



## EC28 B Transmitter

# With Modbus Suitable for Use in Ex Zones



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Whenever toxic gases, oxygen or hydrogen are to be monitored and current measured values are to be transmitted digitally, the EC28 B transmitter combined with GfG's proven control units is a reliable and economical solution. This ATEX-certified transmitter means it can be used even in potentially explosive atmospheres.

The hardware of the EC28 B 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 the RS-485 industry standard with Modbus protocol. The Smart Sensor technology allows for the 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		
	2	3	-	-	1	2	-	-	2	3	-	-	
» 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	» Sulphur dioxide (SO <sub>2</sub> )	-	-		
» Arsine (AsH <sub>3</sub> )	-	-	» Ethylene oxide (C <sub>2</sub> H <sub>4</sub> O)	-	-	» Hydrogen sulphide (H <sub>2</sub> S)	1	2	» Silane (SiH <sub>4</sub> )	1	2		
» Bromine gas (Br <sub>2</sub> )	-	-	» Hydrogen fluoride (HF)	1	2	» Carbon monoxide (CO)	2	3	» Nitrogen dioxide (NO <sub>2</sub> )	1	2		
» Chlorine (Cl <sub>2</sub> )	1	2	» Carbon monoxide (CO)	2	3	» Ozon (O <sub>3</sub> )	2	3	» Nitrogen monoxide (NO)	1	2		
» Chlorine dioxide (ClO <sub>2</sub> )	2	3	» Ozon (O <sub>3</sub> )	2	3	» Phosgene (COCl <sub>2</sub> )	-	-	» Hydrogen (H <sub>2</sub> )	-	-		
» Hydrogen chloride (HCl)	1	2	» Phosgene (COCl <sub>2</sub> )	-	-								
» Hydrogen cyanide (HCN)	1	2	» Phosphine (PH <sub>3</sub> )	1	2								

## Technical Data EC28:

<b>Measuring principle:</b>	Electrochemical (EC)	<b>Humidity:</b>	5 to 90 % r. h. <sup>1</sup>	<b>Weight:</b>	650 g
<b>Measuring range:</b>	Sensor dependent	<b>Air pressure:</b>	80 to 120 kPa <sup>1</sup>	<b>Approvals / Certifications:</b>	
<b>Gas supply:</b>	Diffusion or gassing per calibration adapter	<b>Output signal:</b>	RS-485	Markings & Type of Protection:	⊕ II 2G Ex emb [ib] IIC T4 Gb -20 °C ≤ Ta ≤ +50 °C
<b>Lifetime of the sensor:</b>	Sensor dependent	<b>Power supply:</b>	18 to 30 V DC	Functional Safety (SIL):	DIN EN 61508-2: 2011
<b>Response time:</b>	Sensor dependent	<b>Housing:</b>	Plastic		
<b>Temperature:</b>	-20 to +50 °C <sup>1</sup>	<b>Protection class:</b>	IP64		
		<b>Dimensions:</b>	115 x 203 x 55 mm (W x H x D)		

<sup>1</sup> Sensor dependent

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