



IR22 Transmitter

For monitoring
combustible gases (HC)
and CO₂



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The IR22 infrared transmitter uses the adsorption spectra of gases for targeted monitoring of specific combustible gases and CO₂. The measurement method allows reliable monitoring even under difficult conditions, such as a low percentage of oxygen in the ambient air.

Selective and insensitive

Not only is the method highly selective, it is also extremely insensitive to sensor toxins and, unlike for example catalytic sensors, can monitor the concentration of combustible gases even when there is little or no oxygen in the gas mixture.

Communicates analog and digital

The measured values and status information of the IR22 can be transmitted either analog (4-20 mA or 0.2-1 mA) or digital (RS-485). This allows not only the use in combination with any GfG controller,

but also the connection to programmable logic controllers (PLC).

Smart measured value processing

Industry-wide, the trend is towards smart units, such as the IR22, whose integrated electronics process the data already at the measuring point. The linearization of the measurement signal, compensation of temperature influences, detection of malfunctions and information on the next service or maintenance interval are just some of the advantages that result.

One-man calibration and adjustment

All service and maintenance work can be performed by a single technician. A calibration adapter facilitates regular function checks. It ensures the safe and steady supply of test gas during maintenance.

Variants for every requirement

The basic version of the IR22 is sufficient for many applications. If a measured value display on site is desired, there is also a variant with display and acoustic alarm.

- IR22** Basic variant
- IR22 D** with display to show the current measured value

In combination with GfG's powerful controllers, both variants are the right choice for a wide range of use cases.

Overview of the gases and measuring ranges:

Other gases on request.

» Carbon dioxide (CO ₂)	0 to 1.0 % by volume 0 to 5.0 % by volume 0 to 10.0 % by volume 0 to 25.0 % by volume 0 to 50.0 % by volume
» Methane (CH ₄)	0 to 100 % LEL 0 to 5.0 % by volume
» Difluormethane/R32 (CH ₂ F ₂)	0 to 100 % LEL 0 to 14.0 % by volume
» Propane (C ₃ H ₈)	0 to 100 % LEL 0 to 2.0 % by volume

IR22 transmitter with one cable entry for analog connection



IR22 Technical Data:

Measuring principle: infrared (IR)

Measuring ranges ¹: 0 to 100 % LEL
0 to 50 % by volume

Gas supply: Diffusion or gassing per calibration adapter

Lifetime of the sensor: > 5 years

Response time: t₉₀ < 50 s

Temperature: -25 to +50 °C
Humidity: 0 to 95 % r. h. (non-condensing)

Air pressure: 80 to 130 kPa

Output signal: Analog: 0.2-1 mA or 4-20 mA
Digital: RS-485

Power supply: 12 to 30 V DC

Housing: Plastic
Protection class: IP54
Dimensions: 96 x 123 x 49 mm (W x H x D)
Weight: 125 - 150 g¹
Approvals / Certifications: Functiona Safety (SIL): DIN EN 61508-2: 2011

¹ Sensor dependent

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