

Product: XgardIQ Sensor Module

Subject: Technical Specification

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Product:	XgardIQ
Sensor Module Part Number:	XIQ-IR (0-100ppm)
Gas Type:	Sulphur Dioxide (SO₂)
Sensor Technology:	Electrochemical

Environmental Specification:

Temperature Range:	-30°C to +50°C.
Humidity Range for Operation/Storage:	15 to 90%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 humidity.
Pressure Range:	80 to 120 kPa

Performance Characteristics:

Expected Operating Life:	>24 months in air if operated within stated environmental limits and not exposed to excessive gas concentrations or humidity.
Storage Life:	6 months from date of manufacture.
T90 Response Time:	~25 seconds
Minimum Display Resolution:	1ppm
Linearity	<5% of full-scale
Long Term Sensitivity Drift:	<4% per year (in clean air)

Configuration:

XgardIQ Display Name:	SO ₂
Range:	0-100ppm
Maximum User-Selectable Range:	0-100ppm
Minimum Recommended User-Selectable Range:	0-5ppm
Alarm 1 Threshold	10ppm
Alarm 2 Threshold	20ppm
Stabilisation Time	60 seconds

Product Notes and Calibration Instructions:

Crowcon recommends SO₂ 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 10ppm Sulphur Dioxide (SO₂) 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.

Cross-Sensitivity Data:

Gas	Concentration Used	Reading (% of applied gas)
Ammonia	20ppm	<0.1%
Carbon Monoxide	400ppm	<1.5%
Chlorine	10ppm	<-50%
Ethylene	400ppm	<50%
Hydrogen	400ppm	<0.5%
Hydrogen Sulphide	20ppm	<2%
Nitrogen Dioxide	10ppm	<-120%
Nitric Oxide	50ppm	<-10%

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.

Electrochemical cells used in toxic and oxygen sensor modules contain small volumes of corrosive electrolyte. Care should be observed when replacing or disposing of cells to ensure that the electrolyte does not come into contact with skin or eyes.

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.