CROWCON
Detecting Gas Saving Lives

IRmax

Fixed Point Gas Detector

- Simple to install
- Low maintenance
- Low cost of ownership
- Fail-safe
- Low power
- Local or remote display options

IRmax

Infrared Hydrocarbon Gas Detector

IRmax is a compact, low power and highly rugged infrared gas detector, that delivers rapid, fail safe detection of methane, butane, propane and many other hydrocarbon gases and vapours.

Simple to install

Compact size	Requires less space, effort and time to install
Various installation options	Can be wall mounted, fitted to a 50mm (2 inch) pipe or connected to an auxiliary junction box using a choice of mounting acessories
Industry standard 4-20mA output	IRmax is compatible with virtually any control system
Options for HART communications and RS-485 Modbus	

Easy maintenance

Remote non-intrusive calibration	The Remote Display can be mounted up to 30 metres from the IRmax and test gas can be applied without requiring direct access to the detector
Hand-held Intrinsically Safe (I.S) calibrator	IRmax detectors fitted with an I.S barrier module can be checked and calibrated using an I.S handheld display
STAY-CLIR optics	Prevents condensation on optical components

Low cost of ownership

Low power	IRmax only consumes 1W of power, enabling small power supplies and battery back up systems to be used
Automatic optical obscuration monitoring	Minimal routine maintenance keeps costs to a minimum
Annual proof-test interval	

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Gases and ranges

Linearisation			Range
Acetone (C_3H_6O)	Pentane (C_5H_{12})	Paraxylene (C_8H_{10})	
Butane (C_4H_{10})	Petrol vapour	Ethane (C_2H_6)	
Ethanol (C_2H_5OH)	Propane (C_3H_8)	Ethylene dichloride (EDC)	
Ethylene (C_2H_4)	Propylene (C_3H_6)	Cyclohexane (C_6H_{12})	
Ethyl acetate (C_4H_8O2)	THF (Tetrahydrofuran) (C_4H_8O)	Butadiene (C_4H_6)	0-100% LEL
Heptane (C_7H_{16})	Xylene (C_8H_{10})	Toluene (C_7H_8)	
Hexane (C_6H_{14})	Methyl acetate ($C_3H_6O_2$)	Butene (C_4H^8)	
LPG	Propylacetate ($C_5H_{10}O_2$)	Methyl Ethyl Ketone (MEK)	
Methanol (CH_3OH)	Hexene (C_6H_{12})	Isopropanol (IPA)	
Methane (CH_4)			0-50, 100% LEL

Other ranges & calibrations may be available, please contact Crowcon if your requirement is not shown.

www.acornfiresecurity.com

Specification

Size	IRmax	158 x 75 x 57mm (6.2 x 2.9 x 2.3ins)		
	IRmax with Fixed IR display	230 x 75 x 57mm (9 x 2.9 x 2.3ins)		
	IRmax with IS Barrier Module	261 x 75 x 57mm (2.3 x 2.9 x 2.3ins)		
	Remote IR Display	60 x 54 x 48mm (2.3 x 2.1 x 1.9ins)		
Weight	IRmax	1.58kg (3.5lbs)		
	IRmax with Fixed IR Display	2kg (4.4lbs)		
	IRmax with IS Barrier Module	2.4kg (5.3lbs)		
	Remote IR Display	0.2kg (0.4lbs)		
Enclosure material		316 stainless steel		
Description		Dual-beam infrared hydrocarbon gas detector with optional display		
Ingress protection		IP66		
Connection		One M20 or ½" NPT cable gland entry		
Power		12-30 Vdc. < 1W		
Electrical output		4-20mA current sink or source		
		2mA dirty optics warning (at 75% obscuration, configurable)		
		0mA detector fault signal (at 90% obscuration, configurable)		
		RS-485 Modbus (optional), HART 7 (optional)		
IR display		4- digit LCD with back-light		
		Function buttons can be de-activated if required		
		Terminals for connecting HART communicators (optional function)		
	LED	Red: Gas detected	Amber: IRmax fault	Green: Healthy
	Display functions	Gas level, obscuration level, supply voltage, signal current		
	Password protected functions	Zero, calibrate, ramp output, trim zero mA, trim span mA		
Operating temperature		-40°C to +75°C (-40°F to 167°F)		
Humidity		0 to 95% RH non-condensing		
Pressure range		Atmospheric +/- 10%		
Repeatability		+/- 2% FSD		
Zero drift		+/- 2% FSD per year maximum		
Rresponse time		T90 < 4 seconds		
Functional safety		IEC61508, EN50402 SIL2		
Approvals ATEX & IECEx	IRmax without Display	Ex II 2 GD Ex db IIC T6 Gb (Tamb -40°C ≤ Ta ≤ +50°C) Ex II 2 GD Ex db IIC T4 Gb (Tamb -40°C ≤ Ta ≤ +75°C) Ex II 2 GD Ex tb IIIC T135°C Db (Tamb -40°C ≤ Ta ≤ +75°C)		
	IRmax with Remote and Handheld Display	Ex II 2 GD Ex db ia IIC T4 Gb (Tamb -40°C ≤ Ta ≤ +75°C) Ex II 2 GD Ex tb ia IIIC T135°C Db (Tamb -40°C ≤ Ta +40°C)		
	IRmax with Fixed Display	EX II 2G Ex db ia IIC T4 Gb (Tamb -40°C ≤ Ta ≤ +75°C)		
EMC Compliance		EN50270, FCC CFR47 Part 15B, ICES-003		
Accuracy		+/- 2% of reading		
Linearity		+/- 3% of full-scale		

Check www.crowcon.com for updates.

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