

Refrigerant gas leakage detector

GLD small series

Gas leakage detectors for fixed installations

CAREL offers the range of GLD sensors for detecting leakages of CFC, HFC, HFO and CO_2 refrigerant gases, designed to meet all industrial refrigeration and air conditioning needs (supermarkets, shopping centres and other public places) in units that require continuous control and monitoring.

- **savings:** allow a prompt response, avoiding unit downtime;
- constant monitoring of environments where there is the risk of gas leakage;
- **signalling:** prompt notification of system gas leaks.



The CAREL GD* Small (Small (P/Ns GDSB* & GDSR*) series gas leakage detectors guarantee monitoring in rooms where there is a risk of gas leakages due to the installation of refrigerated units, providing prompt notification and thus ensuring cost savings by avoiding system stoppages.

When a leakage above a certain concentration is detected, the sensor sends a signal to the connected controller or supervisor. Available in versions with semiconductor sensitive element and infrared for CO_2. To the list of gases detected, refer to the technical manual.

Advantages

Preventing refrigerant gas leakages brings the following advantages:

- no system downtime or significant economic costs due to poor food preservation;
- help reduce greenhouse gas emissions;
- monitor the environment where the refrigerated units are installed.

The device is integrated into the CAREL supervisory system, offering all the advantages of local and remote supervision.

Available in the built-in version or with remote sensor.

Prompt notification of gas leaks

Reduced costs due to leakages from the circuit, protecting people's health.

Greater connectivity

Integration with most CAREL and third-party controllers.

Monitoring

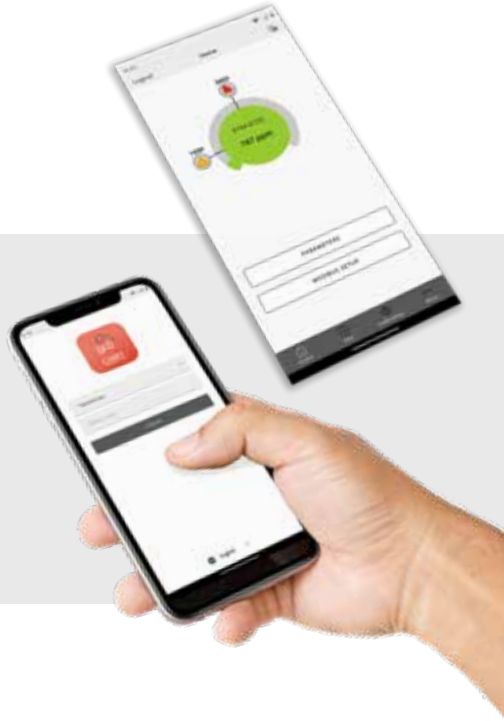
Constant monitoring of the environment for verification of gas leakages even with remote supervisory systems.

Supervision

Monitoring and control of gas concentrations in accordance with the requirements of the ASHRAE 15 and EN 378 series standards.

Dedicated app - Rileva

The app for smartphones is available (downloadable from the App Store and Google Play) for faster interaction with the device during configuration, installation and routine maintenance/service.



Main benefits and performance

Specifications	Benefits	Advantages
Temperature compensation	Accuracy of the readings and excellent precision	Higher precision (ppm) in detecting a gas leak in the environment. SAFETY AND EFFICIENCY
Wide working temperature range	Suitable for all applications	One single product for multiple purposes (even installed directly in a cold room at -40°C). EXTENDED RANGE
LED diagnostics	Immediate indication of the causes of problems	Fast troubleshooting. EASY CONTROL
2 relays	Multiple alarms (high, low/general)	Immediate alarm or warning. SAFETY
Replacement of the pre-calibrated sensitive element	Avoid the need for on-site calibration, simplifying maintenance	Save time during annual calibration No specialist installers or gas bottles are needed. EASY TO USE AND FAST INSTALLATION
User interface via Bluetooth	• Combined with the RILEVA app to simplify configuration • View the readings in real time • Configure the detector • Output test • Generate the calibration certificate • Generate customisable calibration certificates	Faster and easier commissioning. EASY TO USE AND FAST CONFIGURATION
Magnetic switch	• Fast interaction with the device	Avoid opening the sensor cover for service and maintenance. EASY CONTROL
Ingress protection IP67	Possibility of installation in equipment rooms, without specific protection	Faster installation
Multiple gases	Detected gas configurable via app or serial parameter semiconductor version only)	Less part numbers to manage in the warehouse SIMPLIFIED MANAGEMENT

Functions

- Performance guaranteed down to -40°C;
- User interface: "RILEVA" app for Android and IOS "RilevaTE";
- Safety relay ON/OFF.

Input
24 Vac/Vdc power supply



Output
- Alarm, warning/general alarm relay;
- 4-20 mA or 0-10 V, 0-5 V analogue output;
- Modbus RTU RS485 serial.

Periodical sensor check

Semiconductor version	Electrochemical version	Infrared version
12 months	12 months	Not required

Reference conditions at 25 °C 50% RH, atmospheric pressure 101.3 kPa

Refrigeration unit scheduled maintenance

Leak checks are mandatory if the refrigerant system charge is higher than the limit values shown in the table, in accordance with the F-Gas regulation

Refrigerant	GWP IPCC AR4	GWP= 5-49 tonnes of CO2 12 months WITH sensor 24 months WITHOUT sensor	GWP= 50-499 tonnes of CO2 6 months WITH sensor 12 months WITHOUT sensor	GWP= 500 tonnes of CO2 or higher 3 months WITH sensor 6 months WITHOUT sensor
R-1150	4	1250kg	12500kg	125000kg
R-1233zde	5	1000kg	10000kg	100000kg
R-1234yf	4	1250kg	12500kg	125000kg
R-1234ze	6	834kg	8334kg	83334kg
R-1270	2	2500kg	25000kg	250000kg
R-134a	1430	3,5kg	35kg	350kg
R-22	1810	2,8kg	28kg	277kg
R-290	3,3	1516kg	15152kg	151516kg
R-32	675	7,5kg	75kg	741kg
R-404A	3922	1,3kg	13kg	128kg
R-407A	2107	2,4kg	24kg	238kg
R-407C	1774	2,9kg	29kg	282kg
R-407F	1825	2,8kg	28kg	274kg
R-410A	2088	2,4kg	24kg	240kg
R-448A	1387	3,7kg	37kg	361kg
R-449A	1397	3,6kg	36kg	358kg
R-450A	604	8,3 kg	83kg	828kg
R-452A	2140	2,4kg	24kg	234kg
R-452B	698	7,2kg	72kg	717kg
R-454A	239	21kg	210kg	2093kg
R-454B	466	11kg	108kg	1073kg
R-454C	148	34kg	338kg	3379kg
R-455A	148	34kg	338kg	3379kg
R-464A	1323	3,8kg	38kg	378kg
R-465A	145	35kg	345kg	3449kg
R-466A	733	6,9kg	69kg	683kg
R-468A	148	34kg	338kg	3379kg
R-50	25	200kg	2000kg	20000kg
R-507A	3985	1,3kg	13kg	126kg
R-513A	631	8kg	80kg	793kg
R-600A	3	1667kg	16667kg	166667kg
R-717	0	-	-	-
R-744	1	5000kg	50000kg	500000kg

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