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 04.0003X issue No.:6	Certificate history: Issue No. 6 (2017-9-21) Issue No. 5 (2014-3-7) Issue No. 4 (2012-8-13) Issue No. 3 (2011-12-7) Issue No. 2 (2011-6-10) Issue No. 1 (2006-11-7)
Status:	**Current**	
Date of Issue:	**2017-09-21** Page 1 of 4	
Applicant:	**Dräger Safety AG & Co. KGaA** Revalstraße 1 23560 Lübeck **Germany**	
Equipment: *Optional accessory:*	**Gas measuring transmitter type P3S, P3U, P3FB (P3U/P3FB alternative with P3U Remote Adapter and P3U Remote Sensor)**	
Type of Protection:	**Equipment protection by intrinsic safety "i"**	

Marking:

Ex ia IIC T4 Ga	(-40 °C ≤ T_a ≤ + 65 °C)
Ex ia IIC T6 Ga	(-40 °C ≤ T_a ≤ + 40 °C)
Ex ia I Ma	(-40 °C ≤ T_a ≤ + 65 °C)
Ex ic IIC T4 Gc	(-40 °C ≤ T_a ≤ + 65 °C)
Ex ic IIC T6 Gc	(-40 °C ≤ T_a ≤ + 40 °C)

Approved for issue on behalf of the IECEx Certification Body: Jörg Koch

Position: Head of Certification Body

Signature:
(for printed version)

Date: 21.9.17

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
On the safe side.

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Manufacturer: **Dräger Safety AG & Co. KGaA**
Revalstrasse 1
23560 Lübeck
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"

*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/BVS/ExTR06.0003/06

Quality Assessment Report:

DE/BVS/QAR06.0001/12

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Schedule

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

General product information:

Gas measuring transmitter type P3S, P3U, P3FB
(P3U/P3FB alternative with P3U Remote Adapter and P3U Remote Sensor)

The Gas measuring transmitter type P3S, P3U and P3FB are intended for gas detection under atmospheric conditions in fixed installations. The device is housed in a plastic enclosure (surface resistance < 10^9 Ohm). Supply of the electronics and signalling is accomplished by a 2-, 3- or 4-wire connection. For all cases, supply and signalling occur from one common intrinsically safe circuit. All device types may be equipped with a "Duct Extension". This enables direct mounting of the device to a duct, due to the protruding sensor.

P3S:
The device may be equipped with an integral LC-Display for displaying the measurement value. The front of the device provides a circular bayonet cover, which may be opened for maintenance work (calibration). Behind the opening, control elements and 2 contacts are located. The contacts allow connection of an I.S. certified voltage meter, which enables reading of the measurement value in case no internal display is provided.

P3U / P3FB:
The device may be equipped with an integral LC-Display for displaying the measurement value and a membrane keypad. For measurements at remote locations the P3U Remote Adapter may be plugged in, instead of the electro-chemical sensor. The cable of the P3U Remote Adapter, which may be up to 100 m in length, connects to the P3U Remote Sensor which now accepts the electrochemical sensor.
The gas measuring transmitter type P3FB is identical to the type P3U, except that the internal electronic provide a field bus connection in accordance with the FISCO concept (Terminal X7).

Ratings:
See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

In applications, which require devices with EPL Ga (Zone 0), intensive electrostatic charging processes have to be prevented.
The measurement function for explosion protection is not the subject of this IECEx Test report.

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

The definition of the internal used electrochemical cells for the detection of gases was modified.
The standard IEC 60079-26 is no longer applied. The EPL Ga requirements for the gas measuring transmitter are complied by the standards listed above.

Annex: BVS_04_0003x_Dräger_Annex_issue6.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 04.0003X issue No.: 6**
Annex

Ratings:

1 Gas measuring transmitter type P3S

1.1 Supply-/signal circuit, Connection via terminals X1/1 and X1/2

Maximum input voltage	U_i	DC	30	V
Maximum input current	I_i		300	mA
Maximum input power	P_i		700	mW
Maximum internal capacitance	C_i		negligible	
Maximum internal inductance	L_i		50	µH

1.2 Measuring circuit, for calibration only, Connection via 2 contact areas

Maximum output voltage	U_o	DC	7.6	V
Maximum output current	I_o		1	mA
Maximum external capacitance	C_o		2.5	µF
Maximum external inductance	L_o		10	mH
Maximum input voltage	U_i	DC	10.4	V
Maximum internal capacitance	C_i		negligible	
Maximum internal inductance	L_i		negligible	

2 Gas measuring transmitter type P3U

Supply-/signal circuit, Connection via terminals X7/1 - X7/4 or X8/1 - X8/4 (looped through)

Maximum input voltage	U_i	DC	30	V
Maximum input current	I_i		300	mA
Maximum input power	P_i		700	mW
Maximum internal capacitance	C_i		5	nF
Maximum internal inductance	L_i		50	µH

3 Gas measuring transmitter type P3FB

Field bus connection in accordance with the FISCO concept, connection only via terminal X7

Maximum input voltage	U_i	DC	24	V
Maximum input current	I_i		380	mA
Maximum input power	P_i		5.32	W
Maximum internal capacitance	C_i		5	nF
Maximum internal inductance	L_i		10	µH

4 Ambient temperature range for all types

Ex ia IIC T4 Ga	(-40 °C < T_a < + 65 °C)
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