

Tailored to Task, Tailored to Gas

Why a Fixed Refrigerant Leak Detection System?

- ✓ Save money – In refrigeration and heating installations, efficiency in the operation of the system depends on its gas charge, a leaking system will incur additional running costs. Undercharged systems need to work harder to produce the same cooling effect which substantially increases power consumption resulting in an increase in your energy bill.
- ✓ Leak Detection systems identify problems early and allow systems to be repaired at a lower cost in leaked refrigerant and with less system down time and costly stock losses.
- ✓ In addition, systems with Fixed Gas Detection systems require fewer inspections under F-Gas (842/2006) regulations.
- ✓ Avoid Prosecution – Many refrigerants are toxic or flammable and a duty of care exists on system operators to protect both staff and members of the public from the effects of refrigerant leaks.
- ✓ F-Gas legislation requires gas detection for systems for refrigerant plant with a charge in excess of 300kg

Why Install a Murco Refrigerant Detection System?....

- An out-of-the box solution which is quick and easy to install
- A range of products to detect every refrigerant gas for any application
- Continuous monitoring – sensors are located in the monitored area and connected to a central controller or BMS to provide a continuous signal
- Qualifies for Enhanced Capital Allowance from the Carbon Trust (UK Only)
- Industry Experts in refrigeration working closely with global manufacturers
- Constantly improving and developing our innovative product solutions

A Suitably designed Murco leak detection system can ensure compliance:

- ✓ Legislation – F Gas Regulation, EH40
- ✓ Standards – EN378
- ✓ Regulatory Approvals UL, CE
- ✓ Greener Building Programmes – BREEAM, LEED, Energy Technology List

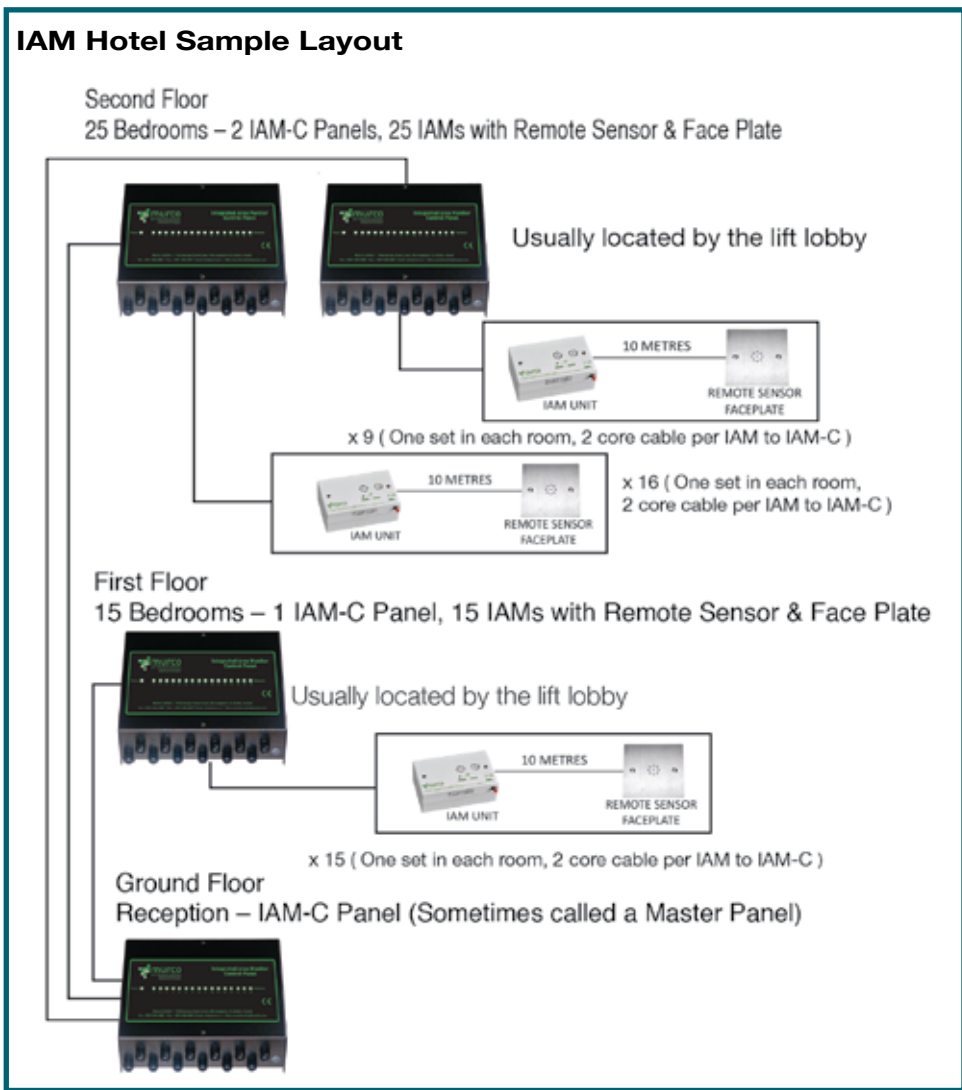


• Comply with legislation • Protect personnel • Protect the environment • Save on operating costs •

“ If your business success depends on refrigeration, depend on Murco the refrigeration experts ”

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Integrated Area Monitor (IAM)



Application and Features

A stand-alone detector that combines sensor and monitor. Suits larger systems where hundreds of sensors may be required. Offers visual, audible alarms and relays to connect to control systems or to control external devices such as indoor air conditioning units or fans. One alarm level and mute button for siren. Filtered sensors (where relevant) and selectable delays to eliminate false alarms.

An optional control panel, the IAM-C, allows system expansion to cover multiple locations. It has 16 channels to which IAM monitors or other IAM-C panels can be connected.

- All Category A (by EN378) spaces including**
- hotel rooms • hospitals • dormitories
 - universities • conference rooms • theatres • office blocks • leisure centres
 - airports • shopping malls • machinery rooms

Detector Location

Air Conditioning – Direct systems VRV/VRF
EN378 states that at least one detector shall be installed in each occupied space being considered and the location of detectors shall be chosen in relation to the refrigerant and they shall be located where the refrigerant from the leak will collect. In this case refrigerants are heavier than air and detectors should have their sensors mounted low, at less than bed height in the case of an hotel or other similar Category Class A spaces. Ceiling or other voids if not sealed are part of the occupied space. In a hotel room monitoring in ceiling voids would not strictly comply with EN378.

Do Mount In-Room Sensors

- at less than the normal heights of the occupants. For example in a hotel room this is less than bed height – between 200 and 500 mm off the floor.
- away from draughts and heat sources like radiators etc.
- avoid sources of steam


Don't Mount Sensors ...

- under mirrors
- at vanity units
- in or near bathrooms

Technical Specification	
Power Supply	230 VAC, 120VAC
Pre-set Alarm Levels (eg. 1000 ppm)	One (1)
Visual + Audible Alarm	Yes
Relay Outputs	Two (2)
Multi Sensor Control Panels	Optional
Standard Alarm Levels	1,000ppm (air conditioning /refrigeration) 10,000ppm (air conditioning)

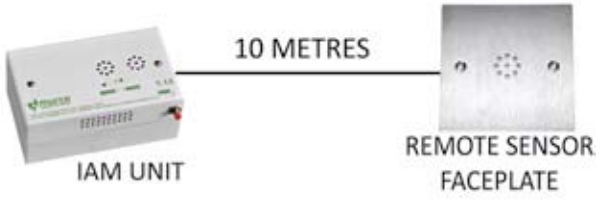
IMPORTANT:
Carefully consider the ramifications of using too few sensors. A few extra sensors could make a significant difference if a gas leak occurs.

Housing Options And Sensor Placement



IP66 ENCLOSURE STANDARD

IP rating: IP41 Temperature rating: -20C to +50C
 Application: General indoor applications, hotel rooms, offices, residences. Also suitable for plant rooms, etc.



IAM WITH REMOTE SENSOR AND DECORATIVE FACE PLATE

IP rating: IP41 Temperature rating: -20C to +50C
 In certain installations where aesthetics are important. The sensor head is located remotely in a back box 44mm deep (not supplied) behind an elegant stainless steel/brass face plate (brass option available) while the rest of the unit is located elsewhere.

IAM Commonly ordered products for R407C			
Sensor Housing Options	Description	Application	Part Number
Integrated Area Monitor – Standard	*IAM Refrigeration R407C 1,000ppm 220V Std	Refrigeration	IAM R407C 101
IAM with Remote Sensor and decorative face plate (includes 10m cable and stainless steel face plate)	*IAM Refrigeration R407C 1,000ppm 220V FP Rem	Refrigeration	IAM R407C 105
Integrated Area Monitor – Standard	IAM Air Conditioning R407C 10,000ppm (1%) 220V Std	Air Conditioning	IAM R407C 107
IAM with Remote Sensor and decorative face plate (includes 10m cable and stainless steel face plate)	IAM Air Conditioning R407C 10,000ppm (1%) 220V FP Rem	Air Conditioning	IAM R407C 111

IAM Commonly ordered products for R410A			
Sensor Housing Options	Description	Application	Part Number
Integrated Area Monitor – Standard	*IAM Refrigeration R410A 1,000ppm 220V Std	Air Conditioning/ Refrigeration	IAM R410A 101
IAM with Remote Sensor and decorative face plate (includes 10m cable and stainless steel face plate)	*IAM Refrigeration R410A 1,000ppm 220V FP Rem	Air Conditioning/ Refrigeration	IAM R410A 105
Integrated Area Monitor – Standard	IAM Air Conditioning R410A 10,000ppm (1%) 220V Std	Air Conditioning	IAM R410A 107
IAM with Remote Sensor and decorative face plate (includes 10m cable and stainless steel face plate)	IAM Air Conditioning R410A 10,000ppm (1%) 220V FP Rem	Air Conditioning	IAM R410A 111

* This configuration meets BREEAM requirement

IAM Control Panel – optional extra for remote alarm indication			
Options	Part Number		
IAM Control Panel 220V	IAM-C 101		

Murco Detectors can detect almost any gas for any application

To order a detector for a different gas, simply change the gas in the part number.

ORDERING INFORMATION:

Murco Part Numbers Explanatory Note: To order the correct product for your requirements, simply follow our part number configuration below and email your order to; sales@murco.ie.

Here is a typical Murco Part Number for an IAM standard enclosure, low level alarm for R407C breakdown as follows;

Product +Gas + Enclosure Option - IAM +R407C +101

IAM = the Product you require (in this case an IAM)

R407C = the gas you need to detect which you can change according to your requirements (R410a, R134a, R404a, R410a, etc.)

101 = standard version alarm (1,000ppm)

Other Optional Enclosures: Refrigerant Settings

101 = standard version alarm (1,000ppm)

105 = Remote Sensor with decorative face plate (alarm 1,000ppm)

Other Optional Enclosures: Air Conditioning Settings

107 = standard version (alarm 10,000ppm)

111 = Remote Sensor with decorative face plate (alarm 10,000ppm)

Email your order to
sales@murco.ie

Other Fixed Gas Detectors



MGD RANGE – Murco Gas Detector

A robust and scalable gas detection system, for reliable real-time monitoring that alarms when pre-set thresholds are exceeded. The MGD alarms are monitored by a centralized controller, which can alert personnel via an onboard buzzer and LED alarm indicators.



HGM RANGE - by Bacharach

Bacharach's Single and Multi Zone refrigerant monitors provide a unique combination of high sensitivity, large dynamic measurement ranges and speed of response.



MGS RANGE - Murco Gas Sensor

A state-of-the-art gas detector for areas that require continuous monitoring. It can be used on a stand-alone basis or integrated into Controls or Building Management Systems. 7 optional housings.

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