



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

Certificate No.: IECEx IBE 18.0019X

Issue No: 0

Certificate history:

[Issue No. 0 \(2019-09-16\)](#)

Status: **Current**

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Date of Issue: **2019-09-16**

Applicant: **BD SENSORS GmbH**  
BD-Sensors-Str. 1  
95199 Thierstein  
**Germany**

Equipment: **Pressure transmitter DX4B LMK 387(H), DX4B LMK 487(H) and DX4B DMK 387**

*Optional accessory:*

Type of Protection: **Ex ia**

Marking:

Ex ia IIB T4 Ga

Ex ia IIC T4 Ga

Ex ia IIC T4 Gb

Ex ia IIIC T135 °C Da

*Approved for issue on behalf of the IECEx  
Certification Body:*

Dipl.-Ing. Alexander Henker

*Position:*

Head of the Certification Body

*Signature:  
(for printed version)*

*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:

**IBExU Institut für Sicherheitstechnik GmbH**  
Certification Body  
Fuchsmühlenweg 7  
09599 Freiberg  
Germany





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Manufacturer: **BD SENSORS GmbH**  
BD-Sensors-Str. 1  
95199 Thierstein  
**Germany**

Additional 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 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 : 2017** Explosive atmospheres - Part 0: Equipment - General requirements  
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 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*

Test Report:

[DE/IBE/ExTR16.0007/00](#)

Quality Assessment Report:

[DE/IBE/QAR19.0004/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The devices DX4B LMK 387(H), DX4B LMK 487(H) and DX4B DMK 387 represent pressure transmitter or submersible probe in stainless steel, titanium or plastic enclosure. The submersible probes can be equipped with an optional 3L temperature sensor. The devices are intended for use in potentially hazardous areas, where devices with EPL Ga, Gb or Da required. They are supplied by an intrinsically safe power supply of the Category „ia“.

### Variants:

DX4B LMK 387 and DX4B LMK 487 - submersible probe (Pt100 optional)

DX4B LMK 387 H and DX4B LMK 487 H - submersible probe with other electronic (Pt100 optional)

DX4B DMK 387 - pressure transmitter

### Technical data

Ambient temperature range: -25 °C to +65 °C

### Electrical data

LMK 387, LMK 487 supply electric circuit in type of protection intrinsic safety Ex ia IIB

(supply + and-)	$U_i$	28 V DC
	$I_i$	93 mA
	$P_i$	660 mW
effective inner capacity	$C_i$	49.2 nF
effective inner inductivity	$L_i$	negligible

LMK 387 H, LMK 487 H (both only IIB) and DMK 387 supply electric circuit in type of protection intrinsic safety Ex ia IIC

(supply + and-)	$U_i$	28 V DC
	$I_i$	93 mA
	$P_i$	660 mW
effective inner capacity	$C_i$	14.2 nF



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effective inner inductivity	$L_i$	negligible
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Pt100-circuit in type of protection intrinsic safety Ex ia IIC

(3-wire circuit)	$U_i$	30 V DC
	$I_i$	54 mA
	$P_i$	405 mW
effective inner capacity	$C_i$	negligible
effective inner inductivity	$L_i$	negligible

plus line inductivities 1  $\mu$ H/m and line capacities 160 pF/m (cable supplied by the manufacturer)

The supply connections have an inner capacity of max. 100 nF on the submersible probe (LMK 387, LMK 487) and 27 nF on the submersible probe (LMK 387 H, LMK 487 H) and on the pressure transmitter (DMK 387) to the housing.

#### SPECIFIC CONDITIONS OF USE: YES as shown below:

- For hydrostatic probes made of titanium impact and friction sparks are to be avoided by contact with other bodies and objects.
- The equipment designed with connector have to be installed in such a way that the degree of protection IP 20 is always kept.
- The safety and assembly instructions contained in the operating instruction and the ambient temperature range  $-25\text{ }^{\circ}\text{C} \leq T_a \leq +65\text{ }^{\circ}\text{C}$  have to be taken into account.
- The device may be operated in explosive atmospheres which requires equipment of Category 1 only when there are atmospheric conditions (temperature of  $-20\text{ }^{\circ}\text{C}$  to  $+60\text{ }^{\circ}\text{C}$ , pressure of 0.8 bar to 1.1 bar).