



## EC28 i Transmitter

# Intrinsically Safe for Toxic Gases, O<sub>2</sub> and H<sub>2</sub>



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Where toxic gases, oxygen or hydrogen are to be monitored in areas with a particular risk of explosion, the intrinsically safe EC28 i transmitter along with GfG's control units is a reliable and cost-effective solution. The power supply and transmission of the measured values are carried out via two-wire cabling.

## Intrinsically safe operation

Due to its intrinsically safe build, the EC28 i can be used even in areas with a particularly high risk of explosion. A safety barrier (SB1 or Zener barrier; optionally available) has to be connected between the transmitter and the programmable logic controller (PLC) to convert the supply voltage to 24 V DC. This prevents the power lines from igniting within the Ex zone. The intrinsic safety of the EC28 i is ATEX-certified and makes it suitable for applications up to Ex zone 0.

## 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 a 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:

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

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

## Technical Data EC28 i:

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

|                          |  |
|--------------------------|--|
| <b>Humidity:</b>         | 5 to 90 % r. h. <sup>1</sup>                         |
| <b>Air pressure:</b>     | 80 to 120 kPa <sup>1</sup>                           |
| <b>Output signal:</b>    | 4-20 mA  |
| <b>Power supply:</b>     | 15 to 30 V DC<br>21 V to 27 V DC (via Zener barrier) |
| <b>Housing:</b>          | Plastic  |
| <b>Protection class:</b> | IP64   |

|                                    |  |
|------------------------------------|--|
| <b>Dimensions:</b>                 | 115 x 203 x 55 mm (W x H x D)  |
| <b>Weight:</b>                     | 650 g  |
| <b>Approvals / Certifications:</b> | Markings & Type of Protection: Ⓢ II 1G Ex ia IIC T4 Ga<br>-20 °C ≤ Ta ≤ +50 °C |

<sup>1</sup> Sensor dependent

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