

# Transmitter CS21

Monitoring of refrigeration plants



- Selective and precise detection even in dry air and up to 96 % rel. humidity
- Wide dynamic detection range, from a few ppm up to the LEL range
- External sensor available
- Chemosorption sensor
- Fast response time
- One man calibration at site

Worldwide Supplier Of Gas Detection Solutions



# Transmitter CS21 for refrigeration plants

## Averting hazards in time

The transmitter CS21 uses the proven principle of chemisorption to detect toxic and combustible gases. In less than 8 seconds the CS21 responds to gas from gas leaks. This extremely short response time allows the user to take action in time and prevent damage to people and plant.

## Favourable long-term solution

Long sensor life makes the CS21 a cost effective alternative. The sensor can be permanently operated for often 5 years or more. The CS21 is supplied pre-calibrated and easily mounts to the wall. A wide temperature range from -30°C to +55°C makes this transmitter very interesting for monitoring in refrigeration plants. The distance between transmitter and control module may be more than 500 meters. A robust aluminum enclosure protects the sensor and the circuitry from impacts, splash water and dust.

The transmitter must not be used directly in areas with potentially explosive atmosphere. While detecting combustible gases and vapours within LEL-range the gas being measured has to be led to the transmitter. In that case Ex-protection has to be guaranteed with external components like a flame arrestor.

Description	Gas	Detection range
Ammonia	NH <sub>3</sub>	(0) 20 .. 300 ppm (0) 30 .. 1000 ppm (0) 50 .. 10000 ppm
CFC 113 (1,1,2-Trichloro-1,2,2-Trifluoroethane)	C <sub>2</sub> Cl <sub>3</sub> F <sub>3</sub>	(0) 30 .. 2000 ppm
CFC 21 (Fluorodichloromethane)	CHCl <sub>2</sub> F	(0) 30 .. 2000 ppm
CFC 22 (Chlorine difluoromethane)	CHClF <sub>2</sub>	(0) 30 .. 1000 ppm
HFC 134a (1,1,1,2-Tetrafluoroethane)	CF <sub>3</sub> CH <sub>2</sub> F	(0) 30 .. 5000 ppm
HFC 143a (1,1,1-Trifluoroethane)	CF <sub>3</sub> CH <sub>3</sub>	(0) 30 .. 2000 ppm



CS21 with GMA81 A

## We help to plan and execute your projects:

- Consultation for gas and water monitoring
- Best positioning of transmitters
- Various concepts for alarm triggering
- Construction and installation of complete switch cabinets
- Reliable service
- Customer specific documentation of gas warning systems

# Transmitter CS21 Technical Data

## Gas:

see chart

## Detection range:

see chart

## Gas supply:

Diffusion through stainless steel  
+ PTFE membrane

## Detection principle:

Chemosorption (CS)

## Power supply:

10 .. 32 V DC

## Output signal:

0,2 .. 1 mA (4kW) or  
4 .. 20 mA (200W)

## Response time:

t<sub>Alarm</sub> less than 14 seconds  
(depending on gas)

## Expected sensor life:

> 5 years

## Ambient temperatur:

-30°C .. +55°C

## Humidity:

20 .. 96 % r. h.,  
non-condensing

## Pressure:

920 .. 1100 hPa

## Casing material:

Aluminium

## Casing protection:

IP54, splash water proof

## Dimensions:

100 x 100 x 57 mm (WxHxD)

## Weight:

370 g

## Cable connection:

Shielded cable  
3 x 0,75mm<sup>2</sup> for up to 500 m,  
3 x 1,5 mm<sup>2</sup> for more than 500 m  
PG11 - cable gland

## Cable:

Shielded cable  
e.g. LiYCY 3x1,5 mm<sup>2</sup>



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