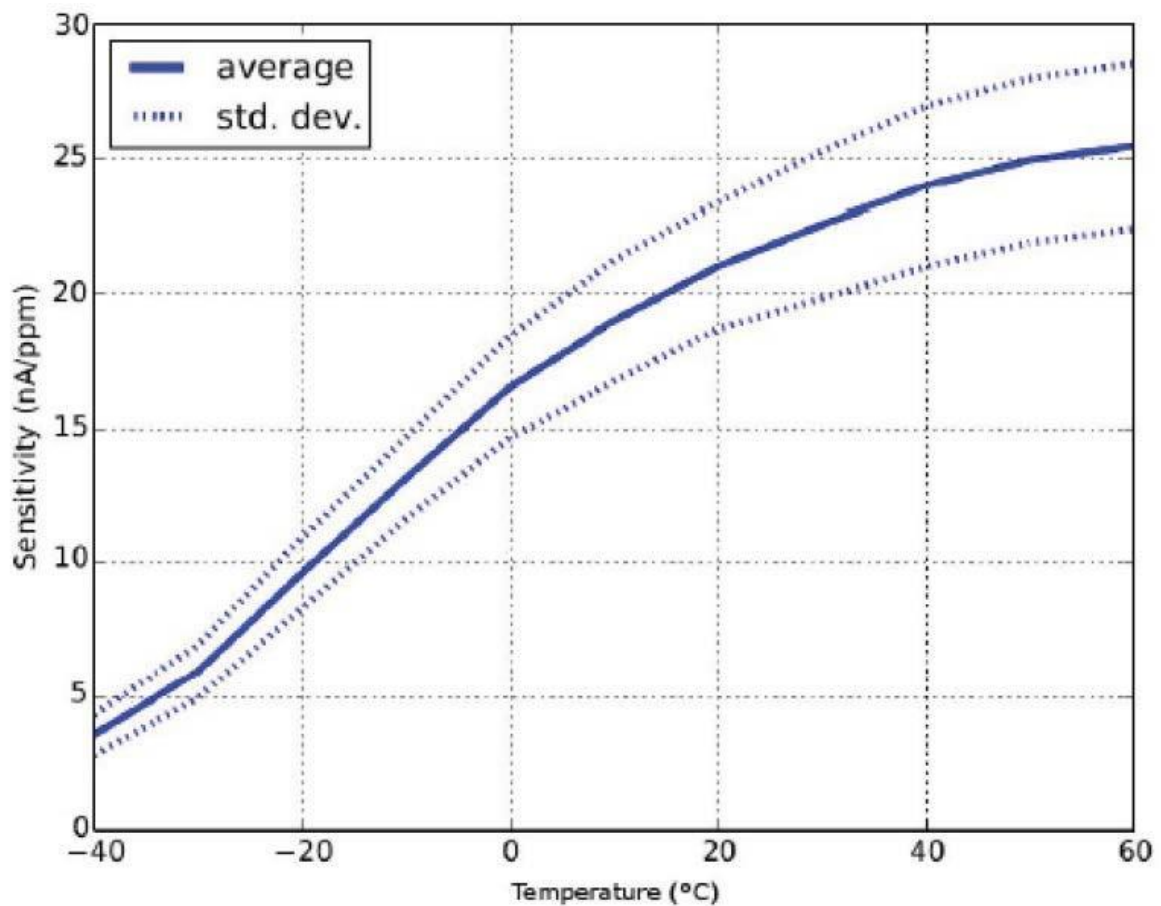
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|------------------|--------|
| Housing material | PPO |
| Weight | < 0.7g |

Dimensions



All dimensions in mm

Temperature curve



Cross sensitivity

| Gas | | Test Gas Concentration | Reading in ppm |
|---|---------------------------------|------------------------|----------------|
| Carbon Dioxide | CO ₂ | 5000ppm | 0ppm |
| Ammonia | NH ₃ | 100ppm | 0ppm |
| Carbon Monoxide | CO | 100ppm | 6ppm |
| Methane | CH ₄ | 10000ppm | 0ppm |
| Toluene | C ₇ H ₈ | 50ppm | 0ppm |
| Benzene | C ₆ H ₆ | 50ppm | 0ppm |
| Ethanol | C ₂ H ₆ O | 100ppm | 0ppm |
| Ethylene | C ₂ H ₄ | 100ppm | 0ppm |
| Hydrogen | H ₂ | 100ppm | <3ppm |
| Hydrogen | H ₂ | 20000ppm | <50ppm |
| Hydrogen Cyanide | HCN | 20ppm | <1ppm |
| Sulphur Dioxide | SO ₂ | 10ppm | <1ppm |
| Nitrogen Dioxide | NO ₂ | 10ppm | 0ppm |
| Chlorine | Cl ₂ | 20ppm | 0ppm |
| Hydrogen Chloride | HCl | 5ppm | 0ppm |
| HCHO sensor no reaction for all of these material: Shampoo, Washing Powder, Washing liquid, Washing Spirit, 84 Toilet Liquid, Iodine. | | | |
| When you are eating in the room, the HCHO sensor no reaction for this food smelling. | | | |
| HCHO sensor reaction in mouth smelling; | | | |
| HCHO sensor reaction with Orange smelling, this smelling is high HCN gas, please see above the cross data. | | | |

Test Conditions: T=20°C, P=1013hPa, Flow Rate=300ml/min

We will continue improve this data and will test more gas.

If you have any question please contact with us

DISCLAIMER:

rate>150qcm/min using EC-Sense recommended circuitry. Cross sensitivity gases are not target gases. Relations and performance can change, also with ageing of the accept any legal responsibility for customer applications of our sensors. EC-Sense accepts no liability for any consequential losses, injury or damage resulting from the is for guidance only and may not be taken as warranty. Any use of the given data must be assessed and determined by the user thereof to be in accordance with federal,

WARNING:EC-Sense sensors are designed to operate in a wide range of harsh conditions. It is nevertheless essential to prevent exposure to high concentrations of solvent

Please note that gluing or soldering direct to the pins of EC-Sense gas sensors will void any warranty. Please use PCB sockets when connecting EC-Sense sensors. Any

sensors and instruments for response to gas before use, especially where life safety is a performance requirement of the product. At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste but contact EC-Sense or their distributor for disposal instructions. Customers should test under their own conditions to ensure that the sensors are suitable for their specific requirements.