



# 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 TUN 14.0028X** issue No.: **0** Certificate history: \_\_\_\_\_

Status: **Current**

Date of Issue: **2014-11-20** Page 1 of 3

Applicant: **SensoTech GmbH**  
Steinfeldstraße 1  
39179 Magdeburg-Barleben  
Germany

Electrical Apparatus: **LiquiSonic immersion sensor V10 40-40 Ex and LiquiSonic immersion sensor V10 40-40 Ex Pharma**  
Optional accessory:


Type of Protection: **Flameproof enclosures "d"**

Marking: **Ex d IIC T1 to T6 Gb**  
**Ex d IIC T1 to T6 Ga/Gb**

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

Position: **Head of the IECEx certification body**

Signature:  
(for printed version)

  
2014-11-20

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

Certificate issued by:

**TÜV NORD CERT GmbH**  
Hanover Office  
Am TÜV 1  
30519 Hannover  
Germany





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Manufacturer: **SensoTech GmbH**  
Steinfeldstraße 1  
39179 Magdeburg-Barleben  
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:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-26 : 2006</b> 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/TUN/ExTR14.0040/00](#)

##### Quality Assessment Report:

[DE/TUN/QAR11.0004/02](#)



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## Schedule

### EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The LiquiSonic immersion sensors V10 40-40 Ex and V10 40-40 Ex Pharma determine the properties of liquid media via the propagation velocity of ultrasonic waves. The immersion sensors consist of the sensor enclosure and the sensor body.

The sensor enclosure is a 2-compartment Ex d enclosure. In one compartment is the electronics, the other compartment is used as terminal compartment. Both compartments are designed in the type of protection flameproof enclosures and connected by a separately certified Ex d bushing. The sensor body below the flange is in the media-carrying pipe.

The sensor enclosure may alternatively be connected via a cable to the sensor body.

The pharmaceutical design differs only by an optimized design for hygiene.

### Technical data

Permitted range of ambient temperature	- 20 °C to +60 °C
Permitted range of ambient temperature	-20 °C to +50 °C for T6
Permitted range of medium temperature	-20 °C to +180 °C
Maximum operating pressure	100 bar
Power supply	24 V d.c. ±15 %
Maximum power input	3 W
Relationship between medium temperature and temperature class	
Marking: II 2 G Ex d IIC T1 to T6 Gb (Sensor body in zone 1)	
Temperature class	Maximum medium temperature [°C]
T1 to T3	180
T4	130
T5	95
T6	80
Marking: II 1/2 G Ex d IIC T1 to T6 Ga/Gb (Sensor body in zone 0)	
Temperature class	Maximum medium temperature [°C]
T1 and T2	180
T3	160
T4	108
T5	80
T6	68

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. The security level of the flameproof joints is higher than the in the standard IEC 60079-1 required security level.
2. For immersion sensors which are made of the materials titanium grade 2, grade 7 or zirconium applies: The installation must be carried out so that the generation of sparks by impact or friction is excluded.
3. If the sensor enclosure is connected by a cable with the sensor body, the medium temperature may not exceeded 120 °C.
4. Permitted range of ambient temperature: -20 °C to + 60 °C resp. to +50 °C for T6.