



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 15.0056X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 6	Issue 5 (2020-02-20)
Date of Issue:	2021-05-11		Issue 4 (2019-10-11)
Applicant:	GfG Gesellschaft für Gerätebau mbH Klönnestr. 99 44143 Dortmund Germany		Issue 3 (2018-01-04)
Equipment:	Gas detector and remote monitoring device type G888C, G888S, G888M, G999C, G999S, G999E, G999P, G999M, G999L		Issue 2 (2017-04-13)
Optional accessory:			Issue 1 (2016-08-04)
Type of Protection:	Flameproof Enclosures "d", Intrinsic Safety "i"		Issue 0 (2015-06-30)
Marking:	See Annex		

Approved for issue on behalf of the IECEx
Certification Body:

Dr Franz Eickhoff

Position:

Lead Auditor and officially recognised expert

Signature:
(for printed version)

Date:
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

 **DEKRA**
On the safe side.



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Manufacturer: **GfG Gesellschaft für Gerätebau mbH**
Klönnestr. 99
44143 Dortmund
Germany

Manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/BVS/ExTR15.0052/06

Quality Assessment Report:

DE/BVS/QAR07.0002/14



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Subject, type, marking and ambient temperature range

See Annex

General product information

The Gas detector type G888C, type G888S, type G888M, type G999C, type G999S, type G999E, type G999P or type G999M is a portable instrument with a built in power-supply battery. It is used for the detection of gases in ambient air under atmospheric conditions.

The measurement values are shown on a built-in display. If the present limits are reached, a visual alarm, an audible alarm and a vibrating alarm are produced.

The remote monitoring device type G999L is a portable device with a built in power-supply battery for Gas detectors of the series G888 and G999. Purpose of the G999L is to receive status messages and measurement data of the Gas detectors by radio. It is able to connect up to ten Gas detectors by radio.

At the front of the G999L an LED panel shows the status of all connected respectively addressed gas detectors. Actual measurement data of the connected Gas detectors are shown at the display of the G999L.

The Gas detector type G888C, type G888S, type G888M, type G999C, type G999S or type G999M contains 3 electro-chemical cells, 1 IR-sensor and 1 sensor of flameproof enclosure.

The Gas detector type G999E contains 4 electro-chemical cells and 1 IR-sensor.

The Gas detector type G999P contains 3 electro-chemical cells, 1 IR-sensor and 1 PID-sensor.

A radio or bluetooth module for wireless data transfer can be optionally used inside of the the Gas detector type G888C, type G888S, type G888M, type G999C, type G999S, type G999E, type G999P or type G999M.

The gas detector type G888C, type G888S, type G888M, type G999C, type G999S, type G999E, type G999P or type G999M and the remote monitoring device type G999L is powered by a NiMH battery which has to be charged only outside of the hazardous area.

The gas detector type G999C, type G999S, type G999E, type G999P or type G999M contains additionally a built-in pump.

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Gas Sensor type A (used in type G888C, G999C, G999S)	IECEx SIR 07.0031X	IEC 60079-0:2004 IEC 60079-1:2003
4P Series Gas Sensing Head (used in type G888C, G888M, G999C, G999M, G999S)	IECEx SIR 04.0013X	IEC 60079-0:2011 IEC 60079-1:2014

Ratings

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

The measurement function for explosion protection is not subject of this Test Report.

For Gas detector types G888C, G888M, G999C, G999M, G999S / usage Group I / mining:

The gas detector may only be used in potentially explosive atmospheres as intended. That means, that the device has to be carried on the body or has not be discarded unattended, so that mechanical stress by impact is avoided. It is intended for the low risk of mechanical danger according to IEC 60079-0.

The gas detector has to be removed immediately from the hazardous area and has to be cleaned when it is contaminated with oils and greases or hydraulic fluids.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

The gas detectors and the remote monitoring device were tested in accordance to the standards listed on page 1.

A bluetooth module can optionally be used in the gas detector type G888C, type G888S, type G888M, type G999C, type G999S, type G999E, type G999P or type G999M.

A new material combination can optionally be used for the back casing.

Annex:

[BVS_15_0056X_GfG_Annex_issue6.pdf](#)



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Annex

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Subject, type, marking and ambient temperature range

Gas detector type G888C, G999C, G999S	Ex ia db IIC T4 Gb Ex ia db I Mb	-20 °C ≤ T _a ≤ +50 °C -20 °C ≤ T _a ≤ +50 °C
Gas detector type G888S	Ex ia db IIC T4 Gb Ex ia I Ma	-20 °C ≤ T _a ≤ +50 °C -20 °C ≤ T _a ≤ +50 °C
Gas detector type G999E, G999P	Ex ia IIC T4 Ga Ex ia I Ma	-20 °C ≤ T _a ≤ +50 °C -20 °C ≤ T _a ≤ +50 °C
Gas detector type G888M, G999M	Ex ia db IIC T4 Gb Ex ia db I Mb Ex ia da IIC T4 Ga Ex ia da I Ma	-20 °C ≤ T _a ≤ +50 °C -20 °C ≤ T _a ≤ +50 °C -20 °C ≤ T _a ≤ +40 °C -20 °C ≤ T _a ≤ +40 °C
Remote monitoring device type G999L	Ex ib IIC T4 Gb Ex ib I Mb	-20 °C ≤ T _a ≤ +50 °C -20 °C ≤ T _a ≤ +50 °C

Ratings

Power supply battery in type G888C or type G888S or type G888M

Nominal voltage			2.6 V
Nominal capacity			2100 mAh
Maximum charging voltage	U _m	DC	6 V

Power supply battery in type G999C or type G999S or type G999E or type G999P or type G999M or type G999L

Nominal voltage			5.2 V
Nominal capacity			2100 mAh
Maximum charging voltage	U _m	DC	9 V

Radio or Bluetooth module

Frequency range radio (depend on module type)	865.0 – 868.6 MHz or 865.0 – 870.0 MHz or 902.0 – 928.0 MHz
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Frequency range Bluetooth	2.402 – 2.480 GHz
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Nominal RF output power	< 35 mW
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Maximum RF output power	< 250 mW
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Ambient temperature range depend on type and marking, see **Subject, type, marking and ambient temperature range**.