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PROSENSE

**Product Data Sheet**

**FC4-H2-20000**
**Electrochemical H2 Sensor**

# FC4-H2-20000 Electrochemical H2 Sensor




## Key Features & Benefits

*0 Power Consumption
*High Precision
* High sensitivity
*Wide Linear Range
*Excellent Repeatability and Stability

## Applications

Energy，Electric Power，Petrochemical，Environmental Protection，Mining，Agriculture，Smart Home, etc.

## Technical Specification

### MEASUREMENT

| | |
|---|---|
| **Principle** | Micro fuel cell |
| **Range** | 0-20000ppm |
| **Maximum Overload** | 40000ppm |
| **Sensitivity** | 0. 2±0.1 (nA/ppm) |
| **Response Time (T90)** | ＜60seconds |
| **Baseline Offset（20℃）** | ±50ppm |
| **Zero Drift（-20℃-40℃）** | ±100ppm |
| **Repeatability** | 2% of signal |
| **Output Signal** | Linear |
| **Long Term Output Drift** | ＜3% signal/year |

### ENVIRONMENTAL

| | |
|---|---|
| **Working Temperature Range** | -40℃～70℃ |
| **Working Pressure Range** | 90 ～ 110 kPa |
| **Working Humidity Range** | 10％－90％ (not condensing) |

### LIFETIME

| | |
|---|---|
| **Expected Operating Life** | 5 years in air |
| **Warranty** | 24 months |

### PHYSICAL CHARACTERISTICS

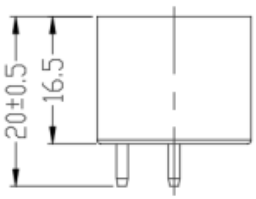
| | |
|---|---|
| **Weight** | **7** g |
| **Orientation Sensitivity** | None |

## Product Dimension

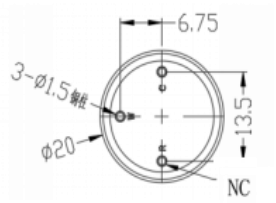
**A**



**B**




**C**




Notes：1 All dimensions in mm
2 All tolerances ±0.15mm unless otherwise stated.

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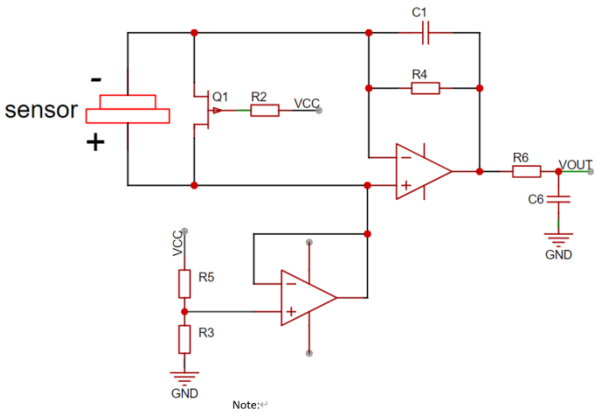
## Cross-Sensitivity Data

**Notes:** 1. All performance data is based on condition at 20℃, 50%RH & 1013mbar.For sensor performance data under other conditions, please contact us.

2. Connection should be made via PCB sockets only. Soldering to the pins will seriously damage the sensor

| Gas | Concentration Used（ppm） | FC4-H2-20000（ppm H2） |
|---|---|---|
| CO | 100 | 40 |

## Recommend Circuit




Note:

1. ReH2mmendation for VCC is 3.3V
2. R3&R5 help settle Vref, typical values:
Vref=0.148mV; R3=47K/0.1%;R5=1M/0.1%
3. R2 is reH2mmended as 1M/1%
4. R4 is reH2mmended as 1M/1%
5. C1 is reH2mmended as 10uf with TP5552 as the amplifier
6. Typical values forR6 and C6 are 1K/1% and 100nf/10% separately.

## Precautions：

1 .The sensor should be prevented from organic solvents or corrosive gases

2 .The sensor should not be stored in dusty, dirty areas and anaerobic environment

3 .The sensor must not be exposed to very high concentration of the analyte permanantly

4 .Excessive shock or vibration should be prevented to avoid internal damage

5 .The pins should not be broken or bent

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