

Sensor Life Expectancy in Air Under Normal Conditions

Sensors have an operational life expectancy, a shelf life for storage and a recommended calibration frequency that is commonly dependent on the type of application and environment. All information listed below is approximate, in air and under normal conditions. If you require more specific information on the sensor in the unit you are servicing, contact CETCI for specifications.

Electrochemical Sensor	Range	Life Expectancy	Shelf Life	Calibration Frequency**
Ammonia (NH ₃)	(0 - 500 ppm)	~2 yrs*	⋮	⋮
Carbon Monoxide (CO) (Type A)	(0 - 200 ppm)	~3 yrs	⋮	⋮
Carbon Monoxide (CO) (Type B)	(0 - 200 ppm)	~6 yrs	⋮	⋮
Chlorine (Cl ₂)	(0 - 5 ppm)	~3 yrs	⋮	⋮
Chlorine Dioxide (ClO ₂)	(0 - 1 ppm)	~2 yrs	⋮	⋮
Ethylene (C ₂ H ₄)	(0 - 200 ppm)	~2 yrs	⋮	⋮
Ethylene Oxide (C ₂ H ₄ O)	(0 - 20 ppm)	~2 yrs	⋮	⋮
Fluorine (F ₂)	(0 - 1 ppm)	~2 yrs	⋮	⋮
Formaldehyde (CH ₂ O)	(0 - 5 ppm)	~2 yrs	Electrochemical	For car park applications
Hydrogen (H ₂)	(0 - 2,000 ppm)	~2 yrs	sensors have a	sensors should be
Hydrogen Sulphide (H ₂ S) (Type A)	(0 - 50 ppm)	~2 yrs	shelf life of less	calibrated every
Hydrogen Sulphide (H ₂ S) (Type B)	(0 - 50 ppm)	~5 yrs	than 6 months.	12 months. All other
Hydrogen Chloride (HCl)	(0 - 30 ppm)	~2 yrs	⋮	applications, especially
Hydrogen Cyanide (HCN)	(0 - 30 ppm)	~2 yrs	⋮	where people are
Nitric Oxide (NO)	(0 - 100 ppm)	~2 yrs	⋮	routinely working should
Nitrogen Dioxide (NO ₂) (Type A)	(0 - 10 ppm)	~3 yrs	⋮	be every 6 months.
Nitrogen Dioxide (NO ₂) (Type B)	(0 - 10 ppm)	~6 yrs	⋮	⋮
Oxygen (O ₂)	(0 - 25% vol)	~3 yrs	⋮	⋮
Ozone (O ₃)	(0 - 1 ppm)	~2 yrs	⋮	⋮
Phosphine (PH ₃)	(0 - 5 ppm)	~2 yrs	⋮	⋮
Silane (SiH ₄)	(0 - 20 ppm)	~2 yrs	⋮	⋮
Sulphur Dioxide (SO ₂)	(0 - 20 ppm)	~2 yrs	⋮	⋮
Catalytic Sensor	Range	Life Expectancy	Shelf Life	
Hydrogen (H ₂)	(0 - 100% LEL)	~5 yrs	n/a	⋮
Methane (CH ₄)	(0 - 100% LEL)	~5 yrs	n/a	⋮
Propane (C ₃ H ₈)	(0 - 100% LEL)	~5 yrs	n/a	⋮
Solid State Refrigerant Sensor	Range	Life Expectancy	Shelf Life	Calibration Frequency
R22, R134A, R402A, R404A, R407C, R410A, R422D, R507A	(0 - 2,000 ppm)	~5 yrs	n/a	every 12 months
TVOcs	(0 - 500 ppm)	~5 yrs	n/a	⋮
Non-Dispersive Infrared Refrigerant Sensor (NDIR)	Range	Life Expectancy	Shelf Life	Calibration Frequency
R22, R123, R134A, R404A, R407A, R407C, R407F, R410A, R422A, R422D, R427A, R507A, HF01234YF, HF01234ZE	(0 - 3,500 ppm)	~7 yrs	n/a	every 2 years
Infrared Sensor	Range	Life Expectancy	Shelf Life	
Carbon Dioxide (CO ₂)	(0 - 5,000 ppm) (0 - 5% vol)	~8 yrs	n/a	⋮
Photo Ionization Detector (PID) Sensor	Range	Life Expectancy	Shelf Life	Calibration Frequency
various	(ppm or ppb)	^	n/a	^

* Depends on the application and environment - in cold environments the sensor lasts longer.

** Bump tests are recommended and more frequent calibration is recommended if you are not confident the unit is responding as it should.

^ Depends on application and environment - how dirty the environment is and how often the sensor is used.

Note: When storing sensors, package them securely so no dust or dirt will settle in or on them - especially for NDIR and PID sensors where dirt can cause operational problems.

Electrochemical sensors should be stored in the fridge; if left on the shelf their shelf life may decrease to 3 - 4 months