SPECIFICATION SHEET

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DETECTING GAS. SAVING LIVES.

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PRODUCT	XgardIQ Sensor Module FM Methane CH4 Cat 0-100% LEL (4.4% Vol.)
PART NUMBER	XIQ-FA
GAS TYPE	Methane CH4 Cat 0-100% LEL (4.4% Vol.)
SENSOR TYPE	Catalytic
WARRANTY PERIOD	24 months if operated within stated environmental limits and not exposed to excessive gas concentrations or contaminants (see Product Notes).
ENVIRONMENTAL SPECIFICATION	
TRANSITTER OPERATIONAL TEMPERATURE RANGE	-40°C to +70°C**
SENSOR OPERATIONAL TEMPERATURE AND HUMIDITY RANGE	-40°C to +75°C** 0 to 95% RH (non-condensing)
RECOMMENDED STORAGE TEMPERATURE AND HUMIDITY RANGE	5°C to 20°C 0 to 95% RH (non-condensing)
PRESSURE RANGE	1 atm +/-10%
** For operation in excess of 70°C, to avoid overheating of the transmitter, the sensor should use the remote cable accessory with the transmitter sited in a cooler location.	
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	<25 seconds
MINIMUM DISPLAY RESOLUTION	1%LEL
LINEARITY	< ±1.5% of full-scale†
ACCURACY*	±2% of full scale†
LONG TERM SENSITIVITY DRIFT	<1% LEL per month
*Accuracy in-use is dependent on the sensor being calibrated regularly by trained and competent personnel, in accordance with these instructions, using the correct accessories and fresh calibration gas. † Measurements taken in accordance with ANSI/UL 60079-29-1	
CONFIGURATION	
DISPLAY NAME ON XGARDIQ TRANSMITTER	CH4
POWER REQUIREMENT FOR XGARDIQ TRANSMITTER	18-30V DC (for reliable catalytic performance)
GAS RANGE	0-100%LEL

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MAXIMUM USER-SELECTABLE GAS 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 Methane catalytic 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.

Important: Catalytic sensors are sensitive to changes in temperature and humidity and may exhibit more zero drift during the first 6 months of commissioning. Optimum results can be obtained by re-zeroing the sensor in clean air the day following initial installation, and then checking the zero value in the zero menu after 2 or 3 months, and re-zeroing in clean air if required.

Crowcon recommends calibration is performed using 50%LEL Methane (CH4) 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: This sensor is not suitable for use with acetylene. Catalytic sensor 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 catalytic sensor depends on the application and the amount of gas and contaminants to which the catalytic 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: 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: Sensor modules calibrated to 4.4 %Vol. methane are calibrated in accordance with IEC 80079-20-1:2017

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.

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