

# SIL-Declaration of Conformity

**CC28**

**CC28D**

**CC28DA**

**GfG Gesellschaft für Gerätebau mbH**

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The transmitter **CC 28 (D, DA)** complies with the following European Standards for Functional Safety:

Functional safety of electrical/electronic/programmable electronic safety-related systems

**EN 61508-1:2011**

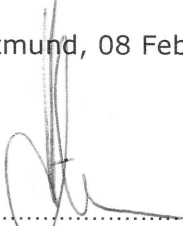
The following parameters for single channel and dual channel use of **transmitter CC28 (D, DA)** have been determined:

	Single channel use	Redundant use
Safety function	Explosion protection	
Metering range	0 – 100 % LEL	
SIL level hardware	2	3
Device type	B	
SFF	93.54	
HFT	0	1
$\beta$ factor	—	10 %
PFD	$3.01 \times 10^{-4}$ (per year)	$3.02 \times 10^{-5}$ (per year)
$\lambda_{du}$	$6.31 \times 10^{-8}$ (per h)	
$\lambda_{dd}$	$2.77 \times 10^{-7}$ (per h)	
$\lambda_{su}$	$6.10 \times 10^{-7}$ (per h)	
$\lambda_{sd}$	$2.80 \times 10^{-8}$ (per h)	
Proof Test Interval	1 year	
MTTR	72 h	

The calculation of the parameters was done by GWW GasWarn Dr. Wenker GmbH, and the accuracy of the statement is confirmed by the conformity statement of GWW GasWarn Dr. Wenker GmbH as independent expert.

Always consider the following Operational conditions and safety notes of the operation manual 197-000.12.

Dortmund, 08 February 2016

  
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H.J. Hübner  
President



## **Operational Conditions**

The SIL level of the transmitter in combination with the determined error rate is only valid, if the following operational conditions are adhered:

The transmitter must be mounted in a position which is suitable for the detection task, must be properly connected to a controller and must be put into operation by the manufacturer GfG or by an authorised representative.

Error reports of 2.8 mA as "fault low" and 22 mA as "fault high" must be recognized as transmitter failure by the used controller. This is automatically made sure when controllers are used which are produced by GfG Gesellschaft für Gerätebau mbH.

The ambient conditions e.g. referring temperature, humidity and pressure, which are stated in the manufacturer's documentation, have to be observed.

According to the manufacture's statements the transmitter has to be regularly serviced by an expert and must be calibrated with a certified test gas.

It must be made sure that the transmitter does not come into contact with traces of one of the following catalyst poisons:

- Silicone vapours (e.g. in polishing or impregnation agents, silicone greases, softeners)
- organic phosphorous compounds (e.g. herbicides or insecticides), halogen compounds (e.g. anorganic or organic chlorine or fluorine compounds)
- Sulphur compounds (e.g. hydrogen sulfide or sulphur-organic compounds)

If one of the mentioned catalyst poisons is expected to be present, a different detection principle, e.g. an infrared detector, should be used.

If none of the mentioned catalyst poisons is expected in the environment but cannot be excluded expressively, a new installed system has to be calibrated with test gas in very short time intervals. The intervals may then be prolonged according to bulletin BGI 518 of the Association of Workers' Compensation Insurance Carriers (= bulletin T 023 of BG-Chemie).

### **Annual Proof Test**

At least once a year a Proof Test of the complete safety chain has to be effected. For the transmitter the Proof Test is equivalent to a system check according to the Ordinance on Industrial Safety and Health and includes the regular calibration / adjustment without additional requirements.