

## EC28 DAB Transmitter

# With Display, Alarm and Bus for Use in Ex Zones



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Whenever toxic gases, oxygen or hydrogen need to be monitored, current measured values are to be displayed locally and transmitted digitally, and an alarm needs to be issued on site, the EC28 DAB transmitter combined with GfG's proven control units is the solution of choice. The ATEX-certified design means it can be used even in potentially explosive atmospheres.

The hardware of the EC28 DAB 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.

## 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. Adjustments can be made using the RC2 remote control (one-man calibration).

## Display, Control Buttons and Alarms

The EC28 DAB 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. The EC28 DAB has highly visible, red alarm LEDs and a loud, integrated horn (90 dB). Costs for additional, ex-protected alarm devices can therefore be eliminated.

## 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 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
» 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 DAB:

**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:** RS-485  
**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:** 800 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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