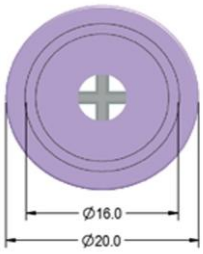
SENOVOL CORPORATION

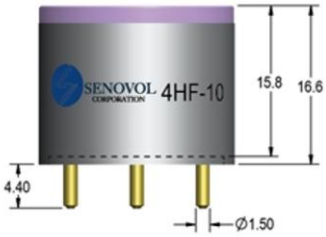
HF-10 Sensors
4-Series

This sensor is designed for the measurement of HF concentration in gas phase. It can be used as the pin-to-pin replacement of the standard 4-series electrochemical HF sensors which made by the other manufacturers.

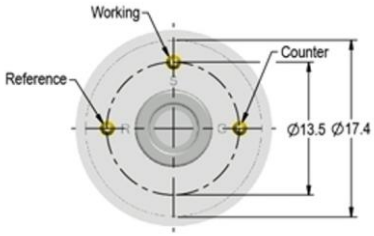
Product Dimensions



Top View



Side View



Bottom View

All dimensions in mm
All tolerances are ± 10mm unless otherwise stated.

Performance

Nominal Range	0 ~ 10 ppm
Maximum Overload	50 ppm
Sensitivity (2 0°C)	-0.3 ± 0.1 μA/ppm
Response Time (T90)	≤ 120 s
Zero Signal (20°C):	< ±0.2 μA
Baseline	< 2 ppm
Resolution:	0.2 ppm
Linearity	Linear up to 10 ppm
Bias Voltage	0 mV

Physical Characteristics

Housing Material	ABS
Weight	5 grams
Orientation:	None

Environmental

Temperature Range	-20°C ~ 50°C
Pressure Range	1 ± 0.1 atm
Humidity Range	15% ~ 90%RH

Life Time

Expected Operating Life	2 years in clean air
Long Time Output Drift	<5 % per year
Storage Life	6 months in original packaging
Storage Temperature	10℃ ~ 30℃
Warranty	12 months

Intrinsic Safety

Max current at 50ppm HF:	< 0.2 mA
Max. O/C Voltage:	1.3 V
Max. S/C Current:	< 1.0 A

Note

The performance data in this document are conducted by using Senovol's recommended test circuitry and test environment at 20°C, 50%RH and 1 atm. Sensor performance varies under different environmental conditions. Please contact us if you need more details.

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Installation

Output signals from the sensor pins are different. Inappropriate use of the pins in product design will affect the sensor functionality. Exposure to high concentrations of solvent vapors should be avoided under any condition. Mechanical overstress may cause deformation or cracks of the plastic enclosure of the sensor. If the sensor is used in extreme environmental conditions, please contact us for more details.

Cross-Sensitivities

Gas	Concentration (ppm)	Output Signal (ppm HF equivalent)
Hydrogen Sulfide	20	-11.6
Sulfur Dioxide	20	-0.2
Nitric Oxide	50	0.0
Carbon Monoxide	100	0.0
Hydrogen	1000	0.0

Note: The cross sensitivities include but not limited to the above gases. It may also respond to other gases. The data in the table above may vary from different batches of sensors and the changes of test environment. Calibration using the gases that have the cross sensitivities to this sensor is not recommended.

Note

This sensor is used in gas detection instruments. The instrument's user guide must be read carefully, and all calibration procedures must be followed using certified target calibration gas before each use to ensure accuracy. Customers are strongly advised to validate sensor performance for their specific product designs or applications, using this document as a reference.