



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx BVS 05.0011X issue No.: 2
Status: **Current**
Date of Issue: 2012-08-09 Page 1 of 5

Certificate history:
Issue No. 2 (2012-8-9)
Issue No. 1 (2009-3-23)
Issue No. 0 (2005-11-23)

Applicant: **Dräger Safety AG & Co. KGaA**
Revalstraße 1
23560 Lübeck
Germany

Electrical Apparatus: **Gas sensor types IDS0001, IDS0002, IDS0011 and IDS0012 and gas sensing heads type ITR 0001, ITR0002, ISH0001 and type ISH 0002**
Optional accessory:

Type of Protection: **Equipment protection by flameproof enclosures "d", dust ignition protection by enclosure 't', protection by increased safety "e"**

Marking: Ex d IIC T6 Gb or Ex de IIC T6 Gb
Ex tb IIIC T80°C Db


Approved for issue on behalf of the IECEx
Certification Body:

Dr. Franz Eickhoff

Position:

Deputy Head of Certification Body

Signature:
(for printed version)


20 12-08-09

Date:

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 the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

 **DEKRA**
DEKRA EXAM GmbH



IECEX Certificate of Conformity

Certificate No.. IECEx BVS 05.0011X

Date of Issue: 2012-08-09

Issue No.. 2

Page 2 of 5

Manufacturer: **Dräger Safety AG & Co. KGaA**
Revalstraße 1
23560 Lübeck
Germany

Manufacturing location(s):

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 electrical apparatus 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 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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

IECEX ATR:
Test Report:
DE/BVS/ExTR 06.0028/02

File Reference:
Quality Assessment Reports:
DE/BVS/QAR 06.0001/07



IECEx Certificate of Conformity

Certificate No.. IECEx BVS 05.0011X

Date of Issue: 2012-08-09

Issue No.: 2

Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description:

The flameproof "d" sensor types IDS 0001, IDS 0011, IDS 0002 and IDS 0012 serve for the measurement of combustible gases and vapours under atmospheric conditions. The sensors are suitable for operation in ambient temperatures from -40°C to +65°C.

The power supply of the sensors is affected by non-intrinsically safe circuits via a cast resin cable feed through.

The sensor types IDS 0011 and IDS 0012 are designed for mounting to enclosures with type of protection increased safety "e" that are certified for this purpose.

The sensor types IDS 0001 and IDS 0002 are designed for mounting to enclosures with type of protection flameproof enclosure "d".

The mechanical strength of the assembly as well as the flameproof properties of the connecting NPT thread shall be verified by the type test of the enclosure to which the sensor is attached.

The gas sensing head types ITR 0001 and ITR 0002 resp. ISH 0001 and ISH 0002 consist of a gas sensor of type IDS 0011 resp. IDS 0012 and an attached enclosure of type of protection increased safety "e" type 07-5185-1100/7555 resp. an enclosure type PL6** and is equipped with terminals that are certified for this purpose.

The gas sensing head types ITR 0001, ITR 0002, ISH 0001 and ISH 0002 serve for the measurement of combustible gases and vapours under atmospheric conditions and are suitable for operation in ambient temperature ranges from -40°C to +65°C.

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions for safe use / Installation instructions:

The gas sensor types IDS 0001 and IDS 0002 (NPT thread) shall be connected to enclosures type of protection flameproof "d" whose internal free volume does not exceed 2 litres and whose reference pressure does not exceed 20 bar.

The mechanical strength of the assembly as well as the flameproof properties of the connecting NPT thread shall be verified by the type test of the enclosure to which the sensor is attached.

The gas sensor types IDS 0011 and IDS 0012 (metric thread) are suitable for mounting to enclosures of type of protection increased safety "e".

The mechanical strength and the IP 6X grade of protection of the assembly shall be verified by the type test of the enclosure to which the sensor is attached. The clearances and creepage distances shall comply with the requirements of 4.3 (Table 1) and 4.4 of IEC60079-7.

The wiring and the connection of the wires of the sensor shall be performed according to 4.5, 4.7.2 and 4.8 of IEC60079-7 mechanical protected and corresponding to the temperature resistance of the wire.

The threaded joint between the gas sensor and enclosure shall be properly mounted and protected against unintended loosening.

After assembly, the sensor housing shall be connected to potential ground of the enclosure in an electrostatically conductive manner (contact resistance < 10⁶ Ohm). If equipotential bonding is necessary, it shall be provided by the assembly.



IECEx Certificate of Conformity

Certificate No.: IECEx BVS 05.0011X

Date of Issue: 2012-08-09

Issue No.. 2

Page 4 of 5

EQUIPMENT(continued):

Subject and type

Gas sensor types IDS 0001, IDS 0002, IDS 0011 and IDS 0012 as well as gas sensing head types ITR 0001, ITR 0002, ISH 0001 and ISH 0002.

Gas sensor types IDS 0011 and IDS 0012 with M25 thread for mounting to enclosures with type of protection increased safety "e".

Gas sensor types IDS 0001 and IDS 0002 with 3/4 " NPT thread for mounting to enclosures with type of protection flameproof enclosure "d".

Gas Sensing head types ITR 0001, ITR 0002, ISH 0001 and ISH 0002 with an attached enclosure of type of protection increased safety "e".

Parameters

1. Supply of the gas sensors and gas sensing heads

Voltage

up to 30 V

Power

up to 2 W

2. Temperatures

Ambient temperature range for gas sensor types IDS 0001, IDS 0002,

IDS 0011 and IDS 0012 as well as gas sensing heads types ITR 0001,

ITR 0002, ISH 0001 and ISH 0002

-40 °C to +65 °C

Gas sensor types IDS 0001, IDS 0011, IDS 0002 and IDS 0012:

Maximum temperature of cast resin at maximum allowed power and ambient temperature

75 °C

Maximum temperature of supply leads at maximum allowed power and ambient temperature

70 °C



IECEx Certificate of Conformity

Certificate No.. IECEx BVS 05.0011X

Date of Issue: 2012-08-09

Issue No.: 2

Page 5 of 5

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

This supplement covers the requirements of the new standards.