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 IBE 12.0027X	Issue No: 1	Certificate history:
Status:	**Current**	Page 1 of 4	Issue No. 1 (2014-04-29) Issue No. 0 (2012-12-11)
Date of Issue:	**2014-04-29**		

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

Electrical Apparatus: **Pressure Transmitter DX19 series**

Optional accessory:

Type of Protection: **Intrinsic safety "ia"**

Marking:

Ex ia IIC T4 Ga
Ex ia IIB T4 Ga (type DX19-*457* only)
Ex ia IIC T4 Gb (non-metallic pressure connection)
Ex ia IIIC T85 °C Da
Ex ia IIIC T85 °C Db (non-metallic pressure connection)

Approved for issue on behalf of the IECEx Certification Body: Prof. Dr. Tammo Redeker

Position: Head of Certification Body

Signature:
(for printed version)

Date: 2014-04-29

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 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition:2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*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/ExTR12.0031/00 DE/IBE/ExTR12.0031/01

Quality Assessment Report:

DE/TUN/QAR12.0007/01

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Pressure transmitters DX19 are different pressure measurement devices or level probes in stainless steel enclosure with different pressure ports. As measuring cell and evaluation electronic serves a separately approved electronic module. The devices having metallic pressure Connection are intended for use in potentially hazardous areas, where EPL Ga respective Da devices are required. They are supplied by an intrinsically safe power supply of the Category „ia".

See the attachement for detailed technical data.

CONDITIONS OF CERTIFICATION: YES as shown below:

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 have to be taken into account.

The device may be operated in explosive atmospheres which requires equipment of EPL Ga only when there are atmospheric conditions (temperature of -20 °C to +60 °C, pressure of 0.8 bar to 1.1 bar).

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

Extension of available types

Annex:

AnnexIBE12.0027X01.pdf

Type code

DX19- ***A B C nnn D***

A	D	pressure measurement devices
	L	level probe
B	M	transmitter
C	P	stainless steel sensor
	K	ceramic sensor
nnn	number	design
D	I	precision

Exception

DMK457 KRO	with EMV 45 as clamp PCB
17.600G	conform to DMP

Technical data

Ambient temperature range	-20 °C to +70 °C (type DX19-*** I to +65 °C) -40 °C to +70 °C (DMP331 and DMP333 with static cable system	
Ingress protection of enclosure	≥ IP 65	
Explosion protection method	Intrinsic safety "ia"	
Supply 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	negligible
effective inner inductivity	L_i	negligible
additional line inductivities 1 µH/m and line capacities 160 pF/m (cable supplied by the manufacturer) The supply connections have an inner capacity of max. 27 nF to the housing.		
Type DX19-*457 * resp. devices having EMV 58 in type of protection Intrinsic Safety Ex ia IIB		
effective inner capacity	C_i	105 nF
effective inner inductivity	L_i	5 µH
The supply connections have an inner capacity of max. 91 nF resp. 140 nF to the housing.		

Types

Name	Type	Electronic-module	Measurement cell
DMP 343	PT	ELMO-STA	DSP 210 / ELV 66 = DSP 210 Z
DMP 331	PT	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
DMP 333	PT	ELMO-STA	DSP 4XX / ELV 66 = DSP 4XX Z
DMP 335	PT	ELMO-STA	MSP 12X / ELV 57 = MSP 12X Z
17.600G	PT	ELMO-STA	MSP 12X / ELV 57 = MSP 12X Z
DMK 331	PT	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z DSK 516 with ELV 94
LMP 331	PT	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMK 331	PT	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
LMK 307	Probe	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
DMP 331 I	PT	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
DMP 333 I	PT	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X
LMP 331 I	PT	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
DMP 331 P	PT	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative DSP 1XX / ELV66 = DSP 1XX Z
DMK 331 P	PT	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z
DMK457 KRO	PT	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z additional with EMV 45 as clamp platine.
LMP 307	Probe	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMP 307 I	Probe	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
LMP 308	Probe	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z
LMP 308 I	Probe	ELMO-PRE	DSP 4XX / ELI 20 = DSP 4XX X alternative ICS 86 / ELI 20 with aid platine PD16
DMP 457	PT	ELMO-STA	DSP 4XX / ELV66 = DSP 4XX Z alternative ICS 86 / ELV 70 = ICS 86 Z EMV 58 replaced by EMV 26 of ELMO-STA
DMK 457	PT	ELMO-STA	DSK 511 / ELV 58 = DSK 511 Z EMV 58 replaced by EMV 26 of ELMO-STA
DMP 339	PT	ELMO-STA ELMO-PRE	ICS 89 / ELV 66 / ELV 68 / EMV 26 ICS 89 / ELI 36 / ELI 37 / EMV 52
17.605	PT	ELMO-STA	SPS 1000 / ELV 49 / ELV 68 / EMV 26
26.600	PT	ELMO-STA	DSK611 / ELV 49 / ELV 68 / EMV 26
DMP 334	PT	ELMO-STA	ST1 with ELV97
DMP 311	PT	ELMO-STA	DSP4XX, ICS86, NPI15 with ELV66, ELV70, ELV86

DMP 321	PT	ELMO-STA	DSP4XX, ICS86, NPI15, ST1 with ELV79, ELV67, ELI68, ELI69, ELI57, ELI63, ELI73