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.: **0**

Status: **Current**

Date of Issue: **2004-01-20** Page **1** of **4**

Applicant: **Dräger Safety AG & Co. KGaA**
Revalstrasse 1
23560 Lübeck
Germany

Electrical Apparatus: **Gas measuring transmitter type P3S and type P3U**
Optional accessory: **see Schedule**

Type of Protection: **General Requirements, Intrinsic Safety**

Marking: **Ex ia IIC T6 Tamb - 40 °C up to + 40 °C**
Ex ia IIC T4 Tamb - 40 °C up to + 65 °C

Approved for issue on behalf of the IECEx Certification Body: Dr. Michael Wittler

Position: Head of Testing Laboratory

Signature: (for printed version)

Date: 20.01.04

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:

EXAM BBG Prüf- und Zertifizier GmbH

Fachstelle für Sicherheit elektrischer Betriebsmittel – BVS
Dinnendahlstrasse 9
44809 Bochum
Germany

EXAM
BBG Prüf- und Zertifizier GmbH

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

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 manufacture'rs 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 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: 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

IECEx ATR:	File Reference:
DE/BVS/04/2009	**A 20030561**

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Schedule

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

Description
The Gas Detectors type P3S and P3U are intended for gas detection under atmospheric conditions in fixed installations. The device is housed in a plastic enclosure (surface resistance < 1 GΩ). 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. Both 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:
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.

Marking

1 For the gas measuring transmitter P3:

The name of the manufacturer or his trademark
Type P3S or P3U
Ex ia IIC T4 (Tamb -40 °C up to +65 °C)
Ex ia IIC T6 (Tamb -40 °C up to +40 °C)
Serial number
Certificate number

2 For the remote adapter:

The name of the manufacturer or his trademark
Type P3U Remote Adapter
Ex ia IIC T4 (Tamb -40 °C up to +65 °C)
Ex ia IIC T6 (Tamb -40 °C up to +40 °C)
Serial number
Certificate number

3 For the remote sensor:

The name of the manufacturer or his trademark
Type P3U Remote Sensor
Ex ia IIC T4 (Tamb -40 °C up to +65 °C)
Ex ia IIC T6 (Tamb -40 °C up to +40 °C)
Serial number
Certificate number

CONDITIONS OF CERTIFICATION: YES as shown below:

The measurement function for explosion protection is not the subject of this IECEx ASSESSMENT AND TEST REPORT.

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EQUIPMENT(continued):

Parameters

1 Gas measuring transmitter type P3S

1.1 Supply-/signal circuit

Connection via terminals X1/1 and X1/2

Voltage	Ui	DC	30	V
Current	Ii		300	mA
Power	Pi		700	mW
maximum internal capacitance	Ci		negligible	
maximum internal inductance	Li		50	µH

1.2 Measuring cicuit, for calibration only

Connection via 2 contact areas

Voltage	Uo	DC	7.6	V
Current	Io		1	mA
maximum external capacitance	Co		2.5	µF
maximum external inductance	Lo		10	mH
Voltage	Ui	DC	10.4	V
maximum internal capacitance	Ci		negligible	
maximum internal inductance	Li		negligible	

2 Gas measuring transmitter type P3U

Supply-/signal circuit

Connection via terminals X7/1 - X7/4 or X8/1 - X8/4 (looped through)

Voltage	Ui	DC	30	V
Current	Ii		300	mA
Power	Pi		700	mW
maximum internal capacitance	Ci		5	nF
maximum internal inductance	Li		50	µH

3 Ambient temperature range Tamb

Ex ia IIC T6	-40 °C up to +40 °C
Ex ia IIC T4	-40 °C up to +65 °C

Annexe: