

IR22 D Transmitter

Infrared measurement of carbon dioxide and combustible gases



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The IR22 D infrared transmitter uses the adsorption spectra of gases for targeted monitoring of specific combustible gases and CO₂. This 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.

Analog and digital communication

The measured values and status information of the IR22 D 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).

Protection level and display elements

The compact housing for wall mounting is protected against splash water and dust (IP54). The D version of the IR22 has a 2.2 inch display to show measured values, status information and alarms at the measuring point. Normally backlit in green, the display changes for visual alert to red in the event of an alarm. At the same time, an acoustic alarm signal can be emitted from the integrated horn. The status LEDs indicate operational readiness (green) and special states (yellow).

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.



IR22 D transmitter with one cable entry for analog connection

Overview of the gases and measuring ranges:

Other gases on request.

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

Technical Data: IR22 D

Measuring principle: Infrared (IR)

Detection ranges*: 0 to 100% LEL
0 to 50% by volume

Gas supply: Diffusion or gassing per calibration adapter

Expected sensor life: Greater than 5 years

Response time: t₉₀ < 50 s

Temperature: -13 to +122 °F / -25 to +50 °C

Humidity: 0 to 95% r. h. (non-condensing)

Pressure: 70 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: 3.8 x 4.75 x 2 in /

96 x 123 x 49 mm

(W x H x D)

Weight: 6 to 7 oz / 170 to 195 g*

Approvals / Certifications:

Functional Safety (SIL):

DIN EN 61508-2: 2011

EC-type examination:

PFG 15 G 001 (for measuring function)

Electromagnetic compatibility:

DIN EN 50270

Interference emission: Type class 1

Interference immunity: Type class 2

CSA:**

c-CSA-us

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UL 61010-1 (2012)

** CO2 version only



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