



## Translation

# EC-Type Examination Certificate

- (1)
- (2) **- Directive 94/9/EC -**  
**Equipment and protective systems intended for use**  
**in potentially explosive atmospheres**
- (3) **BVS 05 ATEX E 143 X**
- (4) **Equipment:** **Gas detection sensors type IDS 0011 resp. type IDS 0012 resp. type IDS 0001 resp. type IDS 0002 and Gas detection heads type ITR 0001 resp. type ITR 0002 resp. type ITR 0010 resp. type ISH 0001 resp. type ISH 0002 resp. type ISH 0010**
- (5) **Manufacturer:** **Dräger Safety AG & Co. KGaA**
- (6) **Address:** **23560 Lübeck**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.
- (8) The certification body of EXAM BBG Prüf- und Zertifizier GmbH, notified body no. 0158 in accordance with Article 9 of the directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.  
The examination and test results are recorded in the test and assessment report BVS PP 05.2107 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:

EN 50014:1997 + A1 – A2 General Requirements  
EN 50018:2000 +A1 Flameproof enclosure  
EN 50019:2000 Increased safety  
EN 60079-7:2003 Increased safety  
EN 50281-1-1:1998 Dust explosion protection

- (10) If the sign „X“ is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-Type Examination certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.  
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:



**II 2G EEx d IIC T6 resp. II 2G EEx de IIC T6**  
**II 2D IP 6X T 80 °C**

**EXAM BBG Prüf- und Zertifizier GmbH**

Bochum, dated 26. September 2005

Signed: Jockers

Signed: Eickhoff

Certification body

Special services unit

(13)

Appendix to

(14)

# EC-Type Examination Certificate

## BVS 05 ATEX E 143 X

(15)

### 15.1 Subject and Type

Gas detection sensors type IDS 0001 resp. IDS 0011 resp. type IDS 0002 resp. type IDS 0012 and Gas detection heads type ITR 0001 resp. type ITR 0002 resp. type ITR 0010 resp. type ISH 0001 resp. type ISH 0002 resp. type ISH 0010

Gas detection sensors type IDS 0011 resp. type IDS 0012 providing M25 thread connection for attachment to an enclosure increased safety „e“

Gas detection sensors type IDS 0001 resp. type IDS 0002 providing NPT ¾“ thread connection for attachment to a flameproof enclosure „d“

Gas detection heads type ITR 0001 resp. type ISH 0001 with type of protection increased safety „e“ by use of enclosure type 07-5185-1100/7555 according EC-type Examination Certificate PTB 01 ATEX 1014 U (certified per PTB 01 ATEX 1104 and IBEXU00ATEX1081 as a complete terminal box).

Gas detection heads type ITR 0002 resp. type ISH 0002 with type of protection increased safety „e“ by use of enclosure type PL 612 according EC-Type Examination Certificate BAS 01 ATEX 2107 X.

Gas detection heads type ITR 0010 resp. type ISH 0010 with type of protection flameproof enclosure „d“ by use of enclosure type SL 26.1N according EC-Type Examination Certificate CESI 03 ATEX 059 U resp. CESI 02 ATEX 091.

### 15.2 Description

The sensors type IDS 0001 resp. type IDS 0011 resp. type IDS 0002 resp. type IDS 0012, manufactured using type of protection flameproof enclosures „d“, provide measurement of combustible gases and vapors under atmospheric conditions. The sensors are suitable for use in an ambient temperature range of -40 °C to +65 °C.

The non-intrinsically safe power supply of the sensors enters the enclosure via a resin bushing. The sensor type IDS 0011 resp. type IDS 0012 may be attached to an enclosure of type of protection increased safety „e“ that is certified for this purpose. The sensor type IDS 0001 resp. IDS 0002 is dedicated for the attachment to a flameproof enclosure „d“. The mechanical strength of the attachment to the flameproof enclosure as well as the explosion relevant and constructional assessment of the connection thread shall be made in conjunction with the certification of the electrical apparatus to which the sensor is attached.

The gas detection heads type ITR 0001 resp. type ISH 0001 and type ITR 0002 resp. type ISH 0002 consist of a gas detection sensor type IDS 0011 resp. type IDS 0012 and an attached terminal box with type of protection increased safety „e“, fitted with terminals that are certified for this purpose. The gas detection heads type ITR 0001 resp. type ISH 0001 and type ITR 0002 resp. type ISH 0002 provide measurement of combustible gases and vapors under atmospheric conditions and are suitable for use in an ambient temperature range of -40 °C to +65 °C.

The gas detection heads type ITR 0010 resp. type ISH 0010 consist of a gas detection sensor type IDS 0001 resp. type IDS 0002 and an attached terminal box, comprising terminals with type of protection flameproof enclosures „d“. The gas detection heads type ITR 0010 resp. type ISH 0010 provide measurement of combustible gases and vapors under atmospheric conditions and are suitable for use in an ambient temperature range of -40 °C to +60 °C.

### 15.3 Parameters

#### 15.3.1 Supply of the gas detection sensors and gas detection heads

Voltage	up to	30 V
Power	up to	2 W

#### 15.3.2 Temperatures

Ambient Temperature Range for

Gas detection sensors type IDS 0001 resp. type IDS 0011 resp. type IDS 0002 resp. type IDS 0012 and

Gas detection heads type ITR 0001 resp. type ISH 0001 resp. type ITR 0002 resp. type ITR 0002  
-40 °C to + 65 °C

Ambient Temperature Range for

Gas detection heads type ITR 0010 resp. type ISH 0010  
-40 °C to + 60 °C

Gas detection sensors type IDS 0001 resp. type IDS 0011 resp. type IDS 0002 resp. type IDS 0012

Maximum permissible Temperature at resin at maximum permissible power and ambient temperature  
75 °C

Maximum permissible Temperature of wires at maximum permissible power and ambient temperature  
70 °C

- (16) Test and assessment report  
BVS PP 05.2107 EG, dated 26.09.2005

- (17) Special conditions for safe use  
The gas detection sensors type IDS 0001 resp. type IDS 0011 resp. type IDS 0002 resp. type IDS 0012 and the gas detection heads type ITR 0001 resp. type ISH 0001 and type ITR 0002 resp. ISH 0002 are suitable for use in an ambient temperature range of -40 °C to +65 °C.

The gas detection heads type ITR 0010 resp. type ISH 0010 are suitable for use in an ambient temperature range of -40 °C to +60 °C.

The gas detection sensor type IDS 0001 resp. IDS 0002 (NPT-thread) is suitable for the attachment to an enclosure with type of protection flameproof enclosures „d“. The free internal volume is limited to 2 liters and the maximum reference pressure may not exceed 20 bar. The mechanical strength of the attachment to the flameproof enclosure as well as the explosion relevant and constructional assessment of the connection thread shall be made in conjunction with the certification of the electrical apparatus to which the sensor is attached.

The gas detection sensor type IDS 0011 resp. type IDS 0012 (metric thread) is suitable for the attachment to an enclosure with type of protection increased safety „e“. The mechanical strength and the ingress protection IP 6X of the attachment shall be ensured by the certification of the electrical apparatus to which the sensor will be attached. After attachment of the sensor to an enclosure with type of protection increased safety „e“, the clearance and creepage distances must comply with clause 4.3 (Table 1) of

EN 50019 resp. clauses 4.4 and 4.5 of EN 60079-7. The wires of the sensors shall be routed and connected according clauses 4.2, 4.5.1 and 4.8 of EN 50019 resp. clauses 4.3, 4.61 and 4.9 of EN 50079-7 mechanically protected and by observation of the temperature rating of the wires.

The sensors shall be appropriately screwed into the enclosure wall and secured against self-loosening. After attachment, the sensor's enclosure shall be connected to the equipotential bonding of the terminal box in an electrostatic manner (resistance <math> < 10^6 </math> Ohms). If equipotential bonding is necessary, it shall be ensured by the attachment.

The measurement function for explosion protection in accordance with EN 61779-1 and EN 61779-4 is not subject of this EC-Type Examination Certificate.