

Product: XgardIQ Sensor Module

Subject: Technical Specification

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Product:	XgardIQ
Sensor Module Part Number:	XIQ-BJ
Gas Type:	Methane (CH₄)
Sensor Technology:	Infrared (IR)

Environmental Specification:

ATEX and IECEx Approved Ambient Temperature Range	-20°C to +55°C
Operational Temperature and Humidity Range:	-20°C to +55°C 0 to 95% RH non-condensing
Recommended storage Temperature and Humidity Range	-25°C to +85°C 0 to 95% RH non-condensing.
Warranty Period:	24 months if operated within stated environmental limits.
Pressure Range:	700 to 1300mBar

Performance Characteristics:

Expected Operating Life:	>10 years if operated within stated environmental limits.
Storage Life:	Unlimited if stored at 20°C in the original packaging in a clean environment.
T90 Response Time:	<25 seconds @ 0.5 litre per minute flow rate
Minimum Display Resolution:	1%LEL
Linearity	Maximum deviation: +/-0.1% volume
Long Term Sensitivity Drift:	Negligible

Configuration:

XgardIQ Display Name:	Methane
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*

*Please note thermal stabilisation time of sensor in Product Notes

Product Notes and Calibration Instructions:

Crowcon recommends IR Methane sensors are initially calibrated on commissioning and bump-tested every 12 months minimum. Re-calibration is only necessary where the sensor reading deviates significantly from the applied test gas concentration.

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

Important: to allow for thermal stabilisation of the sensor, it is essential that the sensor module is left powered for at least 1 hour after insertion before attempting to zero or calibrate. The sensor may be zeroed in clean air after 1 hour of being powered.

Crowcon recommends calibration and bump-tests are performed using 50%LEL Methane (CH₄) in air or nitrogen 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: 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 methane = 4.4% volume.

Safety Information:

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

Important note: the IR sensor module must only be used with XgardIQ transmitters bearing the certification label shown below.



The IR sensor module must not be fitted to transmitters manufactured before August 2016 unless the transmitter has been upgraded to the latest hardware and certification status by Crowcon.

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.