

Gas leak detectors

New family MRLDS

PN 07/20 June



Dear Customer,

we are pleased to announce that the new MRLDS gas leak detectors are now available. They are designed for constant monitoring of possible gas leakage, also providing remote monitoring with Bluetooth® connectivity and connection to XWEB systems. They are also suited for refrigerated applications where the detector can be positioned within cold rooms.

The new series is also compatible with iPro programmable controllers and features clear and complete alarm signaling with new functions compatible with the latest market needs.

1. Applications

MRLDS gas detectors are designed for the constant monitoring of gas leakage of the system. MRLDS gas detectors provide timely reporting and allow for quick intervention, which can prevent system downtime and reduce greenhouse gas emissions as required by international regulations, increase safety and reduce potential losses caused by refrigerant leaks.

The MRLDS series is the ideal solution for the refrigeration environment, such as supermarkets, hypermarkets, storage centers and cold rooms.

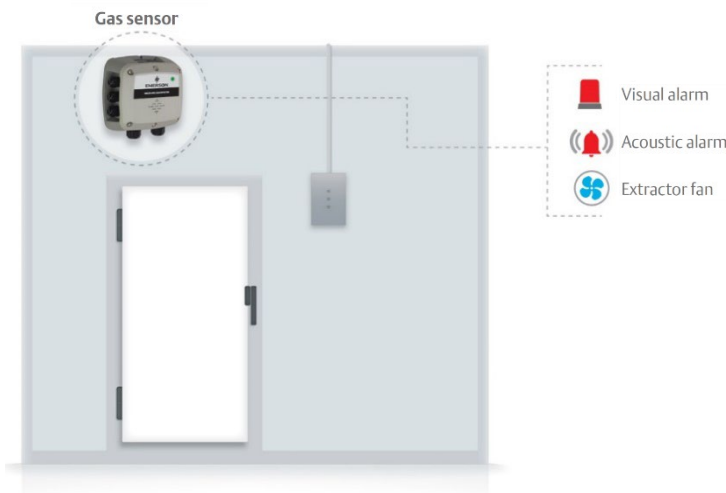
Not only for refrigeration, the MRLDS series is also used in HVAC applications where chiller, heat pumps and other typical equipment of air conditioning systems are present.

2. Operation mode

This new family of detectors works in stand-alone mode or connected to Dixell systems and controllers.

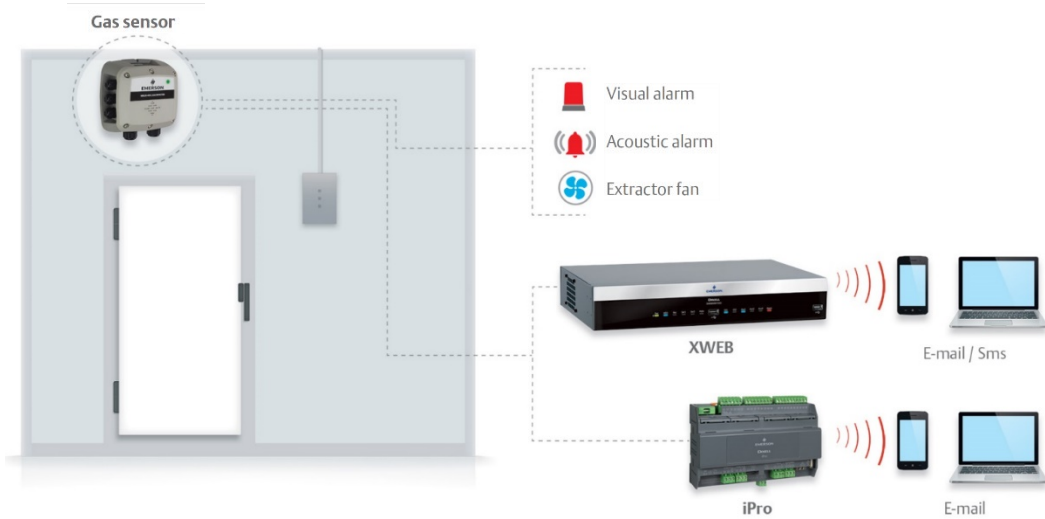
2.1 Stand-alone functioning

Detectors in stand-alone mode, thanks to their 3 relays, can generate a visual/acoustic alarm and activate extractor fans in case of gas leakage.



2.2 Combined with XWEB systems and iPro controllers

Gas detectors can be connected to XWEB PRO monitoring and supervisor systems, the iPro family programmable controllers, or to third-party systems using their RS485 serial port, providing an advanced alarm signal and facilitating service staff to promptly intervene.



3. Features and main functions

New MRLDS (modular refrigerant leak detection system) are innovative sensors; they feature several functions that ensure an easier installation and maintenance, with clear and complete alarm signals.

- Internal buzzer for acoustic alarm signals
- Relay for acoustic/visual alarm signals and auxiliary safety ventilation
- Health safety
- Food safety and waste reduction
- Reduced gas taxation
- Improve COP by gas leaks reduction
- Maintenance cost reduction
- ModBUS available

3.1 Natural refrigerant compatible

The series is compatible with the most commonly used gases. We've focused attention on environmentally friendly solutions with the introduction of Low GWP Refrigerants, ensuring compliance with European and international regulations.



3.2 High protection degree

The new MRLDS family is available in both IP41 and IP66 versions making the installation possible even in environments with critical situations.

3.3 Bluetooth connectivity & Mobile application

Thanks to the Bluetooth® connectivity and the dedicated App, the installation, configuration and maintenance are quick, easy and intuitive; no specific training is needed for the installer.

App functionalities

- **Configuration**
 - Alarm levels
 - Alarm behavior
 - ModBUS address
 - Output settings
- **Calibration**
 - Scan in calibration gas details
 - Generate field calibration certificates
- **Real time data view**
- **Test mode**
- **Diagnostics**
 - Fault codes
 - Facilitate field support



3.4 Pre-calibrated Sensors

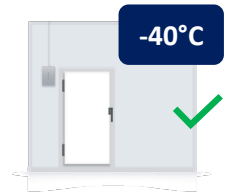
The maintenance of the device can be done by the user without using special equipment; in fact, the pre-calibrated sensors enable the old sensor to be replaced within few minutes without using a specific gas for calibration, reducing mounting costs and possible setting errors.

NOTE: the detector has the sensor built-in; check the “How to order” chapter for sensor spare parts.



3.5 Low temperature performance

The ability to place the detectors in up to -40°C environments enables the detectors to be mounted even in refrigerated applications with low temperatures, such as inside a cold room.



3.6 Powerful hardware



A powerful HW platform that features serial output, analog and relay outputs provide optimal local and remote alarm management, and also the ability to connect to external magnetic switches or to extractor fans.

3.7 Temperature-compensated Measurement

Temperature compensation adjusts the system's performance, balancing for effects caused by changes in temperature. This is particularly important in maintaining high measurement precision, ultimately mitigating false alarms and ensuring accuracy in refrigeration applications.

4. Technical data



Enclosure	IP41	IP66
Dimensions (W×H×D)	(165×165×77mm)	(165×165×87mm)
Power supply	24Vac	
Analog Current	4 to 20mA	
Analog Voltage	Selectable: 0 to 5V; 1 to 5V (<i>default</i>); 0 to 10V; 2 to 10V	
Relay output	3x1A SPDT	
Serial output	RS485	
Operating temperature	-40°C to 50°C	
Storage temperature	-20°C to 40°C	
Relative humidity	5% to 90% (non-condensing humidity)	
Approvals	CE EN 50270:2015 UL/CSA/IEC/EN 61010-1	

5. How to order

5.1 Gas detectors

MRLDS450 – **A41** (IP41 degree of protection)



MRLDS450 – **A66** (IP66 degree of protection)



A	
Refrigerant	
744I	R744 (CO ₂)
290I	R290 (Propane)
134A	R134A
404A	R404A
407A	R407A
407C	R407C
410A	R410A
449A	R449A
507A	R507A

5.2 Sensors for detectors

MRLDS450 – 744IMT (for 744 gas)

MRLDS450 – 290IMT (for 290 gas)



6. Pricing

Please contact our sales department for prices and further information.

7. Availability and orders

Gas leak detectors with IP66 degree of protection and sensors are available beginning of July 2020.

Gas leak detectors with IP41 degree of protection are available beginning of September 2020.

Please contact Dixell to check the availability of further gases that are not present in the “Chapter 5” list.

Please contact our sales department for delivery time.