

Product: XgardIQ Sensor Module

Subject: Technical Specification

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Product:	XgardIQ
Sensor Module Part Number:	XIQ-AF
Gas Type:	Hydrogen (H₂)
Sensor Technology:	Pellistor

Environmental Specification:

Temperature Range:	-40°C to +75°C.
Humidity Range for Operation/Storage:	0 to 99%rh non-condensing.
Recommended Storage Temperature	20°C
Warranty Period:	12 months if operated within stated environmental limits and not exposed to excessive gas concentrations or contaminants (see Product Notes).
Pressure Range:	Atmospheric +/-10%

Performance Characteristics:

Expected Operating Life:	>36 months in air if operated within stated environmental limits and not exposed to excessive gas concentrations or contaminants (see Product Notes).
Storage Life:	6 months from date of manufacture.
T90 Response Time:	~12 seconds
Minimum Display Resolution:	1%LEL
Linearity	<3% of full-scale
Long Term Sensitivity Drift:	<5% per year

Configuration:

XgardIQ Display Name:	H2
Range:	0-100%LEL
Maximum User-Selectable Range:	0-100%LEL
Minimum Recommended User-Selectable Range:	0-20%LEL
Alarm 1 Threshold	20%LEL
Alarm 2 Threshold	40%LEL
Stabilisation Time	60 seconds

Product Notes and Calibration Instructions:

Crowcon recommends Hydrogen sensors are initially calibrated on commissioning and re-calibrated every 6 months minimum.

Please refer to the XgardIQ installation, operating and maintenance instructions for information on performing sensor zero and calibration.

Crowcon recommends calibration is performed using 50%LEL Hydrogen (H₂) in air at a flow-rate of 0.5 - 1 litre per minute. The sensor must be zeroed in clean air before calibration is performed.

Note: if a dust filter accessory is fitted to the sensor, calibration must be performed with the filter in-place. Filters must be inspected regularly and replaced as soon as they show signs of contamination. A dust filter will affect the T90 response time of the sensor: response time may be significantly longer than shown on this datasheet.

Note: Pellistors can suffer from loss of sensitivity if exposed to poisons or inhibitors such as silicones, sulphides, chlorine, lead or halogenated hydrocarbons. Sensors must be tested regularly with gas to verify response. In applications where such compounds are present we recommend the use of infrared flammable gas sensors.

The operational life of the pellistors depends on the application and the amount of gas and contaminants to which the pellistor has been exposed. Under normal conditions (6 monthly calibration with periodic exposure to calibration gas) the life expectancy is 3-5 years.

The sinter should be inspected regularly; a blocked sinter may prevent gas from reaching the sensor.

Note: modules will be calibrated in compliance with EN60079-20-1:2010 where 100% LEL hydrogen = 4% volume.

Safety Information:

XgardIQ sensor modules are designed to detect gases or vapours in air, and not inert or oxygen deficient atmospheres.

Maintenance and calibration operations must be performed by qualified service personnel.

Disclaimer:

The data contained on this document is provided for guidance purposes only and is correct at the time of issue. Performance data is typical as measured at Crowcon; no guarantees can be made on the performance of individual products. Environmental specifications are specific to the sensor listed, and may differ from those shown on the gas detector datasheet.