

# IRMAX

## Fixed Point Gas Detector

IRmax is a compact, low power and highly rugged infrared gas detector, that delivers rapid, fail-safe detection of hydrocarbon gases.



Dependability in all conditions is what makes the IRmax stand out from the crowd, with the reliability of the IRmax hydrocarbon detector proven in hot, cold, wet and saline environments.

IRmax's unique Stay-CLIR optical components are treated with a highly durable coating that completely prevents faults due to condensation, making it ideal for offshore use.

Certified for use in Zone 1 & 2 and EMC compliant\*, the IRmax is compatible with virtually any control system, requiring minimal routine maintenance helping keep costs at a minimum. The IRmax also contains no components for artificially heating optical surfaces, meaning power consumption is dramatically reduced, requiring only 1W of power.

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. It can also be wall mounted, fitted to a 50mm (2 inch) pipe or connected to an auxiliary junction box, making it a reliable and versatile choice for hydrocarbon gas detection.

## FEATURES

### Simple to install

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

### Easy Maintenance

- Remote non-intrusive calibration means the remote display can be mounted up to 30 metres from the IRmax, and test gas applied without requiring direct access to the detector
- Fitted with an I.S barrier module, the device can be checked and calibrated using an I.S handheld display
- STAY-CLIR optics prevents condensation on optical components, for clear readings at all times

### Low Cost of Ownership

- Only consumes 1W of power, meaning small power supplies and battery back-up systems can be used
- Minimal routine maintenance keeps costs down
- Annual proof-test interval.

## GASES & RANGES

GASES & RANGES	
GAS	RANGE
Acetone (C <sub>3</sub> H <sub>6</sub> O)	0-100% LEL
Butadiene (C <sub>4</sub> H <sub>6</sub> )	0-100% LEL
Butane (C <sub>4</sub> H <sub>10</sub> )	0-100% LEL
Butene (C <sub>4</sub> H <sub>8</sub> )	0-100% LEL
Cyclohexane (C <sub>6</sub> H <sub>12</sub> )	0-100% LEL
Ethanol (C <sub>2</sub> H <sub>5</sub> OH)	0-100% LEL
Ethane (C <sub>2</sub> H <sub>6</sub> )	0-100% LEL
Ethyl acetate (C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> )	0-100% LEL
Ethylene (C <sub>2</sub> H <sub>4</sub> )	0-100% LEL
Ethylene dichloride (EDC)	0-100% LEL
Heptane (C <sub>7</sub> H <sub>16</sub> )	0-100% LEL
Hexane (C <sub>6</sub> H <sub>14</sub> )	0-100% LEL
Hexene (C <sub>6</sub> H <sub>12</sub> )	0-100% LEL
Isopropanol (IPA)	0-100% LEL
LPG	0-100% LEL
Methane (CH <sub>4</sub> )	0-50, 100% LEL
Methanol (CH <sub>3</sub> OH)	0-100% LEL
Methyl acetate (C <sub>3</sub> H <sub>6</sub> O <sub>2</sub> )	0-100% LEL
Methyl Ethyl Ketone (MEK)	0-100% LEL
Paraxylene (C <sub>8</sub> H <sub>10</sub> )	0-100% LEL
Pentane (C <sub>5</sub> H <sub>12</sub> )	0-100% LEL
Petrol vapour	0-100% LEL
Propane (C <sub>3</sub> H <sub>8</sub> )	0-100% LEL
Propylene (C <sub>3</sub> H <sub>6</sub> )	0-100% LEL
Propylacetate (C <sub>5</sub> H <sub>10</sub> O <sub>2</sub> )	0-100% LEL
THF (Tetrahydrofuran) (C <sub>4</sub> H <sub>8</sub> O)	0-100% LEL
Toluene (C <sub>7</sub> H <sub>8</sub> )	0-100% LEL
Xylene (C <sub>8</sub> H <sub>10</sub> )	0-100% LEL

# SPECIFICATIONS

	IRMAX	IRMAX WITH FIXED IR DISPLAY	IRMAX WITH IS BARRIER MODULE	REMOTE IR DISPLAY
<b>SIZE</b>	158 x 75 x 57mm (6.2 x 2.9 x 2.3ins)	230 x 75 x 57mm (9 x 2.9 x 2.3ins)	261 x 75 x 57mm (2.3 x 2.9 x 2.3ins)	60 x 54 x 48mm (2.3 x 2.1 x 1.9ins)
<b>WEIGHT</b>	1.58kg (3.5lbs)	2kg (4.4lbs)	2.4kg (5.3lbs)	0.2kg (0.4lbs)
<b>INGRESS PROTECTION</b>	IP66			
<b>ENCLOSURE MATERIAL</b>	316 stainless steel			
<b>POWER</b>	12-30 Vdc. < 1W			
<b>CONNECTION</b>	One M20 or 1/2" NPT cable gland entry			
<b>ELECTRICAL OUTPUT</b>	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)			
<b>OPERATING TEMPERATURE</b>	-40°C to +75°C (-40°F to 167°F)			
<b>HUMIDITY</b>	0 to 95% RH non-condensing			
<b>PRESSURE RANGE</b>	Atmospheric +/- 10%			
<b>REPEATABILITY</b>	+/- 2% FSD			
<b>ZERO DRIFT</b>	+/- 2% FSD per year maximum			
<b>RESPONSE TIME</b>	T-90 < 4 seconds			
<b>FUNCTIONAL SAFETY</b>	Validation to IEC61508, EN50402 SIL 2			
<b>APPROVALS</b>	Ex II 2 GD Exd IIC T6 Gb (Tamb -40 to+50°C), T4 (Tamb -40 to+75°C) Ex tb IIIC T135°C Db (Tamb -40 to +75°C)		Ex II 2 G Exd ia IIC T4 Gb (Tamb -40 to+75°C)	Ex II 2 GD Exd ia IIC T4 Gb (Tamb -40 to+75°C) Ex tb IIIC T135°C Db (Tamb -40 to +40°C)
<b>EMC COMPLIANCE</b>	Directive 2014/30 EU: EN50270, FCC CFR47 Part 15B, ICES-003			
<b>ZONES</b>	Certified for use in Zone 1 & 2.			

## Disclaimer

Due to ongoing research and product improvement, specifications are subject to change without notice. While every effort has been made to ensure accuracy in this document, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This document is not intended to form the basis of a contract.

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