



## EC28 Transmitter

# For Toxic Gases, O<sub>2</sub> and H<sub>2</sub> in Ex Zones



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Whenever toxic gases, oxygen or hydrogen are to be monitored, the EC28 transmitter combined with GfG's proven control units is a reliable and cost-effective solution. This ATEX-certified transmitter allows for safe use, even in potentially explosive atmospheres.

The hardware of the EC28 complies with the European Functional Safety Standard DIN EN 61508-2: 2011 for many gases. The SIL levels (up to SIL3) in single-channel (1oo1) or redundant (1oo2) use are listed in the overview of gases.



## Communication and Service

Communication is carried out via a 4 to 20 mA signal. The Smart Sensor technology enables quick and easy replacement of the sensor. Adjustments can be made using the RC2 remote control (one-man calibration).

## Remote Control RC2 (optional)

Gases like ammonia and hydrogen are lighter than air. Transmitters with these sensors are therefore installed near the ceiling. To simplify servicing, these transmitters can be equipped with a permanently installed cable meaning that the RC2 remote control can be connected for maintenance

work and settings can be made from ground level. The display of the RC2 remote control shows the same information as would be shown by the EC28 versions with display. This makes inspection, maintenance and calibration much easier.

## Reliable Measurement & Minimal Operating Costs

The sensor and built-in temperature compensation ensure the highest measuring accuracy. The long sensor service life and low maintenance requirements ensure minimal operating costs.

## Variants for Every Application

The basic version of the EC28 is sufficient for many applications. For specific requirements, the EC28 is also available in a wide variety of versions:

- EC28** basic version for a wide range of electrochemical sensors
- EC28 D** with display for showing the current measured values
- EC28 DA** with display, bright LED warning lights and integrated alarm horn
- EC28 DAR** with display, alarm horn and relay for additional external alarm devices
- EC28 B** with Modbus interface
- EC28 DB** with Modbus interface and display
- EC28 DAB** with Modbus interface, display, bright LED lights and integrated alarm horn
- EC28 i** intrinsically safe
- EC28 Di** intrinsically safe and with display

Together with GfG's sophisticated controllers, all versions of the EC28 are the perfect choice for detecting a wide range of gases.

## Overview of Gases and SIL Levels:

	1oo1	1oo2		1oo1	1oo2		1oo1	1oo2
» Ammonia (NH <sub>3</sub> )	2	3	» Diborane (B <sub>2</sub> H <sub>6</sub> )	1	2	» Oxygen (O <sub>2</sub> )	2	3
» Arsine (AsH <sub>3</sub> )	-	-	» Ethylene oxide (C <sub>2</sub> H <sub>4</sub> O)	-	-	» Sulphur dioxide (SO <sub>2</sub> )	-	-
» Bromine gas (Br <sub>2</sub> )	-	-	» Hydrogen fluoride (HF)	1	2	» Hydrogen sulphide (H <sub>2</sub> S)	1	2
» Chlorine (Cl <sub>2</sub> )	1	2	» Carbon monoxide (CO)	2	3	» Silane (SiH <sub>4</sub> )	1	2
» Chlorine dioxide (ClO <sub>2</sub> )	2	3	» Ozon (O <sub>3</sub> )	2	3	» Nitrogen dioxide (NO <sub>2</sub> )	1	2
» Hydrogen chloride (HCl)	1	2	» Phosgene (COCl <sub>2</sub> )	-	-	» Nitrogen monoxide (NO)	1	2
» Hydrogen cyanide (HCN)	1	2	» Phosphine (PH <sub>3</sub> )	1	2	» Hydrogen (H <sub>2</sub> )	-	-

# Technical Data EC28:

**Measuring principle:** Electrochemical (EC)  
**Measuring range:** Sensor dependent  
**Gas supply:** Diffusion or gassing per calibration adapter  
**Lifetime of the sensor:** Sensor dependent  
**Response time:** Sensor dependent  
**Temperature:** -20 to +50 °C<sup>1</sup>

**Humidity:** 5 to 90 % r. h.<sup>1</sup>  
**Air pressure:** 80 to 120 kPa<sup>1</sup>  
**Output signal:** 4-20 mA  
**Power supply:** 18 to 30 V DC  
**Housing:** Plastic  
**Protection class:** IP64  
**Dimensions:** 115 x 203 x 55 mm (W x H x D)

**Weight:** 650 g  
**Approvals / Certifications:** Markings & Type of Protection: Ⓜ II 2G Ex emb [ib] IIC T4 Gb -20 °C ≤ Ta ≤ +50 °C  
 Functional Safety (SIL): DIN EN 61508-2: 2011

<sup>1</sup> Sensor dependent

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