



Refrigeration Detector

20-300, 20-2000ppm
IP44
LHFC

Nov.10



LHFC

Features

- Continuous monitoring
- Low zero point drift
- Poisoning stable
- Long life sensor
- Easy maintenance/calibration
- Reverse polarity protected
- Overload protected
- 4-20mA loop-powered or 2-10Vdc output signal

Technical Data

Gas	Freon
Detection principle	Semiconductor
Response time	<50sec
Sensor coverage	100m ²
Measurement range	20-300 or 20-2000ppm
Storage time	12 months
Mounting height	0,2m above floor
Output signal	
4-20mA	load < 500ohm overload and short circuit proofed
2-10Vdc	load < 50kohm overload and short circuit proofed
Power supply	18-28Vdc (reverse polarity prot.)
Power consumption	22mA, max (0,6VA)
Expected lifetime	>5 years normal operating envirom.
Humidity range	
Continuous	15-95% rH non-condensing
Operating range	
Continuous	-15 up to +50C
Rating	IP44 Protection Class
Pressure range	Atmospheric +/-10%

Application

For detection of refrigerant Freon gases HFC.

The transmitter is used for monitoring leakages in:

- Cold storage depots
- Ventilation Systems
- Breweries
- Commercial range in cooling systems

Due to the analogue signal 4-20mA and 2-10Vdc the HCFC transmitter is compatible to any electronic analogue control, DDC/PLC control or automation system.

Ordering Codes

LHFC3 R134a	Refrigeration Detector	20-300ppm
LHFC3 R404a	Refrigeration Detector	20-300ppm
LHFC3 R416a	Refrigeration Detector	20-300ppm
LHFC3 R507	Refrigeration Detector	20-300ppm
LHFC3 R410a	Refrigeration Detector	20-300ppm
LHFC3 R409a	Refrigeration Detector	20-300ppm
LHFC3 R411a	Refrigeration Detector	20-300ppm
LHFC R134a	Refrigeration Detector	20-2000ppm
LHFC R404a	Refrigeration Detector	20-2000ppm
LHFC R416a	Refrigeration Detector	20-2000ppm
LHFC R507	Refrigeration Detector	20-2000ppm
LHFC R410a	Refrigeration Detector	20-2000ppm
LHFC R409a	Refrigeration Detector	20-2000ppm
LHFC R411a	Refrigeration Detector	20-2000ppm

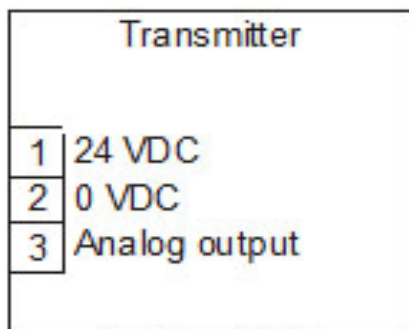
GCD	Protocol for CDA-series
GAS17	Calibration gas 17 liter
REG	Pressure regulator flow adjusted to 0,5 lit/min.
Warning devices	See special datasheet
Warning signs	See special datasheet

Technical Data continue

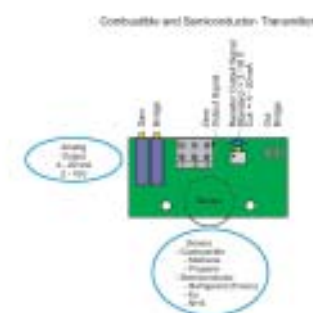
Physical Characteristics

Enclosure	GW Plast 75 GWT
Flammability	UL94: VO Halogenfree
Enclosure colour	RAL 7032 (light grey)
Dimensions	80 x 40mm
Weight	Approx. 0,2kg
Installation	Wall mounting
Cable entry	Standard 3 pieces
Wire connection	Screw type terminal min. 0,25mm ² and max 2,5mm ² Max. loop resistor 500ohm (= wire resistor + controller input resistor)
Guidelines	EMV-Directive 89/336/EWG, CE EM-Directive 2004/108/EWG, CE

Connecting Diagram



Terminal 2 is only for 2-10Vdc signal = 3-wire
4-20mA two-wire loop powered



Maintenance

At commissioning and at periodic intervals determined by the person responsible for the gas detection system (**recommendation every year**).

After exchange of the sensor

If in case of operational or climatic influences the sensitivity of the sensor **falls below 30 %** in operation, calibration will not be possible any more.

Then the sensor has to be changed.

Exchange of sensor element

Sensor should always be installed without power applied:

- Unplug basic PCB EC-S carefully from the terminal blocks on the base.
- Unplug old sensor element from the PCB EC-S.
- Plug in sensor element into the PCB EC-S.
- Plug in the PCB EC-S into terminal block carefully.
- Calibrate

Calibration

