



MHFC

### 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 <sup>2</sup>
Measurement range	0-300ppm 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	IP65 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

LHFCR134a	Refrigeration Detector	20-2000ppm
LHFCR404a	Refrigeration Detector	20-2000ppm
LHFCR416a	Refrigeration Detector	20-2000ppm
LHFCR507	Refrigeration Detector	20-2000ppm
LHFCR410a	Refrigeration Detector	20-2000ppm
LHFCR409a	Refrigeration Detector	20-2000ppm
LHFCR411a	Refrigeration Detector	20-2000ppm

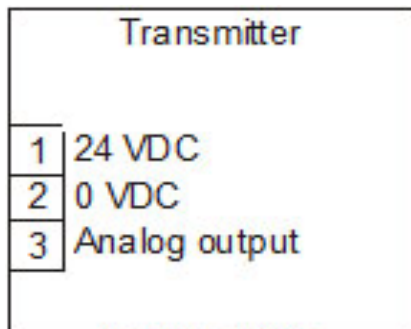
GCD	Protocol for CDA-series
GAS 17	Calibration gas 17 liter
REG	Pressure regulator flow adjusted to 0,5 lit/min.
Warning devices	See special datasheet
Warning signs	See special datasheet

### Technical Data continue

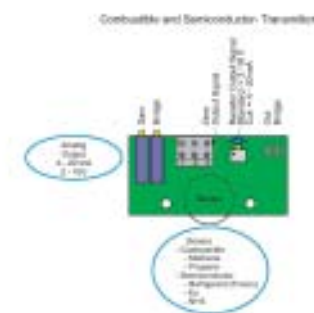
#### Physical Characteristics

Enclosure	GW Plast 75 GWT
Flammability	UL94: VO Halogenfree
Enclosure colour	RAL 7032 (light grey)
Dimensions	96 x 130 x 56mm
Weight	Approx. 0,2kg
Installation	Wall mounting
Cable entry	Standard
Wire connection	Screw type terminal min. 0,25mm2 and max 2,5mm2  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.

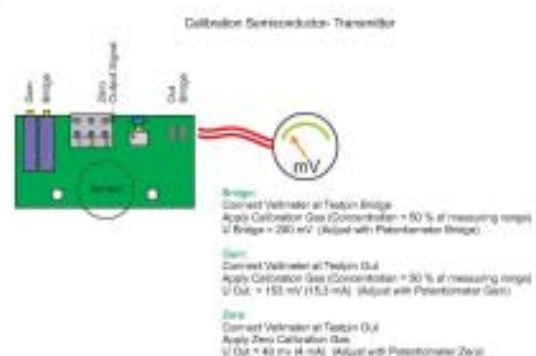
Then the sensor has to be changed.

#### 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



#### Calculation output signal

