Fixed gas detection systems

smart
GasDetection
Technologies

CC33 Transmitter

Flameproof enclosure for explosive gases and vapors in Ex zone 1

GfGsafety.com

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If combustible gases and vapors are to be monitored in hazardous areas and there is a requirement for a flameproof gas detector, the CC33 transmitter is a reliable solution. It meets the requirements of ignition protection type „d" for safe use in Ex zone 1.
Thanks to the proven measuring principle of catalytic combustion, the CC33 detects flammable gases with shortest response times (t_{90} ≤ 9 s; sensor dependent). This is due to the chimney effect of the sensor housing, which ensures a faster gas flow.

Installation, service and operation

Connection and signal transmission are conducted through 4-20 mA industrial standard (ACDC-capable) or digitally through the RS-485 interface (Modbus / RTU). Smart Sensor technology simplifies sensor replacement. Maintenance and calibration can be performed by a single person.
When mounted close to the ceiling, a remote calibration adapter can be used for test gas supply without affecting the sensor's chimney effect.

The current measured value including unit, gas type and the menu can be read on the color backlit 2.2-inch display. Operation is conducted using a magnetic pen. 4 colored LEDs indicate operating, special and alarm status in green, yellow or red.

Reliable measurement & minimal operating costs

The transmitter's built-in electronics compensate for temperature fluctuations and always ensure the highest measurement accuracy. Long-life sensors reduce operating costs.

Versions and options for every application

The CC33 is available as a basic version in a lacquered aluminium housing and with 10 mm thick bulletproof glass. Alternatively, it is also available in a stainless steel housing (15 mm glass) if the application so requires.
The CC33 can be operated as a stand-alone solution that both detects hazards from combustible gases such as methane, butane or propane early enough and controls alarms and safety measures.
For an additional on-site alarm, the transmitter is available with an optional buzzer for Ex zone 1, which accompanies the visual alarm (red LEDs and red backlit display) with a loud acoustic signal.

The CC33 can also be optionally configured with three freely programmable relays for the connection of additional visual and audible alarm devices. A colored LED for status indication is provided for each relay.

Also in combination with GfG's powerful controllers, the CC33 is the right choice for monitoring flammable gases and vapors up to the lower explosion limit (LEL) as well as ammonia (vol%).

CC33 with lacquered aluminium housing and explosion-proof buzzer

CC33 Technical Data:

Measuring principle:	Catalytic combustion (CC)
Measuring ranges:	0 to 100 % LEL[1] 0 to 4 vol%[2]
Gas supply:	Diffusion or gassing per calibration adapter
Lifetime of the sensor:	5 years[3]
Response time:	t_{90} ≤ 9 s[4]
Temperature:	-25 to +55 °C[5]
Humidity:	5 to 95 % r. h.[5]
Air pressure:	80 to 120 kPa[5]
Output signal:	
Analog:	4-20 mA
Digital:	RS-485
Power supply:	12 to 30 V DC
Housing:	Die-cast aluminium
Protection class:	IP67[6]
Dimensions:	145 x 169 x 129 mm (W x H x D)
Weight:	1.60 kg
Approvals / Certifications:	
Types of protection:	⟨Ex⟩ II 2G Ex db IIC T6 Gb -20 °C ≤ Ta ≤ +55 °C (without buzzer) ⟨Ex⟩ II 2G Ex db ib IIC T4/T6 Gb -20 °C ≤ Ta ≤ +55/+40 °C (with buzzer)

[1] Overview of all gases in the operating instructions, [2] For ammonia only, [3] Depending on operating conditions, [4] Sensor dependent, [5] Depending on sensor und Ex-protection, [6] With thread sealing

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