



# 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](http://www.iecex.com)

### Ex COMPONENT CERTIFICATE

Certificate No.:	<b>IECEx EPS 17.0058U</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 3	Issue 2 (2023-05-30)
Date of Issue:	2023-11-24		Issue 1 (2017-11-16)
Applicant:	<b>Korea New Ceramics Co., Ltd</b> 31 Wonmi-ro 177beon-gil Bucheon-si, Gyeonggi-Do 14559 <b>Korea, Republic of</b>		Issue 0 (2017-10-13)
Ex Component:	Gas Detection Sensors type KGS 701, KGS 702, KGS 703, KGS 704, KGS 801, KGS 802, KGS 803, KGS 804, KGS 901, KGS 902, KGS 903		

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **da, db**

Marking: **Ex da IIC Ga**

**Ex db IIC Gb**

Approved for issue on behalf of the IECEx  
Certification Body:

**Ulrich Feike**

Position:

**Head of Certification**

Signature:  
(for printed version)

Date:  
(for printed version)

1. This certificate and schedule may only be reproduced in full.
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](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**Bureau Veritas Consumer Products Services Germany GmbH**  
**Businesspark A96**  
**86842 Türkheim**  
**Germany**





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Manufacturer: **Korea New Ceramics Co., Ltd**  
31 Wonmi-ro 177beon-gil  
Bucheon-si, Gyeonggi-Do 14559  
**Korea, Republic of**

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 component 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

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 component listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/EPS/ExTR17.0056/02](#)

Quality Assessment Report:

[DE/EPS/QAR13.0002/11](#)



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## Ex Component(s) covered by this certificate is described below:

This is a pellistor or catalytic bead sensor for the combustible gas detection. This sensor consists of a matched pair of elements, one active and the other for compensation. The active bead is coated with a catalyst that, when in contact with a combustible hydrogen, hydrocarbon or solvent, causes the gas or vapor to "burn" or oxidize at concentrations below the Lower Explosive Limit (LEL). This oxidization process raises the temperature of the active bead and increases the resistance of the internal wire coil. The second bead does not have the catalytic coating and provides compensation for environmental conditions including temperature and humidity.

Electrical data:

Type	Operating Voltage U	Operating Current I
KGS 701 and KGS 801	3.0 V DC	76 +/- 6 mA
KGS 702 and KGS 802	3.3 V DC	74 +/- 6 mA
KGS 703 and KGS 803	4.25 V DC	56 +/- 6 mA
KGS 704 and KGS 804	2.2 V DC	70 +/- 6 mA
KGS 901	3.0 V DC	76 +/- 6 mA
KGS 902	2.0 V DC	270 +/- 20 mA
KGS 903	2.0 V DC	70 +/- 6 mA

## SCHEDULE OF LIMITATIONS:

Notes for manufacture, installation and operation in EPL Gb:

The ambient temperature range amounts  $-40\text{ °C} \leq T_{amb} \leq +55\text{ °C}$ .

The sensor must be installed within apparatus that provides sufficient ingress protection and connection method must be assessed to comply with type of protection suitable for the specific EPL. The supply voltage shall not exceed the values as indicated above for example by use of intrinsic safe power supply.

Notes for manufacture, installation and operation in EPL Ga:

The ambient temperature range amounts  $-20\text{ °C} \leq T_{amb} \leq +55\text{ °C}$ .

The sensor shall be supplied by a circuit of Level of Protection "ia", with a maximum dissipated power limited to max 1.3 W.

The sensor must be installed within apparatus that provides sufficient ingress protection and connection method must be assessed to comply with type of protection suitable for the specific EPL.



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

Addition of new models KGS 901, KGS 902, KGS 903