



5th Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate BVS 05 ATEX E 143 X

Equipment: Gas detection sensors types IDS 0001, IDS 0002, IDS 0011, IDS 0012 and Gas sensing heads types ITR 0001, ITR 0002, ITR 0010, ISH 0001, ISH 0002, and ISH 0010

Manufacturer: Dräger Safety AG & Co. KGaA

Address: 23560 Lübeck, Germany



Description

The gas detection sensors now also comply with the current status of the standards applicable and may modified according to the documents stated in the pertinent Test and Assessment Report.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 60079-0:2006 General requirements
EN 60079-1:2004 Flameproof Enclosure 'd'
EN 60079-7:2003 Increased Safety 'e'
EN 61241-0:2006 General requirements
EN 61241-1:2004 Protection by Enclosures

The marking of the equipment shall include the following:

 **II 2G Ex d IIC T6** (Type IDS 0001, IDS 0002, IDS 0011, IDS 0012, ITR 0010 and ISH 0010)
 **II 2G Ex de IIC T6** (Type ITR 0001, ITR 0002, ISH 0001 and ISH 0002)
II 2D Ex tD A21 IP6X T80°C

Special conditions for safe use

The gas detection sensors of the following types: IDS 0001, IDS 0011, IDS 0002, and IDS 0012, as well as the gas sensing heads of the following types: ITR 0001, ISH 0001, ITR 0002 and ISH 0002 are suitable for use in ambient temperature ranges of -40 °C to +65 °C.

The gas sensing heads type ITR 0010 and type ISH 0010 are suitable for use in ambient temperature ranges of -40 °C to +60 °C.

The gas detection sensors type IDS 0001 and type IDS 0002 (NPT thread) are suitable to be attached to an enclosure of the type of protection Flameproof Enclosure 'd', if there free volume does not exceed two litres and if the reference pressure is lower than 20 bar. The mechanical strength of the attachment and the inspection of the connecting thread regarding aspects of explosion protection and construction have to be carried out as part of the approval of the equipment to which the sensor will be attached.

The gas detection sensors type IDS 0011 and type IDS 0012 (metric thread) are suitable to be attached to an enclosure of the type of protection Increased Safety 'e'. The mechanical strength and the compliance with the degree of protection IP6X have to be ensured of the as part of the approval of the electrical equipment intended for the attachment. If the sensor is attached to an enclosure of type of protection Increased Safety 'e', the clearance and creepage distances have to meet the requirements stated in 4.3 (Table 1) of EN 60079-7 or 4.4 and 4.5 of EN 60079-7. The wiring and the connecting of the sensor conductors have to be carried out mechanically protected according to 4.2, 4.3, 4.5.2, 4.6.1, 4.8 and 4.9 of EN 60079-7 and have to consider the temperature resistance of the conductors.

The sensors have to be properly screwed into the enclosure wall and to be fastened against accidental loosening. The sensor enclosure attached has to be connected to the potential equalisation of the enclosure attached in an electrostatically conductive manner (contact resistance $< 10^6$ Ohm). If a potential equalisation is necessary, it has to be ensured by the attachment.

The measuring function for the purpose of explosion protection according to Annex II section 1.5.5 of Directive 94/9/EC is not subject of this supplement.

Test and assessment report

BVS PP 05.2107 EG as of 23.03.2009

DEKRA EXAM GmbH

Bochum, dated 23rd March 2009

Signed: Simanski

Signed: U. Hauke

Certification body

Special services unit

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 23rd March 2009
BVS-Kr /Ld / Her A 20080911

DEKRA EXAM GmbH



Certification body



Special services unit