

## EC28 DB Transmitter

# Ex Zone Monitoring with Display and Modbus



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Whenever toxic gases, hydrogen or oxygen are to be monitored and current measured values are to be displayed locally as well as transmitted digitally, the EC28 DB transmitter combined with GfG's proven control units is the perfect solution. The ATEX-certified design means it can be used even in potentially explosive atmospheres. The hardware of the EC28 DB complies with the European Functional Safety Standard DIN EN 61508-2: 2011 for many gases. The SI levels (up to SIL3) in single-channel (1oo1) or redundant (1oo2) use are listed in the overview of gases.



## 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

## Communication and Service

Communication is carried out via RS-485 industry standard with Modbus protocol. The Smart Sensor technology enables the quick and easy replacement of the sensor.

## Display and Control Buttons

The EC28 DB transmitter features a 2.2 inch LC display and three control buttons. In normal operation, the display shows the measured value or information on faults or alarms. In addition, the operating parameters (sample gas, measuring range, limit values, etc.) can be called up via the operating keys.

## Remote Control RC2 (optional)

If the EC28 DB has to be mounted in a difficult-to-access location, the RC2 remote control facilitates servicing and adjustments (one-man adjustment). It displays the same information that is shown on the transmitter's display.

## 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.

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 SI 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	» 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	» Phosgene	(COCl <sub>2</sub> )	-	-	» Nitrogen monoxide	(NO)	1	2
» Chlorine dioxide	(ClO <sub>2</sub> )	2	3	» Ozon	(O <sub>3</sub> )	2	3	» Phosphine	(PH <sub>3</sub> )	1	2	» Hydrogen	(H <sub>2</sub> )	-	-
» Hydrogen chloride	(HCl)	1	2												
» Hydrogen cyanide	(HCN)	1	2												

# Technical Data EC28 DB:

<b>Measuring principle:</b>	Electrochemical (EC)	<b>Humidity:</b>	5 to 90 % r. h. <sup>1</sup>	<b>Weight:</b>	800 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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